

rotationally-molded marine fuel tank manufacturers and material suppliers to assess the progress of low-permeation fuel tank development and compliance.

Design-Based Certification—The Panel recommended that EPA propose a design-based certification for carbon canisters and fuel tanks. For the carbon canisters, the design requirement would call for a ratio of carbon volume (liters) to fuel tank capacity (gallons) of 0.04 liter/gallon for boats less than 26 feet in length, and 0.016 liter/gallon for larger boats. The different canister sizes are intended to account for the differences between boats normally trailered to the water for use versus boats normally stored in the water between uses. For fuel tanks, the Panel recommended that EPA propose to allow design-based certification for metal tanks and plastic fuel tanks with a continuous EVOH barrier.

SERs commented that the American Boat and Yacht Council (ABYC) and the Society of Automotive Engineers (SAE) have industry recommended practices for boat designs that must be met as a condition of membership in the National Marine Manufacturers Association (NMMA). NMMA is working to update these recommended practices to include carbon canister installation specifications and a low-permeation fuel line designation. The Panel recommended that EPA propose to accept data used for meeting the voluntary requirements as part of the EPA certification.

Additional Lead Time for Small SI Fuel Line Requirement—EPA is proposing to apply the fuel line permeation requirements beginning with the 2008 model year for Small SI nonhandheld equipment. Given the short lead time before 2008, small business equipment manufacturers may not be ready for such a requirement. The Panel recommended EPA propose a 2009 implementation date for low-permeation fuel line for small business equipment manufacturers producing Small SI nonhandheld equipment.

(d) Manufacturer Hardship Provisions

The Panel recommended that EPA propose hardship programs for affected manufacturers. EPA has adopted hardship provisions in a number of previous rules. The following section summarizes the hardship provisions recommended by the Panel which would be available to engine manufacturers, equipment manufacturers, vessel manufacturers, and fuel system component manufacturers (*i.e.*, fuel tank, fuel line, and fuel cap manufacturers). A discussion of the proposed hardship

provisions can be found in Sections VIII.C.8, VIII.C.9, and VIII.C.10.

Unusual Circumstances Hardship—The Panel recommended that EPA propose a provision allowing for hardship relief under unusual circumstances for manufacturers affected by this rule. Manufacturers would be able to apply for hardship relief if circumstances outside their control cause the failure to comply and if failure to sell the subject engines or equipment would jeopardize the company's solvency. An example of an unusual circumstance outside a manufacturer's control may be an "Act of God," a fire at the manufacturing plant, or the unforeseen shut down of a supplier with no alternative available.

Economic Hardship—The Panel recommended that EPA propose economic hardship provisions for small businesses affected by this rule. Small manufacturers would be able to petition EPA for limited additional lead time to comply with the standards. A manufacturer would have to make the case that it has taken all possible business, technical, and economic steps to comply but the burden of compliance costs would have a significant impact on the company's solvency.

We invite comments on all aspects of the proposal and its impacts on small entities.

D. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for federal agencies to assess the effects of their regulatory actions on state, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "federal mandates" that may result in expenditures to state, local, and tribal governments, in the aggregate, or to the private sector, of \$100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires that EPA identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if the Administrator publishes with the final rule an explanation of why that alternative was not adopted.

Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

This rule contains no federal mandates for state, local, or tribal governments as defined by the provisions of Title II of the UMRA. The rule imposes no enforceable duties on any of these governmental entities. Nothing in the rule would significantly or uniquely affect small governments.

EPA has determined that this rule contains federal mandates that may result in expenditures of more than \$100 million to the private sector in any single year. EPA believes that the proposal represents the least costly, most cost-effective approach to achieve the air quality goals of the rule. The costs and benefits associated with the proposal are discussed above and in the Draft Regulatory Impact Analysis as required by the UMRA.

E. Executive Order 13132: Federalism

Executive Order 13132, entitled "Federalism" (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" is defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government."

Under section 6 of Executive Order 13132, EPA may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or EPA consults with State and local officials early in the process of developing the proposed regulation. EPA also may not issue a regulation that has federalism implications and that preempts State law, unless the Agency consults with

State and local officials early in the process of developing the proposed regulation.

Section 4 of the Executive Order contains additional requirements for rules that preempt State or local law, even if those rules do not have federalism implications (*i.e.*, the rules will not have substantial direct effects on the States, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government). Those requirements include providing all affected State and local officials notice and an opportunity for appropriate participation in the development of the regulation. If the preemption is not based on express or implied statutory authority, EPA also must consult, to the extent practicable, with appropriate State and local officials regarding the conflict between State law and Federally protected interests within the agency's area of regulatory responsibility.

This proposed rule does have federalism implications. It does not propose any significant revisions from current statutory and regulatory requirements, but it proposes to codify existing statutory requirements. Prior to the passage of Public Law 108–199, the various states could adopt and enforce nonroad emission control standards previously adopted by the state of California under section 209(e) of the Clean Air Act, once California had received authorization from EPA to enforce such standards. As part of directing EPA to undertake this rulemaking, section 428 of Public Law 108–199 has taken away the authority of states to adopt California standards for any nonroad spark-ignition engine under 50 horsepower that they had not already adopted by September 1, 2003. No state had done so by that date. No current state law is affected by the provisions of Public Law 108–199 mentioned above. Today's action proposes to codify the statutory provision prohibiting other states from adopting California standards for nonroad spark-ignition engines under 50 horsepower. It does not affect the independent authority of California.

EPA did consult with representatives of various State and local governments in developing this rule. EPA has also consulted representatives from the National Association of Clean Air Agencies (NACAA), which represents state and local air pollution officials. These officials participated in two EPA workshops regarding the Small SI safety study in which they expressed concern about the language of section 428 of

Public Law 108–199 limiting the states ability to adopt the California standards for nonroad spark-ignition engines under 50 horsepower and urged EPA to move expeditiously in adopting new Federal emission standards for this category.

In the spirit of Executive Order 13132, and consistent with EPA policy to promote communications between EPA and State and local governments, EPA specifically solicits comment on this proposed rule from State and local officials.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

Executive Order 13175, entitled "Consultation and Coordination with Indian Tribal Governments" (65 FR 67249, November 9, 2000), requires EPA to develop an accountable process to ensure "meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications."

This proposed rule does not have tribal implications as specified in Executive Order 13175. This rule will be implemented at the Federal level and impose compliance costs only on engine and equipment manufacturers. Tribal governments will be affected only to the extent they purchase and use equipment with regulated engines. Thus, Executive Order 13175 does not apply to this rule. EPA specifically solicits additional comment on this proposed rule from tribal officials.

G. Executive Order 13045: Protection of Children From Environmental Health and Safety Risks

Executive Order 13045, "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997) applies to any rule that (1) Is determined to be "economically significant" as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, section 5–501 of the Order directs the Agency to evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

This proposed rule is not subject to the Executive Order because it does not involve decisions on environmental health or safety risks that may disproportionately affect children.

The effects of ozone on children's health were addressed in detail in EPA's rulemaking to establish the NAAQS for these pollutants, and EPA is not revisiting those issues here. EPA believes, however, that the emission reductions from the strategies proposed in this rulemaking will further reduce air toxic emissions and the related adverse impacts on children's health.

H. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.

Executive Order (EO) 12898 (59 FR 7629 (Feb. 16, 1994)) establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

EPA has determined that this proposed rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it increases the level of environmental protection for all affected populations without having any disproportionately high and adverse human health or environmental effects on any population, including any minority or low-income population. This proposed rule will reduce air pollution from mobile sources in general and thus decrease the amount of such emissions to which all affected populations are exposed.

I. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution, or Use

This rule is not a "significant energy action" as defined in Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use" (66 FR 28355, May 22, 2001), because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. If promulgated, this proposed rule is expected to result in the use of emission control technologies that are estimated to reduce nationwide fuel consumption by around 100 million gallons per year by 2020.

J. National Technology Transfer Advancement Act

Section 12(d) of the National Technology Transfer and Advancement

Act of 1995 (“NTTAA”), Public Law 104–113, section 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless doing so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This proposed rulemaking involves technical standards. EPA proposes to use the test procedures specified in 40 CFR part 1065, as described in Section IX. While the Agency identified the test procedures specified by the International Organization for Standardization (ISO 8178) as being potentially applicable, we do not propose to use it in this rulemaking. The use of this voluntary consensus standard would be impractical because we have been working with engine manufacturers and other interested parties in comprehensive improvements to test procedures for measuring engine emissions, as reflected by the provisions in part 1065. We expect these procedures to form the basis for internationally harmonized test procedures that will be adopted by ISO, other testing organizations, and other national governments.

EPA welcomes comments on this aspect of the proposed rulemaking and, specifically, invites the public to identify potentially applicable voluntary consensus standards and to explain why such standards should be used in this regulation.

List of Subjects

40 CFR Part 60

Administrative practice and procedure, Air pollution control, Incorporation by reference, Intergovernmental relations, Reporting and recordkeeping requirements.

40 CFR Part 63

Administrative practice and procedure, Air pollution control, Hazardous substances, Incorporation by reference, Intergovernmental relations, Reporting and recordkeeping requirements.

40 CFR Part 85

Confidential business information, Imports, Labeling, Motor vehicle pollution, Reporting and recordkeeping requirements, Research, Warranties.

40 CFR Part 89

Environmental protection, Administrative practice and procedure, Confidential business information, Imports, Labeling, Motor vehicle pollution, Reporting and recordkeeping requirements, Research, Vessels, Warranty.

40 CFR Part 90

Environmental protection, Administrative practice and procedure, Confidential business information, Imports, Labeling, Reporting and recordkeeping requirements, Research, Warranty.

40 CFR Part 91

Environmental protection, Administrative practice and procedure, Air pollution control, Confidential business information, Imports, Labeling, Penalties, Reporting and recordkeeping requirements, Warranties.

40 CFR Part 1027

Environmental protection, Administrative practice and procedure, Air pollution control, Imports, Reporting and recordkeeping requirements.

40 CFR Parts 1045, 1048, 1051, 1054, and 1060

Environmental protection, Administrative practice and procedure, Air pollution control, Confidential business information, Imports, Incorporation by Reference, Labeling, Penalties, Reporting and recordkeeping requirements, Warranties.

40 CFR Part 1065

Environmental protection, Administrative practice and procedure, Incorporation by reference, Reporting and recordkeeping requirements, Research.

40 CFR Part 1068

Environmental protection, Administrative practice and procedure, Confidential business information, Imports, Motor vehicle pollution, Penalties, Reporting and recordkeeping requirements, Warranties.

40 CFR Part 1074

Environmental protection, Administrative practice and procedure, Motor vehicle pollution.

Dated: April 17, 2007.

Stephen L. Johnson,
Administrator.

For the reasons set out in the preamble, title 40, chapter I of the Code of Federal Regulations is proposed to be amended as set forth below.

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

1. The authority citation for part 60 continues to read as follows:

Authority: 42 U.S.C. 7401, *et seq.*

Subpart JJJJ—[Amended]

2. Section 60.4231 as proposed on June 12, 2006 (71 FR 33804) is proposed to be further amended by revising the section heading and paragraphs (a), (b), and (c) and adding paragraph (e) to read as follows:

§ 60.4231 What emission standards must I meet if I am a manufacturer of stationary SI internal combustion engines or equipment containing such engines?

(a) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) manufactured on or after January 1, 2008 to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as follows:

| If engine displacement is . . . | and manufacturing dates are . . . | the engine must meet emission standards and related requirements for nonhandheld engines under . . . |
|---------------------------------|--|--|
| (1) below 225 cc | January 1, 2008 to December 31, 2011 | 40 CFR part 90. |
| (2) below 225 cc | January 1, 2012 or later | 40 CFR part 1054. |
| (3) at or above 225 cc | January 1, 2008 to December 31, 2010 | 40 CFR part 90. |
| (4) at or above 225 cc | January 1, 2011 or later | 40 CFR part 1054. |

(b) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that use gasoline and that are manufactured on or after the applicable date in § 60.4230(a)(2) to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cubic centimeters (cc) to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as appropriate.

(c) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are rich burn engines that use LPG and that are manufactured on or after the applicable date in § 60.4230(a)(2) to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as appropriate.

* * * * *

(e) Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, to the extent they apply to equipment manufacturers.

3. Section 60.4238 as proposed on June 12, 2006 (71 FR 33804) is revised to read as follows:

§ 60.4238 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines ≤19 KW (25 HP) or a manufacturer of equipment containing such engines?

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in § 60.4231(a) must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing

stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

4. Section 60.4239 as proposed on June 12, 2006 (71 FR 33804) is revised to read as follows:

§ 60.4239 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines >19 KW (25 HP) that use gasoline or a manufacturer of equipment containing such engines?

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in § 60.4231(b) must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must test their engines as specified in that part. Stationary SI internal combustion engine manufacturers who certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 40 CFR part 1054 must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

5. Section 60.4240 as proposed on June 12, 2006 (71 FR 33804) is revised to read as follows:

§ 60.4240 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines >19 KW (25 HP) that are rich burn engines that use LPG?

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in § 60.4231(c) must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must test their engines as specified in that part. Stationary SI internal combustion engine manufacturers who certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part

90 or 40 CFR part 1054 must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

6. Section 60.4242 as proposed on June 12, 2006 (71 FR 33804) is amended by revising paragraphs (a) and (b) to read as follows:

§ 60.4242 What other requirements must I meet if I am a manufacturer of stationary SI internal combustion engines or equipment containing stationary SI internal combustion engines or a manufacturer of equipment containing such engines?

(a) Stationary SI internal combustion engine manufacturers must meet the provisions of 40 CFR part 90, 40 CFR part 1048, or 40 CFR part 1054, as applicable, as well as 40 CFR part 1068 for engines that are certified to the emission standards in 40 CFR part 1048 or 1054, except that engines certified pursuant to the voluntary certification procedures in § 60.4241 are permitted to provide instructions to owners and operators allowing for deviations from certified configurations, if such deviations are consistent with the provisions of paragraphs § 60.4241(c) through (f). Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, as applicable. Labels on engines certified to 40 CFR part 1048 must refer to stationary engines, rather than or in addition to nonroad engines, as appropriate.

(b) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to standards applicable under 40 CFR part 90, 40 CFR part 1048, or 40 CFR part 1054 for that model year may certify any such family that contains both nonroad and stationary engines as a single engine family and/or may include any such family containing stationary engines in the averaging, banking and trading provisions applicable for such engines under those parts. This provision also applies to equipment or component manufacturers certifying to standards under 40 CFR part 1060.

* * * * *

7. Section 60.4243 as proposed on June 12, 2006 (71 FR 33804) is amended

by revising paragraph (a) to read as follows:

§ 60.4243 What are my compliance requirements if I am an owner or operator of a stationary SI internal combustion engine?

(a) If you are an owner or operator, you must operate and maintain the stationary SI internal combustion engine and control device according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators of certified engines may only change those settings that are allowed by the manufacturer to ensure compliance with the applicable emission standards. If you own or operate a stationary SI internal combustion engine that is certified to 40 CFR part 90, 1048, 1054, or 1060, you must also meet the requirements of 40 CFR parts 90, 1048, 1054, 1060, and/or part 1068, as they apply to you.

8. Section 60.4245 as proposed on June 12, 2006 (71 FR 33804) is amended by revising the introductory text and paragraph (a) to read as follows:

§ 60.4245 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary SI internal combustion engine?

Owners or operators of stationary SI ICE must meet the following notification, reporting and recordkeeping requirements.

(a) Owners and operators of all stationary SI ICE must keep records of the information in paragraphs (a)(1) through (4) of this section.

(1) All notifications submitted to comply with this subpart and all documentation supporting any notification.

(2) Maintenance conducted on the engine.

(3) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable.

(4) If the stationary SI internal combustion engine is not a certified engine, documentation that the engine meets the emission standards.

9. Section 60.4246 as proposed on June 12, 2006 (71 FR 33804) is amended by revising the definitions for "Certified stationary internal combustion engine" and "Useful life" to read as follows:

§ 60.4246 What definitions apply to this subpart?

Certified stationary internal combustion engine means an engine that belongs to an engine family that has a certificate of conformity that complies with the emission standards and requirements in this part, or of 40 CFR part 90, 40 CFR part 1048, or 40 CFR part 1054, as appropriate.

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. The values for useful life for stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) are given in 40 CFR 90.105, 40 CFR 1054.107, and 40 CFR 1060.101, as appropriate. The values for useful life for stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) certified to 40 CFR part 1048 are given in 40 CFR 1048.101(g). The useful life for stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) certified under the voluntary manufacturer certification program of this subpart is 8,000 hours or 10 years, whichever comes first.

10. Table 1 to subpart JJJJ of part 60 as proposed on June 12, 2006 (71 FR 33804) is amended by revising footnote a to read as follows:

Table 1 to Subpart JJJJ of Part 60—NO_x, NMHC, and CO Emission Standards in g/HP-hr for Stationary SI Engines >25 HP (except Gasoline and Rich Burn LPG Engines)

^a Stationary SI natural gas and lean burn LPG engines between 25 and 50 HP may comply with the requirements of 40 CFR part 1048, instead of this table. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as appropriate.

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

11. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

Subpart A—[Amended]

12. Section 63.6675 as proposed to be amended on June 12, 2006 (71 FR 33804) is amended by revising the definitions for "Certified stationary RICE" and "Useful life" to read as follows:

§ 63.6675 What definitions apply to this subpart?

Certified stationary RICE means an engine that belongs to an engine family that has a certificate of conformity that complies with the emission standards and requirements in this part, or in 40 CFR parts 89, 90, 1039, 1048, or 1054, as appropriate.

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. The values for useful life for stationary CI ICE with a displacement of less than 10 liters per cylinder are given in 40 CFR 1039.101. The values for useful life for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder are given in 40 CFR 94.9. The values for useful life for stationary SI ICE with a maximum engine power less than or equal to 25 HP are given in 40 CFR 90.105, 40 CFR 1054.107, or 40 CFR 1060.101, as appropriate. The values for useful life for stationary SI ICE with a maximum engine power greater than 25 HP certified to 40 CFR part 1048 are given in 40 CFR 1048.101 and 1048.105. The useful life for stationary SI ICE with a maximum engine power greater than 25 HP certified under the voluntary manufacturer certification program 40 CFR part 60, subpart JJJJ, is 8,000 hours or 10 years, whichever comes first.

PART 85—CONTROL OF AIR POLLUTION FROM MOBILE SOURCES

13. The authority citation for part 85 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

Subpart Q—[Removed]

14. Subpart Q is removed.

Subpart R—[Amended]

15. Section 85.1713 is amended as follows:

a. By revising the introductory text and paragraphs (a), (c)(3)(iv), and (d) through (k).

b. By adding paragraph (l).

c. By removing and reserving paragraph (c)(3)(v).

§ 85.1713 Delegated-assembly exemption.

The provisions of this section apply with respect to heavy-duty highway engines. This section is addressed to engine manufacturers unless specified otherwise.

(a) Shipping an engine separately from an aftertreatment component that you have specified as part of its certified configuration will not be a violation of the prohibitions in Clean Air Act section 203 (42 U.S.C. 7522) if you follow the provisions of paragraph (b), (c), or (d) of this section.

* * * * *

(c) * * *

(3) * * *

(iv) Audits must involve the assembling companies' facilities, procedures, and production records to monitor their compliance with your instructions, must include investigation of some assembled engines, and must confirm that the number of aftertreatment devices shipped were sufficient for the number of engines produced.

* * * * *

(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 the requirements of this section by maintaining a database showing how you pair aftertreatment components with the appropriate engines.

(e) The engine's model year does not change based on the date the vehicle manufacturer adds the aftertreatment device.

(f) Once the vehicle manufacturer takes possession of an engine exempted under this section and the engine reaches the point of final vehicle assembly, the exemption expires and the engine is subject to all the prohibitions in Clean Air Act section 203 (42 U.S.C. 7522).

(g) You must notify us within 15 days if you find from an audit or another source that a vehicle manufacturer has failed to meet its obligations under this section.

(h) We may suspend, revoke, or void an exemption under this section, as follows:

(1) We may suspend or revoke your exemption for the entire engine family if we determine that any of the engines are not in their certified configuration

after installation in the vehicle, or if you fail to comply with the requirements of this section. If we suspend or revoke the exemption for any of your engine families under this paragraph (g), this exemption will not apply for future certificates unless you demonstrate that the factors causing the nonconformity do not apply to the other engine families. We may suspend or revoke the exemption for shipments to a single facility where final assembly occurs.

(2) 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.

(i) You are liable for the in-use compliance of any engine that is exempt under this section.

(j) It is a violation of the Act for any person to introduce into U.S. commerce a previously exempted engine, including as part of a vehicle, without complying fully with the installation instructions.

(k) [Reserved]

(l) 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 (l) in your application for certification, or in a separate submission.

16. Subpart Y is revised to read as follows:

Subpart Y—Fees for the Motor Vehicle and Engine Compliance Program

§ 85.2401 Assessment of fees.

See 40 CFR part 1027 for the applicable fees associated with certifying engines, vehicles, and equipment under this chapter.

PART 90—CONTROL OF EMISSIONS FROM NONROAD SPARK-IGNITION ENGINES AT OR BELOW 19 KILOWATTS

17. The authority citation for part 90 continues to read as follows:

Authority: 42 U.S.C. 7401—7671q.

Subpart A—[Amended]

18. Section 90.1 is amended by revising paragraphs (d)(1) and (d)(5) and adding paragraphs (d)(8) and (h) to read as follows:

§ 90.1 Applicability.

* * * * *

(d) * * *

(1) Engines that are certified to meet the requirements of 40 CFR part 1051, or are otherwise subject to 40 CFR part 1051 (for example, engines used in snowmobiles and all-terrain vehicles). This part nevertheless applies to engines used in recreational vehicles if the manufacturer uses the provisions of 40 CFR 1051.145(a)(3) to exempt them from the requirements of 40 CFR part 1051. Compliance with the provisions of this part is a required condition of that exemption.

* * * * *

(5) Engines certified to meet the requirements of 40 CFR part 1048, or are otherwise subject to 40 CFR part 1048, subject to the provisions of § 90.913.

* * * * *

(8) Engines that are subject to emission standards under 40 CFR part 1054. See 40 CFR 1054.1 to determine when part 1054 applies. Note that certain requirements and prohibitions apply to engines built on or after January 1, 2009 if they are installed in equipment that will be used solely for competition, as described in 40 CFR 1054.1 and 40 CFR 1068.1; those provisions apply instead of the provisions of this part 90.

* * * * *

(h) Although the definition of nonroad engine in § 90.3 excludes certain engines used in stationary applications, stationary engines manufactured after January 1, 2008 are required under 40 CFR part 60 to comply with this part.

19. Section 90.2 is amended by adding paragraph (d) to read as follows:

§ 90.2 Effective dates.

* * * * *

(d) Engines used in emergency and rescue equipment as described in § 90.1(d)(7) are subject to the provisions of this part through December 31, 2009. Starting January 1, 2010 the provisions in 40 CFR 1054.660 apply instead of those in § 90.1(d)(7).

20. Section 90.3 is amended by adding a definition for "Fuel line" in alphabetical order to read as follows:

§ 90.3 Definitions.

* * * * *

Fuel line has the meaning given in 40 CFR 1054.801.

* * * * *

21. Section 90.7 is amended by adding paragraph (b)(3) to read as follows:

§ 90.7 Reference materials.

* * * * *

(b) * * *
 (3) *California Air Resources Board material*. The following table lists material from the California Air Resources Board 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 get copies of these materials from the California Air Resources Board, 9528 Telstar Ave., El Monte, California 91731.

| Document number and name | Part 90 reference |
|---|-------------------|
| "Tier 3 standards for Small Off-Road Engines," Mobile Source Division, California Air Resources Board | § 90.127 |

Subpart B—[Amended]

22. Section 90.101 is revised to read as follows:

§ 90.101 Applicability.

(a) The requirements of this subpart B are applicable to all nonroad engines and vehicles subject to the provisions of subpart A of this part.

(b) In a given model year, you may ask us to approve the use of procedures for certification, labeling, reporting, and recordkeeping specified in 40 CFR part 1054 or 1068 instead of the comparable procedures specified in this part 90. We may approve the request as long as it does not prevent us from ensuring that you fully comply with the intent of this part.

23. Section 90.107 is amended by revising paragraph (d)(11)(ii) and adding paragraphs (d)(12), (d)(13), (d)(14), and (d)(15) to read as follows:

§ 90.107 Application for certification.

* * * * *

(d) * * *
 (11) * * *

(ii) Provide the applicable useful life as determined under § 90.105;

(12) Describe in your application for certification how you comply with the requirements of §§ 90.127 and 90.129, if applicable.

(13) A statement indicating whether the engine family contains only nonroad engines, only stationary engines, or both;

(14) Identification of 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; and

(15) For imported engines, identification of the following:

- (i) The port(s) at which the manufacturer will import the engines.
- (ii) The names and addresses of the agents authorized to import the engines.
- (iii) The location of test facilities in the United States where the manufacturer can test engines if EPA selects them for testing under a selective

enforcement audit, as specified in subpart F of this part.

* * * * *

24. Section 90.114 is amended by adding paragraph (g) to read as follows:

§ 90.114 Requirement of certification—engine information label.

* * * * *

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

25. Section 90.116 is amended as follows:

- a. By revising paragraphs (a) introductory text and (d)(5).
- b. By removing and reserving paragraph (e)(1).
- c. By adding paragraph (g).

§ 90.116 Certification procedure—determining engine displacement, engine class, and engine families.

(a) Except as specified in paragraph (g) of this section, engine displacement must be calculated using nominal engine values and rounded to the nearest whole cubic centimeter in accordance with ASTM E29–93a. This procedure has been incorporated by reference. See § 90.7.

* * * * *

(d) * * *

(5) The engine class. In addition, engines of different displacements that are within 15 percent of the largest displacement may be included within the same engine family as long as all the engines are in the same class;

* * * * *

(g) Each engine produced under the provisions of § 90.1(b) must have a total displacement at or below 1000.0 cc after rounding to the nearest 0.1 cc.

26. Section 90.120 is amended by adding paragraph (b)(3) to read as follows:

§ 90.120 Certification procedure—use of special test procedures.

* * * * *

(b) * * *

(3) A manufacturer may elect to use the test procedures in 40 CFR part 1065

as an alternate test procedure without getting advance approval by the Administrator or meeting the other conditions of paragraph (b)(1) of this section. The manufacturer must identify in its application for certification that the engines were tested using the procedures in 40 CFR part 1065. For any EPA testing with Phase 1 or Phase 2 engines, EPA will use the manufacturer's selected procedures for mapping engines, generating duty cycles, and applying cycle-validation criteria. For any other parameters, EPA may conduct testing using either of the specified procedures.

* * * * *

27. A new § 90.127 is added to subpart B to read as follows:

§ 90.127 Fuel line permeation from nonhandheld engines and equipment.

The following permeation standards apply to new nonhandheld engines and equipment with respect to fuel lines:

(a) *Emission standards and related requirements.* New nonhandheld engines and equipment that run on a volatile liquid fuel (such as gasoline) must meet the emission standards specified in paragraph (a)(1) or (a)(2) of this section starting in the 2009 model year for small-volume engine manufacturers and small-volume equipment manufacturers (as defined in 40 CFR 1054.801), and in the 2008 model year for all other engines and equipment, as follows:

(1) New nonhandheld engines and equipment must use only fuel lines that meet a permeation emission standard of 15 g/m²/day when measured according to the test procedure described in 40 CFR 1060.515. This standard applies to any fuel line that is exposed to liquid fuel during normal operation.

(2) Alternatively, new nonhandheld engines and equipment must use only fuel lines that meet standards that apply for these engines in California for the same model year (the California standards are incorporated by reference in § 90.7). This may involve SHED-based measurements for equipment or testing with fuel lines alone. If this involves SHED-based measurements, all elements of the emission-control system

must remain in place for fully assembled engines and equipment.

(3) The emission standards in this section apply with respect to discrete fuel line segments of any length. Compliance may also be demonstrated using aggregated systems that include multiple sections of fuel line with connectors, and fittings. The standard applies with respect to the total permeation emissions divided by the wetted internal surface area of the assembly. Where it is not practical to determine the wetted internal surface area of the assembly, the internal surface area per unit length of the assembly may be assumed to be equal to the ratio of internal surface area per unit length of the hose section of the assembly.

(4) The emission standards in this section apply over a useful life of five years.

(5) Fuel lines must be labeled in a permanent and legible manner with one of the following approaches:

(i) By meeting the labeling requirements that apply for these engines in California.

(ii) By identifying the certificate holder's corporate name or trademark, or the fuel line manufacturer's corporate name or trademark, and the fuel line's permeation level. For example, the fuel line may identify the emission standard from this section, the applicable SAE classification, or the family number identifying compliance with California standards. A continuous stripe or other pattern may be added to help identify the particular type or grade of fuel line.

(6) The requirements of this section do not apply to auxiliary marine engines.

(b) *Certification requirements.* To certify that you meet the standards of this section, you must have emission data from your testing or from the fuel line manufacturer using the appropriate procedures that demonstrate compliance with the standard, including any of the following:

(1) Emission data demonstrating compliance with fuel line permeation requirements for model year 2008 equipment sold in California. You may satisfy this requirement by presenting an approved Executive Order from the California Air Resources Board showing that the fuel lines meet the applicable standards in California.

(2) Emission data demonstrating a level of permeation control that meets any of the following industry standards:

(i) R11A specifications in SAE J30 (incorporated by reference in § 90.7).

(ii) R12 specifications in SAE J30 (incorporated by reference in § 90.7).

(iii) Category 1 specifications in SAE J2260 (incorporated by reference in § 90.7).

(iv) Emission data demonstrating compliance with the fuel line permeation standards in 40 CFR 1051.110.

(c) *Prohibitions.* (1) Except as specified in paragraph (c)(2) of this section, introducing engines or equipment into U.S. commerce without meeting all the requirements of this section violates § 90.1003(a)(1).

(2) It is not a violation to introduce your engines into U.S. commerce if other companies add fuel lines when installing your engines in their equipment. However, you must give equipment manufacturers any appropriate instructions so that fully assembled equipment will meet all the requirements in this section, as described in § 90.128.

28. A new § 90.128 is added to subpart B to read as follows:

§ 90.128 Installation instructions.

(a) If you sell an engine for someone else to install in a piece of nonroad 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. In particular, describe the steps needed to control evaporative emissions, as described in § 90.127. This may include information related to the delayed requirements for small-volume equipment manufacturers.

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

(c) 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.

(d) Equipment manufacturers failing to follow the engine manufacturer's emission-related installation instructions will be considered in violation of § 90.1003(a)(3).

29. A new § 90.129 is added to subpart B to read as follows:

§ 90.129 Fuel tank permeation from handheld engines and equipment.

The following permeation standards apply to certain new handheld engines and equipment with respect to fuel tanks:

(a) *Emission standards and related requirements.* (1) New handheld engines

and equipment that run on a volatile liquid fuel (such as gasoline) and have been certified to meet applicable fuel tank permeation standards in California must meet one of the following emission standards starting in the 2009 model year, as follows:

(i) Engines and equipment must use only fuel tanks that meet a permeation emission standard of 2.0 g/m²/day when measured according to the applicable test procedure specified by the California Air Resources Board.

(ii) Engines and equipment must use only fuel tanks that meet the fuel tank permeation standards in 40 CFR 1060.103.

(iii) Engines and equipment must use only fuel tanks that meet standards that apply for these engines in California for the same model year. This may involve SHED-based measurements for equipment or testing with fuel tanks alone. If this involves SHED-based measurements, all elements of the emission-control system must remain in place for fully assembled engines and equipment.

(2) Engine and equipment manufacturers may generate or use emission credits to show compliance with the requirements of this section under the averaging program as described in 40 CFR part 1054, subpart H.

(3) The emission standards in this section apply over a useful life of two years.

(4) Equipment must be labeled in a permanent and legible manner with one of the following approaches:

(i) By meeting the labeling requirements that apply for equipment in California.

(ii) By identifying the certificate holder's corporate name or trademark, or the fuel tank manufacturer's corporate name or trademark. Also identify the family number identifying compliance with California standards or state: "THIS FUEL TANK COMPLIES WITH U.S. EPA STANDARDS." This label may be applied to the fuel tank or it may be combined with the emission control information label required in § 90.114. If the label information is not on the fuel tank, the label must include a part identification number that is also permanently applied to the fuel tank.

(5) The requirements of this section do not apply to engines or equipment with structurally integrated nylon fuel tanks (as defined in 40 CFR 1054.801).

(b) *Certification requirements.* To certify that you meet the standards of this section, you must have emission data from your testing or from the fuel tank manufacturer using the appropriate procedures that demonstrate

compliance with the standard. You may satisfy this requirement by presenting an approved Executive Order from the California Air Resources Board showing that the fuel tanks meet the applicable standards in California.

(c) *Prohibitions.* Introducing equipment into U.S. commerce without meeting all the requirements of this section violates § 90.1003(a)(1).

Subpart C—[Amended]

30. Section 90.201 is revised to read as follows:

§ 90.201 Applicability.

(a) The requirements of this subpart C are applicable to all Phase 2 spark-ignition engines subject to the provisions of subpart A of this part except as provided in § 90.103(a). These provisions are not applicable to any Phase 1 engines. Participation in the averaging, banking and trading program is voluntary, but if a manufacturer elects to participate, it must do so in compliance with the regulations set forth in this subpart. The provisions of this subpart are applicable for HC+NO_x (NMHC+NO_x) emissions but not for CO emissions.

(b) See 40 CFR 1054.740 for special provisions for using emission credits generated under this part 90 from Phase 2 engines to demonstrate compliance with engines certified under 40 CFR part 1054.

31. Section 90.210 is amended by adding paragraph (i) to read as follows:

§ 90.210 End-of-year and final reports.

(i) For 2007 and later model years, include in your end-of-year and final reports an accounting to show a separate balance of emission credits for handheld and nonhandheld engines. Use your best judgment to differentiate your current balance of banked credits for handheld and nonhandheld engines. You may exchange handheld and nonhandheld credits to demonstrate compliance with the requirements of this part 90. However, emission credits you generate for banking under this part 90 will be restricted for engines subject to the requirements of 40 CFR part 1054.

Subpart G—[Amended]

32. Section 90.601 is amended by adding paragraph (c) to read as follows:

§ 90.601 Applicability.

(c) Importers must complete the appropriate EPA declaration form before importing an engine. These forms are available on the Internet at <http://www.epa.gov/OTAQ/imports/> or by phone at 734-214-4100. Importers must keep the forms for five years and make them available promptly upon request.

33. A new § 90.616 is added to subpart G to read as follows:

§ 90.616 Model year restrictions related to imported engines and equipment.

The provisions of 40 CFR 1054.695 apply starting January 1, 2009. These provisions limit the importation of engines or equipment after new emission standards have started to apply where the engines or equipment were built before the emission standards took effect.

Subpart J—[Amended]

34. Section 90.910 is amended by adding paragraph (c) to read as follows:

§ 90.910 Granting of exemptions.

(c) Manufacturers may ask EPA to apply the provisions of 40 CFR 1068.201(i) to engines exempted or excluded under this subpart.

Subpart K—[Amended]

35. Section 90.1003 is amended by revising paragraph (b)(3) to read as follows:

§ 90.1003 Prohibited acts.

(b) * * * * *
(3) The following provisions apply for converting nonroad engine to use alternative fuels:

(i) Until December 31, 2009, converting an engine to use a clean alternative fuel (as defined in Title II of the Act) is not considered a prohibited act under § 90.1003(a) if the vehicle or equipment complies with the applicable standard when operating on the alternative fuel, and the device or element is replaced upon completion of the conversion procedure. Also, in the case of engines converted to dual fuel or flexible use, the action must result in the proper functioning of the device or element when the nonroad engine operates on conventional fuel.

(ii) The provisions of 40 CFR 1054.635 apply starting January 1, 2010.

36. A new § 90.1007 is added to subpart K to read as follows:

§ 90.1007 Bonding requirements related to recall and compliance assurance.

The provisions of 40 CFR 1054.685 and 1054.690 apply starting with the 2009 model year. These provisions include measures to ensure that certifying manufacturers are able to cover any potential compliance,

enforcement, or recall actions under the Clean Air Act.

Subpart L—[Amended]

37. Section 90.1103 is amended by adding paragraph (e) to read as follows:

§ 90.1103 Emission warranty, warranty period.

(e) Starting with the 2009 model year, you must meet the conditions specified in 40 CFR 1054.120(f) to ensure that owners will be able to promptly obtain warranty repairs. Describe in your application for certification how you will meet these conditions.

PART 91— CONTROL OF EMISSIONS FROM MARINE SPARK-IGNITION ENGINES

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

Authority: 42 U.S.C. 7401—7671q.

Subpart A—[Amended]

39. Section 91.1 is amended by adding paragraph (d) to read as follows:

§ 91.1 Applicability.

(d) This part does not apply to engines that are subject to emission standards under 40 CFR part 1045. See 40 CFR 1045.1 to determine when that part 1045 applies. Note that certain requirements and prohibitions apply to engines built on or after January 1, 2009 if they are installed in equipment that will be used solely for competition, as described in 40 CFR 1045.1 and 40 CFR 1068.1; those provisions apply instead of the provisions of this part 91.

Subpart B—[Amended]

40. Section 91.101 is revised to read as follows:

§ 91.101 Applicability.

(a) The requirements of this subpart B are applicable to all engines subject to the provisions of subpart A of this part.

(b) In a given model year, you may ask us to approve the use of procedures for certification, labeling, reporting, and recordkeeping specified in 40 CFR part 1045 or 1068 instead of the comparable procedures specified in this part 91. We may approve the request as long as it does not prevent us from ensuring that you fully comply with the intent of this part.

41. Section 91.107 is amended by adding paragraph (d)(12) to read as follows:

§ 91.107 Application for certification.

(d) * * *

(12) Identification of 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.

* * * * *

42. Section 91.119 is amended by adding paragraph (b)(3) to read as follows:

§ 91.119 Certification procedure—use of special test procedures.

* * * * *

(b) * * *

(3) A manufacturer may elect to use the test procedures in 40 CFR part 1065 as an alternate test procedure without getting advance approval by the Administrator or meeting the other conditions of paragraph (b)(1) of this section. The manufacturer must identify in its application for certification that the engines were tested using the procedures in 40 CFR part 1065. For any EPA testing with engines subject to standards under this part, EPA will use the manufacturer's selected procedures for mapping engines, generating duty cycles, and applying cycle-validation criteria. For any other parameters, EPA may conduct testing using either of the specified procedures.

* * * * *

Subpart K—[Amended]

43. Section 91.1010 is amended by adding paragraph (c) to read as follows:

§ 91.1010 Granting of exemptions.

* * * * *

(c) Manufacturers may ask EPA to apply the provisions of 40 CFR 1068.201(i) to engines exempted or excluded under this subpart.

44. A new § 91.1013 is added to subpart K to read as follows:

§ 91.1013 Exemption for certified Small SI engines.

The provisions of 40 CFR 1045.605 apply for engines subject to the standards of this part 91. This generally allows manufacturers to use marine engines that have been certified to emission standards for nonroad spark-ignition engines below 19 kW without recertifying those engines under this part 91.

45. A new part 1027 is added to subchapter U of chapter I to read as follows:

PART 1027—FEES FOR ENGINE, VEHICLE, AND EQUIPMENT COMPLIANCE PROGRAMS

Sec.

1027.101 To whom do these requirements apply?

1027.105 How much are the fees?

1027.110 What special provisions apply for certification related to motor vehicles?

1027.115 What special provisions apply for certification related to nonroad and stationary engines?

1027.120 Can I qualify for reduced fees?

1027.125 Can I get a refund?

1027.130 How do I make a fee payment?

1027.135 What provisions apply to a deficient filing?

1027.140 What reporting and recordkeeping requirements apply under this part?

1027.150 What definitions apply to this subpart?

1027.155 What abbreviations apply to this subpart?

Authority: 42 U.S.C. 7401—7671q.

§ 1027.101 To whom do these requirements apply?

(a) This part prescribes fees manufacturers must pay for activities related to EPA's engine, vehicle, and equipment compliance program (EVECP). This includes activities related to approving certificates of conformity and performing tests and taking other steps to verify compliance with emission standards. You must pay fees as described in this part if you are a manufacturer of any of the following products:

(1) Motor vehicles and motor vehicle engines we regulate under 40 CFR part 86. This includes light-duty vehicles, light-duty trucks, medium-duty passenger vehicles, highway motorcycles, and heavy-duty highway engines and vehicles.

(2) The following nonroad engines and equipment:

(i) Locomotives and locomotive engines we regulate under 40 CFR part 92 or 1033.

(ii) Nonroad compression-ignition engines we regulate under 40 CFR part 89 or 1039.

(iii) Marine compression-ignition engines we regulate under 40 CFR part 94 or 1042.

(iv) Marine spark-ignition engines and vessels we regulate under 40 CFR part 91, 1045, or 1060. We refer to these as Marine SI engines.

(v) Nonroad spark-ignition engines above 19 kW we regulate under 40 CFR part 1048. We refer to these as Large SI engines.

(vi) Recreational vehicles we regulate under 40 CFR part 1051.

(vii) Nonroad spark-ignition engines and equipment at or below 19 kW we

regulate under 40 CFR part 90, 1054, or 1060. We refer to these as Small SI engines.

(3) The following stationary internal combustion engines:

(i) Stationary compression-ignition engines we certify under 40 CFR part 60, subpart III.

(ii) Stationary spark-ignition engines we certify under 40 CFR part 60, subpart JJJJ.

(b) This part applies to applications for certification that we receive on or after [EFFECTIVE DATE FOR FINAL RULE]. Earlier applications are subject to the provisions of 40 CFR part 85, subpart Y, as that provision read prior to [EFFECTIVE DATE FOR FINAL RULE].

(c) Nothing in this part limits our authority to conduct testing or to require you to conduct testing as provided in the Act, including our authority to require you to conduct in-use testing under section 208 of the Act (42 U.S.C. 7542).

(d) Paragraph (a) of this section identifies the parts of the CFR that define emission standards and other requirements for particular types of engines and vehicles. This part 1027 refers to each of these other parts generically as the "standard-setting part." For example, 40 CFR part 1051 is always the standard-setting part for recreational vehicles. For some nonroad engines, we allow for certification related to evaporative emissions separate from exhaust emissions. In this case, 40 CFR part 1060 is the standard-setting part for the equipment or fuel system components you produce.

§ 1027.105 How much are the fees?

(a) Fees are determined based on the date we receive a complete application for certification. Each reference to a year in this subpart refers to the calendar year, unless otherwise specified. Paragraph (b) of this section specifies baseline fees, which applied for certificates received in 2005. For engine and vehicles not yet subject to standards in 2005, these values represent the fees that apply initially based on available information to characterize what the fees would have been in 2005. See paragraph (c) of this section for provisions describing how we calculate fees for future years.

(b) The following baseline fees for each application for certification:

(1) Except as specified in paragraph (b)(2) of this section for Independent Commercial Importers, the following fees apply for motor vehicles and motor vehicle engines:

| Category | Certificate type | Fee |
|---|-----------------------|----------|
| (i) Light-duty vehicles and trucks | Federal | \$33,883 |
| (ii) Light-duty vehicles and trucks | California-only | 16,944 |
| (iii) Medium-duty passenger vehicles | Federal | 33,883 |
| (iv) Medium-duty passenger vehicles | California-only | 16,944 |
| (v) Highway motorcycle | All | 2,414 |
| (vi) Heavy-duty highway engine | Federal | 21,578 |
| (vii) Heavy-duty highway engine | California-only | 826 |
| (viii) Complete heavy-duty highway vehicles | Federal | 33,883 |
| (ix) Complete heavy-duty highway vehicles | California-only | 16,944 |
| (x) Heavy-duty vehicle | Evap | 826 |

(2) A fee of \$8,387 applies for Independent Commercial Importers with respect to the following motor vehicles:

- (i) Light-duty vehicles and light-duty trucks.
- (ii) Medium-duty passenger vehicles.
- (iii) Complete heavy-duty highway vehicles.

(3) The following fees apply for nonroad and stationary engines, vehicles, equipment, and components:

| Category | Certificate type | Fee |
|--|---|-------|
| (i) Locomotives and locomotive engines | All | \$826 |
| (ii) Marine compression-ignition engines and stationary compression-ignition engines with per-cylinder displacement at or above 10 liters. | All, including Annex VI | 826 |
| (iii) Other nonroad compression-ignition engines and stationary compression-ignition engines with per-cylinder displacement below 10 liters. | All | 1,822 |
| (iv) Large SI engines | All | 826 |
| (v) Marine SI engines and Small SI engines | Exhaust only | 826 |
| (vi) Recreational vehicles | Exhaust (or combined exhaust and evap) | 826 |
| (vii) Stationary spark-ignition engines | Exhaust (or combined exhaust and evap) | 826 |
| (viii) Equipment and fuel system components associated with nonroad and stationary spark-ignition engines. | Evap (where separate certification is required) | 241 |

(c) We will calculate adjusted fees for later years based on changes in the Consumer Price Index and the number of certificates. We will announce adjusted fees for a given year by January 31 of the preceding year.

(1) We will adjust the values specified in paragraph (b) of this section for later years as follows:

(i) Use the fee identified in § 1027.105(b)(3) through 2014 for certification related to evaporative emissions from nonroad and stationary engines when a separate fee applies for certification to evaporative emission standards. Use the following equation starting with 2015:

$$\text{Certificate Fee}_{CY} = [(\text{Op} + \text{L}) \cdot (\text{CPI}_{CY-2} / \text{CPI}_{2006})] \cdot 1.169 / [(\text{cert}\#_{MY-2} + \text{cert}\#_{MY-3}) \cdot 0.5]$$

Where:

Certificate Fee_{CY} = Fee per certificate for a given year.

Op = operating costs are all of EPA's nonlabor costs for each category's compliance program, including any fixed costs associated with EPA's testing laboratory, as described in paragraph (d)(1) of this section.

L = the labor costs, to be adjusted by the Consumer Price Index, as described in paragraph (d)(1) of this section.
 CPI_{CY-2} = the Consumer Price Index for the month of November two years before the applicable calendar year, as described in paragraph (d)(2) of this section.
 CPI₂₀₀₆ = 201.8. This is based on the October 2006 value of the Consumer Price Index.

OH = 1.169. This is based on EPA overhead, which is applied to all costs.

cert#_{MY-2} = the total number of certificates issued for a fee category in the model year two years before the calendar year for the applicable fees as described in paragraph (d)(3) of this section.

cert#_{MY-3} = the total number of certificates issued for a fee category in the model year three years before the calendar year for the applicable fees as described in paragraph (d)(3) of this section.

(ii) Use the following equation for all other certificates for 2006 and later:

$$\text{Certificate Fee}_{CY} = [\text{Op} + \text{L} \cdot (\text{CPI}_{CY-2} / \text{CPI}_{2002})] \cdot 1.169 / [(\text{cert}\#_{MY-2} + \text{cert}\#_{MY-3}) \cdot 0.5]$$

Where:

CPI₂₀₀₂ = 180.9. This is based on the December 2002 value of the Consumer Price Index as described in paragraph (d)(2) of this section.

(2) The fee for any year will remain at the previous year's amount until the value calculated in paragraph (c)(1) of this section differs by at least \$50 from the amount specified for the previous year.

(d) Except as specified in § 1027.110(a) for motor vehicles and motor vehicle engines, we will use the following values to determine adjusted fees using the equation in paragraph (c) of this section:

(1) The following values apply for operating costs and labor costs:

| Engine or vehicle category | Op | L |
|--|-------------|-------------|
| (i) Light-duty, medium-duty passenger, and complete heavy-duty highway vehicle certification | \$3,322,039 | \$2,548,110 |
| (ii) Light-duty, medium-duty passenger, and complete heavy-duty highway vehicle in-use testing | 2,858,223 | 2,184,331 |
| (iii) Independent Commercial Importers identified in § 1027.105(b)(2) | 344,824 | 264,980 |
| (iv) Highway motorcycles | 225,726 | 172,829 |
| (v) Heavy-duty highway engines | 1,106,224 | 1,625,680 |
| (vi) Nonroad compression-ignition engines | 486,401 | 545,160 |
| (vii) Evaporative certificates related to nonroad and stationary engines | 5,039 | 236,670 |
| (viii) All other | 177,425 | 548,081 |

(2) The applicable Consumer Price Index is based on the values published by the Bureau of Labor Statistics for all U.S. cities using the "U.S. city average" area, "all items," and "not seasonally adjusted" numbers (see <ftp://ftp.bls.gov/pub/special.requests/cpi/cpiat.txt>). For example, we calculated the 2006 fees using the Consumer Price Index for November 2004, which is 191.0.

(3) Fee categories for counting the number of certificates issued are based on the grouping shown in paragraph (d)(1) of this section.

(e) The following example for calculating the 2006 complete federal heavy duty highway vehicle fee illustrates the fee adjustment:

Op = \$1,106,224
 L = \$1,625,680
 CPI₂₀₀₂ = 180.9
 CPI₂₀₀₄ = 191.0
 cert#₂₀₀₄ = 131
 cert#₂₀₀₃ = 95
 Fee₀₆ = [$\$1,106,224 + \$1,625,680 \cdot (191.0/180.9)$] $\cdot 1.169/[(131+95) \cdot 0.5]$ = \$29,200.88
 Assessed Fee = \$29,201

§ 1027.110 What special provisions apply for certification related to motor vehicles?

(a) We will adjust fees for 2006 and later years for light-duty, medium-duty passenger, and complete heavy-duty highway vehicles as follows:

(1) California-only certificates.

Calculate adjusted fees for California-only certificates by applying the light-duty, medium-duty passenger, and complete heavy-duty highway vehicle certification Op and L values to the equation in § 1027.105(c). The total number of certificates issued will be the total number of California-only and federal light-duty, medium-duty passenger, and complete heavy-duty highway vehicle certificates issued during the appropriate model years.

(2) *Federal certificates.* Calculate adjusted fees for federal certificates with the following three steps:

(i) Apply the light-duty, medium-duty passenger, and complete heavy-duty highway vehicle certification Op and L values to the equation in § 1027.105(c) to determine the certification portion of the light-duty fee. The total number of certificates issued will be the total number of California-only and federal light-duty, medium-duty passenger and complete heavy-duty highway vehicle certificates issued during the appropriate model years.

(ii) Apply the light-duty, medium-duty passenger, and complete heavy-duty highway vehicle in-use testing Op and L values to the equation in § 1027.105(c) to determine the in-use testing portion of the fee. The total

number of certificates issued will be the total number of federal light-duty, medium-duty passenger, and complete heavy-duty highway vehicle certificates issued during the appropriate model years.

(iii) Add the certification and in-use testing portions determined in paragraphs (a)(2)(i) and (ii) of this section to determine the total light-duty, medium-duty passenger, and complete heavy-duty highway vehicle fee for each federal certificate.

(b) For light-duty vehicles, light-duty trucks, medium-duty passenger vehicles, highway motorcycles, and complete heavy-duty highway vehicles subject to exhaust emission standards, the number of certificates issued as specified in § 1027.105(d)(3) is based only on engine families with respect to exhaust emissions. A separate fee applies for each evaporative family for heavy-duty engines.

(c) If you manufacture a heavy-duty vehicle that another company has certified as an incomplete vehicle such that you exceed the maximum fuel tank size specified by the original manufacturer in the applicable certificate of conformity, you must submit a new application for certification and certification fee for the vehicle.

§ 1027.115 What special provisions apply for certification related to nonroad and stationary engines?

(a) For nonroad spark-ignition engines above 19 kW that we regulate under 40 CFR part 1048 and for all compression-ignition engines, the applicable fee is based only on engine families with respect to exhaust emissions.

(b) For manufacturers certifying recreational vehicles with respect to both exhaust and evaporative emission standards, fees are determined using one of the following approaches:

(1) If your engine family includes demonstration of compliance with both exhaust and evaporative emission standards, the applicable fee is based on certification related to the combined family. No separate fee applies for certification with respect to evaporative emission standards. These are all considered engine families complying with exhaust emissions for determining the number of certificates for calculating fees for later years.

(2) If you have separate families for demonstrating compliance with exhaust and evaporative emission standards, a separate fee from the appropriate fee category applies for each unique family. Also, the number of certificates issued as specified in § 1027.105(d)(3) is based on a separate count of emission families

for exhaust and evaporative emissions for each respective fee category.

(c) For manufacturers certifying other spark-ignition engines or equipment with respect to exhaust and evaporative emission standards, a separate fee from the appropriate fee category applies for each unique family. A single engine or piece of equipment may involve separate emission families and certification fees for exhaust and evaporative emissions. Also, the number of certificates issued as specified in § 1027.105(d)(3) is based on a separate count of emission families for exhaust and evaporative emissions for each respective fee category.

(d) For any certification related to evaporative emissions from engines, equipment, or components not covered by paragraph (a) through (c) of this section, the fee applies for each certified product independent of certification for exhaust emissions, as illustrated in the following examples:

(1) A fuel tank certified to meet permeation and diurnal emission standards would count as a single family for assessing the certification fee and for calculating fee amounts for future years.

(2) If an equipment manufacturer applies for certification to generate or use emission credits for fuel, tanks and fuel lines, each affected fuel-tank and fuel-line family would count as a single family for assessing the certification fee and for calculating fee amounts for future years. This fee applies whether or not the equipment manufacturer is applying for certification to demonstrate compliance with another emission standard, such as running losses.

(e) If you certify fuel system components under 40 CFR part 1060, a single fee applies for each emission family even if those components are used with different types of nonroad or stationary engines.

(f) If your application for certification relates to emission standards that apply only in California, you must pay the same fee identified for meeting EPA standards.

(g) For marine compression-ignition engines, if you apply for a federal certificate and an Annex VI certificate for the same engine family, a single fee applies for the engine family (see 40 CFR parts 94 and 1042).

(h) If you produce engines for multiple categories in a single engine family, a single fee applies for the engine family. For example, 40 CFR 60.4210 allows you to produce stationary and nonroad compression-ignition engines in a single engine family. If the certification fee for the different types of engines is different,

the fee that applies for these engines is based on the emission standards to which you certify the engine family. For example, if you certify marine diesel engines to the standards that apply to land-based nonroad diesel engines under 40 CFR 94.912, the certification fee is based on the rate that applies for land-based nonroad diesel engines.

§ 1027.120 Can I qualify for reduced fees?

(a) *Eligibility requirements.* To be eligible for a reduced fee, the following conditions must be satisfied:

(1) The certificate is to be used for sale of vehicles or engines within the United States; and

(2) The full fee for an application for certification for a model year exceeds 1.0% of the aggregate projected retail sales price of all vehicles or engines covered by that certificate.

(b) *Initial reduced fee calculation.* (1) If the requirements of paragraph (a) of this section are satisfied, the initial fee paid shall be \$750 or 1.0% of the aggregate projected retail sales price of all the vehicles or engines to be covered by the certification application, whichever is greater.

(2) For vehicles or engines that are converted to operate on an alternative fuel, using as the basis for the conversion a vehicle or engine which is covered by an existing certificate of conformity, the cost basis used in this section must be the aggregate projected retail value-added to the vehicle or engine by the conversion rather than the full cost of the vehicle or engine. To qualify for this provision, the existing certificate must cover the same sales area and model year as the requested certificate for the converted vehicle or engine.

(3) For ICI certification applications, the cost basis of this section shall be the aggregate projected retail cost of the entire vehicle(s) or engine(s), not just the value added by the conversion. If the vehicles/engines covered by an ICI certificate are not being offered for sale, the manufacturer shall use the fair retail market value of the vehicles/engines as the retail sale price required in this section. For an ICI application for certification, the retail sales price (or fair retail market value) must be based on the applicable National Automobile Dealer's Association (NADA) appraisal guide and/or other evidence of the actual market value.

(4) The aggregate cost used in this section must be based on the total projected sales of all vehicles and engines under a certificate, including vehicles and engines modified under the modification and test option in 40 CFR 85.1509 and 89.609. The projection

of the number of vehicles or engines to be covered by the certificate and their projected retail selling price must be based on the latest information available at the time of the fee payment.

(5) A manufacturer may submit a reduced fee as described in this section if it is accompanied by a calculation of the fee based on the number of vehicles covered and the projected aggregate retail sales price as specified on the fee filing form. The reduced fee calculation shall be deemed approved unless EPA determines that the criteria of this section have not been met. The Agency may make such a determination either before or after EPA issues a certificate of conformity. If the Agency determines that the requirements of this section have not been met, EPA may deny future reduced fee applications and require submission of the full fee payment until such time as the manufacturer demonstrates to the satisfaction of the Administrator that its reduced fee submissions are based on accurate data and that final fee payments are made within 45 days of the end of the model year.

(6) If the reduced fee is denied by the Administrator, the applicant will have 30 days from the date of notification of the denial to submit the appropriate fee to EPA.

(c) *Revision of the number of vehicles or engines covered by the certificate.* (1) If after the original certificate, including a certificate under which modification and test vehicles are imported under 40 CFR 85.1509 and 89.609, is issued, the number of vehicles or engines to be produced or imported under the certificate exceeds the number indicated on the certificate, the manufacturer or importer shall—

(i) Request that EPA revise the certificate with a number that indicates the new projection of the vehicles or engines to be covered by the certificate. The revised certificate must be applied for, revised and issued before the vehicles or engines are sold or finally imported into the United States; and

(ii) Submit payment of 1.0% of the aggregate projected retail sales price of all the vehicles or engines above the number of vehicles or engines listed on the certificate to be covered by the application for certification.

(2) A manufacturer must receive a revised certificate prior to the sale or final importation of any vehicles or engines, including modification and test vehicles, that are not originally included in the certificate issued under paragraph (b) of this section, or as indicated in a revised certificate issued under paragraph (c)(1) of this section. In the event that a certificate is not timely

revised such additional vehicles or engines are not covered by a certificate of conformity.

(d) *Final reduced fee calculation and adjustment.* (1) If the initial fee payment is less than the final reduced fee, then the manufacturer shall pay the difference between the initial reduced fee and the final reduced fee using the provisions of § 1027.130. The final reduced fee shall be calculated using the procedures of paragraph (c) of this section but using actual production figures rather than projections and actual retail sales value rather than projected retail sales value.

(2) This payment shall be paid within 45 days of the end of the model year. The total fees paid for a certificate shall not exceed the applicable full fee of § 1027.105. If a manufacturer fails to make complete payment with 45 days then the Agency may void ab initio the applicable certificate. EPA may also refuse to grant reduced fee requests submitted under paragraph (b)(5) of this section.

(3) If the initial fee payment exceeds the final reduced fee then the manufacturer may request a refund using the procedures of § 1027.125.

(e) *Records retention.* Manufacturers are subject to the applicable maintenance of records requirements of 40 CFR part 86, subpart A. If a manufacturer fails to maintain the records or provide such records to EPA as required then EPA may void the certificate for which such records shall be kept. Manufacturers must retain in their records the basis used to calculate the projected sales and fair retail market value and the actual sales and retail price for the vehicles and engines covered by each certificate that is issued under the reduced fee provisions of this section. This information must be retained for a period of at least three years after the issuance of the certificate and must be provided to the Agency within 30 days of request.

§ 1027.125 Can I get a refund?

(a) We will refund the total fee imposed under this part if you ask for a refund after failing to get a certificate for any reason.

(b) If your actual sales or the actual retail prices in a given year are less than you projected for calculating a reduced fee under § 1027.120, we will refund the appropriate portion of the fee. We will also refund a portion of the initial payment if it exceeds the final fee for the engines, vehicles, or equipment covered by the certificate application.

(1) You are eligible for a partial refund related to a certificate only if you sold

engines, vehicles, or equipment under that certificate in the United States.

(2) Include all the following in your request for a partial refund of reduced fee payments:

(i) State that you sold engines, vehicles, or equipment under the applicable certificate in the United States.

(ii) Identify the number of engines, vehicles, or equipment you produced or imported under the certificate, and whether the engines, vehicles, or equipment have been sold.

(iii) Identify the reduced fee that you paid under the applicable certificate.

(iv) Identify the actual retail sales price for the engines, vehicles, or equipment produced or imported under the certificate.

(v) Calculate the final value of the reduced fee using actual production figures and retail prices.

(vi) Calculate the refund amount.

(c) We will approve your request to correct errors in the amount of the fee.

(d) All refunds must be applied for within six months of the end of the model year.

(e) Send refund and correction requests to the Fee Program Specialist, U.S. Environmental Protection Agency, Vehicle Programs and Compliance Division, 2000 Traverwood Dr., Ann Arbor, MI 48105, online at www.Pay.gov, or as specified in guidance by the Administrator.

(e) You may request to have refund amounts applied to the amount due on another application for certification.

§ 1027.130 How do I make a fee payment?

(a) Pay fees to the order of the Environmental Protection Agency in U.S. dollars using any of the following methods: money order, bank draft, certified check, corporate check, electronic funds transfer, any method available for payment online at www.Pay.gov, or as specified in EPA guidance

(b) Send a completed fee filing form to the address designated on the form for each fee payment or electronically at www.Pay.gov, or as provided in EPA guidance. These forms are available on the Internet at <http://www.epa.gov/otaq/guidance.htm>.

(c) You must pay the fee amount due before we will start to process an application for certification.

(d) If we deny a reduced fee, you must pay the proper fee within 30 days after we notify you of our decision.

§ 1027.135 What provisions apply to a deficient filing?

(a) Any filing under this part is deficient if it is not accompanied by a

completed fee filing form and full payment of the appropriate fee.

(b) A deficient filing will be rejected unless the completed form and full payment are submitted within a time limit we specify. We will not process an application for certification if the associated filing is deficient.

§ 1027.140 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, vehicles, and equipment regulated under this part:

(a) Filing out fee filing forms under § 1027.130.

(b) Retaining fee records, including reduced fee documentation, under § 1027.120.

§ 1027.150 What definitions apply to this subpart?

The definitions in this section apply to this part. As used in this part, all undefined terms have the meaning the Act or the standard-setting part gives to them. The definitions follow:

Annex VI means MARPOL Annex VI, which is an annex to the International Convention on the Prevention of Pollution from Ships, 1973, as modified by the protocol of 1978 relating thereto. This is an international treaty regulating disposal of waste products from marine vessels.

Application for Certification means a manufacturer's submission of an application for certification.

California-only certificate is a certificate of conformity issued by EPA showing compliance with emission standards established by California.

Federal certificate is a certificate of conformity issued by EPA showing compliance with EPA emission standards specified in one of the standard-setting parts specified in § 1027.101(a).

Light-duty means relating to light-duty vehicles and light-duty trucks.

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 engine, vehicle, vessel, or piece of equipment into commerce in the United States. This includes importers who import such products for resale, but not dealers.

Total number of certificates issued means the number of certificates for

which fees have been paid. This term is not intended to represent multiple certificates that are issued within a single family or test group.

Void has the meaning given in 40 CFR 1068.30.

We (us, our) means the Administrator of the Environmental Protection Agency and any authorized representatives.

§ 1027.155 What abbreviations apply to this subpart?

The following symbols, acronyms, and abbreviations apply to this part:

CFR Code of Federal Regulations
EPA U.S. Environmental Protection Agency

Evap Evaporative Emissions

ICI Independent Commercial Importer

46. A new part 1045 is added to subchapter U of chapter I to read as follows:

PART 1045 CONTROL OF EMISSIONS FROM SPARK-IGNITION PROPULSION MARINE ENGINES

Subpart A Overview and Applicability

Sec.

1045.1 Does this part apply for my products?

1045.2 Who is responsible for compliance?

1045.5 Which engines are excluded from this part's requirements?

1045.10 How is this part organized?

1045.15 Do any other regulation parts apply to me?

1045.20 What requirements apply to my vessels?

1045.25 How do the requirements related to evaporative emissions apply to engines and their fuel systems?

Subpart B Emission Standards and Related Requirements

1045.101 What exhaust emission standards and requirements must my engines meet?

1045.103 What exhaust emission standards must my outboard and personal watercraft engines meet?

1045.105 What exhaust emission standards must my sterndrive/inboard engines meet?

1045.107 What are the standards for evaporative emissions?

1045.110 How must my engines diagnose malfunctions?

1045.115 What other requirements apply?

1045.120 What emission-related warranty requirements apply to me?

1045.125 What maintenance instructions must I give to buyers?

1045.130 What installation instructions must I give to vessel manufacturers?

1045.135 How must I label and identify the engines I produce?

1045.140 What is my engine's maximum engine power?

1045.145 Are there interim provisions that apply only for a limited time?

Subpart C—Certifying Engine Families

1045.201 What are the general requirements for obtaining a certificate of conformity?

- 1045.205 What must I include in my application?
- 1045.210 May I get preliminary approval before I complete my application?
- 1045.220 How do I amend the maintenance instructions in my application?
- 1045.225 How do I amend my application for certification to include new or modified engines or change an FEL?
- 1045.230 How do I select engine families?
- 1045.235 What emission testing must I perform for my application for a certificate of conformity?
- 1045.240 How do I demonstrate that my engine family complies with exhaust emission standards?
- 1045.245 How do I determine deterioration factors from exhaust durability testing?
- 1045.250 What records must I keep and what reports must I send to EPA?
- 1045.255 What decisions may EPA make regarding my certificate of conformity?

Subpart D—Testing Production-line Engines

- 1045.301 When must I test my production-line engines?
- 1045.305 How must I prepare and test my production-line engines?
- 1045.310 How must I select engines for production-line testing?
- 1045.315 How do I know when my engine family fails the production-line testing requirements?
- 1045.320 What happens if one of my production-line engines fails to meet emission standards?
- 1045.325 What happens if an engine family fails the production-line testing requirements?
- 1045.330 May I sell engines from an engine family with a suspended certificate of conformity?
- 1045.335 How do I ask EPA to reinstate my suspended certificate?
- 1045.340 When may EPA revoke my certificate under this subpart and how may I sell these engines again?
- 1045.345 What production-line testing records must I send to EPA?
- 1045.350 What records must I keep?

Subpart E—In-use Testing

- 1045.401 What testing requirements apply to my engines that have gone into service?
- 1045.405 How does this program work?
- 1045.410 How must I select, prepare, and test my in-use engines?
- 1045.415 What happens if in-use engines do not meet requirements?
- 1045.420 What in-use testing information must I report to EPA?
- 1045.425 What records must I keep?

Subpart F—Test Procedures

- 1045.501 How do I run a valid emission test?
- 1045.505 How do I test engines using discrete-mode or ramped-modal duty cycles?
- 1045.515 What are the test procedures related to not-to-exceed standards?
- 1045.520 What testing must I perform to establish deterioration factors?

Subpart G—Special Compliance Provisions

- 1045.601 What compliance provisions apply to these engines?
- 1045.605 What provisions apply to engines already certified under the motor-vehicle program or other nonroad spark-ignition engine programs?
- 1045.620 What are the provisions for exempting engines used solely for competition?
- 1045.630 What is the personal-use exemption?
- 1045.635 What special provisions apply for small-volume engine manufacturers?
- 1045.640 What special provisions apply to branded engines?
- 1045.645 What special provisions apply for converting an engine to use an alternate fuel?
- 1045.650 Do the provisions of 40 CFR 1068.260 apply for marine engines?
- 1045.660 How do I certify outboard or personal watercraft engines for use in jet boats?

Subpart H—Averaging, Banking, and Trading for Certification

- 1045.701 General provisions.
- 1045.705 How do I generate and calculate exhaust emission credits?
- 1045.706 How do I generate and calculate evaporative emission credits?
- 1045.710 How do I average emission credits?
- 1045.715 How do I bank emission credits?
- 1045.720 How do I trade emission credits?
- 1045.725 What must I include in my application for certification?
- 1045.730 What ABT reports must I send to EPA?
- 1045.735 What records must I keep?
- 1045.745 What can happen if I do not comply with the provisions of this subpart?

Subpart I—Definitions and Other Reference Information

- 1045.801 What definitions apply to this part?
- 1045.805 What symbols, acronyms, and abbreviations does this part use?
- 1045.810 What materials does this part reference?
- 1045.815 What provisions apply to confidential information?
- 1045.820 How do I request a hearing?
- 1045.825 What reporting and recordkeeping requirements apply under this part?
- Appendix I to Part 1045—Summary of Previous Emission Standards
- Appendix II to Part 1045—Duty Cycles for Propulsion Marine Engines

Authority: 42 U.S.C. 7401—7671q.

Subpart A—Overview and Applicability

§ 1045.1 Does this part apply for my products?

(a) Except as provided in § 1045.5, the regulations in this part 1045 apply as follows:

(1) The requirements of this part related to exhaust emissions apply to new, spark-ignition propulsion marine

engines beginning with the 2009 model year.

(2) The requirements of this part related to evaporative emissions apply to fuel lines and fuel tanks used with marine engines that use a volatile liquid fuel (such as gasoline) beginning with the 2009 model year as specified in 40 CFR part 1045.107. This includes fuel lines and fuel tanks used with auxiliary marine engines. This also includes portable marine fuel tanks and associated fuel lines.

(b) We specify optional standards for certifying sterndrive/inboard engines before the 2009 model year in § 1045.145(a). Engines certified to these standards are subject to all the requirements of this part as if these optional standards were mandatory.

(c) See 40 CFR part 91 for requirements that apply to outboard and personal watercraft engines not yet subject to the requirements of this part 1045.

(d) The provisions of §§ 1045.620 and 1045.801 apply for new engines used solely for competition beginning January 1, 2009.

§ 1045.2 Who is responsible for compliance?

The requirements and prohibitions of this part apply to manufacturers of engines and fuel-system components as described in § 1045.1. 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 manufacturer of fuel-system components. Vessel manufacturers must meet applicable requirements as described in § 1045.20.

§ 1045.5 Which engines are excluded from this part's requirements?

(a) *Auxiliary engines.* The exhaust emission standards of this part do not apply to auxiliary marine engines. See 40 CFR part 90, 1048, or 1054 for the exhaust emission standards that apply.

(b) *Hobby engines and vessels.* This part does not apply with respect to reduced-scale models of vessels that are not capable of transporting a person.

§ 1045.10 How is this part organized?

This part 1045 is divided into the following subparts:

(a) Subpart A of this part defines the applicability of this part 1045 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 § 1045.145 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, vessel 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 vessels.

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

§ 1045.15 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 § 1045.107 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 1045 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 1045, or vessels

powered by these engines. Part 1068 of this chapter describes general provisions, including these seven areas:

- (1) Prohibited acts and penalties for engine manufacturers, vessel 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.

§ 1045.20 What requirements apply to my vessels?

(a) If you manufacture vessels with engines certified to the exhaust emission standards in this part, your vessels must meet all emission standards with the engine and fuel system installed.

(b) You may need to certify your vessels or fuel systems as described in 40 CFR 1060.1 and 1060.601. If you produce vessels subject to this part without obtaining a certificate, you must still meet the requirements of 40 CFR 1060.101(e) and (f) and keep records as described in 40 CFR 1060.210.

(c) You must identify and label vessels you produce under this section consistent with the requirements of § 1045.135 and 40 CFR part 1060.

(d) You must follow all emission-related installation instructions from the certifying manufacturers as described in § 1045.130 and 40 CFR 1068.105. If you do not follow the installation instructions, we may consider your vessel to be not covered by the certificates of conformity. Introduction of such vessels into U.S. commerce violates 40 CFR 1068.101.

§ 1045.25 How do the requirements related to evaporative emissions apply to engines and their fuel systems?

(a) Engine manufacturers must provide the installation instructions required by § 1045.130 to the ultimate purchasers of the engine. These instructions may be combined with the maintenance instructions required by § 1045.125.

(b) Engines sold with attached fuel lines or installed fuel tanks must be covered by the appropriate certificates of conformity issued under 40 CFR part 1060.

(c) Fuel lines intended to be used with new engines and new portable fuel tanks must be certified to the applicable requirements of 40 CFR part 1060.

(d) All persons installing engines certified under this part 1045 must follow the certifying manufacturer's emission-related installation instructions (see § 1045.130 and 40 CFR 1068.105).

Subpart B—Emission Standards and Related Requirements

§ 1045.101 What exhaust emission standards and requirements must my engines meet?

(a) You must show that your engines meet the following requirements:

(1) Outboard and personal watercraft engines must meet the exhaust emission standards in § 1045.103.

(2) Sterndrive/inboard engines must meet the exhaust emission standards in § 1045.105. Sterndrive/inboard engines may also meet the optional standards in § 1045.145.

(3) Sterndrive/inboard engines must meet the engine-diagnostic requirements in § 1045.110.

(4) All engines must meet the requirements in § 1045.115.

(b) It is important that you read § 1045.145 to determine if there are other interim requirements or interim compliance provisions that apply for a limited time.

§ 1045.103 What exhaust emission standards must my outboard and personal watercraft engines meet?

(a) *Emission standards.* Starting in the 2009 model year, exhaust emissions from your outboard and personal watercraft engines may not exceed emission standards as follows:

(1) Measure emissions using the applicable steady-state test procedures described in subpart F of this part.

(2) The exhaust emission standards from the following table apply:

TABLE 1 TO § 1045.103—EMISSION STANDARDS FOR OUTBOARD AND PERSONAL WATERCRAFT ENGINES (G/KW-HR)

| Maximum Engine Power (P) | HC+NO _x | CO |
|--------------------------|--------------------|---------------|
| P ≤ 40 kW | 28 - 0.3 × P | 500 - 5.0 × P |
| P > 40 kW | 16.0 | 300 |

(3) For engines with maximum engine power at or below 40 kW, round the calculated HC+NO_x emission standard to the nearest 0.1 g/kW-hr; round the calculated CO emission standard to the nearest g/kW-hr.

(b) *Averaging, banking, and trading.* You may generate or use emission credits under the averaging, banking, and trading (ABT) program described in subpart H of this part for demonstrating compliance with HC+NO_x emission standards. For CO emissions, you may generate or use emission credits for averaging as described in subpart H of this part, but not for banking or trading. To generate or use emission credits, you must specify a family emission limit for each pollutant you include in the ABT program for each engine family. 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) For engines with maximum engine power at or below 4.3 kW, the maximum value of the family emission limit for HC+NO_x is 81.0 g/kW-hr. For all other engines, the maximum value of the family emission limit for HC+NO_x is defined by the following formula, with results rounded to the nearest 0.1 g/kW-hr:

$$FEL_{max,HC+NO_x} = 0.25(151 + 557/P^{0.9}) + 6.0.$$

(2) For engines with maximum engine power above 40 kW, the maximum value of the family emission limit for CO is 450 g/kW-hr. For all other engines, the maximum value is defined by the following formula, with results rounded to the nearest g/kW-hr:

$$FEL_{max,CO} = 650 - 5.0 \times P$$

(c) *Not-to-exceed standards.* Exhaust emissions may not exceed the not-to-exceed standards, as follows:

(1) Measure emissions using the not-to-exceed procedures in subpart F of this part:

(2) Determine the not-to-exceed standard, rounded to the same number of decimal places as the emission standard in Table 1 of this section, from the following equation:

$$\text{Not-to-exceed standard} = (\text{STD}) \times (M)$$

Where:

STD = The standard specified in paragraph (a) of this section if you certify without using ABT for that pollutant; or the FEL for that pollutant if you certify using ABT.

M = The NTE multiplier for that pollutant, as defined in paragraph (c)(3) of this section.

(3) Use one of the two sets of NTE multipliers from the following table across the applicable zone specified in § 1045.515:

TABLE 2 TO § 1045.103—NTE MULTIPLIERS FOR OUTBOARD AND PERSONAL WATERCRAFT ENGINES

| Approach | Pollutant | Subzone 1 | Subzone 2 | Subzone 3 | Subzone 4 |
|---------------------|--------------------|-----------|-----------|-----------|-----------|
| Primary | HC+NO _x | 1.20 | 1.20 | 1.20 | 1.60 |
| | CO | 1.50 | 1.50 | 1.50 | 1.50 |
| Alternative 1 | HC+NO _x | 2.00 | 0.80 | 0.80 | 2.00 |
| | CO | 3.00 | 1.50 | 1.00 | 1.00 |
| Alternative 2 | HC+NO _x | 1.00 | 1.00 | 1.00 | 3.00 |
| | CO | 1.50 | 1.00 | 1.00 | 2.00 |

(d) *Fuel types.* The exhaust emission standards in this section apply for engines using the fuel type on which the engines in the engine 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.

(e) *Useful life.* Your engines must meet the exhaust emission standards in paragraphs (a) through (c) of this section over the full useful life as follows:

(1) For outboard engines, the minimum useful life is 350 hours of engine operation or 10 years, whichever comes first.

(2) For personal watercraft engines, the minimum useful life is 350 hours of engine operation or 5 years, whichever comes first.

(3) You must specify a longer useful life in terms of hours for the engine family if the average service life of your vehicles is longer than the minimum value, as follows:

(i) Except as allowed by paragraph (e)(3)(ii) of this section, your useful life (in hours) may not be less than either of the following:

(A) Your projected operating life from advertisements or other marketing materials for any engines in the engine family.

(B) Your basic mechanical warranty for any engines in the engine family.

(ii) Your useful life may be based on the average service life of vehicles in the engine family if you show that the average service life is less than the useful life required by paragraph (e)(3)(i) of this section, but more than the minimum useful life (350 hours of engine operation). In determining the actual average service life of vehicles in an engine family, we will consider all available information and analyses.

Survey data is allowed but not required to make this showing.

(f) *Applicability for testing.* The duty-cycle emission standards in this subpart apply to all testing performed according to the procedures in § 1045.505, including certification, production-line, and in-use testing. The not-to-exceed standards apply for all testing performed according to the procedures of subpart F of this part.

§ 1045.105 What exhaust emission standards must my sterndrive/inboard engines meet?

(a) *Emission standards.* Starting in the 2009 model year, exhaust emissions from your sterndrive/inboard engines may not exceed emission standards as follows:

(1) Measure emissions using the applicable steady-state test procedures described in subpart F of this part.

(2) The exhaust emission standards from the following table apply:

TABLE 1 TO § 1045.105—EMISSION STANDARDS FOR STERNDRIVE/INBOARD ENGINES (G/KW-HR)

| Engine type | HC+NO _x | CO |
|--|--------------------|------|
| Primary standard for sterndrive/inboard engines | 5.0 | 75.0 |
| Alternate standards for high-performance engines | 5.0 | 350 |

(b) *Averaging, banking, and trading.* You may generate or use emission credits under the averaging, banking, and trading (ABT) program described in subpart H of this part for demonstrating compliance with HC+NO_x and CO emission standards. To generate or use emission credits, you must specify a family emission limit for each pollutant you include in the ABT program for each engine family. 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) For high-performance engines, 30.0 g/kW-hr for HC+NO_x and 350 g/kW-hr for CO.
- (2) For other engines, 16.0 g/kW-hr for HC+NO_x and 150 g/kW-hr for CO.

(c) *Not-to-exceed standards.* Exhaust emissions may not exceed the not-to-exceed standards for all sterndrive/inboard engines except high-performance engines, as follows:

- (1) Measure emissions using the not-to-exceed procedures in subpart F of this part:

(2) Determine the not-to-exceed standard, rounded to the same number of decimal places as the emission standard in Table 1 of this section from the following equation:

$$\text{Not-to-exceed standard} = (\text{STD}) (M)$$

Where:

STD = The standard specified in paragraph (a) of this section if you certify without using ABT for that pollutant; or the FEL for that pollutant if you certify using ABT.

M = The NTE multiplier for that pollutant, as defined in paragraph (c)(3) of this section.

- (3) Use the NTE multipliers from the following table across the applicable zone specified in § 1045.515:

TABLE 2 TO § 1045.105—NTE MULTIPLIERS FOR STERNDRIVE/INBOARD ENGINES

| Pollutant | Subzone 1 | Subzone 2 | Subzone 3 | Subzone 4 |
|--------------------------|-----------|-----------|-----------|-----------|
| HC+NO _x | 1.50 | 1.00 | 1.00 | 1.50 |
| CO. | 3.50 | 1.00 | 1.00 | 1.00 |

(d) *Fuel types.* The exhaust emission standards in this section apply for engines using the fuel type on which the engines in the engine 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.

(e) *Useful life.* Your engines must meet the exhaust emission standards in paragraphs (a) through (c) of this section over their full useful life, as follows:

- (1) For high-performance engines with maximum engine power above 485 kW, the minimum useful life is 50 hours of operation or 1 year, whichever comes first. For high-performance engines with maximum engine power at or below 485 kW, the minimum useful life is 150 hours of operation or 3 years, whichever comes first.

- (2) For all other engines, the minimum useful life is 480 hours of operation or ten years, whichever comes first. However, you may request in your

application for certification that we approve a shorter useful life for an engine family. We may approve a shorter useful life, in hours of engine operation but not in years, if we determine that these engines will rarely operate longer than the shorter useful life. If engines identical to those in the engine family have already been produced and are in use, your demonstration must include documentation from such in-use engines. In other cases, your demonstration must include an engineering analysis of information equivalent to such in-use data, such as data from research engines or similar engine models that are already in production. Your demonstration must also include any overhaul interval that you recommend, any mechanical warranty that you offer for the engine or its components, and any relevant customer design specifications. Your demonstration may include any other relevant information. The useful life value may not be shorter than any of the following:

- (i) 150 hours of operation.
- (ii) Your recommended overhaul interval.

- (iii) Your mechanical warranty for the engine.

(3) You must specify a longer useful life in terms of hours for the engine family if the average service life of your vehicles is longer than the minimum value, as follows:

(i) Except as allowed by paragraph (e)(3)(ii) of this section, your useful life (in hours) may not be less than either of the following:

(A) Your projected operating life from advertisements or other marketing materials for any engines in the engine family.

(B) Your basic mechanical warranty for any engines in the engine family.

(ii) Your useful life may be based on the average service life of vehicles in the engine family if you show that the average service life is less than the useful life required by paragraph (e)(3)(i) of this section, but more than the minimum useful life (480 hours of engine operation). In determining the actual average service life of vehicles in an engine family, we will consider all available information and analyses. Survey data is allowed but not required to make this showing.

(f) *Applicability for testing.* The duty-cycle emission standards in this section

apply to all testing performed according to the procedures in § 1045.505, including certification, production-line, and in-use testing. The not-to-exceed standards apply for all testing performed according to the procedures of subpart F of this part.

§ 1045.107 What are the standards for evaporative emissions?

Fuel systems must meet the evaporative emission requirements of 40 CFR part 1060 as specified in this section. The useful life of these standards is five years for personal watercraft and ten years for all other vessels.

(a) *Fuel line permeation.* Nonmetal fuel lines must meet the permeation requirements specified in 40 CFR 1060.102 for EPA NR fuel lines starting in the 2009 model year. 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. Portable fuel tanks and fuel tanks for personal watercraft must meet permeation standards starting in the 2011 model year. Other installed fuel tanks must meet permeation standards starting in the 2012 model year. Vessel manufacturers may generate or use emission credits to show compliance with the requirements of this paragraph under the averaging, banking, and trading (ABT) program, as described in subpart H of this part. Starting in the 2014 model year for personal watercraft and in the 2015 model year for other installed fuel tanks, family emission limits may not exceed 5.0 g/m²/day if testing occurs at a nominal temperature of 28° C, or 8.3 g/m²/day if testing occurs at a nominal temperature of 40° C. Portable fuel tank manufacturers may not generate or use emission credits under subpart H of this part. See § 1045.145(e) for special provisions related to the timing of these requirements.

(c) *Running loss.* The running loss requirements specified in 40 CFR part 1060 do not apply.

(d) *Diurnal emissions.* Installed fuel tanks must meet the diurnal emission requirements specified in 40 CFR 1060.105. Fuel tanks for personal watercraft must meet diurnal emission standards starting in the 2009 model year. Other installed fuel tanks must meet diurnal emission standards starting in the 2010 model year. Fuel tanks meeting the definition of *portable marine fuel tank* in § 1045.801 must comply with the diurnal requirements for portable nonroad fuel tanks in 40 CFR part 1060 starting in the 2009 model year.

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

§ 1045.110 How must my engines diagnose malfunctions?

The following engine-diagnostic requirements apply to sterndrive/inboard engines only:

(a) *Equip your engines with a diagnostic system.* Equip each engine with a diagnostic system that will detect significant malfunctions in its emission control system using one of the following protocols:

(1) If your emission control strategy depends on maintaining air-fuel ratios at stoichiometry, an acceptable diagnostic design would identify malfunction whenever the air-fuel ratio does not cross stoichiometry for one minute of intended closed-loop operation. You may use other diagnostic strategies if we approve them in advance.

(2) If the protocol described in paragraph (a)(1) of this section does not apply to your engine, you must use an alternative approach that we approve in advance. Your alternative approach must generally detect when the emission control system is not functioning properly.

(3) Diagnostic systems approved by the California Air Resources Board for use with sterndrive/inboard engines fully satisfy the requirements of this section.

(b) *Use a malfunction-indicator light (MIL).* The MIL must be readily visible to the operator; it may be any color except red. When the MIL goes on, it must display “Check Engine,” “Service Engine Soon,” or a similar message that we approve. You may use sound in addition to the light signal. The MIL must go on under each of these circumstances:

(1) When a malfunction occurs, as described in paragraph (a) of this section.

(2) When the diagnostic system cannot send signals to meet the requirement of paragraph (b)(1) of this section.

(3) When the engine’s ignition is in the “key-on” position before starting or cranking. The MIL should go out after engine starting if the system detects no malfunction.

(c) *Control when the MIL can go out.* If the MIL goes on to show a malfunction, it must remain on during all later engine operation until servicing corrects the malfunction. If the engine is not serviced, but the malfunction does not recur for three consecutive engine starts during which the malfunctioning

system is evaluated and found to be working properly, the MIL may stay off during later engine operation.

(d) *Store trouble codes in computer memory.* Record and store in computer memory any diagnostic trouble codes showing a malfunction that should illuminate the MIL. The stored codes must identify the malfunctioning system or component as uniquely as possible. Make these codes available through the data link connector as described in paragraph (g) of this section. You may store codes for conditions that do not turn on the MIL. The system must store a separate code to show when the diagnostic system is disabled (from malfunction or tampering).

(e) *Make data, access codes, and devices accessible.* Make all required data accessible to us without any access codes or devices that only you can supply. Ensure that anyone servicing your engine can read and understand the diagnostic trouble codes stored in the onboard computer with generic tools and information.

(f) *Consider exceptions for certain conditions.* Your diagnostic systems may disregard trouble codes for the first three minutes after engine starting. You may ask us to approve diagnostic-system designs that disregard trouble codes under other conditions that would produce an unreliable reading, damage systems or components, or cause other safety risks.

(g) *Follow standard references for formats, codes, and connections.* Follow conventions defined in the following documents (incorporated by reference in § 1045.810) or ask us to approve using updated versions of (or variations from) these documents:

(1) ISO 9141–2 Road vehicles—Diagnostic systems—Part 2: CARB requirements for interchange of digital information, February 1994.

(2) ISO 14230–4 Road vehicles—Diagnostic systems—Keyword Protocol 2000—Part 4: Requirements for emission-related systems, June 2000.

§ 1045.115 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.

(b) *Torque broadcasting.* Electronically controlled engines must broadcast their speed and output shaft torque (in newton-meters). Engines may alternatively broadcast a surrogate value

for determining torque. Engines must broadcast engine parameters such that they can be read with a remote device, or broadcast them directly to their controller area networks. This information is necessary for testing engines in the field (see 40 CFR part 1065, subpart J). Small-volume engine manufacturers may omit this requirement.

(c) *EPA access to broadcast information.* If we request it, you must provide us any hardware or tools we would need to readily read, interpret, and record all information broadcast by an engine's on-board computers and electronic control modules. If you broadcast a surrogate parameter for torque values, you must provide us what we need to convert these into torque units. We will not ask for hardware or tools if they are readily available commercially.

(d) [Reserved]

(e) *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.

(f) *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.

(g) *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 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 vessel) damage or accidents.

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

§ 1045.120 What emission-related warranty requirements apply to me?

(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.

(1) The minimum warranty period for outboard engines is 175 hours of engine operation or 5 years, whichever comes first. The minimum warranty period for personal watercraft engines is 175 hours of engine operation or 30 months, whichever comes first.

(2) The minimum warranty period for sterndrive/inboard engines is shown in the following table:

TABLE 1 TO § 1045.120—WARRANTY PERIODS FOR STERNDRIVE/INBOARD ENGINES ¹

| Maximum engine power | Electronic components | Mechanical components |
|------------------------|-------------------------|-----------------------|
| P < 373 kW | 3 years/480 hours | 3 years/480 hours. |
| 373 ≤ P < 485 kW | 3 years/480 hours | 3 years/150 hours. |
| P ≥ 485 kW | 3 years/480 hours | 1 year/50 hours. |

¹ The warranty period expires after the specified time period or number of operating hours, whichever comes first.

(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.

§ 1045.125 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 § 1045.245 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.

(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, 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 air, 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 the applicable dates shown in paragraph (5) of the definition of *new propulsion marine engine* in § 1045.801.

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

(3) The cost of the scheduled maintenance is more than 2 percent of the price of the engine.

(4) 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.

§ 1045.130 What installation instructions must I give to vessel manufacturers?

(a) If you sell an engine for someone else to install in a vessel, 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 a vessel 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 § 1045.205(t).

(4) Describe the steps needed to control evaporative emissions as described in § 1045.107. This will generally require notification that the installer and/or vessel manufacturer must meet the requirements of § 1045.107 and 40 CFR part 1060.

(5) Describe any necessary steps for installing the diagnostic system described in § 1045.110.

(6) Describe any limits on the range of applications needed to ensure that the engine operates consistently with your application for certification. For example, if your engines are certified only for personal watercraft, tell vessel manufacturers not to install the engines in vessels longer than 4.0 meters.

(7) 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.

(8) 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 vessel, as described in 40 CFR 1068.105."

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

(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.

§ 1045.135 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 in one piece so it is not removable without being destroyed or defaced. However, you may use two-piece labels for engines below 19 kW if there is not enough space on the engine to apply a one-piece label.

(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 § 1045.640.

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

(4) State the engine's displacement (in liters) and maximum engine power; however, you may omit the displacement from the label if all the engines in the engine family have the same per-cylinder displacement and total displacement.

(5) 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.

(6) State the FELs to which the engines are certified (in g/kW-hr) if certification depends on the ABT provisions of subpart H of this part.

(7) Identify the emission control system. Use terms and abbreviations consistent with SAE J1930 (incorporated by reference in § 1045.810). 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.

(8) 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.

(9) 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.

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

(11) If your durability demonstration for sterndrive/inboard engines is limited to fresh water, state: "THIS ENGINE IS NOT INTENDED FOR USE IN SALTWATER."

(d) You may add information to the emission control information label to identify other emission standards that the engine meets or does not meet (such as California standards). You may also add other information to ensure that the engine will be properly maintained and used.

(e) You may ask us to approve modified labeling requirements in this part 1045 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.

(f) If you obscure the engine label while installing the engine in the vessel such that the label cannot be read during normal maintenance, you must place a duplicate label on the vessel. If others install your engine in their vessels in a way that obscures the engine label, we require them to add a duplicate label on the vessel (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 vessel manufacturer.

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

§ 1045.140 What is my engine's maximum engine power?

(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 whole kilowatt.

(b) 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.

(c) The nominal power curve must be within the range of the actual power curves of production engines considering normal production variability. If after production begins it is determined that your nominal power curve does not represent production engines, we may require you to amend your application for certification under § 1045.225.

§ 1045.145 Are there interim provisions that apply only for a limited time?

The provisions in this section apply instead of other provisions in this part. This section describes when these interim provisions apply.

(a) *Small-volume engine manufacturers.* Special provisions apply to you for sterndrive/inboard engines if you are a small-volume engine manufacturer subject to the requirements of this part. Contact us before 2009 if you intend to use any of the following provisions:

(1) You may delay complying with otherwise emission standards and other requirements that would otherwise apply until the 2013 model year for high-performance engines and until the 2011 model year for other sterndrive/inboard engines. Add a permanent label to a readily visible part of each engine exempted under this paragraph (a)(1). This label must include at least the following items:

(i) The label heading "EMISSION CONTROL INFORMATION".

(ii) Your corporate name and trademark.

(iii) Engine displacement (in liters), rated power, and model year of the engine or whom to contact for further information.

(iv) The following statement: "THIS ENGINE IS EXEMPT UNDER 40 CFR 1045.145(a)(1) FROM EMISSION STANDARDS AND RELATED REQUIREMENTS."

(2) You may use the provisions of 40 CFR 1068.250 to further delay compliance with emission standards; however, you must use a base engine that has been certified if such an engine is available.

(b) *Early banking.* You may generate emission credits for sterndrive/inboard engines before the 2009 model year (or before the 2011 model year for small-volume engine manufacturers), as follows:

(1) You must begin actual production of early-compliant engines by September 1, 2008 (or before September

1, 2010 for small-volume engine manufacturers).

(2) You may not generate emission credits under this paragraph (b) with engines you produce after December 31, 2008 (or December 31, 2010 for small-volume engine manufacturers).

(3) Early-compliant engines must be certified to the standards and requirements for sterndrive/inboard engines under this part 1045, with family emission limits at or below the emission standards in § 1045.105.

(4) You must calculate emission credits by comparing the engine's family emission limits with assigned baseline levels of 16 g/kW-hr for HC+NO_x and 150 g/kW-hr for CO.

(5) Calculate emission credits using a multiplier based on the number of model years before the standards start to apply. The multipliers are 1.25 for one year early, 1.5 for two years early, and 2.0 for three or more years early. For example, multiply your calculated emission credits generated from compliant 2008 model year engines by 1.25 or, if emission standards are delayed for your engines until 2011 under paragraph (a)(1) of this section, multiply those calculated emission credits by 2.0.

(6) You may not use the provisions of this paragraph (b) to generate emission credits for engines whose point of first retail sale is in California.

(7) HC+NO_x or CO credits you generate under this paragraph (b) may be banked for up to three model years after the model year in which the emission standards start to apply.

(c) *Early compliance with evaporative emission standards.* You may fuel tanks that do not meet the otherwise applicable permeation 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 one fuel tank certified to EPA's evaporative emission standards by producing it before EPA's evaporative emission standards start to apply. You may use this evaporative allowance by selling one fuel tank that does not meet the permeation emission standards that would otherwise apply. For example, you can earn an evaporative allowance by selling a low-permeation fuel tank for personal watercraft before the 2011 model year, in which case you could sell a high-permeation fuel tank for a personal watercraft in 2011. You must meet all the other requirements related to evaporative emissions that apply.

(2) You must add a label to exempted fuel tanks you produce under this paragraph (c) with the following

statement: "EXEMPT FROM EMISSION STANDARDS UNDER 40 CFR 1045.145(c)".

(3) Evaporative allowances you earn under this paragraph (c) from portable fuel tanks may be used only for other portable fuel tanks. Similarly, evaporative allowances from personal watercraft fuel tanks may be used only for personal watercraft fuel tanks and evaporative allowances from other installed fuel tanks may be used only for other installed fuel tanks.

(4) You may not use the allowances you generate under this paragraph (c) for portable fuel tanks and personal watercraft fuel tanks in 2014 or later model years. Similarly, you may not use the allowances you generate under this paragraph (c) for other installed fuel tanks in 2015 or later model years.

(d) *Useful life for evaporative emission standards.* A useful life period of two years applies for fuel tanks certified to meet the permeation emission standards in § 1045.110(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 the useful life values specified in § 1045.107.

Subpart C—Certifying Engine Families

§ 1045.201 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 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.

(b) The application must contain all the information required by this part and must not include false or incomplete statements or information (see § 1045.255).

(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 § 1045.250.

(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 § 1045.255 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 § 1045.235(c)).

§ 1045.205 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 § 1045.201(c). We may require you to provide additional information to evaluate your application.

(a) Describe the engine 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 engine family. For each engine configuration, list the maximum engine power and the range of values for maximum engine power resulting from production tolerances, as described in § 1045.140.

(b) Explain how the emission control systems operate. Describe in detail all system components for controlling exhaust emissions, including all auxiliary emission control devices (AECs) and all fuel-system components you will install on any production or test engine. Identify the part number of each component you describe. For this paragraph (b), treat as separate AECs any devices that modulate or activate differently from each other. Include sufficient detail to allow us to evaluate whether the AECs are consistent with the defeat device prohibition of § 1045.115.

(c) For sterndrive/inboard engines, explain how the engine diagnostic system works, describing especially the engine conditions (with the corresponding diagnostic trouble codes) that cause the malfunction-indicator light to go on. Propose what you consider to be extreme conditions under which the diagnostic system should disregard trouble codes, as described in § 1045.110.

(d) Describe the engines 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.

(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 engine family's useful life.

(i) Include the maintenance and warranty instructions you will give to the ultimate purchaser of each new engine (see §§ 1045.120 and 1045.125).

(j) Include the emission-related installation instructions you will provide if someone else installs your engines in a vessel (see § 1045.130).

(k) Describe your emission control information label (see § 1045.135).

(l) Identify the emission standards or FELs to which you are certifying engines in the engine family.

(m) Identify the engine family's deterioration factors and describe how you developed them (see § 1045.245). 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 by mode for hydrocarbons (such as THC or THCE, as applicable), NO_x, and CO on an emission-data engine to show your engines meet the duty-cycle emission standards we specify in § 1045.101. Show emission figures before and after applying deterioration factors for each engine. 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) Note that §§ 1045.235 and 1045.245 allow you to submit an application in certain cases without new emission data.

(p) State that all the engines in the engine family comply with the not-to-exceed emission standards we specify in subpart B of this part for all normal operation and use when tested as specified in § 1045.515. Describe any relevant testing, engineering analysis, or other information in sufficient detail to support your statement.

(q) 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 CO₂, 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.

(r) Describe all adjustable operating parameters (see § 1045.115(e)), 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.

(s) Provide the information to read, record, and interpret all the information broadcast by an engine's onboard computers and electronic control units. State that, upon request, you will give us any hardware, software, or tools we would need to do this. If you broadcast a surrogate parameter for torque values, you must provide us what we need to convert these into torque units. You may reference any appropriate publicly released standards that define conventions for these messages and parameters. Format your information consistent with publicly released standards.

(t) Confirm that your emission-related installation instructions specify how to ensure that sampling of exhaust emissions will be possible after engines are installed in vessels and placed in service. Show how to sample exhaust emissions in a way that prevents diluting the exhaust sample with ambient air.

(u) Unconditionally certify that all the engines in the engine 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) Include the information required by other subparts of this part. For example, include the information required by § 1045.725 if you participate in the ABT program.

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

(y) 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.

(z) For imported engines, identify the following:

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

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

(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.

§ 1045.210 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 engine family definitions, auxiliary emission control devices, deterioration factors, testing for service accumulation, maintenance, and compliance with not-to-exceed standards. 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.

§ 1045.220 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 § 1045.125. 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.

§ 1045.225 How do I amend my application for certification to include new or modified engines or change an FEL?

Before we issue you a certificate of conformity, you may amend your application to include new or modified engine 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 engine 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 configuration to an engine family. In this case, the engine configuration added must be consistent with other engine configurations in the engine family with respect to the criteria listed in § 1045.230.

(2) Change an engine 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 engine 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 engine is still appropriate for showing that the amended family complies with all applicable requirements.

(3) If the original emission-data engine for the engine family is not appropriate to show compliance for the new or modified engine configuration, include new test data showing that the new or modified engine 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 newly added or modified engine. You may ask for a hearing if we deny your request (see § 1045.820).

(e) For engine families already covered by a certificate of conformity, you may start producing the new or modified engine 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 engines do not meet applicable requirements, we will notify you to cease production of the engines and may require you to recall the engines at no expense to the owner. Choosing to produce engines under this paragraph (e) is deemed to be consent to recall all engines 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 engines.

(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 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 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 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 engine 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.

§ 1045.230 How do I select engine 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. Your engine family is limited to a single model year.

(b) Group engines in the same engine family if they are the same in all the following aspects:

(1) The combustion cycle and fuel.

(2) The cooling system (for example, raw-water vs. separate-circuit cooling).

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

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

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

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

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

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

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

(1) In unusual circumstances, you may group such engines in the same

engine 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 all your high-performance engines into a single engine family.

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

§ 1045.235 What emission testing must I perform for my application for a certificate of conformity?

This section describes the emission testing you must perform to show compliance with the emission standards in § 1045.101(a). See § 1045.205(p) regarding emission testing related to the not-to-exceed standards. See §§ 1045.240 and 1045.245 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 the engine with a configuration that is most likely to exceed the exhaust emission standards, using good engineering judgment. Consider the emission levels of all exhaust constituents over the full useful life of the engine when operated in a vessel.

(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 engine 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. Unless we later invalidate these data, we may decide not to consider your data in determining if your engine family meets applicable requirements.

(3) We may set the adjustable parameters of your emission-data engine to any point within the physically adjustable ranges (see § 1045.115(e)).

(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 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.

(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 engine family covered by the application for certification. For engines originally tested under the provisions of 40 CFR part 91, 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.

§ 1045.240 How do I demonstrate that my engine family complies with exhaust emission standards?

(a) For purposes of certification, your engine family is considered in compliance with the emission standards in § 1045.103 or § 1045.105 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 engine 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 from § 1045.101 for any pollutant.

(c) Determine a deterioration factor to compare emission levels from the emission-data engine with the applicable emission standards. Section 1045.245 specifies how to test engines to develop deterioration factors that represent the expected deterioration in emissions over your engines' full useful life. Your deterioration factors must take into account any available data from in-use testing with similar engines. Small-

volume engine manufacturers may use assigned deterioration factors that we establish. Apply deterioration factors as follows:

(1) *Additive deterioration factor for exhaust emissions.* For engines that do not use aftertreatment technology, use an additive deterioration factor for exhaust emissions. An additive deterioration factor is the difference between exhaust emissions at the end of useful life and exhaust emissions at the low-hour test point. Adjust the official emission results for each tested engine at the selected test point by adding the factor to the measured emissions. If the deterioration factor is less than zero, use zero. Additive deterioration factors must be specified to one more decimal place than the emission standard.

(2) *Multiplicative deterioration factor for exhaust emissions.* For engines 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 useful life to exhaust emissions at the low-hour test point. Adjust the official emission results for each tested engine at the selected test point by multiplying the measured emissions by the deterioration factor. If the deterioration factor is less than one, use one. Multiplicative deterioration factors must be specified to one more significant figure than the emission standard.

(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 vehicle's full useful life, apply the deterioration factor to each pollutant and then add the results before rounding.

(e) Small-volume engine manufacturers may establish emission levels for certification without testing, as follows:

(1) For high-performance engines, you may use a family emission limit of 30.0 g/kW-hr for HC+NO_x emissions and 350 g/kW-hr for CO emissions.

(2) For other four-stroke sterndrive/inboard engines, you may use a family emission limit of 22.0 g/kW-hr for

HC+NO_x emissions and 150 g/kW-hr for CO emissions.

(3) Note that you must use emission credits under the provisions of subpart H of this part to show that you meet applicable requirements if you use family emission limits as specified in this paragraph (e). Also, if you use these family emission limits, you must use them for both HC+NO_x and CO emissions.

§ 1045.245 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 § 1045.240. 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 engine family based on emission measurements from similar engines if you have already given us these data for certifying the 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 engine 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. 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 a vessel 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 § 1045.125 and 40 CFR part 1065, subpart E.

(4) If you measure emissions at only two points to calculate your deterioration factor, base your

calculations on a linear relationship connecting these two data points for each pollutant. If you measure emissions at three or more points, use a linear least-squares fit of your test data for each pollutant to calculate your deterioration factor.

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

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

(7) 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 engine 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.

§ 1045.250 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 § 1045.205 that you were not required to include in your application.

(3) A detailed history of each emission-data engine. 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 engine 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.

§ 1045.255 What decisions may EPA make regarding my certificate of conformity?

(a) If we determine your application is complete and shows that the engine family meets all the requirements of this part and the Act, we will issue a certificate of conformity for your engine 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 engine 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 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 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 § 1045.820).

Subpart D—Testing Production-line Engines

§ 1045.301 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 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).

(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 §§ 1045.325 and 1045.340).

(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 § 1045.235(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.

§ 1045.305 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 duty-cycle emission standards in subpart B of this part. The not-to-exceed standards apply for this testing, but you need not do additional testing to show that production-line engines meet the not-to-exceed standards.

(b) *Modifying a test engine.* Once an engine is selected for testing (see § 1045.310), 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 engines.

(e) *Stabilizing emission levels.* You may operate the engine to stabilize the emission levels before you test production-line engines. Using good engineering judgment, operate your engines in a way that represents the way production engines will be used. You may operate each engine for no more than the greater of two periods:

(1) 12 hours.

(2) 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 § 1045.345 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.

§ 1045.310 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:

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

Where:

N = Required sample size for the model year.
 t₉₅ = 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, t₉₅, 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:

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

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 § 1045.315(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 § 1045.315.

(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 § 1045.320.

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

§ 1045.315 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 engine-family basis. See § 1045.320 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 § 1045.240(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:

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

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 § 1045.315(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 § 1045.225(f).

(h) If you amend the application for certification for an engine family under § 1045.225, do not change any previous

calculations of sample size or CumSum statistics for the model year.

§ 1045.320 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 § 1045.315(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 § 1045.345).

(b) You may request to amend the application for certification to raise the FEL of the entire engine family at this point (see § 1045.225).

§ 1045.325 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 § 1045.315. 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 § 1045.820). 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 1045.335 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 § 1045.225(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.

§ 1045.330 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 § 1045.315 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.

§ 1045.335 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.

§ 1045.340 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 § 1045.325 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.

§ 1045.345 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 § 1045.315 and the sample-size calculation required in § 1045.310 for each engine family.

(9) Report on each failed engine as described in § 1045.320.

(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 1045. 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 1045.815 describes how we treat information you consider confidential.

§ 1045.350 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 § 1045.345.

(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 § 1045.345 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

§ 1045.401 What testing requirements apply to my engines that have gone into service?

(a) We may perform in-use testing of any engine subject to the standards of this part. If you produce outboard or personal watercraft engines that are subject to the requirements of this part, you must test them as described in this subpart. The testing requirements described in this subpart do not apply to sterndrive/inboard engines. This generally involves testing engines in the field or removing them for measurement in a laboratory.

(b) We may approve an alternate plan for showing that in-use engines comply with the requirements of this part if one of the following is true:

(1) You produce 200 or fewer engines per year in the selected engine family.

(2) You identify a unique aspect of your engine applications that keeps you from doing the required in-use testing.

(c) We may void your certificate of conformity for an engine family if you do not meet your obligations under this part.

(d) Independent of your responsibility to test in-use engines, we may choose at any time to do our own testing of your in-use engines.

(e) If in-use testing shows that engines fail to meet emission standards or other requirements of this part, we may pursue a recall or other remedy as allowed by the Act (see § 1045.415).

§ 1045.405 How does this program work?

(a) You must test in-use engines for exhaust emissions from the families we select. We may select up to 25 percent of your engine families in any model year or one engine family if you have three or fewer families. When we select an engine family for testing, we may specify that you preferentially test engines based on the type of vessel. In addition, we may identify specific modes of operation or sampling times. You may choose to test additional engine families that we do not select.

(b) The provisions of this paragraph (b) describe how test families are selected, depending on when we receive the application for certification.

(1) If we receive the application by December 31 of a given calendar year for the following model year (for example, by December 31, 2009 for model year

2010), we would expect to select engine families for testing by February 28 of the model year. If we have not completed the selection of engine families by February 28, you may select your own engine families for in-use testing. In this case, you must make your selections and notify us which engine families you have selected by March 31. You should consider the following factors in selecting engine families, in priority order:

(i) Select an engine family that has not recently been tested in an in-use testing regimen (and passed) under the provisions of this subpart. This should generally involve engine families that have not been selected in the previous two model years. If design changes have required new testing for certification, we would consider that this engine family has not been selected for in-use testing.

(ii) Select an engine family if we have approved an alternative approach to establishing a deterioration factor under § 1045.245(b)(7).

(iii) Select the engine family with the highest projected U.S.-directed production volume.

(2) If we receive an application for a given model year after December 31 of the previous calendar year, you must conduct in-use testing with that engine family without regard to the limitations specified in paragraph (a) of this section, unless we waive this requirement. We will generally waive testing under this paragraph (b)(2) only for small-volume engine manufacturers or in the case where similar testing was recently completed for a related engine family.

(c) Send us an in-use testing plan for engine families selected for testing. Complete the testing within 24 calendar months after we approve your plan. Send us the in-use testing plan according to the following deadlines:

(1) Within 12 calendar months after we direct you to test a particular engine family.

(2) By February 28 of the following year if you select engine families for testing under paragraph (b)(1) of this section.

(3) Within 12 calendar months after we approve certification for engine families subject to the requirements of paragraph (b)(2) of this section.

(d) You may need to test engines from more than one model year at a given time.

§ 1045.410 How must I select, prepare, and test my in-use engines?

(a) You may make arrangements to select representative test engines from

your own fleet or from other independent sources.

(b) For the selected engine families, select engines that you or your customers have—

(1) Operated for at least 50 percent of the engine family's useful life (see § 1045.103(e));

(2) Not maintained or used in an abnormal way; and

(3) Documented in terms of total hours of operation, maintenance, operating conditions, and storage.

(c) Use the following methods to determine the number of engines you must test in each engine family:

(1) Test at least two engines if you produce 2,000 or fewer engines in the model year from all engine families, or if you produce 500 or fewer engines from the selected engine family. Otherwise, test at least four engines.

(2) If you successfully complete an in-use test program on an engine family and later certify an equivalent engine family with carryover emission data, as described in § 1045.235(d)(1), then test at least one engine instead of the testing rates in paragraph (c)(1) of this section.

(3) If you test the minimum required number of engines and all comply fully with emission standards, you may stop testing.

(4) For each engine that fails any applicable standard, test two more. Regardless of measured emission levels, you do not have to test more than ten engines in an engine family. You may do more tests than we require.

(5) You may concede that the engine family does not comply before testing a total of ten engines.

(d) You may do minimal maintenance to set components of a test engine to specifications for anything we do not consider an adjustable parameter (see § 1045.205(r)). Limit maintenance to what is in the owner's instructions for engines with that amount of service and age. Document all maintenance and adjustments.

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

(f) For a test program on an engine family, choose one of the following methods to test your engines:

(1) Remove the selected engines for testing in a laboratory. Use the applicable steady-state and transient procedures in subpart F of this part to show compliance with the duty-cycle standards in § 1045.103(a) or § 1045.105(a). We may direct you to measure emissions on the dynamometer using the test procedures in § 1045.515 to show compliance with the not-to-

exceed standards in § 1045.103(c) or § 1045.105(c).

(2) Test the selected engines while they remain installed in the vessel. Use the procedures in § 1045.515. Measure emissions during normal operation of the vessel to show compliance with the not-to-exceed standards in § 1045.103(c) or § 1045.105(c). We may direct you to include specific areas of normal operation.

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

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

§ 1045.415 What happens if in-use engines do not meet requirements?

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

(b) If the average emission levels calculated in § 1045.410(h) exceed any of the emission standards that apply, notify us within fifteen days of completing testing on this family. Otherwise follow the reporting instructions in § 1045.420.

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

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

(e) You may voluntarily recall an engine family for emission failures, as described in 40 CFR 1068.535, unless

we have ordered a recall for that family under 40 CFR 1068.505.

(f) You have the right to a hearing before we order you to recall your engines or implement an alternative remedy (see § 1045.820).

§ 1045.420 What in-use testing information must I report to EPA?

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

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

(2) [Reserved]

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

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

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

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

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

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

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

(c) We will send copies of your reports to anyone from the public who asks for them. See § 1045.815 for information on how we treat information you consider confidential.

(d) We may ask for more information.

§ 1045.425 What records must I keep?

(a) Organize and maintain your records as described in this section. We may review your records at any time, so it is important to keep required information readily available.

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

(c) Keep a copy of the written reports described in § 1045.420.

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

Subpart F—Test Procedures

§ 1045.501 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 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 duty-cycle emission standards in §§ 1045.103 and 1045.105. Measure the emissions of all regulated pollutants as specified in 40 CFR part 1065. Use the applicable duty cycles specified in § 1045.505. Section 1045.515 describes the supplemental procedures for evaluating whether engines meet the not-to-exceed emission standards in §§ 1045.103(c) and 1045.105(c).

(c) *Fuels.* Use the fuels and lubricants specified in 40 CFR part 1065, subpart H, for all the testing we require in this part, except as specified in § 1045.515. For service accumulation, use the test fuel or any commercially available fuel that is representative of the fuel that in-use engines will use.

(d) *Laboratory conditions.* Ambient conditions for duty-cycle testing must be within the ranges specified in 40 CFR 1065.520, except that atmospheric pressure must be between 94.0 and 103.325 kPa. Humidity levels must represent actual in-use humidity levels. Emissions may not be corrected for the effects of test temperature, pressure, or humidity.

(e) *Special and alternate procedures.* If you are unable to run the test cycle specified in this part for your engine (such as with constant-speed engines), 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.

(f) *Laboratory testing with portable analyzers.* You may use portable emission measurement systems for any laboratory testing with high-performance engines, as specified in 40 CFR 1065.901(b), without requesting approval.

§ 1045.505 How do I test engines using discrete-mode or ramped-modal duty cycles?

(a) This section describes how to test engines under steady-state conditions. We allow you to perform tests with either discrete-mode or ramped-modal sampling. You must use the 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 to determine whether it meets the emission standards in § 1045.101(a). Use the 5-mode duty cycle or the corresponding ramped-modal cycle described in Appendix I of this part.

(c) During idle mode, operate the engine with the following parameters:

(1) Hold the speed within your specifications.

(2) Set the engine to operate at its minimum fueling rate.

(3) Keep engine torque under 5 percent of maximum torque at maximum test speed.

(d) For full-load operating modes, operate the engine at wide-open throttle.

(e) See 40 CFR part 1065 for detailed specifications of tolerances and calculations.

§ 1045.515 What are the test procedures related to not-to-exceed standards?

(a) This section describes the procedures to determine whether your engines meet the not-to-exceed emission standards in §§ 1045.103(c) and 1045.105(c). These procedures may include any normal engine operation and ambient conditions that the engines may experience in use. Paragraphs (b) and (c) of this section define the limits of what we will consider normal engine operation and ambient conditions. Use the test procedures we specify in § 1045.501, except for the provisions we specify in this section. Measure emissions with one of the following procedures:

(1) For laboratory testing of installed engines, remove the selected engines from the vessel. You may use an engine dynamometer to simulate normal operation, as described in this section.

(2) For laboratory testing of outboard engines, you may use an engine dynamometer to simulate normal operation, as described in this section, or you may test it using the procedures

specified in paragraph (3) of this paragraph (a).

(3) Test selected sterndrive/inboard engines and personal watercraft engines while they remain installed in the vessel. Test selected outboard engines in their in-use configuration while mounted appropriately on a vessel. In 40 CFR part 1065, subpart J, we describe the equipment and sampling methods for testing engines in the field. Use fuel meeting the specifications of 40 CFR part 1065, subpart H, or a fuel typical of what you would expect the engine to use in service.

(b) Engine testing may occur under a range of ambient conditions as follows:

(1) Engine testing may occur under the following ranges of ambient conditions without correcting measured emission levels:

(i) Barometric pressure must be between 94.0 and 103.325 kPa.

(ii) Ambient air temperature must be between 13 and 35 °C.

(iii) Ambient water temperature must be between 5 and 27 °C.

(iv) Any ambient humidity level.

(2) Engine testing may occur outside the conditions described in paragraph (b)(1) of this section, as long as measured values are corrected to be equivalent to the nearest end of the specified range using good engineering practice.

(c) An engine's emissions may not exceed the NTE standards in § 1045.103(c) or § 1045.105(c) for any continuous sampling period of at least 30 seconds under the following ranges of engine operation:

(1) Engine operation during the emission sampling period may include

any nominally steady-state combination of speeds and loads within the applicable zone defined by segments on an engine's power vs. speed map specified in paragraph (c)(2) of this section, except as follows:

(i) You may request that we specify a narrower zone, as long as the modified zone includes all points where your engines are expected to normally operate in use, but not including any points at which engine speed is below 40 percent of maximum test speed or engine load is below 25.3 percent of maximum torque at maximum test speed.

(ii) You must notify us if you design your engines for normal in-use operation outside the specified zone. If we learn that normal in-use operation for your engines includes other speeds and loads, we may specify a broader zone, as long as the modified zone is limited to normal in-use operation for speeds greater than 40 percent of maximum test speed and loads greater than 25.3 percent of maximum torque at maximum test speed.

(2) The NTE zone for testing engines under this section is defined by the following segments on an engine's torque vs. speed map, as illustrated in Figure 1 of this section:

(i) Speed at or above 40 percent of maximum test speed.

(ii) Speeds and torques below the line defined by the following equation:

Normalized torque = $1.5 \times$ normalized speed - 0.16

(iii) Speeds and torques at or below the engine's mapped torque values.

(iv) Speeds at or below 100 percent of maximum test speed.

(v) Speeds and torques above the line defined by the following equation:

Normalized torque = (normalized speed)^{1.5} - 0.08

(vi) Torques at or above 25.3 percent of maximum torque at maximum test speed.

(3) The NTE zone described in paragraph (c)(2) of this section is divided into the following subzones for determining the applicable NTE standards, as illustrated in Figure 1 of this section:

(i) Subzone 1 includes all operation in the NTE zone characterized by speeds above 90 percent of maximum test speed or loads above 100 percent of maximum torque at maximum test speed.

(ii) Subzone 2 includes all operation in the NTE zone characterized by speeds above 70 percent of maximum test speed or loads above 80 percent of maximum torque at maximum test speed, but excluding Subzone 1.

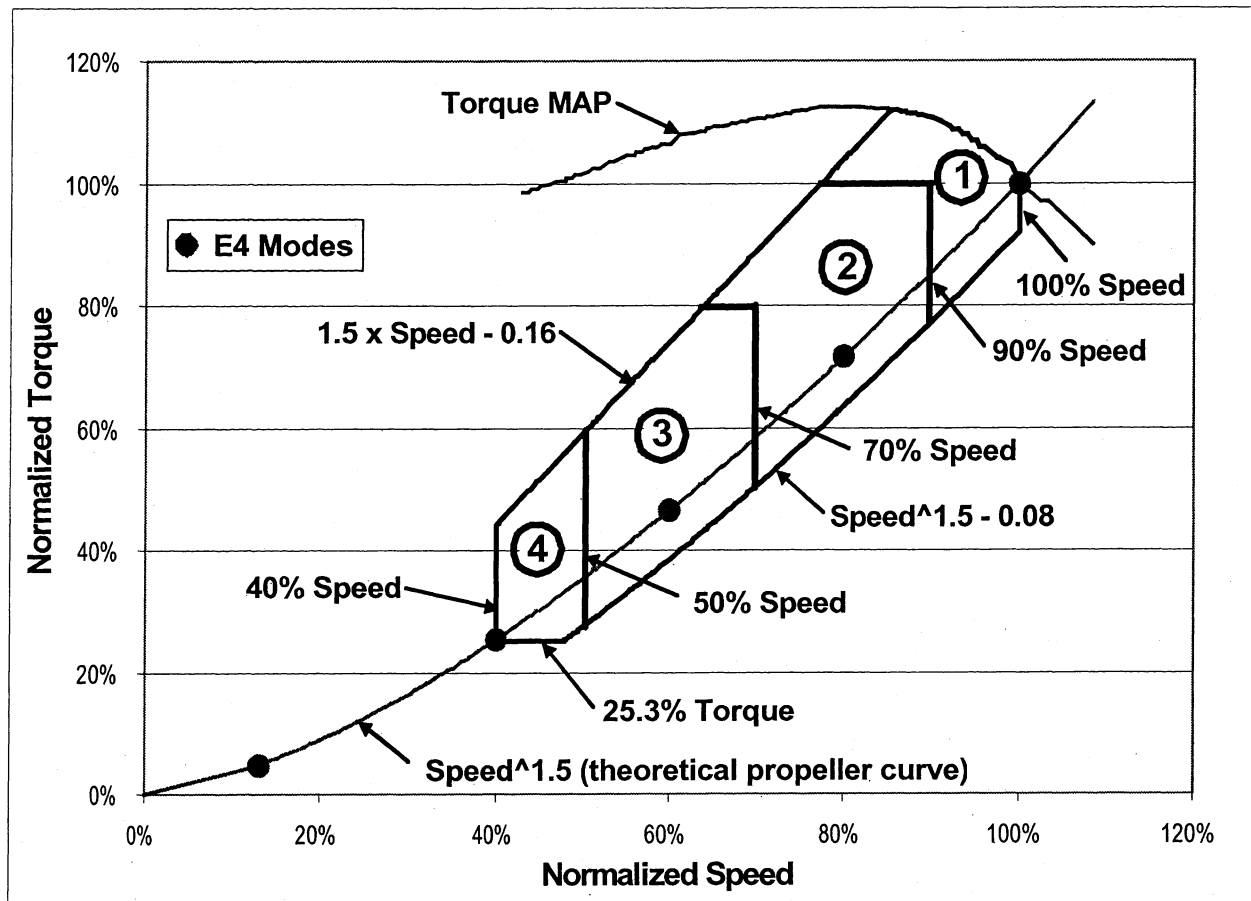
(iii) Subzone 3 includes all operation in the NTE zone characterized by speeds above 50 percent of maximum test speed, but excluding Subzones 1 and 2.

(iv) Subzone 4 includes all operation in the NTE zone excluding Subzones 1, 2, and 3.

(4) The sampling period may not begin until the engine has reached stable operating temperatures. For example, this would exclude engine operation after starting until the thermostat starts modulating coolant temperature. The sampling period may also not include engine starting.

Figure 1 to § 1045.515—NTE Zone and Subzones

Figure 1 of §1045.515 — NTE Zone and Subzones



§ 1045.520 What testing must I perform to establish deterioration factors?

Sections 1045.240 and 1045.245 describe the required methods for testing to establish deterioration factors for an engine family.

Subpart G—Special Compliance Provisions

§ 1045.601 What compliance provisions apply to these engines?

Engine and vessel 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.

§ 1045.605 What provisions apply to engines already certified under the motor-vehicle program or other nonroad spark-ignition engine programs?

(a) *General provisions.* If you are an engine manufacturer, this section allows you to introduce new propulsion marine engines into U.S. commerce if they are already certified to the requirements that apply to spark-ignition engines

under 40 CFR parts 85 and 86 or part 1048 for the appropriate model year. For outboard or personal watercraft engines, you may also introduce the engines into U.S. commerce if they are already certified to the requirements that apply to engines under 40 CFR part 1054 for the appropriate model year. If you comply with all the provisions of this section, we consider the certificate issued under 40 CFR part 86, 1048, or 1054 for each engine to also be a valid certificate of conformity under this part 1045 for its model year, without a separate application for certification under the requirements of this part 1045.

(b) *Vessel-manufacturer provisions.* If you are not an engine manufacturer, you may produce vessels using motor-vehicle engines or nonroad spark-ignition engines under this section as long as you meet all the requirements and conditions specified in paragraph (d) of this section. If you modify the engine in any of the ways described in paragraph (d)(2) of this section, we will consider you a manufacturer of a new propulsion marine engine. Such engine

modifications prevent you from using the provisions of this section.

(c) *Liability.* Engines for which you meet the requirements of this section are exempt from all the requirements and prohibitions of this part, except for those specified in this section. Engines exempted under this section must meet all the applicable requirements from 40 CFR parts 85 and 86, or part 1048, or part 1054. This applies to engine manufacturers, vessel manufacturers who use these engines, and all other persons as if these engines were used in applications other than for installation as propulsion marine engines. The prohibited acts of 40 CFR 1068.101(a)(1) apply to these new engines and vessels; however, we consider the certificate issued under 40 CFR part 86, 1048, or 1054 for each engine to also be a valid certificate of conformity under this part 1045 for its model year. If we make a determination that these engines do not conform to the regulations during their useful life, we may require you to recall them under 40 CFR part 86 or 1068.

(d) *Specific requirements.* If you are an engine or vessel manufacturer and meet all the following criteria and

requirements regarding your new propulsion marine engine, the engine is eligible for an exemption under this section:

(1) Your engine must be covered by a valid certificate of conformity issued under 40 CFR part 86, 1048, or 1054.

(2) You must not make any changes to the certified engine that could reasonably be expected to increase its exhaust emissions for any pollutant, or its evaporative emissions. For example, if you make any of the following changes to one of these engines, you do not qualify for this exemption:

(i) Change any fuel-system or evaporative-system parameters from the certified configuration (this does not apply to refueling controls).

(ii) Change, remove, or fail to properly install any other component, element of design, or calibration specified in the engine manufacturer's application for certification. This includes aftertreatment devices and all related components.

(iii) Modify or design the marine engine cooling system so that temperatures or heat rejection rates are outside the original engine manufacturer's specified ranges.

(3) You must show that less than 5 percent of the engine family's total sales in the United States are used in marine applications. This includes engines used in any application without regard to which company manufactures the vessel or equipment. Show this as follows:

(i) If you are the original manufacturer of the engine, base this showing on your sales information.

(ii) In all other cases, you must get the original manufacturer of the engine to confirm this based on its sales information.

(4) You must ensure that the engine has the label we require under 40 CFR part 86, 1048, or 1054.

(5) You must add a permanent supplemental label to the engine in a position where it will remain clearly visible after installation in the vessel. In the supplemental label, do the following:

(i) Include the heading: "MARINE ENGINE EMISSION CONTROL INFORMATION".

(ii) Include your full corporate name and trademark. You may instead include the full corporate name and trademark of another company you choose to designate.

(iii) State: "THIS ENGINE WAS ADAPTED FOR MARINE USE WITHOUT AFFECTING ITS EMISSION CONTROLS."

(iv) If the modified engine is certified as a motor-vehicle engine, also state:

"THE EMISSION CONTROL SYSTEM DEPENDS ON THE USE OF FUEL MEETING SPECIFICATIONS THAT APPLY FOR MOTOR-VEHICLE APPLICATIONS. OPERATING THE ENGINE ON OTHER FUELS MAY BE A VIOLATION OF FEDERAL LAW."

(v) State the date you finished modifying the engine (month and year), if applicable.

(6) The original and supplemental labels must be readily visible after the engine is installed in the vessel or, if the vessel obscures the engine's emission control information label, the vessel manufacturer must attach duplicate labels, as described in 40 CFR 1068.105.

(7) Send the Designated Compliance Officer a signed letter by the end of each calendar year (or less often if we tell you) with all the following information:

(i) Identify your full corporate name, address, and telephone number.

(ii) List the engine or vessel 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.

(iii) State: "We produce each listed [engine or vessel] model without making any changes that could increase its certified emission levels, as described in 40 CFR 1045.605."

(e) *Failure to comply.* If your engines do not meet the criteria listed in paragraph (d) of this section, they will be subject to the standards, requirements, and prohibitions of this part 1045 and the certificate issued under 40 CFR part 86, 1048, or 1054 will not be deemed to also be a certificate issued under this part 1045. Introducing these engines into U.S. commerce without a valid exemption or certificate of conformity under this part violates the prohibitions in 40 CFR 1068.101(a)(1).

(f) *Data submission.* We may require you to send us emission test data on one of the duty cycles specified in subpart F of this part.

(g) *Participation in averaging, banking and trading.* Engines adapted for marine use under this section may not generate or use emission credits under this part 1045. These engines may generate credits under the ABT provisions in 40 CFR part 86 or 1054. These engines must use emission credits under 40 CFR part 86 or 1054 if they are certified to an FEL that exceeds a standard that applies under 40 CFR part 86 or 1054.

§ 1045.620 What are the provisions for exempting engines used solely for competition?

The provisions of this section apply for new engines and vessels 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 vessels 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 vessel in which the engine is installed must be limited to professional racing teams, professional racers, or other qualified racers.

(3) The engine and the vessel 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 the U.S. Coast Guard or another public organization with authorizing permits for participating competitors. Operation of such engines may include only racing events or trials to qualify for racing events. Authorized attempts to set speed records (and the associated official trials) are also considered racing events. Engines will not be considered to be used solely for competition if they are ever used for any recreational or other noncompetitive purpose. Use of exempt engines in any recreational events, such as poker runs

and lobsterboat races, is a violation of 40 CFR 1068.101(b)(4).

(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 a vessel manufacturer's request for an exempted engine. Keep these records for five years.

§ 1045.630 What is the personal-use exemption.

This section applies to individuals who manufacture recreational vessels for personal use. If you and your vessel meet all the conditions of this section, the vessel and its engine are considered to be exempt from the standards and requirements of this part that apply to new engines, including standards and requirements related to evaporative emissions. For example, you are not required to use certified fuel system components or otherwise obtain certificates of conformity showing that the vessel meets evaporative emission standards, and you do not need to install a certified engine.

(a) The vessel may not be manufactured from a previously certified vessel, nor may it be manufactured from a partially complete vessel that is equivalent to a certified vessel. The vessel must be manufactured primarily from unassembled components, but may incorporate some preassembled components. For example, fully preassembled steering assemblies may be used. You may also power the vessel with an engine that was previously used in a highway or land-based nonroad application.

(b) The vessel may not be sold within five years after the date of final assembly.

(c) No individual may manufacture more than one vessel in any ten-year period under this exemption.

(d) You may not use the vessel in any revenue-generating service or for any other commercial purpose. For example, this exemption does not apply for vessels used in commercial fishing or charter service.

(e) This exemption may not be used to circumvent the requirements of this part or the requirements of the Clean Air Act. For example, this exemption would

not cover a case in which a person sells an almost completely assembled vessel to another person, who would then complete the assembly. This would be considered equivalent to the sale of the complete new vessel. This section also does not allow engine manufacturers to produce new engines that are exempt from emission standards and it does not provide an exemption from the prohibition against tampering with certified engines.

§ 1045.635 What special provisions apply for small-volume engine manufacturers?

This section describes how we apply the special provisions in this part for small-volume engine manufacturers.

(a) If you qualify under paragraph (1) of the definition of small-volume engine manufacturer in § 1045.801, the small-volume engine manufacturer 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 marine spark-ignition engines, but you do not qualify under paragraph (1) of the definition of small-volume engine manufacturer in § 1045.801, you may ask us to designate you to be a small-volume engine 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. For example, we may refuse to designate a company making outboard engines as a small business if annual worldwide production of outboard engines exceeded 5,000 units in any calendar year.

(c) If you use any of the provisions of this part that apply specifically to small-volume engine manufacturers and we find that you exceed the production limits or otherwise do not qualify as a small-volume engine manufacturer, we may consider you to be in violation of the requirements that apply for companies that are not small-volume engine manufacturers for those engines produced in excess of the specified production limits.

§ 1045.640 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 § 1045.135(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

§ 1045.120. 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.

§ 1045.645 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.

§ 1045.650 Do the provisions of 40 CFR 1068.260 apply for marine engines?

The provisions of 40 CFR 1068.260 related to delegated final assembly do not apply for marine spark-ignition engines certified under this part 1045. This means that for engines requiring exhaust aftertreatment (such as catalysts), the engine manufacturers must either install the aftertreatment on the engine before introducing it into U.S. commerce or ship the aftertreatment along with the engine.

§ 1045.660 How do I certify outboard or personal watercraft engines for use in jet boats?

(a) This section describes how to certify outboard or personal watercraft engines for use in jet boats. To be certified under this section, the jet boat engines must be identical in all physical respects to the corresponding outboard or personal watercraft engines, but may differ slightly with respect to engine calibrations.

(b) The outboard or personal watercraft engines must meet all the applicable requirements for outboard or personal watercraft engines and must be labeled accordingly. Jet boat engines certified under this section must meet all the applicable requirements for jet boat engines.

(c) The jet boat engines must be in an engine family separate from the outboard or personal watercraft engines.

(d) Jet boat engine families may use emission credits from outboard or personal watercraft engine families, as described in § 1045.701(d).

Subpart H—Averaging, Banking, and Trading for Certification

§ 1045.701 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 in which emission credits may be exchanged only with other engines 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) You may not average or exchange banked or traded exhaust credits with evaporative credits, or vice versa. Evaporative credits generated by any vessels under this part may be used by any vessels under this part. Exhaust credits may be exchanged only within an averaging set. Except as specified in paragraph (d) of this section, the following criteria define the applicable averaging sets:

(1) Sterndrive/inboard engines.

(2) Outboard and personal watercraft engines.

(d) Sterndrive/inboard engines certified under § 1045.660 for jet boats may use HC+NO_x exhaust credits generated from outboard and personal watercraft engines, as long as the credit-using engine is the same model as an

engine model from an outboard or personal watercraft family. The HC+NO_x FEL cap for such jet boat families is the HC+NO_x standard for outboard and personal watercraft engines. U.S.-directed sales from a jet boat family using the provisions of this paragraph (d) may not be greater than the U.S.-directed sales of the same engine model for outboard or personal watercraft engines in any model year.

(e) You may not generate evaporative credits based on permeation measurements from metal fuel tanks or portable marine fuel tanks.

(f) 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.

(g) Families that use emission credits for one or more pollutants may not generate positive emission credits for another pollutant.

(h) Emission credits may be used in the model year they are generated (averaging) and in future model years (banking), except that CO emission credits for outboard and personal watercraft engines may not be banked.

(i) You may increase or decrease an exhaust FEL during the model year by amending your application for certification under § 1045.225.

§ 1045.705 How do I generate and calculate exhaust emission credits?

The provisions of this section apply for calculating exhaust emission credits for HC+NO_x or CO. 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:

$$\text{Emission credits (kg)} = (\text{Std} - \text{FEL}) \times (\text{Volume}) \times (\text{Power}) \times (\text{LIFE}) \times (\text{LF}) \times (10^{-3})$$

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 average value of maximum engine power of all the engine configurations within a family, calculated on a production-weighted basis, in kilowatts.

LIFE = the estimated engine lifetime for calculating emission credits, in hours. Use 480 hours for high-performance engines with maximum engine power at or below 485 kW. Use 250 hours for high-performance engines with maximum engine power above 485 kW. For other engines use the useful life for the given family.

LF = load factor. Use 0.207. 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 whose point of first retail sale is in the United States. As described in § 1045.730, compliance with the requirements of this subpart is determined at the end of the model year based on actual production volumes for engines whose point of first retail sale is in the United States. Do not include any of the following engines 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 § 1045.5.

(5) Any other engines, where we indicate elsewhere in this part 1045 that they are not to be included in the calculations of this subpart.

§ 1045.706 How do I generate and calculate evaporative emission credits?

The provisions of this section apply for calculating evaporative emission credits. This applies only for fuel tank permeation. You may generate credits only if you are a certifying vessel manufacturer.

(a) For each participating vessel, 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/m²/day.

FEL = the family emission limit for the family, in g/m²/day, as described in paragraph (b) of this section.

Total Area = The combined internal surface area of all fuel tanks in the family, in m².

UL = the useful life for the given family, in years.

AF = adjustment factor. Use 1.0 for fuel tank testing performed at 28 °C and 0.60 for testing performed at 40 °C.

(b) Determine the FEL for calculating credits under paragraph (a) of this section 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/m²/day.

(2) 10.4 g/m²/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) In your application for certification, base your showing of compliance on projected production volumes for vessels whose point of first retail sale is in the United States. As described in § 1045.730, compliance with the requirements of this subpart is determined at the end of the model year based on actual production volumes for

vessels whose point of first retail sale is in the United States. Do not include any of the following vessels to calculate emission credits:

(1) Vessels exempted under subpart G of this part or under 40 CFR part 1068.

(2) Vessels intended for export.

(3) Vessels 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 vessels sold in such a state will not generate credits under the state program. For example, you may not include vessels certified for California if it has more stringent emission standards for these vessels or that vessels generate or use emission credits under the California program.

(4) Vessels not subject to the requirements of this part, such as those excluded under § 1045.5.

(5) Any other vessels, where we indicate elsewhere in this part 1045 that they are not to be included in the calculations of this subpart.

§ 1045.710 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 § 1045.730. 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.

§ 1045.715 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.

(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.

§ 1045.720 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.

(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 vessel 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 § 1045.255(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 § 1045.745.

§ 1045.725 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.

§ 1045.730 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 vessel 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 §§ 1045.705(c) and 1045.706(c). For fuel tanks, 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) Maximum engine power for each engine configuration, and the production-weighted average engine power for the family.
- (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.

§ 1045.735 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 vessel 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 §§ 1045.725 and 1045.730.

(d) Keep the following additional records for each engine or vessel you produce that generates or uses emission credits under the ABT program:

- (1) Family designation.
- (2) Engine or vessel identification number.
- (3) FEL and useful life.
- (4) Maximum engine power or internal surface area of the fuel tank.
- (5) 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.

§ 1045.745 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 § 1045.820).

Subpart I—Definitions and Other Reference Information

§ 1045.801 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, 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 engine family that complies with the emission standards and requirements in this part.

Certified emission level means the highest deteriorated emission level in an engine family for a given pollutant from either transient or steady-state testing.

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, expressed in one of the following ways:

(1) For multiplicative deterioration factors, the ratio of emissions at the end of useful life to emissions at the low-hour test point.

(2) For additive deterioration factors, the difference between emissions at the end of useful life and emissions at the low-hour test point.

Discrete-mode means relating to the discrete-mode type of steady-state test described in § 1045.505.

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-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 engine family. Engines within a single engine configuration differ only with respect to normal production variability.

Engine family has the meaning given in § 1045.230.

Engine manufacturer means the manufacturer of the engine. See the definition of “manufacturer” in this section.

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 § 1045.5, is not subject to this part 1045.

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 engine family with respect to all required testing.

Fuel line means all hose, tubing, and primer bulbs containing or exposed to liquid fuel, including hose or tubing

that delivers fuel to or from the engine. This includes hose or tubing for the filler neck if any portion of the filler-neck material continues to be exposed to liquid fuel after a refueling event in which an operator fills the fuel tank as full as possible.

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.

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.

High-performance means relating to a sterndrive/inboard engine with maximum engine power at or above 373 kW that has design features to enhance power output such that the expected operating time until rebuild is substantially shorter than 480 hours.

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.

Jet boat means a vessel that uses an installed internal combustion engine powering a water jet pump as its primary source of propulsion and is designed with open area for carrying passengers.

Low-hour means relating to an engine that has stabilized emissions and represents the undeteriorated emission level. This would generally involve less than 30 hours of operation.

Manufacture means the physical and engineering process of designing, constructing, and assembling an engine or vessel.

Manufacturer has the meaning given in section 216(1) of the Act. In general, this term includes any person who manufactures an engine or vessel for sale in the United States or otherwise introduces a new marine engine into U.S. commerce. This includes importers who import engines or vessels 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 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 § 1045.140.

Maximum test speed has the meaning given in 40 CFR 1065.1001.

Model year means one of the following things:

(1) For freshly manufactured vessels and engines (see definition of "new propulsion marine engine," paragraph (1)), model year means one of the following:

(i) Calendar year.

(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 engine 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 engine family for model year 2011.

(2) For an engine that is converted to a propulsion marine 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 propulsion marine engine," paragraph (2)).

(3) For an engine originally produced for use as a nonroad engine but not as a propulsion marine engine that is later converted to operate as a propulsion marine engine, model year means the calendar year in which the engine was originally produced (see definition of

"new propulsion marine engine," paragraph (3)).

(4) For engines that are not freshly manufactured but are installed in new vessels, model year means the calendar year in which the engine is installed in the new vessel (see definition of "new propulsion marine engine," paragraph (4)).

(5) For imported engines:

(i) For imported engines described in paragraph (5)(i) of the definition of "new propulsion marine 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 propulsion marine 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 vessel means either of the following things:

(1) A vessel 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 it is placed into service, whichever comes first.

(2) An imported vessel that has already been placed into service, where it has an engine not covered by a certificate of conformity issued under this part at the time of importation that was manufactured after the requirements of this part start to apply (see § 1045.1).

New portable fuel tanks and fuel lines means portable fuel tanks and fuel lines that have not yet been placed into service, or which are otherwise offered for sales as new products.

New propulsion marine engine or *new engine* means any of the following things:

(1) A freshly manufactured propulsion marine 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 intended to be used as a propulsion marine engine that was originally manufactured as a motor-vehicle engine, a nonroad engine that is not a propulsion marine engine, or a stationary engine. In this case, the engine is no longer a motor-vehicle,

nonpropulsion, or stationary engine and becomes a “new propulsion marine engine”. The engine is no longer new when it is placed into marine service.

(3) A propulsion marine engine that has been previously placed into service in an application we exclude under § 1045.5, where that engine is installed in a vessel that is covered by this part 1045. The engine is no longer new when it is placed into marine service covered by this part 1045. For example, this would apply to a auxiliary marine engine that is becomes a propulsion marine engine.

(4) An engine not covered by paragraphs (1) through (3) of this definition that is intended to be installed in a new vessel. The engine is no longer new when the ultimate purchaser receives a title for the vessel or the product is placed into service, whichever comes first. This generally includes installation of used engines in new vessels.

(5) An imported marine engine, subject to the following provisions:

(i) An imported marine 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 marine 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 propulsion marine 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 on or after the dates shown in the following table. This addresses uncertified engines and vessels initially placed into service that someone seeks to import into the United States. Importation of this kind of engine (or vessel containing such an engine) is generally prohibited by 40 CFR part 1068.

APPLICABILITY OF EMISSION STANDARDS FOR PROPULSION MARINE ENGINES

| Engine type | Initial model year of emission standards |
|----------------|--|
| Outboard | 1998 |

APPLICABILITY OF EMISSION STANDARDS FOR PROPULSION MARINE ENGINES—Continued

| Engine type | Initial model year of emission standards |
|---------------------------|--|
| Personal watercraft | 1999 |
| Sterndrive/inboard | 2009 |

Noncompliant engine means an engine 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 means an engine not covered by a certificate of conformity that would otherwise be subject to emission standards.

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 vessels, or equipment that include 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.

Outboard engine means an assembly of a spark-ignition engine and drive unit used to propel a vessel from a properly mounted position external to the hull of the vessel. An outboard drive unit is partially submerged during operation and can be tilted out of the water when not in use.

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.

Personal watercraft means a vessel less than 4.0 meters (13 feet) in length that uses an installed internal combustion engine powering a water jet pump as its primary source of propulsion and is designed with no open load carrying area that would retain water. The vessel is designed to

be operated by a person or persons positioned on, rather than within the confines of the hull. A vessel using an outboard engine as its primary source of propulsion is not a personal watercraft.

Personal watercraft engine means a spark-ignition engine used to propel a personal watercraft.

Placed into service means put into initial use for its intended purpose.

Point of first retail sale means the location at which the initial retail sale occurs. This generally means an equipment dealership, but may also include an engine seller or distributor in cases where loose engines are sold to the general public for uses such as replacement engines.

Portable marine fuel tank has the meaning given in 40 CFR 1060.801.

Ramped-modal means relating to the ramped-modal type of steady-state test described in § 1045.505.

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.

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.

Small-volume engine manufacturer means one of the following:

(1) An engine manufacturer that had U.S.-directed production of sterndrive/inboard engines in 2007, with annual worldwide production of no more than 5,000 sterndrive/inboard 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) An engine manufacturer that we designate to be a small-volume engine manufacturer under § 1045.635.

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.

Stern drive/inboard engine means a spark-ignition engine that is used to propel a vessel, but is not an outboard engine or a personal watercraft engine. This includes engines on propeller-driven vessels, jet boats, air boats, and hovercraft.

Stoichiometric means relating to the particular ratio of air and fuel such that if the fuel were fully oxidized, there would be no remaining fuel or oxygen. For example, stoichiometric combustion in a gasoline-fueled engine typically occurs at an air-to-fuel mass ratio of about 14.7:1.

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 engine family for emission testing. This may include testing for certification, production-line testing, or in-use testing.

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 vessel or new marine propulsion engine, the first person who in good faith purchases such new vessel or new engine for purposes other than resale.

United States has the meaning given in 40 CFR 1068.30.

Upcoming model year means for an engine 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 a vehicle is required to comply with all applicable emission standards, specified as a given number of hours of operation or calendar years, whichever comes first. See §§ 1045.103(e), 1045.105(e), and 1045.107. 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. Unless this is specified at a given speed, it refers to maximum throttle opening at maximum speed. For electronically controlled or other engines with multiple possible fueling rates, wide-open throttle also means the maximum fueling rate at maximum throttle opening under test conditions.

§ 1045.805 What symbols, acronyms, and abbreviations does this part use?

The following symbols, acronyms, and abbreviations apply to this part:

- ABT Averaging, banking, and trading.
- AECD Auxiliary emission control device.

- CFR Code of Federal Regulations.
- CO carbon monoxide.
- CO₂ carbon dioxide.
- EPA Environmental Protection Agency.
- FEL Family Emission Limit.
- g gram.
- HC hydrocarbon.
- hr hour.
- kPa kilopascals.
- kW kilowatt.
- m meter.
- NARA National Archives and Records Administration.
- NMHC nonmethane hydrocarbons.
- NO_x oxides of nitrogen (NO and NO₂).
- NTE not-to-exceed.
- 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.

§ 1045.810 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 § 1045.810.—SAE MATERIALS

| Document number and name | Part 1045 reference |
|---|---------------------|
| SAE J1930, Electrical/Electronic Systems Diagnostic Terms, Definitions, Abbreviations, and Acronyms, revised May 1998 ... | 1045.135 |

(b) *ISO material.* Table 2 of this section lists material from the International Organization for Standardization that we have

incorporated by reference. The first column lists the number and name of the material. The second column lists the section of this part where we

reference it. Anyone may purchase copies of these materials from the International Organization for Standardization, Case Postale 56, CH-

1211 Geneva 20, Switzerland or
www.iso.org. Table 2 follows:

TABLE 2 TO § 1045.810.—ISO MATERIALS

| Document number and name | Part 1045 reference |
|--|---------------------|
| ISO 9141-2 Road vehicles—Diagnostic systems—Part 2: CARB requirements for interchange of digital information, February 1994. | 1045.110 |
| ISO 14230-4 Road vehicles—Diagnostic systems—Keyword Protocol 2000—Part 4: Requirements for emission-related systems, June 2000. | 1045.110 |

§ 1045.815 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.

§ 1045.820 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.

§ 1045.825 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 vessels regulated under this part:

(a) We specify the following requirements related to engine certification in this part 1045:

(1) In § 1045.20 we require vessel manufacturers to label their vessels if they are relying on component certification.

(2) In § 1045.135 we require engine manufacturers to keep certain records related to duplicate labels sent to vessel manufacturers.

(3) In § 1045.145 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 §§ 1045.345 and 1045.350 we specify certain records related to production-line testing.

(6) In §§ 1045.420 and 1045.425 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.

(8) In §§ 1045.725, 1045.730, and 1045.735 we specify certain records related to averaging, banking, and trading.

(b) We specify the following requirements related to vessel or 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 vessels 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 vessel 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 1045—Summary of Previous Emission Standards

(a) The following standard applies to marine spark-ignition engines produced before the model years specified in § 1045.1, at the end of the phase-in period specified in 40 CFR 91.104:

(1) For engines below 4.3 kW, the HC+NO_x standard is 81.00 g/kW-hr.

(2) For engines at or above 4.3 kW, the following HC+NO_x standard applies:

$$STD = 6.00 + 0.250 \cdot (151 + 557/P^{0.9})$$

Where:

STD = The HC+NO_x emission standard, in g/kW-hr.

P = The average power of an engine family, in kW.

(b) See 40 CFR 91.104 for standards that applied during the phase-in period.

Appendix II to Part 1045—Duty Cycles for Propulsion Marine Engines

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

| E4 mode no. | Engine speed ¹ | Torque (percent) ² | Weighting factors |
|-------------|---------------------------|-------------------------------|-------------------|
| 1 | Maximum Test Speed | 100 | 0.06 |
| 2 | 80 % | 71.6 | 0.14 |
| 3 | 60 % | 46.5 | 0.15 |
| 4 | 40 % | 25.3 | 0.25 |
| 5 | Idle | 0 | 0.40 |

¹ Speed terms are defined in 40 CFR part 1065. Percent speed values are relative to maximum test speed.

² Except as noted in § 1045.505, the percent torque is relative to maximum torque at maximum test speed.

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

| RMC mode | Time in mode (seconds) | Engine speed ^{1, 2} | Torque (percent) ^{2, 3} |
|------------------|------------------------|------------------------------|----------------------------------|
| 1a Steady-state | 225 | Idle | 0. |
| 1b Transition | 20 | Linear Transition | Linear Transition. |
| 2a Steady-state | 63 | Maximum Test Speed | 100. |
| 2b Transition | 20 | Linear Transition | Linear Transition. |
| *3a Steady-state | 271 | 40% | 25.3. |
| 3b Transition | 20 | Linear Transition | Linear Transition. |
| 4a Steady-state | 151 | 80% | 71.6. |
| 4b Transition | 20 | Linear Transition | Linear Transition. |
| 5a Steady-state | 161 | 60% | 46.5. |
| 5b Transition | 20 | Linear Transition | Linear Transition. |
| 6 Steady-state | 229 | Idle | 0. |

¹ Speed terms are defined in 40 CFR part 1065. Percent values are relative to maximum test speed.

² Advance from one mode to the next within a 20-second transition phase. During the transition phase, command linear progressions of speed and torque from the speed setting and torque setting of the current mode to the speed setting and torque setting of the next mode.

³ The percent torque is relative to maximum torque at maximum test speed.

PART 1048—CONTROL OF EMISSIONS FROM NEW, LARGE NONROAD SPARK-IGNITION ENGINES

47. The authority citation for part 1048 continues to read as follows:

Authority: 42 U.S.C. 7401—7671q.

Subpart A—[Amended]

48. Section 1048.1 is amended by revising paragraph (d) to read as follows:

§ 1048.1 Does this part apply to me?

* * * * *

(d) In certain cases, the regulations in this part 1048 apply to engines with maximum engine power at or below 19 kW that would otherwise be covered by 40 CFR part 90 or 1054. See 40 CFR 90.913 or 1054.615 for provisions related to this allowance.

49. A new § 1048.2 is added to read as follows:

§ 1048.2 Who is responsible for compliance?

The regulations in this part 1048 contain provisions that affect both engine manufacturers and others. However, the requirements of this part are generally addressed to the engine manufacturer. The term “you” generally means the engine manufacturer, as defined in § 1048.801, especially for issues related to certification (including production-line testing, reporting, etc.).

50. Section 1048.5 is amended by revising paragraph (b) and adding paragraph (c) to read as follows:

§ 1048.5 Which engines are excluded from this part’s requirements?

* * * * *

(b) Propulsion marine engines. See 40 CFR parts 91 and 1045. This part applies with respect to auxiliary marine engines.

(c) Engines that are certified to meet the requirements of 40 CFR parts 92 or 1033 (locomotive engines), or are

otherwise subject to 40 CFR parts 92 or 1033.

51. Section 1048.10 is amended by revising the introductory text to read as follows:

§ 1048.10 How is this part organized?

This part 1048 is divided into the following subparts:

* * * * *

52. Section 1048.15 is amended by revising the section heading to read as follows:

§ 1048.15 Do any other regulation parts apply to me?

Subpart B—[Amended]

53. Section 1048.101 is amended by adding paragraph (a)(2)(iv) and revising paragraphs (f) and (h) to read as follows:

§ 1048.101 What exhaust emission standards must my engines meet?

* * * * *

- (a) * * *
- (2) * * *

(iv) Constant-speed engines and severe-duty engines.

* * * * *

(f) *Small engines.* Certain engines with total displacement at or below 1000 cc may comply with the requirements of 40 CFR part 90 or 1054 instead of complying with the requirements of this part, as described in § 1048.615.

* * * * *

(h) *Applicability for testing.* The duty-cycle emission standards in this subpart apply to all testing performed according to the procedures in §§ 1048.505 and 1048.510, including certification, production-line, and in-use testing. The field-testing standards apply for all testing performed according to the procedures of subpart F of this part.

54. Section 1048.105 is revised to read as follows:

§ 1048.105 What evaporative emission standards and requirements apply?

Starting in the 2007 model year, new engines that run on a volatile liquid fuel (such as gasoline) must meet the emission standards of this section over a useful life of five years. Note that § 1048.245 allows you to use design-based certification instead of generating new emission data. Auxiliary marine engines must meet the evaporative emission standards in 40 CFR 1045.107 instead of the standards in this section.

(a) *Fuel line permeation.* For nonmetallic fuel lines, you must specify and use products that meet the Category 1 specifications for permeation in SAE J2260 (incorporated by reference in § 1048.810).

(b) [Reserved]

(c) *Diurnal emissions.* Evaporative hydrocarbon emissions may not exceed 0.2 grams per gallon of fuel tank capacity when measured using the test procedures specified in 40 CFR 1060.525, except that permeation emissions may not be subtracted from the measured value. Diurnal emission controls must continue to function during engine operation.

(d) *Running loss.* Liquid fuel in the fuel tank may not reach boiling during continuous engine operation in the final installation at an ambient temperature of 30 °C. Note that gasoline with a Reid vapor pressure of 62 kPa (9 psi) begins to boil at about 53 °C at atmospheric pressure, and at about 60 °C for fuel tanks that hold pressure as described in § 1048.245(e)(1)(i).

(e) *Installation.* If other companies install your engines in their equipment, you may introduce your engines into U.S. commerce without meeting all the requirements in this section. However, you must give equipment manufacturers

any appropriate instructions so that fully assembled equipment will meet all the requirements in this section, as described in § 1048.130. Introducing equipment into U.S. commerce without meeting all the requirements of this section violates 40 CFR 1068.101(a)(1).

55. Section 1048.110 is amended by revising paragraphs (c) and (d) to read as follows:

§ 1048.110 How must my engines diagnose malfunctions?

* * * * *

(c) *Control when the MIL can go out.* If the MIL goes on to show a malfunction or system error, it must remain on during all later engine operation until servicing corrects the malfunction. If the engine is not serviced, but the malfunction or system error does not recur for three consecutive engine starts during which the malfunctioning system is evaluated and found to be working properly, the MIL may stay off during later engine operation.

(d) *Store trouble codes in computer memory.* Record and store in computer memory any diagnostic trouble codes showing a malfunction that should illuminate the MIL. The stored codes must identify the malfunctioning system or component as uniquely as possible. Make these codes available through the data link connector as described in paragraph (g) of this section. You may store codes for conditions that do not turn on the MIL. The system must store a separate code to show when the diagnostic system is disabled.

* * * * *

56. Section 1048.115 is amended by revising the section heading, introductory text, and paragraph (e) to read as follows:

§ 1048.115 What other requirements apply?

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

* * * * *

(e) *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.

* * * * *

57. Section 1048.120 is amended by revising paragraph (c) to read as follows:

§ 1048.120 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.

* * * * *

58. Section 1048.125 is amended by revising paragraph (d) to read as follows:

§ 1048.125 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 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.

* * * * *

59. Section 1048.135 is amended by revising paragraphs (c)(5), (c)(11), (c)(17), and (f) to read as follows:

§ 1048.135 How must I label and identify the engines I produce?

* * * * *

(c) * * *

(5) 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.

* * * * *

(11) Identify the emission standards to which you have certified the engine (in g/kW-hr).

* * * * *

(17) If your engines are certified to the voluntary standards in § 1048.140, state: "BLUE SKY SERIES" and identify the standard to which you certify the engines.

* * * * *

(f) If you obscure the engine label while installing the engine in the equipment such that the label cannot be read during normal maintenance, you must place a duplicate label on the equipment. If others install your engine in their equipment in a way that obscures the engine label, 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.

60. Section 1048.140 is revised to read as follows:

§ 1048.140 What are the provisions for certifying Blue Sky Series engines?

This section defines voluntary standards for a recognized level of superior emission control for engines designated as "Blue Sky Series" engines. If you certify an engine family under this section, it is subject to all the requirements of this part as if these voluntary standards were mandatory. To receive a certificate of conformity as "Blue Sky Series," you must certify to one of the sets of exhaust emission standards in the following table:

TABLE 1 TO § 1048.140.—STANDARDS FOR BLUE SKY SERIES ENGINES (g/kW-hr)

| Standards for steady-state and transient test procedures | | Standards for field-testing procedures | |
|--|-----|--|-----|
| HC+NO _x | CO | HC+NO _x | CO |
| 0.80 | 4.4 | 1.10 | 6.6 |
| 0.60 | 4.4 | 0.84 | 6.6 |
| 0.40 | 4.4 | 0.56 | 6.6 |
| 0.20 | 4.4 | 0.28 | 6.6 |
| 0.10 | 4.4 | 0.14 | 6.6 |

Subpart C—[Amended]

61. Section 1048.201 is amended by revising paragraph (a) to read as follows:

§ 1048.201 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.

* * * * *

62. Section 1048.205 is amended by revising paragraphs (b), (p)(1), (q), (r) introductory text, (y), and (aa) to read as follows:

§ 1048.205 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 (AECs) and all fuel-system components you will install on any production or test engine. Identify the part number of each component you describe. For this paragraph (b), treat as separate AECs any devices that modulate or activate differently from each other. Include sufficient detail to allow us to evaluate whether the AECs are consistent with the defeat device prohibition of § 1048.115.

* * * * *

(p) * * *

(1) Present exhaust emission data for HC, NO_x, and CO on an emission-data engine to show your engines meet the applicable duty-cycle emission standards we specify in § 1048.101. Show emission figures before and after applying deterioration factors for each engine. Include emission results for each mode if you do discrete-mode testing under § 1048.505. Include test data for each type of fuel from 40 CFR part 1065, subpart H, on which you intend for engines in the engine family to operate (for example, gasoline, liquefied petroleum gas, methanol, or natural gas). 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. Note that § 1048.235 allows you to submit an application in certain cases without new emission data.

* * * * *

(q) State that all the engines in the engine family comply with the field-

testing emission standards we specify in § 1048.101(c) for all normal operation and use when tested as specified in § 1048.515. Describe any relevant testing, engineering analysis, or other information in sufficient detail to support your statement.

(r) For engines not subject to transient testing requirements in § 148.101(a), include information showing how your emission controls will function during normal in-use transient operation. For example, this might include the following:

* * * * *

(y) 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.

* * * * *

(aa) 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.

63. Section 1048.220 is amended by revising the introductory text to read as follows:

§ 1048.220 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 § 1048.125. 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.

* * * * *

64. Section 1048.225 is revised to read as follows:

§ 1048.225 How do I amend my application for certification to include new or modified engine configurations?

Before we issue you a certificate of conformity, you may amend your application to include new or modified engine 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 engine 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 configuration to an engine family. In this case, the engine configuration added must be consistent with other engine configurations in the engine family with respect to the criteria listed in § 1048.230.

(2) Change an engine 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.

(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 engine 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 engine is still appropriate for showing that the amended family complies with all applicable requirements.

(3) If the original emission-data engine for the engine family is not appropriate to show compliance for the new or modified engine configuration, include new test data showing that the new or modified engine 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 newly added or modified engine. You may ask for a hearing if we deny your request (see § 1048.820).

(e) For engine families already covered by a certificate of conformity, you may start producing the new or modified engine 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 engines do not meet applicable requirements, we will notify you to cease production of the engines and may require you to recall the engines at no expense to the owner. Choosing to produce engines under this paragraph (e) is deemed to be consent to recall all engines 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 engines.

65. Section 1048.230 is amended by revising paragraphs (a) and (d) to read as follows:

§ 1048.230 How do I select engine 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. Your engine family is limited to a single model year.

* * * * *

(d) In unusual circumstances, you may group engines that are not identical with respect to the things listed in paragraph (b) of this section in the same engine family if you show that their emission characteristics during the useful life will be similar.

* * * * *

66. Section 1048.235 is amended by revising paragraph (d)(1) to read as follows:

§ 1048.235 What emission testing must I perform for my application for a certificate of conformity?

* * * * *

(d) * * *

(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 § 1048.225.

* * * * *

67. Section 1048.240 is amended by revising paragraphs (c)(1) and (c)(2) to read as follows:

§ 1048.240 How do I demonstrate that my engine family complies with exhaust emission standards?

* * * * *

(c) * * *

(1) *Multiplicative deterioration factor.* Except as specified in paragraph (c)(2) of this section, use a multiplicative deterioration factor for exhaust emissions. A multiplicative deterioration factor is the ratio of exhaust emissions at the end of useful life to exhaust emissions at the low-hour test point. Adjust the official emission results for each tested engine at the selected test point by multiplying the measured emissions by the deterioration factor. If the factor is less than one, use one.

(2) *Additive deterioration factor.* Use an additive deterioration factor for exhaust emissions if engines do not use aftertreatment technology. Also, you may use an additive deterioration factor for exhaust emissions for a particular pollutant if all the emission-data engines in the engine family have low-hour emission levels below 0.3 g/kW-hr (for CO or HC+NO_x, as appropriate), unless a multiplicative deterioration factor is more appropriate. For example, you should use a multiplicative deterioration factor if emission increases are best represented by the ratio of exhaust emissions at the end of the useful life to exhaust emissions at the low-hour test point. An additive deterioration factor is the difference between exhaust emissions at the end of useful life and exhaust emissions at the low-hour test point. Adjust the official emission results for each tested engine at the selected test point by adding the factor to the measured emissions. If the factor is less than zero, use zero.

* * * * *

68. Section 1048.245 is amended by revising paragraphs (c) and (e)(1)(i) to read as follows:

§ 1048.245 How do I demonstrate that my engine family complies with evaporative emission standards?

* * * * *

(c) Use good engineering judgment to develop a test plan to establish deterioration factors to show how much emissions increase at the end of the useful life.

* * * * *

(e) * * *

(1) * * *

(i) Use a tethered or self-closing gas cap on a fuel tank that stays sealed up to a positive pressure of 24.5 kPa (3.5 psig); however, they may contain air inlets that open when there is a vacuum pressure inside the tank. Nonmetal fuel tanks must also use one of the

qualifying designs for controlling permeation emissions specified in 40 CFR 1060.240.

* * * * *

69. Section 1048.250 is amended by redesignating paragraphs (a) through (d) as paragraphs (b) through (e), respectively, and adding a new paragraph (a) to read as follows:

§ 1048.250 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.

* * * * *

70. Section 1048.255 is amended by revising the section heading and paragraph (d) to read as follows:

§ 1048.255 What decisions may EPA make regarding my certificate of conformity?

* * * * *

(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.

* * * * *

Subpart D—[Amended]

71. Section 1048.301 is amended by revising paragraphs (a) and (c) to read as follows:

§ 1048.301 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) [Reserved]

(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 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.

* * * * *

72. Section 1048.305 is amended by adding introductory text and revising paragraphs (a), (d), and (g) to read as follows:

§ 1048.305 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 either the steady-state or transient testing procedures specified in subpart F of this part to show you meet the duty-cycle emission standards in subpart B of this part. The field-testing standards apply for this testing, but you need not do additional testing to show that production-line engines meet the field-testing standards.

* * * * *

(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 engines.

* * * * *

(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.

73. Section 1048.310 is amended by revising paragraphs (a), (c) introductory text, (c)(2), (f), (g), and (h) to read as follows:

§ 1048.310 How must I select engines for production-line testing?

(a) Use test results from two engines each quarter to calculate the required sample size for the model year for each engine family.

* * * * *

(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:

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

Where:

N = Required sample size for the model year.
t₉₅ = 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.

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:

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

Where:

X_i = Emission test result for an individual engine.

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

* * * * *

(f) Distribute the remaining 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