

## § 1042.201

Alaska west of Kodiak. For the purpose of this paragraph (h)(1), “the smallest Hawaiian islands” includes all Hawaiian islands other than Hawaii, Kahoolawe, Kauai, Lanai, Maui, Molokai, Niihau, and Oahu. Engines must comply fully with the appropriate Tier 2 NO<sub>x</sub> standard and all other applicable requirements when operating in the areas identified in this paragraph (h)(1).

(ii) The provisions of paragraph (h)(1)(i) of this section do not apply to ships operating in an ECA or an ECA associated area. The Tier 3 standards apply in full for any area included in an ECA or an ECA associated area.

(2) *Part 1065 test procedures.* You must generally use the test procedures specified in subpart F of this part for Category 3 engines, including the applicable test procedures in 40 CFR part 1065. You may use a combination of the test procedures specified in this part and the test procedures specified in 40 CFR part 94 before January 1, 2016 without request. After this date, you must use test procedures only as specified in subpart F of this part.

(i) *Limitation of 40 CFR 1068.101 before July 1, 2010.* Notwithstanding other provisions of this part or 40 CFR part 94, for the period June 29, 2010 through July 1, 2010, it is not a violation of 40 CFR 1068.101 to operate in U.S. waters uncertified engines installed on vessels manufactured outside of the United States before June 29, 2010. Operation of such vessels in U.S. waters on or after July 1, 2010 is deemed to be introduction into U.S. commerce of a new marine engine.

(j) Vessel manufacturers and marine equipment manufacturers may apply the provisions of §1042.605 to land-based engines with maximum engine power at or above 19 kW and below 600 kW produced under the allowances provided in 40 CFR 1039.625 for model year 2013 marine engines. All the provisions of §1042.605 apply as if those engines were certified to emission standards under 40 CFR part 1039. Similarly, engine manufacturers, vessel manufacturers, and marine equipment manufacturers must comply with all the provisions of 40 CFR 1039.625 as if those en-

## 40 CFR Ch. I (7–1–14 Edition)

gines were installed in land-based equipment.

[73 FR 37243, June 30, 2008, as amended at 73 FR 59194, Oct. 8, 2008; 75 FR 23000, Apr. 30, 2010; 78 FR 36396, June 17, 2013]

### Subpart C—Certifying Engine Families

#### §1042.201 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.

(b) The application must contain all the information required by this part and must not include false or incomplete statements or information (see §1042.255).

(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 §1042.250.

(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 §1042.255 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 §1042.235(c)).

(h) For engines that become new after being placed into service, such as engines installed on imported vessels, we may specify alternate certification provisions consistent with the intent of this part. See the definition of “new marine engine” in §1042.901.

[73 FR 37243, June 30, 2008, as amended at 75 FR 23000, Apr. 30, 2010]

#### §1042.205 Application requirements.

This section specifies the information that must be in your application,

unless we ask you to include less information under §1042.201(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, ultra low-sulfur diesel fuel). 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 §1042.140.

(b) Explain how the emission control system operates. Describe in detail all system components for controlling exhaust emissions, including all auxiliary emission control devices (AECDs) and all fuel-system components you will install on any production or test engine. Identify the part number of each component you describe. For this paragraph (b), treat as separate AECDs any devices that modulate or activate differently from each other. Include all the following:

(1) Give a general overview of the engine, the emission control strategies, and all AECDs.

(2) Describe each AECD's general purpose and function.

(3) Identify the parameters that each AECD senses (including measuring, estimating, calculating, or empirically deriving the values). Include vessel-based parameters and state whether you simulate them during testing with the applicable procedures.

(4) Describe the purpose for sensing each parameter.

(5) Identify the location of each sensor the AECD uses.

(6) Identify the threshold values for the sensed parameters that activate the AECD.

(7) Describe the parameters that the AECD modulates (controls) in response to any sensed parameters, including the range of modulation for each parameter, the relationship between the sensed parameters and the controlled parameters and how the modulation achieves the AECD's stated purpose. Use graphs and tables, as necessary.

(8) Describe each AECD's specific calibration details. This may be in the form of data tables, graphical representations, or some other description.

(9) Describe the hierarchy among the AECDs when multiple AECDs sense or modulate the same parameter. Describe whether the strategies interact in a comparative or additive manner and identify which AECD takes precedence in responding, if applicable.

(10) Explain the extent to which the AECD is included in the applicable test procedures specified in subpart F of this part.

(11) Do the following additional things for AECDs designed to protect engines or vessels:

(i) Identify the engine and/or vessel design limits that make protection necessary and describe any damage that would occur without the AECD.

(ii) Describe how each sensed parameter relates to the protected components' design limits or those operating conditions that cause the need for protection.

(iii) Describe the relationship between the design limits/parameters being protected and the parameters sensed or calculated as surrogates for those design limits/parameters, if applicable.

(iv) Describe how the modulation by the AECD prevents engines and/or vessels from exceeding design limits.

(v) Explain why it is necessary to estimate any parameters instead of measuring them directly and describe how the AECD calculates the estimated value, if applicable.

(vi) Describe how you calibrate the AECD modulation to activate only during conditions related to the stated need to protect components and only as needed to sufficiently protect those components in a way that minimizes the emission impact.

(12) Include any other information required by this part with respect to AECDs. For example, see §1042.115 for requirements related to on-off technologies.

(c) If your engines are equipped with an engine diagnostic system, explain how it works, describing especially the engine conditions (with the corresponding diagnostic trouble codes)

## § 1042.205

## 40 CFR Ch. I (7–1–14 Edition)

that cause the malfunction-indicator light to go on.

(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 the duty cycle(s) and the corresponding engine applications. Also describe 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 §§1042.120 and 1042.125). Describe your plan for meeting warranty obligations under §1042.120.

(j) Include the emission-related installation instructions you will provide if someone else installs your engines in a vessel (see §1042.130).

(k) Describe your emission control information label (see §1042.135).

(l) Identify the emission standards and/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 §1042.245). 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 for HC, NO<sub>x</sub>, PM, and CO on an emission-data engine to show your engines meet emission standards as specified in §§1042.101 or 1042.104. Note that you must submit PM data for all engines, whether or not a PM standard applies. Show emission figures before and after

applying adjustment factors for regeneration and deterioration factors for each pollutant and for each engine. If we specify more than one grade of any fuel type (for example, high-sulfur and low-sulfur diesel fuel), you need to submit test data only for one grade, unless the regulations of this part specify otherwise for your engine. Include emission results for each mode for Category 3 engines or for other engines if you do discrete-mode testing under §1042.505. Note that §§1042.235 and 1042.245 allows you to submit an application in certain cases without new emission data.

(p) For Category 1 and Category 2 engines, state that all the engines in the engine family comply with the applicable not-to-exceed emission standards in §1042.101 for all normal operation and use when tested as specified in §1042.515. Describe any relevant testing, engineering analysis, or other information in sufficient detail to support your statement.

(q) [Reserved]

(r) Report test results as follows:

(1) Report all test results involving measurement of pollutants for which emission standards apply. Include test results from invalid tests or from any other tests, whether or not they were conducted according to the test procedures of subpart F of this part. We may ask you to send other information to confirm that your tests were valid under the requirements of this part and 40 CFR part 1065.

(2) Report measured CO<sub>2</sub>, N<sub>2</sub>O, and CH<sub>4</sub> as described in §1042.235. Small-volume engine manufacturers may omit reporting N<sub>2</sub>O and CH<sub>4</sub>.

(s) Describe all adjustable operating parameters (see §1042.115(d)), 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) For Category 1 engines, information showing why the limits, stops, or other means of inhibiting adjustment are effective in preventing adjustment

## Environmental Protection Agency

## § 1042.210

of parameters on in-use engines to settings outside your intended physically adjustable ranges.

(5) For Category 2 and Category 3 engines, propose a range of adjustment for each adjustable parameter, as described in §1042.115(d). Include 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 proposed adjustable ranges.

(t) 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.

(u) 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.

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

- (1) Constant-speed engines.
- (2) Engines used with controllable-pitch propellers.
- (3) Recreational engines.

(w) 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.

(x) 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 produc-

tion volumes in earlier years for similar models.

(y) Include the information required by other subparts of this part. For example, include the information required by §1042.725 if you participate in the ABT program.

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

(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.

(bb) The following provisions apply for imported engines:

(1) Describe your normal practice for importing engines. For example, this may include identifying the names and addresses of any agents you have authorized to import your engines. Engines imported by nonauthorized agents are not covered by your certificate.

(2) For engines below 560 kW, identify a test facility 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.

[73 FR 37243, June 30, 2008, as amended at 74 FR 56509, Oct. 30, 2009; 75 FR 23000, Apr. 30, 2010]

### § 1042.210 Preliminary approval.

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, useful life, testing for service accumulation, maintenance, and compliance with not-to-exceed standards. See §1042.245 for specific provisions that apply for deterioration factors. 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