

to allow determination of the displacement to the nearest 0.02 liters. Determine the final value by truncating digits to establish the per-cylinder displacement to the nearest 0.1 liters. For example, for an engine with circular cylinders having an internal diameter of 13.0 cm and a 15.5 cm stroke length, the rounded displacement would be: $(13.0/2)^2 \times (\pi) \times (15.5) \div 1000 = 2.0$ liters.

(d) The nominal power curve and intended swept volume must be within the range of the actual power curves and swept volumes of production engines considering normal production variability. If after production begins, it is determined that either your nominal power curve or your intended swept volume does not represent production engines, we may require you to amend your application for certification under § 1042.225.

(e) Throughout this part, references to a specific power value for an engine are based on maximum engine power. For example, the group of engines with maximum engine power above 600 kW may be referred to as engines above 600 kW.

(f) Calculate an engine family's power density in kW/L by dividing the unrounded maximum engine power by the engine's unrounded per-cylinder displacement, then dividing by the number of cylinders. Round the calculated value to the nearest whole number.

§ 1042.145 Interim provisions.

(a) *General.* The provisions in this section apply instead of other provisions in this part for Category 1 and Category 2 engines. This section describes when these interim provisions expire.

(b) *Delayed standards.* Post-manufacturer marinizers that are small-volume engine manufacturers may delay compliance with the Tier 3 standards for engines below 600 kW as follows:

(1) You may delay compliance with the Tier 3 standards for one model year, as long as the engines meet all the requirements that apply to Tier 2 engines.

(2) You may delay compliance with the NTE standards for Tier 3 engines for three model years in addition to the one-year delay specified in paragraph

(b)(1) of this section, as long as the engines meet all other Tier 3 requirements for the appropriate model year.

(c) *Part 1065 test procedures.* You must generally use the test procedures specified in subpart F of this part, including the applicable test procedures in 40 CFR part 1065. As specified in this paragraph (c), you may use a combination of the test procedures specified in this part and the test procedures specified for Tier 2 engines before January 1, 2015. After this date, you must use test procedures only as specified in subpart F of this part.

(1) You may determine maximum test speed for engines below 37 kW as specified in 40 CFR part 89 without request through the 2009 model year.

(2) Before January 1, 2015, you may ask to use some or all of the procedures specified in 40 CFR part 94 (or 40 CFR part 89 for engines below 37 kW) for engines certified under this part 1042. If you ask to rely on a combination of procedures under this paragraph (c)(2), we will approve your request only if you show us that it does not affect your ability to demonstrate compliance with the applicable emission standards. This generally requires that the combined procedures would result in emission measurements at least as high as those that would be measured using the procedures specified in this part. Alternatively, you may demonstrate that the combined effects of the different procedures is small relative to your compliance margin (the degree to which your emissions are below the applicable standards).

(d) [Reserved]

(e) *Delayed compliance with NTE standards.* Engines below 56 kW may delay complying with the NTE standards specified in § 1042.101(c) until the 2013 model year. Engines at or above 56 kW and below 75 kW may delay complying with the NTE standards specified in § 1042.101(c) until the 2012 model year.

(f) *In-use compliance limits.* The provisions of this paragraph (f) apply for the first three model years of the Tier 4 standards. For purposes of determining compliance based on testing other than certification or production-line testing, calculate the applicable in-use

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compliance limits by adjusting the applicable standards/FELs. The PM adjustment does not apply for engines with a PM standard or FEL above 0.04 g/kW-hr. The NO_x adjustment does not apply for engines with a NO_x FEL

above 2.7 g/kW-hr. Add the applicable adjustments in one of the following tables to the otherwise applicable standards and NTE limits. You must specify during certification which add-ons, if any, will apply for your engines.

TABLE 1 TO § 1042.145.—IN-USE ADJUSTMENTS FOR THE FIRST THREE MODEL YEARS OF THE TIER 4 STANDARDS

Fraction of useful life already used	In-use adjustments (g/kW-hr)	
	For Tier 4 NO _x standards	For Tier 4 PM standards
0 < hours ≤ 50% of useful life	0.9	0.02
50 < hours ≤ 75% of useful life	1.3	0.02
hours > 75% of useful life	1.7	0.02

TABLE 2 TO § 1042.145.—OPTIONAL IN-USE ADJUSTMENTS FOR THE FIRST THREE MODEL YEARS OF THE TIER 4 STANDARDS

Fraction of useful life already used	In-use adjustments (g/kW-hr)	
	For model year 2017 and earlier Tier 4 NO _x standards	For model year 2017 and earlier Tier 4 PM standards
0 < hours ≤ 50% of useful life	0.3	0.05
50 < hours ≤ 75% of useful life	0.4	0.05
hours > 75% of useful life	0.5	0.05

(g) *Deficiencies for NTE standards.* You may ask us to accept as compliant an engine that does not fully meet specific requirements under the applicable NTE standards. Such deficiencies are intended to allow for minor deviations from the NTE standards under limited conditions. We expect your engines to have functioning emission control hardware that allows you to comply with the NTE standards.

(1) Request our approval for specific deficiencies in your application for certification, or before you submit your application. We will not approve deficiencies retroactively to cover engines already certified. In your request, identify the scope of each deficiency and describe any auxiliary emission control devices you will use to control emissions to the lowest practical level, considering the deficiency you are requesting.

(2) We will approve a deficiency only if compliance would be infeasible or unreasonable considering such factors as the technical feasibility of the given hardware and the applicable lead time and production cycles. We may consider other relevant factors.

(3) Our approval applies only for a single model year and may be limited to specific engine configurations. We may approve your request for the same deficiency in the following model year if correcting the deficiency would require unreasonable hardware or software modifications and we determine that you have demonstrated an acceptable level of effort toward complying.

(4) You may ask for any number of deficiencies in the first three model years during which NTE standards apply for your engines. For the next four model years, we may approve up to three deficiencies per engine family. Deficiencies of the same type that apply similarly to different power ratings within a family count as one deficiency per family. We may condition approval of any such additional deficiencies during these four years on any additional conditions we determine to be appropriate. We will not approve deficiencies after the seven-year period specified in this paragraph (g)(4), unless they are related to safety.