

provisions that apply broadly, but do not necessarily apply for all engines or all persons. The issues addressed by these provisions include these seven areas:

- (1) Prohibited acts and penalties for engine manufacturers, vehicle 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) Recall.
- (7) Procedures for hearings.
- (e) Other parts of this chapter apply if referenced in this part.

§ 1036.30 Submission of information.

Send all reports and requests for approval to the Designated Compliance Officer (see § 1036.801). See § 1036.825 for additional reporting and recordkeeping provisions.

Subpart B—Emission Standards and Related Requirements

§ 1036.100 Overview of exhaust emission standards.

Engines used in vehicles certified to the applicable chassis standards for greenhouse gas pollutants described in 40 CFR 1037.104 are not subject to the standards specified in this part. All other engines subject to this part must meet the greenhouse gas standards in § 1036.108 in addition to the criteria pollutant standards of 40 CFR part 86.

§ 1036.108 Greenhouse gas emission standards.

This section contains standards and other regulations applicable to the emission of the air pollutant defined as the aggregate group of six greenhouse gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. This section describes the applicable CO₂, N₂O, and CH₄ standards for engines. Except as specified in para-

graph (a)(4) of this section, these standards do not apply for engines used in vehicles subject to (or voluntarily certified to) the CO₂, N₂O, and CH₄ standards for vehicles specified in 40 CFR 1037.104.

(a) *Emission standards.* Emission standards apply for engines measured using the test procedures specified in subpart F of this part as follows:

(1) CO₂ emission standards apply as specified in this paragraph (a)(1). The applicable test cycle for measuring CO₂ emissions differs depending on the engine family's primary intended service class and the extent to which the engines will be (or were designed to be) used in tractors. For medium and heavy heavy-duty engines certified as tractor engines, measure CO₂ emissions using the steady-state duty cycle specified in 40 CFR 86.1362 (referred to as the SET cycle). This is intended for engines designed to be used primarily in tractors and other line-haul applications. Note that the use of some SET-certified tractor engines in vocational applications does not affect your certification obligation under this paragraph (a)(1); see other provisions of this part and 40 CFR part 1037 for limits on using engines certified to only one cycle. For medium and heavy heavy-duty engines certified as both tractor and vocational engines, measure CO₂ emissions using the steady-state duty cycle and the transient duty cycle (sometimes referred to as the FTP engine cycle), both of which are specified in 40 CFR part 86, subpart N. This is intended for engines that are designed for use in both tractor and vocational applications. For all other engines (including all spark-ignition engines), measure CO₂ emissions using the transient duty cycle specified in 40 CFR part 86, subpart N.

(i) The CO₂ standard for model year 2016 and later spark-ignition engines is 627 g/hp-hr.

(ii) The following CO₂ standards apply for compression-ignition engines and all other engines (in g/hp-hr):

Model years	Light heavy-duty	Medium heavy-duty—vocational	Heavy heavy-duty—vocational	Medium heavy-duty—tractor	Heavy heavy-duty—tractor
2014–2016	600	600	567	502	475

Model years	Light heavy-duty	Medium heavy-duty—vocational	Heavy heavy-duty—vocational	Medium heavy-duty—tractor	Heavy heavy-duty—tractor
2017 and later	576	576	555	487	460

(2) The CH₄ emission standard is 0.10 g/hp-hr when measured over the transient duty cycle specified in 40 CFR part 86, subpart N. This standard begins in model year 2014 for compression ignition engines and in model year 2016 for spark-ignition engines. Note that this standard applies for all fuel types just as the other standards of this section do.

(3) The N₂O emission standard for all model year 2014 and later engines is 0.10 g/hp-hr when measured over the transient duty cycle specified in 40 CFR part 86, subpart N. This standard begins in model year 2014 for compression ignition engines and in model year 2016 for spark-ignition engines.

(4) This paragraph (a)(4) describes alternate emission standards for engines certified under 40 CFR 1037.150(m). The standards of paragraphs (a)(1) through (3) of this section do not apply for these engines. The standards in this paragraph (a)(4) apply for emissions measured with the engine installed in a complete vehicle consistent with the provisions of 40 CFR 1037.150(m)(6). The CO₂ standard for the engines equals the test result specified in 40 CFR 1037.150(m)(6) multiplied by 1.10 and rounded to the nearest 0.1 g/mile. The N₂O and CH₄ standards are both 0.05 g/mile (or any alternate standards that apply to the corresponding vehicle test group). The only requirements of this part that apply to these engines are those in this paragraph (a)(4) and those in §§ 1036.115 through 1036.135.

(b) *Family certification levels.* You must specify a CO₂ Family Certification Level (FCL) for each engine family. The FCL may not be less than the certified emission level for the engine family. The CO₂ Family Emission Limit (FEL) for the engine family is equal to the FCL multiplied by 1.03.

(c) *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 demon-

strating compliance with CO₂ emission standards. Credits (positive and negative) are calculated from the difference between the FCL and the applicable emission standard. As described in § 1036.705, you may use CO₂ credits to certify your engine families to FELs for N₂O and/or CH₄, instead of the N₂O/CH₄ standards of this section that otherwise apply. Except as specified in §§ 1036.150 and 1036.705, you may not generate or use credits for N₂O or CH₄ emissions.

(d) *Useful life.* Your engines must meet the exhaust emission standards of this section throughout their full useful life, expressed in service miles or calendar years, whichever comes first. The useful life values applicable to the criteria pollutant standards of 40 CFR part 86 apply for the standards of this section.

(e) *Applicability for testing.* The emission standards in this subpart apply as specified in this paragraph (e) to all duty-cycle testing (according to the applicable test cycles) of testable configurations, including certification, selective enforcement audits, and in-use testing. The CO₂ FCLs serve as the CO₂ emission standards for the engine family with respect to certification and confirmatory testing instead of the standards specified in paragraph (a)(1) of this section. The FELs serve as the emission standards for the engine family with respect to all other testing. See §§ 1036.235 and 1036.241 to determine which engine configurations within the engine family are subject to testing.

(f) *Multi-fuel engines.* For dual-fuel, multi-fuel, and flexible-fuel engines, perform exhaust testing on each fuel type (for example, gasoline and E85).

(1) This paragraph (f)(1) applies where you demonstrate the relative amount of each fuel type that your engines consume in actual use. Based on your demonstration, we will specify a

weighting factor and allow you to submit the weighted average of your emission results. For example, if you certify an E85 flexible-fuel engine and we determine the engine will produce one-half of its work from E85 and one-half of its work from gasoline, you may average your E85 and gasoline emission results.

(2) If you certify your engine family to N₂O and/or CH₄ FELs the FELs apply for testing on all fuel types for which your engine is designed, to the same extent as criteria emission standards apply.

§ 1036.115 Other requirements.

(a) The warranty and maintenance requirements, adjustable parameter provisions, and defeat device prohibition of 40 CFR part 86 apply with respect to the standards of this part.

(b) [Reserved]

§ 1036.130 Installation instructions for vehicle manufacturers.

(a) If you sell an engine for someone else to install in a vehicle, 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 heavy-duty motor vehicle violates federal law, subject to fines or other penalties as described in the Clean Air Act."

(3) Provide all instructions needed to properly install the exhaust system and any other components.

(4) Describe any necessary steps for installing any diagnostic system required under 40 CFR part 86.

(5) Describe how your certification is limited for any type of application. For example, if you certify heavy heavy-duty engines to the CO₂ standards using only steady-state testing, you must make clear that the engine may be installed only in tractors.

(6) Describe any other instructions to make sure the installed engine will op-

erate according to design specifications in your application for certification. This may include, for example, instructions for installing aftertreatment devices when installing the engines.

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

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

(d) Provide instructions in writing or in an equivalent format. For example, you may post instructions on a publicly available Web site 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.

§ 1036.135 Labeling.

Label your engines as described in 40 CFR 86.007-35(a)(3), with the following additional information:

(a) [Reserved]

(b) Identify the emission control system. Use terms and abbreviations as described in 40 CFR 1068.45 or other applicable conventions.

(c) Identify any limitations on your certification. For example, if you certify heavy heavy-duty engines to the CO₂ standards using only transient cycle testing, include the statement "VOCATIONAL VEHICLES ONLY".

(d) You may ask us to approve modified labeling requirements in this part 1036 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. We may also specify modified labeling requirement to be consistent with the intent of 40 CFR part 1037.

§ 1036.140 Primary intended service class.

You must identify a single primary intended service class for each compression-ignition engine family. Select the class that best describes vehicles for which you design and market the engine. The three primary intended