

Environmental Protection Agency

§ 86.1305–2010

model year for which a section is applicable. The section continues to apply to subsequent model years unless a later model year section is adopted. (Example: § 86.13xx–2004 applies to the 2004 and subsequent model years. If a § 86.13xx–2007 is promulgated it would apply beginning with the 2007 model year; § 86.13xx–2004 would apply to model years 2004 through 2006.)

(b) A section reference without a model year suffix refers to the section applicable for the appropriate model year.

[65 FR 59958, Oct. 6, 2000. Redesignated and amended at 70 FR 40438, July 13, 2005]

§ 86.1305–90 Introduction; structure of subpart.

(a) This subpart describes the equipment required and the procedures to follow in order to perform exhaust emission tests on Otto-cycle and diesel heavy-duty engines. Subpart A sets forth the testing requirements and test intervals necessary to comply with EPA certification procedures.

(b) Four topics are addressed in this subpart. Sections 86.1306 through 86.1315 set forth specifications and equipment requirements; §§ 86.1316 through 86.1326 discuss calibration methods and frequency; test procedures are listed in §§ 86.1327 through 86.1341; calculation formula are found in § 86.1342; and data requirements are found in § 86.1344.

[54 FR 14571, Apr. 11, 1989]

§ 86.1305–2004 Introduction; structure of subpart.

(a) This subpart describes the equipment required and the procedures to follow in order to perform exhaust emissions tests on Otto-cycle and diesel-cycle heavy duty engines. Subpart A of this part sets forth the emission standards and general testing requirements to comply with EPA certification procedures.

(b) This subpart contains five key sets of requirements, as follows: specifications and equipment needs (§§ 86.1306 through 86.1314); calibration methods and frequencies (§§ 86.1316 through 86.1326); test procedures (§§ 86.1327 through 86.1341 and §§ 86.1360 through 86.1380); calculation formulas

(§§ 86.1342 and 86.1343); and data requirements (§ 86.1344).

[65 FR 59958, Oct. 6, 2000]

§ 86.1305–2010 Introduction; structure of subpart.

(a) This subpart specifies the equipment and procedures for performing exhaust-emission tests on Otto-cycle and diesel-cycle heavy-duty engines. Subpart A of this part sets forth the emission standards and general testing requirements to comply with EPA certification procedures.

(b) Use the applicable equipment and procedures for spark-ignition or compression-ignition engines in 40 CFR part 1065 to determine whether engines meet the duty-cycle emission standards in subpart A of this part. Measure the emissions of all regulated pollutants as specified in 40 CFR part 1065. Use the duty cycles and procedures specified in § 86.1333–2007, § 86.1360–2007, and § 86.1362–2007. Adjust emission results from engines using aftertreatment technology with infrequent regeneration events as described in § 86.004–28.

(c) The provisions in § 86.1370–2007 and § 86.1372–2007 apply for determining whether an engine meets the applicable not-to-exceed emission standards.

(d) Measure smoke using the procedures in subpart I of this part for evaluating whether engines meet the smoke standards in subpart A of this part.

(e) Use the fuels specified in 40 CFR part 1065 to perform valid tests, as follows:

(1) For service accumulation, use the test fuel or any commercially available fuel that is representative of the fuel that in-use engines will use.

(2) For diesel-fueled engines, use the ultra low-sulfur diesel fuel specified in 40 CFR part 1065 for emission testing.

(f) You may use special or alternate procedures to the extent we allow them under 40 CFR 1065.10.

(g) This subpart applies to you as a manufacturer, and to anyone who does testing for you.

[70 FR 40438, July 13, 2005]

EFFECTIVE DATE NOTE: At 73 FR 37192, June 30, 2008, § 86.1305–2010 was amended by revising paragraph (b), effective July 7, 2008. For

§ 86.1306-07

the convenience of the user, the revised text is set forth as follows:

§ 86.1305-2010 Introduction; structure of subpart.

* * * * *

(b) Use the applicable equipment and procedures for spark-ignition or compression-ignition engines in 40 CFR part 1065 to determine whether engines meet the duty-cycle emission standards in subpart A of this part. Measure the emissions of all regulated pollutants as specified in 40 CFR part 1065. Use the duty cycles and procedures specified in §§ 86.1333-2010, 86.1360-2007, and 86.1362-2007. Adjust emission results from engines using aftertreatment technology with infrequent regeneration events as described in § 86.004-28.

* * * * *

§ 86.1306-07 Equipment required and specifications; overview.

Section 86.1306-07 includes text that specifies requirements that differ from § 86.1306-96. Where a paragraph in § 86.1306-96 is identical and applicable to § 86.1306-07, this may be indicated by specifying the corresponding paragraph and the statement “[Reserved]. For guidance see § 86.1306-96.”.

(a) and (b) [Reserved]. For guidance see § 86.1306-96.

(c)(1) Upon request, the Administrator may allow a manufacturer to use some of the test equipment allowed for model year 2006 and earlier engines instead of the test equipment required for model year 2007 and later engines, provided that good engineering judgment indicates that it would not adversely affect determination of compliance with the applicable emission standards of this part.

(2) A manufacturer may use the test equipment required for model year 2007 and later engines for earlier model year engines, provided that good engineering judgment indicates that it would not adversely affect determination of compliance with the applicable emission standards of this part.

(d) Approval of alternate test system.

(1) If on the basis of the information described in paragraph (d)(5) of this section, the Administrator determines that an alternate test system would consistently and reliably produce emission test results that are at least

equivalent to the results produced using the test systems described in this subpart, he/she shall approve the alternate system for optional use instead of the test systems described in this subpart.

(2) Any person may submit an application for approval of an alternate test system.

(3) In approving an alternate test system, the Administrator may approve it for general use, or may approve it conditionally.

(4) The Administrator may revoke the approval on the basis of new information that indicates that the alternate test system is not equivalent. However, revocation of approval must allow manufacturers sufficient lead-time to change the test system to an approved system. In determining the amount of lead-time that is required, the Administrator will consider relevant factors such as:

(i) The ease with which the test system can be converted to an approved system.

(ii) The degree to which the alternate system affects the measured emission rates.

(iii) Any relevant conditions included in the approval.

(5) The application for approval must include:

(i) *An explanation of the theoretical basis of the alternate system.* This technical description should explain why the detection principle of the alternate system would provide equivalent results to the detection principle of the prescribed system for the full range of emission properties being measured. This description may include equations, figures, and references. For example, a NO_x measurement application should theoretically relate the alternate detection principle to the chemiluminescent detection principle of detecting nitric oxide for a typical range of NO to NO₂ ratios. A PM measurement application should explain the principle(s) by which the alternate system quantifies PM mass independent of PM composition, and how it is impacted by semi-volatile and volatile species= phase distributions. For any proportioning or integrating system,