

§ 86.1

40 CFR Ch. I (7–1–22 Edition)

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AUTHORITY: 42 U.S.C. 7401–7671q.

EDITORIAL NOTE: Nomenclature changes to part 86 appear at 60 FR 34377, June 30, 1995 and 69 FR 18803, Apr. 9, 2004.

§ 86.1 Incorporation by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, a document must be published in the FEDERAL REGISTER and the material must be available to the public. All approved material is available for inspection at U.S. EPA, Air and Radiation Docket and Information Center, 1301 Constitution Ave., NW., Room B102, EPA West Building, Washington, DC 20460, (202) 202–1744, and is available from the sources listed below. It is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fedreg.legal@nara.gov, or go to www.archives.gov/federal-register/cfr/ibr-locations.html.

(b) *ASTM International material.* The following standards are available from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA, 19428–2959, (610) 832–9585, or <http://www.astm.org/>:

(1) ASTM C1549–09, Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer, approved August 1, 2009 (“ASTM C1549”), IBR approved for § 86.1869–12(b).

(2) ASTM D86–12, Standard Test Method for Distillation of Petroleum Products at Atmospheric Pressure, approved December 1, 2012 (“ASTM D86”), IBR approved for §§ 86.113–04(a), 86.113–94(b), 86.213(a), and 86.513(a).

(3) ASTM D93–13, Standard Test Methods for Flash Point by Pensky-Martens Closed Cup Tester, approved July 15, 2013 (“ASTM D93”), IBR approved for § 86.113–94(b).

(4) ASTM D445–12, Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and Calculation of Dynamic Viscosity), approved April 15, 2012 (“ASTM D445”), IBR approved for § 86.113–94(b).

(5) ASTM D613–13, Standard Test Method for Cetane Number of Diesel Fuel Oil, approved December 1, 2013 (“ASTM D613”), IBR approved for § 86.113–94(b).

(6) ASTM D975–13a, Standard Specification for Diesel Fuel Oils, approved December 1, 2013 (“ASTM D975”), IBR approved for § 86.1910(c).

(7) ASTM D976–06 (Reapproved 2011), Standard Test Method for Calculated Cetane Index of Distillate Fuels, approved October 1, 2011 (“ASTM D976”), IBR approved for § 86.113–94(b).

(8) ASTM D1319–13, Standard Test Method for Hydrocarbon Types in Liquid Petroleum Products by Fluorescent Indicator Adsorption, approved May 1, 2013 (“ASTM D1319”), IBR approved for §§ 86.113–04(a), 86.213(a), and 86.513(a).

(9) ASTM D1945–03 (reapproved 2010), Standard Test Method for Analysis of Natural Gas by Gas Chromatography, approved January 1, 2010 (“ASTM D1945”), IBR approved for §§ 86.113–94(e) and 86.513(d).

(10) ASTM D2163–07, Standard Test Method for Determination of Hydrocarbons in Liquefied Petroleum (LP) Gases and Propane/Propene Mixtures

by Gas Chromatography, approved December 1, 2007 (“ASTM D2163”), IBR approved for §§ 86.113–94(f).

(11) ASTM D2622–10, Standard Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-ray Fluorescence Spectrometry, approved February 15, 2010 (“ASTM D2622”), IBR approved for §§ 86.113–04(a), 86.113–94(b), 86.213(a), and 86.513(a).

(12) ASTM D2699–13b, Standard Test Method for Research Octane Number of Spark-Ignition Engine Fuel, approved October 1, 2013 (“ASTM D2699”), IBR approved for §§ 86.113–04(a) and 86.213(a).

(13) ASTM D2700–13b, Standard Test Method for Motor Octane Number of Spark-Ignition Engine Fuel, approved October 1, 2013 (“ASTM D2700”), IBR approved for §§ 86.113–04(a) and 86.213(a).

(14) ASTM D3231–13, Standard Test Method for Phosphorus in Gasoline, approved June 15, 2013 (“ASTM D3231”), IBR approved for §§ 86.113–04(a), 86.213(a), and 86.513(a).

(15) ASTM D3237–12, Standard Test Method for Lead in Gasoline by Atomic Absorption Spectroscopy, approved June 1, 2012 (“ASTM D3237”), IBR approved for §§ 86.113–04(a), 86.213(a), and 86.513(a).

(16) ASTM D4052–11, Standard Test Method for Density, Relative Density, and API Gravity of Liquids by Digital Density Meter, approved October 15, 2011 (“ASTM D4052”), IBR approved for § 86.113–94(b).

(17) ASTM D5186–03 (Reapproved 2009), Standard Test Method for Determination of the Aromatic Content and Polynuclear Aromatic Content of Diesel Fuels and Aviation Turbine Fuels by Supercritical Fluid Chromatography, approved April 15, 2009 (“ASTM D5186”), IBR approved for § 86.113–94(b).

(18) ASTM D5191–13, Standard Test Method for Vapor Pressure of Petroleum Products (Mini Method), approved December 1, 2013 (“ASTM D5191”), IBR approved for §§ 86.113–04(a), 86.213(a), and 86.513(a).

(19) ASTM D5769–20, Standard Test Method for Determination of Benzene, Toluene, and Total Aromatics in Finished Gasolines by Gas Chromatography/Mass Spectrometry, approved June 1, 2020 (“ASTM5769”), IBR ap-

proved for §§ 86.113–04(a), 86.213(a), and 86.513(a).

(20) ASTM D6550–20, Standard Test Method for Determination of Olefin Content of Gasolines by Supercritical-Fluid Chromatography, approved July 1, 2020 (“ASTM D6550”), IBR approved for §§ 86.113–04(a), 86.213(a), and 86.513(a).

(21) ASTM E29–93a, Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications, approved March 15, 1993 (“ASTM E29”), IBR approved for §§ 86.004–15(c), 86.007–11(a), 86.007–15(m), 86.1803–01, 86.1823–01(a), 86.1824–01(c), 86.1825–01(c).

(22) ASTM E903–96, Standard Test Method for Solar Absorptance, Reflectance, and Transmittance of Materials Using Integrating Spheres, approved April 10, 1996 (“ASTM E903”), IBR approved for § 86.1869–12(b).

(23) ASTM E1918–06, Standard Test Method for Measuring Solar Reflectance of Horizontal and Low-Sloped Surfaces in the Field, approved August 15, 2006 (“ASTM E1918”), IBR approved for § 86.1869–12(b).

(c) *ANSI material.* The following standards are available from American National Standards Institute, 25 W 43rd Street, 4th Floor, New York, NY 10036, (212) 642–4900, or <http://www.ansi.org>:

(1) ANSI NGV1–2006, Standard for Compressed Natural Gas Vehicle (NGV) Fueling Connection Devices, 2nd edition, reaffirmed and consolidated March 2, 2006, IBR approved for § 86.1813–17(f).

(2) CSA IR–1–15, Compressed Natural Gas Vehicle (NGV) High Flow Fueling Connection Devices—Supplement to NGV 1–2006, ANSI approved August 26, 2015, IBR approved for § 86.1813–17(f).

(d) *California Air Resources Board.* The following documents are available from the California Air Resources Board, 1001 I Street, Sacramento, CA 95812, (916) 322–2884, or <http://www.arb.ca.gov>:

(1) California Requirements Applicable to the LEV III Program, including the following documents:

(i) LEV III exhaust emission standards are in Title 13 Motor Vehicles, Division 3 Air Resources Board, Chapter 1 Motor Vehicle Pollution Control Devices, Article 2 Approval of Motor Vehicle Pollution Control Devices (New Vehicles), § 1961.2 Exhaust Emission

Standards and Test Procedures—2015 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles, effective as of December 31, 2012, IBR approved for § 86.1803–01.

(ii) LEV III evaporative emission standards for model year 2015 and later vehicles are in Title 13 Motor Vehicles, Division 3 Air Resources Board, Chapter 1 Motor Vehicle Pollution Control Devices, Article 2 Approval of Motor Vehicle Pollution Control Devices (New Vehicles) § 1976 Standards and Test Procedures for Motor Vehicle Fuel Evaporative Emissions, effective as of December 31, 2012, IBR approved for § 86.1803–01.

(2) California Regulatory Requirements Applicable to the National Low Emission Vehicle Program, October 1996, IBR approved for § 86.113–04(a).

(3) California Regulatory Requirements known as Onboard Diagnostics II (OBD–II), Approved on April 21, 2003, Title 13, California Code of Regulations, Section 1968.2, Malfunction and Diagnostic System Requirements for 2004 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines (OBD–II), IBR approved for § 86.1806–05(j).

(4) California Regulatory Requirements known as Onboard Diagnostics II (OBD–II), Approved on November 9, 2007, Title 13, California Code of Regulations, Section 1968.2, Malfunction and Diagnostic System Requirements for 2004 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines (OBD–II), IBR approved for § 86.1806–05(j).

(5) California Regulatory Requirements known as Onboard Diagnostics II (OBD–II), Title 13, Motor Vehicles, Division 3, Air Resources Board, Chapter 1, Motor Vehicle Pollution Control Devices, Article 2, Approval of Motor Vehicle Pollution Control Devices (New Vehicles), § 1968.2 Malfunction and Diagnostic System Requirements—2004 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines, effective as of July 31, 2013, IBR approved for § 86.1806–17(a).

(e) *ISO material*. The following standards are available from International

Organization for Standardization, Case Postale 56, CH–1211 Geneva 20, Switzerland, 41–22–749–01–11, or <http://www.iso.org>:

(1) ISO 13837:2008(E), Road Vehicles—Safety glazing materials—Method for the determination of solar transmittance, First edition, April 15, 2008, IBR approved for § 86.1869–12(b).

(2) ISO 15765–4:2005(E), Road Vehicles—Diagnostics on Controller Area Networks (CAN)—Part 4: Requirements for emissions-related systems, January 15, 2005, IBR approved for §§ 86.010–18(k) and 86.1806–05(h).

(f) *NIST material*. The following documents are available from National Institute of Standards and Technology, 100 Bureau Drive, Gaithersburg, MD 20899, or <http://www.nist.gov>:

(1) NIST Special Publication 811, 2008 Edition, Guide for the Use of the International System of Units (SI), March 2008, IBR approved for § 86.1901(d).

(2) [Reserved]

(g) *SAE International material*. The following standards are available from SAE International, 400 Commonwealth Dr., Warrendale, PA 15096–0001, (877) 606–7323 (U.S. and Canada) or (724) 776–4970 (outside the U.S. and Canada), or <http://www.sae.org>:

(1) SAE J1151, Methane Measurement Using Gas Chromatography, stabilized September 2011, IBR approved for § 86.111–94(b).

(2) SAE J1349, Engine Power Test Code—Spark Ignition and Compression Ignition—As Installed Net Power Rating, revised September 2011, IBR approved for § 86.1803–01.

(3) SAE J1711, Recommended Practice for Measuring the Exhaust Emissions and Fuel Economy of Hybrid-Electric Vehicles, Including Plug-in Hybrid Vehicles, Revised June 2010, IBR approved for § 86.1866–12(b).

(4) SAE J1850, Class B Data Communication Network Interface, Revised May 2001, IBR approved for § 86.1806–05(h).

(5) SAE J1877, Recommended Practice for Bar-Coded Vehicle Identification Number Label, July 1994, IBR approved for § 86.1807–01(f).

(6) [Reserved]

(7) SAE J1930, Electrical/Electronic Systems Diagnostic Terms, Definitions, Abbreviations, and Acronyms,

Environmental Protection Agency

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Revised May 1998, IBR approved for §§ 86.1808-01(f), 86.1808-07(f).

(8) SAE J1930, Electrical/Electronic Systems Diagnostic Terms, Definitions, Abbreviations, and Acronyms—Equivalent to ISO/TR 15031-2: April 30, 2002, Revised April 2002, IBR approved for §§ 86.010-18(k) and 86.1806-05(h).

(9) SAE J1939, Recommended Practice for a Serial Control and Communications Vehicle Network, Revised October 2007, IBR approved for § 86.010-18(k).

(10) SAE J1939-11, Physical Layer—250K bits/s, Shielded Twisted Pair, Revised October 1999, IBR approved for § 86.1806-05(h).

(11) SAE J1939-13, Off-Board Diagnostic Connector, July 1999, IBR approved for § 86.1806-05(h).

(12) SAE J1939-13, Off-Board Diagnostic Connector, Revised March 2004, IBR approved for § 86.010-18(k).

(13) SAE J1939-21, Data Link Layer, Revised April 2001, IBR approved for § 86.1806-05(h).

(14) SAE J1939-31, Network Layer, Revised December 1997, IBR approved for § 86.1806-05(h).

(15) SAE J1939-71, Vehicle Application Layer (Through February 2007), Revised January 2008, IBR approved for §§ 86.010-38(j) and 86.1806-05(h).

(16) SAE J1939-73, Application Layer—Diagnostics, Revised September 2006, IBR approved for §§ 86.010-18(k), 86.010-38(j), and 86.1806-05(h).

(17) SAE J1939-81, Network Management, Revised May 2003, IBR approved for §§ 86.010-38(j) and 86.1806-05(h).

(18) SAE J1962, Diagnostic Connector Equivalent to ISO/DIS 15031-3; December 14, 2001, Revised April 2002, IBR approved for §§ 86.010-18(k) and 86.1806-05(h).

(19) SAE J1978, OBD II Scan Tool—Equivalent to ISO/DIS 15031-4; December 14, 2001, Revised April 2002, IBR approved for §§ 86.010-18(k) and 86.1806-05(h).

(20) SAE J1979, E/E Diagnostic Test Modes, Revised September 1997, IBR approved for §§ 86.1808-01(f) and 86.1808-07(f).

(21) SAE J1979, (R) E/E Diagnostic Test Modes, Revised May 2007, IBR approved for §§ 86.010-18(k) and 86.1806-05(h).

(22) SAE J2012, (R) Diagnostic Trouble Code Definitions Equivalent to ISO/DIS 15031-6: April 30, 2002, Revised April 2002, IBR approved for §§ 86.010-18(k) and 86.1806-05(h).

(23) SAE J2064 FEB2011, R134a Refrigerant Automotive Air-Conditioned Hose, Revised February 2011, IBR approved for § 86.1867-12(a) and (b).

(24) SAE J2284-3, High Speed CAN (HSC) for Vehicle Applications at 500 KBPS, May 2001, IBR approved for §§ 86.1808-01(f) and 86.1808-07(f).

(25) SAE J2403, Medium/Heavy-Duty E/E Systems Diagnosis Nomenclature—Truck and Bus, Revised August 2007, IBR approved for §§ 86.010-18(k), 86.010-38(j), and 86.1806-05(h).

(26) SAE J2534, Recommended Practice for Pass-Thru Vehicle Programming, February 2002, IBR approved for §§ 86.1808-01(f) and 86.1808-07(f).

(27) SAE J2727 FEB2012, Mobile Air Conditioning System Refrigerant Emission Charts for R-134a and R-1234yf, Revised February 2012, IBR approved for § 86.1867-12(a) and (b).

(28) SAE J2765 OCT2008, Procedure for Measuring System COP [Coefficient of Performance] of a Mobile Air Conditioning System on a Test Bench, issued October 2008, IBR approved for § 86.1868-12(h).

(h) *Truck and Maintenance Council material.* The following documents are available from the Truck and Maintenance Council, 950 North Glebe Road, Suite 210, Arlington, VA 22203-4181, or (703) 838-1754:

(1) TMC RP 1210B, Revised June 2007, WINDOWSTMCOMMUNICATION API, IBR approved for § 86.010-38(j).

(2) [Reserved]

[79 FR 23685, Apr. 28, 2014, as amended at 80 FR 9100, Feb. 19, 2015; 81 FR 73973, Oct. 25, 2016; 86 FR 34364, June 29, 2021; 86 FR 74521, Dec. 30, 2021]

Subpart A—General Provisions for Heavy-Duty Engines and Heavy-Duty Vehicles

SOURCE: 42 FR 32907, June 28, 1977, unless otherwise noted.

§ 86.000-2 Definitions.

The definitions of § 86.098-2 continue to apply to 1998 and later model year