Environmental Protection Agency  § 86.1

86.521–90 Hydrocarbon analyzer calibration.
86.522–78 Carbon monoxide analyzer calibration.
86.523–78 Oxides of nitrogen analyzer calibration.
86.524–78 Carbon dioxide analyzer calibration.
86.526–90 Calibration of other equipment.
86.527–90 Test procedures, overview.
86.528–78 Transmissions.
86.529–98 Road load force and inertia weight determination.
86.530–78 Test sequence, general requirements.
86.531–78 Vehicle preparation.
86.532–78 Vehicle preconditioning.
86.535–90 Dynamometer procedure.
86.536–78 Engine starting and restarting.
86.537–90 Dynamometer test runs.
86.540–90 Exhaust sample analysis.
86.542–90 Records required.
86.544–90 Calculations; exhaust emissions.

AUTHORITY: 42 U.S.C. 7401–7671q.


§ 86.1 Reference materials.

(a) The documents in paragraph (b) of this section have been 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 notice of change must be published in the FEDERAL REGISTER and the material must be available to the public. All approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030 or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. Also, the material is available for inspection at the Air Docket, EPA/DC, EPA West, Room B102, 1301 Constitution Ave., NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Air Docket is 202–566–1742. Copies are also available from the sources listed below.

(b) The following paragraphs set forth the material that has been incorporated by reference in this part.

1) ASTM material. Copies of these materials may be obtained from American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959, or by calling 610–832–9585, or at http://www.astm.org.


2) SAE material. Copies of these materials may be obtained from Society


(ii) SAE J1349, June 1990, Engine Power Test Code—Spark Ignition and Compression Ignition, IBR approved for §§ 86.094–8, 86.1806–05.

(iii) SAE J1850, July 1995, Class B Data Communication Network Interface, IBR approved for §§ 86.095–17, 86.1806–01.

(iv) SAE J1850, Revised May 2001, Class B Data Communication Network Interface, IBR approved for §§ 86.005–17, 86.007–17, 86.1806–04, 86.1806–05.

(v) SAE J1877, July 1994, Recommended Practice for Bar-Coded Vehicle Identification Number Label, IBR approved for §§ 86.095–35, 86.1806–01.

(vi) SAE J1892, October 1993, Recommended Practice for Bar-Coded Vehicle Emission Configuration Label, IBR approved for §§ 86.095–35, 86.1806–01.

(vii) SAE J1930, Revised May 1996, Electrical/Electronic Systems Diagnostic Terms, Definitions, Abbreviations, and Acronyms, IBR approved for §§ 86.004–38, 86.007–38, 86.010–38, 86.1806–01, 86.1806–07.


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

(xi) SAE J1939–11, December 1994, Physical Layer—250K bits/s, Shielded Twisted Pair, IBR approved for §§ 86.005–17, 86.1806–05.

(xii) SAE J1939–13, Revised October 1999, Physical Layer—250K bits/s, Shielded Twisted Pair, IBR approved for §§ 86.005–17, 86.007–17, 86.010–17, 86.1806–04, 86.1806–05.

(xiii) SAE J1939–13, July 1999, Off-Board Diagnostic Connector, IBR approved for §§ 86.005–17, 86.007–17, 86.1806–04, 86.1806–05.


(xv) SAE J1939–21, July 1994, Data Link Layer, IBR approved for §§ 86.005–17, 86.1806–05.

(xvi) SAE J1939–21, Revised April 2001, Data Link Layer, IBR approved for §§ 86.005–17, 86.007–17, 86.1806–04, 86.1806–05.

(xvii) SAE J1939–31, Revised December 1997, Network Layer, IBR approved for §§ 86.005–17, 86.007–17, 86.1806–04, 86.1806–05.


(xxi) SAE J1939–73, February 1996, Application Layer—Diagnosics, IBR approved for §§ 86.005–17, 86.1806–05.

(xxii) SAE J1939–73, Revised May 2003, Application Layer—Diagnosics, IBR approved for §§ 86.005–17, 86.007–17, 86.1806–04, 86.1806–05.


(xxiv) SAE J1939–81, July 1997, Recommended Practice for Serial Control and Communications Vehicle Network Part 81—Network Management, IBR approved for §§ 86.005–17, 86.007–17, 86.1806–04, 86.1806–05.

(xxv) SAE J1939–81, Revised May 2003, Network Management, IBR approved for §§ 86.010–38.

(xxvi) SAE J1962, January 1995, Diagnostic Connector, IBR approved for §§ 86.099–17, 86.1806–01.
SAE J1962, Revised April 2002, Diagnostic Connector Equivalent to ISO/DIS 15031-3; December 14, 2001, IBR approved for §§86.005–17, 86.007–17, 86.010–18, 86.1806–04, 86.1806–05.

SAE J1978, Revised April 2002, OBD II Scan Tool—Equivalent to ISO/DIS 15031-4; December 14, 2001, IBR approved for §§86.005–17, 86.007–17, 86.010–18, 86.1806–04, 86.1806–05.

SAE J1979, Revised September 1997, E/E Diagnostic Test Modes, IBR approved for §§86.009–17, 86.1806–01.


SAE J2393, Revised August 2007, Medium/Heavy-Duty E/E Systems Diagnosis Nomenclature—Truck and Bus, IBR approved for §§86.007–17, 86.010–18, 86.010–38, 86.1806–05.


ANSI material. Copies of these materials may be obtained from the American National Standards Institute, 25 W 43rd Street, 4th Floor, New York, NY 10036, or by calling 212-642-4900, or at http://www.ansi.org.

(i) ANSI/AGA NGV1–1994, Standard for Compressed Natural Gas Vehicle (NGV) Fueling Connection Devices, IBR approved for §§86.001–9, 86.004–9, 86.098–8, 86.099–8, 86.099–9, 86.1810–01.

(ii) [Reserved]

(iv) California regulatory requirements. Copies of these materials may be obtained from U.S. EPA, see paragraph (a) of this section, or from the California Air Resources Board by calling 916–322–2884, or at http://www.arb.ca.gov.

(i) California Regulatory Requirements Applicable to the “LEV II” Program, including:


(B) California Non-Methane Organic Gas Test Procedures, August 5, 1999, IBR approved for §§86.1803–01, 86.1810–01, 86.1811–04.


(iii) California Regulatory Requirements known as On-board Diagnostics II (OBD II), Approved on April 21, 2003, Title 13, California Code 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.

(iv) California Regulatory Requirements known as On-board Diagnostics II (OBD-II), Approved on November 9, 2007, Title 13, California Code 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 §§86.007–17, 86.1806–05.
(5) ISO material. Copies of these materials may be obtained from the International Organization for Standardization, Case Postale 56, CH–1211 Geneva 20, Switzerland, or by calling 41–22–749–01–11, or at http://www.iso.org.

(i) ISO 9141–2, February 1, 1994, Road vehicles—Diagnostic systems—Part 2: CARB requirements for interchange of digital information, IBR approved for §§86.099–17, 86.005–17, 86.007–17, 86.1806–01, 86.1806–04, 86.1806–05.

(ii) ISO 14230–4:2000(E), June 1, 2000, Road vehicles—Diagnostic systems—KWP 2000 requirements for Emission-related systems, IBR approved for §§86.099–17, 86.005–17, 86.007–17, 86.1806–04, 86.1806–05.

(iii) ISO 15765–4:2001, December 14, 2001, Road Vehicles—Diagnostics on Controller Area Networks (CAN)—Part 4: Requirements for emissions-related systems, IBR approved for §§86.005–17, 86.007–17, 86.1806–04, 86.1806–05.

(iv) ISO 15765–4:2005(E), January 15, 2005, Road Vehicles—Diagnostics on Controller Area Networks (CAN)—Part 4: Requirements for emissions-related systems, IBR approved for §§86.007–17, 86.010–18, 86.1806–05.

(6) NIST material. NIST publications are sold by the Government Printing Office (GPO) and by the National Technical Information Service (NTIS). To purchase a NIST publication you must have the order number. Order numbers are available from the NIST Public Inquiries Unit at (301) 975–NIST. Mailing address: NIST Public Inquiries, NIST, 100 Bureau Drive, Stop 3460, Gaithersburg, Md., 20899–3460. If you have a GPO stock number, you can purchase printed copies of NIST publications from GPO. Orders should be sent to the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402–9325. For more information, or to place an order, call (202) 512–1800, fax: (202) 512–2250. More information can also be found at http://www.nist.gov.


(ii) [Reserved]

(7) Truck and Maintenance Council material. Copies of these materials may be obtained from the Truck and Maintenance Council, 950 North Glebe Road, Suite 210, Arlington, VA 22203–4181, or by calling 703–838–1754.

(i) TMC RP 1210B, Revised June 2007, WINDOWS™ COMMUNICATION API, IBR approved for §86.010–38.

(ii) [Reserved]


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 vehicles. The definitions listed in this section apply beginning with the 2000 model year.

AC1 means a test procedure as described in §86.162–00 which simulates testing with air conditioning operating in an environmental test cell by adding the air conditioning compressor load to the normal dynamometer forces.

AC2 means a test procedure as described in §86.162–00 which simulates