

Environmental Protection Agency

§ 92.7

may not be all inclusive. More recent versions of these standards may be used with advance approval of the Administrator. Copies of these materials may be obtained from American National Standards Institute, 11 West 42nd St., 13th Floor, New York, NY 10036. The table follows:

Document number and name	40 CFR part 92 reference
ANSI B109.1-1992, Diaphragm Type Gas Displacement Meters.	§ 92.117

§ 92.6 Regulatory structure.

This section provides an overview of the regulatory structure of this part.

(a) The regulations of this part 92 are intended to control emissions from in-use locomotives. Because locomotive chassis and locomotive engines are sometimes manufactured or remanufactured separately, the regulations in this part include some provisions that apply specifically to locomotive engines. However, the use of the term "locomotive engine" in the regulations in this part does not limit in any manner the liability of any manufacturer or remanufacturer for the emission performance of a locomotive powered by an engine that it has manufactured or remanufactured.

(b) The locomotives and locomotive engines for which the regulations of this part (i.e., 40 CFR part 92) apply are specified by § 92.1, and by the definitions of § 92.2. The point at which a locomotive or locomotive engine becomes subject to the regulations of this part is determined by the definition of "new locomotive or new locomotive engine" in § 92.2. Subpart J of this part contains provisions exempting certain locomotives or locomotive engines from the regulations in this part under special circumstances.

(c) To comply with the requirements of this part, a manufacturer or remanufacturer must demonstrate to EPA that the locomotive or locomotive engine meets the applicable standards of §§ 92.7 and 92.8, and all other requirements of this part. The requirements of this certification process are described in subparts C and D of this part.

(d) Subpart B of this part specifies procedures and equipment to be used

for conducting emission tests for the purpose of the regulations of this part.

(e) Subparts E, F, G, and H of this part specify requirements for manufacturers and remanufacturers after certification; that is during production and use of the locomotives and locomotive engines.

(f) Subpart I of this part contains requirements applicable to the importation of locomotives and locomotive engines.

(g) Subpart K of this part contains requirements applicable to the owners and operators of locomotives and locomotive engines.

(h) Subpart L of this part describes prohibited acts and contains other enforcement provisions relating to locomotives and locomotive engines.

(i) Unless specified otherwise, the provisions of this part apply to all locomotives and locomotive engines subject to the emission standards of this part.

§ 92.7 General standards.

(a) Locomotives and locomotive engines may not be equipped with defeat devices.

(b) New locomotives fueled with a volatile fuel shall be designed to minimize evaporative emissions during normal operation, including periods when the engine is shut down.

(c)(1) Locomotive hardware for refueling locomotives fueled with a volatile fuel shall be designed so as to minimize the escape of fuel vapors.

(2) Hoses used to refuel gaseous-fueled locomotives shall not be designed to be bled or vented to the atmosphere under normal operating conditions.

(3) No valves or pressure relief vents shall be used on gaseous-fueled locomotives except as emergency safety devices, and these shall not operate at normal system operating flows and pressures.

(d) All new locomotives and new locomotive engines subject to any of the standards imposed by this subpart shall, prior to sale, introduction into service, or return to service, be designed to include features that compensate for changes in altitude to ensure that the locomotives or locomotive engines will comply with the

applicable emission standards when operated at any altitude less than 7000 feet above sea level.

§ 92.8 Emission standards.

(a) *Exhaust standards.* Exhaust emissions from locomotives and locomotive engines, when measured in accordance with the provisions of Subpart B of this part, shall comply with both the applicable line-haul duty-cycle standards, and the applicable switch duty-cycle standards of paragraph (a)(1) (and/or the standards of paragraphs (a)(3) and (a)(4) of this section, as applicable) of this section, and the smoke standards of paragraph (a)(2) of this section. Emissions that do not exceed the standards comply with the standards.

(1) *Gaseous and particulate standards.* Gaseous and particulate emission standards are expressed as gram per brake horsepower hour (g/bhp-hr). Non-methane hydrocarbon standards apply to locomotives and locomotive engines fueled with natural gas, and any combination of natural gas and other fuels where natural gas is the primary fuel; total hydrocarbon equivalent standards apply to locomotives and locomotive engines fueled with an alcohol, and any combination of alcohol and other fuels where alcohol is the primary fuel. Total hydrocarbon standards apply to all other locomotives and locomotive engines; that is, those not fueled by natural gas or alcohol. The line-haul duty-cycle standards and switch duty-cycle standards apply to the respective cycle-weighted emission rates as calculated in subpart B of this part.

(i) *Tier 0.* The following locomotives (and the engines used in the following locomotives) are subject to the Tier 0 emission standards listed in Table A8-1 of this section: Locomotives manufactured on, or after, January 1, 1973, and before January 1, 2002; and upgraded locomotives manufactured prior to January 1, 1973. The standards apply when such a locomotive or locomotive engine is manufactured, remanufactured, or imported on or after January 1, 2002; except where the locomotive was previously certified to one or more FELs under subpart D of this part instead of the applicable standards, in which case, the applicable standards are replaced at each subsequent re-

manufacture by the FELs specified by the previous certificate. Example: a locomotive that is certified to a NO_x FEL of 8.0 g/bhp-hr must be recertified to a NO_x FEL of 8.0 g/bhp-hr at each subsequent remanufacture, except as allowed by paragraph (a)(4)(iii) of this section.

(ii) *Tier 1.* Locomotives and engines used in locomotives manufactured on, or after, January 1, 2002, and before January 1, 2005 are subject to the Tier 1 standards listed in Table A8-2 of this section. The standards apply when such a locomotive or locomotive engine is manufactured or imported, and each time it is remanufactured; except where the locomotive was previously certified to one or more FELs under subpart D of this part instead of the applicable standard, in which case, the standards are replaced at each subsequent remanufacture by the FELs specified by the previous certificate.

(iii) *Tier 2.* Locomotives and engines used in locomotives manufactured on, or after, January 1, 2005 are subject to the Tier 2 standards listed in Table A8-3 of this section. The standards apply when such a locomotive or locomotive engine is manufactured or imported, and each time it is remanufactured except where the locomotive was previously certified to one or more FELs under subpart D of this part instead of the applicable standard, in which case, the standards are replaced at each subsequent remanufacture by the FELs specified by the previous certificate.

(2) *Smoke standards.* The smoke opacity standards listed in Table A8-4 of this section apply, as specified in the table, to locomotives and locomotive engines subject to the Tier 0, Tier 1, or Tier 2 standards. Smoke emissions, when measured in accordance with the provisions of Subpart B of this part, shall not exceed the standards of Table A8-4 of this section.

(3) *Alternate standards.* In lieu of the CO and PM standards specified in paragraph (a)(1) of this section, manufacturers and remanufacturers may elect to comply with the alternate CO and PM standards listed in Table A8-5 of this section. Manufacturers and remanufacturers electing to comply with these alternate standards must comply