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1039 to determine if such vehicles or engines are subject to EPA emission requirements).

(c) For cases in which there are multiple entities meeting the definition of manufacturer or remanufacturer, see § 92.209 for guidance.

(d) The provisions of subpart L of this part apply to all persons.

[63 FR 18998, Apr. 16, 1998, as amended at 70 FR 40452, July 13, 2005]

### § 92.2 Definitions.

(a) The definitions of this section apply to this subpart. They also apply to all subparts of this part, except where noted otherwise.

(b) As used in this part, all terms not defined in this section shall have the meaning given them in the Act:

*Act* means the Clean Air Act as amended (42 U.S.C. 7401 *et seq.*).

*Administrator* means the Administrator of the Environmental Protection Agency or his/her authorized representative.

*Aftertreatment system* or *aftertreatment component* or *aftertreatment technology* means any system or component or technology mounted downstream of the exhaust valve or exhaust port whose design function is to reduce exhaust emissions.

*Alcohol fuel* means a fuel consisting primarily (more than 50 percent by weight) of one or more alcohols: e.g., methyl alcohol, ethyl alcohol.

*Alternator/generator efficiency* means the ratio of the electrical power output from the alternator/generator to the mechanical power input to the alternator/generator at the operating point.

*Alternator/generator input horsepower* means the mechanical horsepower input to the main alternator or generator of a locomotive. For the purpose of calculating brake horsepower, alternator/generator input horsepower does not include any power used to circulate engine coolant, circulate engine lubricant, or to supply fuel to the engine.

*Applicable standard* means a standard to which a locomotive or locomotive engine is subject; or, where a locomotive or locomotive engine is certified another standard or FEL, applicable standard means the other standard or FEL to which the locomotive or locomotive engine is certified, as al-

lowed by § 92.8. This definition does not apply to subpart D of this part.

*Auxiliary emission control device (AECD)* means any element of design which senses temperature, locomotive speed, engine RPM, atmospheric pressure, manifold pressure or vacuum, or any other parameter for the purpose of activating, modulating, delaying, or deactivating the operation of any part of the emission control system (including, but not limited to injection timing); or any other feature that causes in-use emissions to be higher than those measured under test conditions, except as allowed by this part.

*Auxiliary engine* means a locomotive engine that provides hotel power, but does not provide power to propel the locomotive.

*Auxiliary power* means the power provided by the main propulsion engine to operate accessories such as cooling fans.

*Averaging* for locomotives and locomotive engines means the exchange of emission credits among engine families within a given manufacturer's, or remanufacturer's, product line.

*Banking* means the retention of emission credits by a credit holder for use in future calendar year averaging or trading as permitted by the regulations in this part.

*Brake horsepower* means the sum of the alternator/generator input horsepower and the mechanical accessory horsepower, excluding any power used to circulate engine coolant, circulate engine lubricant, or to supply fuel to the engine.

*Calibration* means the set of specifications, including tolerances, specific to a particular design, version, or application of a component, or components, or assembly capable of functionally describing its operation over its working range. This definition does apply to Subpart B of this part.

*Class I freight railroad* means a Class I railroad that primarily transports freight rather than passengers.

*Class I railroad* means a railroad that has been classified as a Class I railroad by the Surface Transportation Board.

*Class II railroad* means a railroad that has been classified as a Class II railroad by the Surface Transportation Board.

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*Class III railroad* means a railroad that has been classified as a Class III railroad by the Surface Transportation Board.

*Configuration* means any subclassification of an engine family which can be described on the basis of gross power, emission control system, governed speed, injector size, engine calibration, and other parameters as designated by the Administrator.

*Crankcase emissions* means emissions to the atmosphere from any portion of the crankcase ventilation or engine lubrication systems.

*Defeat device* means an AECD or other control feature that reduces the effectiveness of the emission control system under conditions which may reasonably be expected to be encountered in normal locomotive operation and use, unless the AECD or other control feature has been identified by the certifying manufacturer or remanufacturer in the application for certification, and:

(1) Such conditions are substantially represented by the portion of the federal test procedure during which the applicable emission rates are measured;

(2) The need for the AECD is justified in terms of protecting the locomotive or locomotive engine against damage or accident; or

(3) The AECD does not go beyond the requirements of engine starting.

*Deterioration factor* means the difference between exhaust emissions at the end of useful life and exhaust emissions at the low mileage test point expressed as either: the ratio of exhaust emissions at the end of useful life to exhaust emissions at the low mileage test point (for multiplicative deterioration factors); or the difference between exhaust emissions at the end of useful life exhaust emissions at the low mileage test point (for additive deterioration factors).

*Diesel fuel* means any fuel suitable for use in diesel engines, and which is commonly or commercially known or sold as diesel fuel.

*Emission control system* means those devices, systems or elements of design which control or reduce the emission of substances from an engine. This includes, but is not limited to, mechan-

ical and electronic components and controls, and computer software.

*Emission credits* represent the amount of emission reduction or exceedance, by a locomotive engine family, below or above the emission standard, respectively. Emission reductions below the standard are considered as "positive credits," while emission exceedances above the standard are considered as "negative credits." In addition, "projected credits" refer to emission credits based on the projected applicable production/sales volume of the engine family. "Reserved credits" are emission credits generated within a calendar year waiting to be reported to EPA at the end of the calendar year. "Actual credits" refer to emission credits based on actual applicable production/sales volume as contained in the end-of-year reports submitted to EPA.

*Emission-data engine* means an engine which is tested for purposes of emission certification or production line testing.

*Emission-data locomotive* means a locomotive which is tested for purposes of emission certification or production line testing.

*Emission-related defect* means a defect in design, materials, or workmanship in a device, system, or assembly described in the approved Application for certification which affects any parameter or specification enumerated in Appendix I of this part.

*Emission-related maintenance* means that maintenance which substantially affects emissions or which is likely to affect the deterioration of the locomotive or engine with respect to emissions, as described in an approved Application for certification.

*Engine family* means a group of locomotive or locomotive engine configurations which are expected to have similar emission characteristics throughout the useful lives of the locomotives and engines (see §92.204), and which are (or were) covered (or requested to be covered) by a specific certificate of conformity.

*Engine used in a locomotive* means an engine incorporated into a locomotive or intended for incorporation into a locomotive.

*Engineering analysis* means a summary of scientific and/or engineering

principles and facts that support a conclusion made by a manufacturer or remanufacturer, with respect to compliance with the provisions of this part.

*EPA Enforcement Officer* means any officer or employee of the Environmental Protection Agency so designated in writing by the Administrator or his/her designee.

*Ethanol* means a fuel that contains at least 50 percent ethanol (ethyl alcohol,  $C_2H_5OH$ ) by volume.

*Exhaust emissions* means substances (i.e., gases and particles) emitted to the atmosphere from any opening downstream from the exhaust port or exhaust valve of a locomotive engine.

*Family Emission Limit* means an emission level declared by the certifying manufacturer or remanufacturer to serve in lieu of an otherwise applicable emission standard for certification and compliance purposes in the averaging, banking and trading program. FELs are expressed to the same number of decimal places as the applicable emission standard.

*Freshly manufactured locomotive* means a locomotive which is powered by a freshly manufactured engine, and which contains fewer than 25 percent previously used parts (weighted by the dollar value of the parts).

*Freshly manufactured locomotive engine* means a new locomotive engine which has not been remanufactured.

*Fuel system* means the combination of fuel tank(s), fuel pump(s), fuel lines and filters, pressure regulator(s), and fuel injection components (or pressure regulator(s) and carburetor(s) if fuel injection is not employed), fuel system vents, and any other component involved in the delivery of fuel to the engine.

*Gaseous fuel* means a fuel which is a gas at standard temperature and pressure. This includes both natural gas and liquefied petroleum gas.

*Green engine factor* means a factor that is applied to emission measurements from a locomotive or locomotive engine that has had little or no service accumulation. The green engine factor adjusts emission measurements to be equivalent to emission measurements from a locomotive or locomotive engine that has had approximately 300 hours of use.

*High-altitude* means relating to an altitude greater than 4000 feet (1220 meters) and less than 7000 feet (2135 meters), or equivalent observed barometric test conditions of 25.7 to 22.7 inch Hg (88.5 to 78.1 kilopascals).

*Hotel power* means the power provided by an engine on a locomotive to operate equipment on passenger cars of a train; e.g., heating and air conditioning, lights, etc.

*Idle speed* means that speed, expressed as the number of revolutions of the crankshaft per unit of time (e.g., rpm), at which the engine is set to operate when not under load for purposes of propelling the locomotive.

*Importer* means an entity or person who imports locomotives or locomotive engines from a foreign country into the United States (including the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Northern Mariana Islands).

*Inspect and qualify* means to determine that a previously used component or system meets all applicable criteria listed for the component or system in a certificate of conformity for remanufacturing (e.g., determine that the component or system is functionally equivalent to one that has not been used previously).

*Installer* means an individual or entity which assembles remanufactured locomotives or locomotive engines.

*Liquefied petroleum gas* means the commercial product marketed as liquefied petroleum gas or propane.

*Locomotive* means a self-propelled piece of on-track equipment designed for moving or propelling cars that are designed to carry freight, passengers or other equipment, but which itself is not designed or intended to carry freight, passengers (other than those operating the locomotive) or other equipment. The following other equipment are not locomotives (see 40 CFR parts 86 and 89 for this equipment):

(1) Equipment which is designed for operation both on highways and rails are not locomotives.

(2) Specialized railroad equipment for maintenance, construction, post accident recovery of equipment, and repairs; and other similar equipment, are not locomotives.

(3) Vehicles propelled by engines with total rated horsepower of less than 750 kW (1006 hp) are not locomotives (see 40 CFR parts 86 and 89 for this equipment), unless the owner (including manufacturers) chooses to have the equipment certified under the requirements of this part. Where equipment is certified as a locomotive pursuant to this paragraph (3), it shall be subject to the requirements of this part for the remainder of its service life. For locomotives propelled by two or more engines, the total rated horsepower is the sum of the rated horsepower of each engine.

*Locomotive engine* means an engine incorporated into a locomotive or intended for incorporation into a locomotive.

*Low hour engine* means an engine during the interval between the time that normal assembly operations and adjustments are completed and the time that 300 additional operating hours have been accumulated (including hours accumulated during emission testing if performed).

*Low idle speed* means a speed which is less than normal idle speed, expressed as the number of revolutions of the crankshaft per unit of time, at which an engine can be set when not under load for purposes of propelling the locomotive.

*Low mileage locomotive* means a locomotive during the interval between the time that normal assembly operations and adjustments are completed and the time that either 10,000 miles of locomotive operation or 300 additional operating hours have been accumulated (including emission testing if performed).

*Malfunction* means a condition in which the operation of a component in a locomotive or locomotive engine occurs in a manner other than that specified by the certifying manufacturer or remanufacturer (e.g., as specified in the application for certification); or the operation of the locomotive or locomotive engine in that condition.

*Manufacturer* means an individual or entity engaged in the manufacturing or assembling of freshly manufactured locomotives or freshly manufactured locomotive engines; or the importing of locomotives or locomotive engines

originally manufactured on or after January 1, 1973 and not remanufactured. (See §§ 92.1(c) and 92.209 for applicability of this term.)

*Maximum rated horsepower* means the maximum brake horsepower output of an engine.

*Mechanical accessory horsepower* means the sum of mechanical horsepower generated by an engine to supply accessories. Mechanical accessory horsepower does not include power supplied to the main alternator or generator, power used to circulate engine coolant or engine lubricant, or power used to supply fuel to the engine.

*Methanol* means a fuel that contains at least 50 percent methanol (methyl alcohol, (CH<sub>3</sub>OH)) by volume.

*Method of aspiration* means the method whereby air for fuel combustion enters the engine (e.g., natural or turbocharged).

*Model year* means a calendar year; except where the Administrator determines a different production period which includes January 1 of such calendar year.

*Natural gas* means the commercial product marketed as natural gas whose primary constituent is methane.

*New locomotive or new locomotive engine* means:

(1)(i) A locomotive or locomotive engine the equitable or legal title to which has never been transferred to an ultimate purchaser; or

(ii) A locomotive or locomotive engine which has been remanufactured, but has not been placed back into service.

(2) Where the equitable or legal title to a locomotive or locomotive engine is not transferred prior to its being placed into service, the locomotive or locomotive engine ceases to be new when it is placed into service.

(3) With respect to imported locomotives or locomotive engines, the term "new locomotive" or "new locomotive engine" means a locomotive or locomotive engine that is not covered by a certificate of conformity under this part at the time of importation, and that was manufactured or remanufactured after the effective date of the emission standards in this part which is applicable to such locomotive or engine (or which would be applicable to

such locomotive or engine had it been manufactured or remanufactured for importation into the United States).

(4) Notwithstanding paragraphs (1) through (3) of this definition, locomotives and locomotive engines which were originally manufactured before January 1, 1973 and which have not been upgraded are not new.

(5) Notwithstanding paragraphs (1) through (3) of this definition, locomotives and locomotive engines which are owned by a small railroad and which have never been manufactured or remanufactured into a certified configuration are not new.

*Nonconforming locomotive or nonconforming locomotive engine* means a locomotive or locomotive engine which is not covered by a certificate of conformity prior to importation or being offered for importation (or for which such coverage has not been adequately demonstrated to EPA); or a locomotive or locomotive engine which was originally covered by a certificate of conformity, but which is not in a certified configuration, or otherwise does not comply with the conditions of that certificate of conformity.

(NOTE: Domestic locomotives and locomotive engines which are not covered by a certificate of conformity prior to their introduction into U.S. commerce are considered to be noncomplying locomotives and locomotive engines.)

*Non-locomotive-specific engine* means an engine that is sold for and used in non-locomotive applications more than for locomotive applications.

*Normal idle* means relating to the idle throttle-notch position for locomotives that have one throttle-notch position, or the highest the idle throttle-notch position for locomotives that have two throttle-notch positions.

*Opacity* means the fraction of a beam of light, expressed in percent, which fails to penetrate a plume of smoke as measured and calculated under the provisions of subpart B of this part.

*Original manufacture* means the event of freshly manufacturing a locomotive or locomotive engine. The date of original manufacture is the date of final assembly; except as provided in §92.11. Where a locomotive or locomotive engine is manufactured under §92.11, the date of original manufacture is the date on which the final assembly

of locomotive or locomotive engine was originally scheduled.

*Original remanufacture* means the first remanufacturing of a locomotive or locomotive engine at which the locomotive or locomotive engines is subject to the emission standards of this part.

*Oxides of nitrogen* means nitric oxide and nitrogen dioxide. Oxides of nitrogen are expressed quantitatively as if the nitric oxide were in the form of nitrogen dioxide (oxides of nitrogen are assumed to have a molecular weight equivalent to nitrogen dioxide).

*Passenger locomotive* means a locomotive designed and constructed for the primary purpose of propelling passenger trains, and providing power to the passenger cars of the train for such functions as heating, lighting and air conditioning.

*Petroleum fuel* means a fuel primarily derived from crude oil (e.g., gasoline or diesel fuel).

*Power assembly* means the components of an engine in which combustion of fuel occurs, and consists of the cylinder, piston and piston rings, valves and ports for admission of charge air and discharge of exhaust gases, fuel injection components and controls, cylinder head and associated components.

*Primary fuel* means that type of fuel (e.g., diesel fuel) that is consumed in the greatest quantity (mass basis) when the locomotive or locomotive engine is operated in use.

*Produce* means to manufacture or remanufacture. Where a certificate holder does not actually assemble the locomotives or locomotive engines that it manufactures or remanufactures, produce means to allow other entities to assemble locomotives or locomotive engines under the certificate holder's certificate.

*Railroad* means a commercial entity that operates locomotives to transport passengers or freight.

*Rated horsepower* means the maximum horsepower output of a locomotive engine in use.

*Remanufacture* means:

(1)(i) To replace, or inspect and qualify, each and every power assembly of a locomotive or locomotive engine, whether during a single maintenance

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event or cumulatively within a five year period; or

(ii) To upgrade a locomotive or locomotive engine; or

(iii) To convert a locomotive or locomotive engine to enable it to operate using a fuel other than it was originally manufactured to use; or

(iv) To install a remanufactured engine or a freshly manufactured engine into a previously used locomotive.

(2) *Remanufacture* also means the act of remanufacturing.

*Remanufacture system* or *remanufacturing system* means all components (or specifications for components) and instructions necessary to remanufacture a locomotive or locomotive engine in accordance with applicable requirements of this part.

*Remanufactured locomotive* means either a locomotive which is powered by a remanufactured locomotive engine, or a repowered locomotive.

*Remanufactured locomotive engine* means a locomotive engine which has been remanufactured.

*Remanufacturer* means an individual or entity that is engaged in the manufacture or assembly of remanufactured locomotives or locomotive engines, (including: Entities that design or produce the emission-related parts used in remanufacturing; entities that install parts in an existing locomotive or locomotive engine to remanufacture it; and entities that own or operate the locomotive or locomotive engine and provide specifications as to how an engine is to be remanufactured (i.e., specifying who will perform the work, when the work is to be performed, what parts are to be used, or how to calibrate the adjustable parameters of the engine)); or an importer of remanufactured locomotives or locomotive engines. (See §§ 92.1(c) and 92.209 for applicability of this term.)

*Repower* means replacement of the engine in a previously used locomotive with a freshly manufactured locomotive engine. Replacing a locomotive engine with a freshly manufactured locomotive engine in a locomotive that has a refurbished or reconditioned chassis such that less than 25 percent of the parts of the locomotive were previously used (as weighted by dollar value) is not repowering.

*Repowered locomotive* means a locomotive that has been repowered with a freshly manufactured engine.

*Service life* means the total life of a locomotive or locomotive engine. Service life begins when the locomotive or locomotive engine is originally manufactured and continues until the locomotive or locomotive engine is permanently removed from service.

*Small railroad* means a railroad that is classified by the Small Business Administration as a small business.

*Small remanufacturer* means a remanufacturer that is classified by the Small Business Administration as a small business.

*Smoke* means the matter in the engine exhaust which obscures the transmission of light.

*Specified adjustable range* means the range of allowable settings for an adjustable component specified by a certificate of conformity.

*Specified by a certificate of conformity* or *specified in a certificate of conformity* means stated or otherwise specified in a certificate of conformity or an approved application for certification.

*Steam locomotive* means a historic locomotive propelled by a steam engine.

*Switch locomotive* means a locomotive designed or used solely for the primary purpose of propelling railroad cars a short distance, and that is powered by an engine with a maximum horsepower rating of 2300 hp or less.

*Test locomotive* or *locomotive engine* means a locomotive or locomotive engine in a test sample.

*Test sample* means the collection of locomotives or locomotive engines selected from the population of an engine family for emission testing or auditing.

*Throttle* means the component, or components, which either directly or indirectly controls the fuel flow to the engine.

*Throttle notch* means a discrete throttle position for a locomotive with a limited number of throttle positions.

*Throttle notch horsepower* means the brake horsepower output of an engine corresponding to each throttle notch position, including dynamic-brake settings.

*Throttle notch speed* means the speed of the engine, expressed as the number of revolutions of the crankshaft per

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unit of time (e.g., rpm), corresponding to each throttle notch position, including dynamic-brake, and hotel power settings.

*Tier 0* means relating to emission standards applicable to locomotives originally manufactured before January 1, 2002; or relating to such locomotives.

*1* means relating to emission standards applicable to locomotives originally manufactured on or after January 1, 2002 and before January 1, 2005; or relating to such locomotives.

*Tier 2* means relating to emission standards applicable to locomotives originally manufactured on or after January 1, 2005; or relating to such locomotives.

*Total Hydrocarbon Equivalent* means the sum of the carbon mass contributions of non-oxygenated hydrocarbons, alcohols and aldehydes, or other organic compounds that are measured separately as contained in a gas sample, expressed as gasoline-fueled vehicle hydrocarbons. The hydrogen-to-carbon ratio of the equivalent hydrocarbon is 1.85:1. Total Hydrocarbon Equivalent is abbreviated THCE.

*Trading* means the exchange of locomotive or locomotive engine emission credits between credit holders.

*United States* means the States, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, Guam, American Samoa, and the U.S. Virgin Islands.

*Upgrade* means to modify a locomotive or locomotive engine that was originally manufactured prior to January 1, 1973 (or a locomotive or locomotive engine that was originally manufactured on or after January 1, 1973, and that is not subject to the emission standards of this part), such that it is intended to comply with the Tier 0 standards. Upgrading is a type of re-manufacturing.

*Useful life* means the period during which the locomotive engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as work output or miles. It is the period during which a new locomotive or locomotive engine is required to comply with all applicable emission standards.

*Volatile liquid fuel* means any liquid fuel other than diesel or biodiesel.

*Voluntary emission recall* means a repair, adjustment, or modification program voluntarily initiated and conducted by a manufacturer or remanufacturer to remedy any emission-related defect for which notification of locomotive or locomotive engine owners has been provided.

[63 FR 18998, Apr. 16, 1998, as amended at 70 FR 40453, July 13, 2005]

### § 92.3 Abbreviations.

The abbreviations of this section apply to all subparts of this part and have the following meanings:

ANSI—American National Standards Institute  
API—American Petroleum Institute  
ASTM—American Society for Testing and Materials  
BHP—Brake horsepower  
BSCO—Brake specific carbon monoxide  
BSHC—Brake specific hydrocarbons  
BSNO<sub>x</sub>—Brake specific oxides of nitrogen  
°C—Celsius  
cfh—cubic feet per hour  
cfm—cubic feet per minute  
CFV—Critical flow venturi  
CL—Chemiluminescence  
CO—Carbon monoxide  
CO<sub>2</sub>—Carbon dioxide  
cu in—cubic inch(es)  
CVS—Constant volume sampler  
EP—End point  
EPA—Environmental Protection Agency  
°F—Fahrenheit  
FEL—Family emission limit  
FID—Flame ionization detector  
ft—foot or feet  
g—gram(s)  
gal—U.S. gallon  
GC—Gas Chromatograph  
h—hour(s)  
H<sub>2</sub>O—water  
HC—hydrocarbon  
HFID—Heated flame ionization detector  
Hg—Mercury  
hp—horsepower  
IBP—Initial boiling point  
in—inch(es)  
K—Kelvin  
kg—kilogram(s)  
km—kilometer(s)  
kPa—kilopascal(s)  
lb—pound(s)  
LPG—Liquified Petroleum Gas  
m—meter(s)  
max—maximum  
mg—milligram(s)  
mi—mile(s)  
min—minute  
ml—milliliter(s)