

## § 7:27B-4.1 Definitions

The following words and terms, when used in this subchapter, have the following meanings, unless the context clearly indicates otherwise.

"Best available retrofit technology" or "BART" means an aftermarket particulate emissions control device that, as determined by the Department, can be used on or in a regulated vehicle or regulated equipment, at a reasonable cost to achieve substantial reduction of fine particulate diesel emissions, and is either a diesel emissions control strategy for which CARB has issued an Executive Order, or a verified retrofit technology for which the USEPA has issued a Verification Letter. "Best available retrofit technology" includes only those retrofit devices and fuel for which the retrofit device manufacturer or fuel manufacturer certifies that the installation and use would not jeopardize the original engine warranty in effect at the time of the installation or the commencement of use of the retrofit device or fuel, and for which the manufacturer has issued a warranty pursuant to N.J.A.C. 7:27-32.9.

"BART 1" means a BART that achieves a minimum particulate emissions control level of 25 percent reduction in mass.

"BART 2" means a BART that achieves a minimum particulate emissions control level of 50 percent reduction in mass.

"BART 3" means a BART that achieves a minimum particulate emissions control level of 85 percent reduction in mass.

"California Air Resources Board" or "CARB" means the agency of the State of California established and empowered to regulate sources of air contaminant emissions, including motor vehicles, pursuant to California Health and Safety Code, Sections 39500 et seq.

"Certified configuration" means a heavy-duty diesel engine design or a light-duty diesel-powered motor vehicle-engine-chassis design certified by either of the following agencies as meeting the applicable emission standards for heavy-duty diesel engines or light-duty diesel-powered motor vehicles manufactured in a given model year:

1. EPA, for model year 1971 or for a more recent model year heavy-duty diesel vehicle engine;
2. EPA, for model year 1968 or for a more recent model year light-duty diesel vehicle;
3. CARB, for model year 1973 or for a more recent model year heavy-duty diesel vehicle engine; or
4. CARB, for model year 1966 or for a more recent model year light-duty diesel vehicle.

"Closed crankcase ventilation system" or "CCVS" means a system, installed upon an internal combustion engine, that is designed to capture all solids, liquids and gases that are emitted from the vent and to divert them to the engine intake air plenum for recombustion.

"Data link connector" or "DLC" means a standardized nine- or 16-pin diagnostic test receptacle used to connect an analyzer to a motor vehicle.

"Department" means the New Jersey Department of Environmental Protection.

"Dew point" means the temperature to which air must be cooled for saturation to occur.

"Diesel bus" means any diesel-powered autobus or motorbus of any size or configuration, whether registered in this State or elsewhere, that is designed or used for intrastate or interstate transportation of passengers for hire or otherwise on a public road, street or highway or any public or quasi-public property in this State, including, but not limited to, autobuses under the jurisdiction of the New Jersey Department of Transportation pursuant to Titles 27 or 48 of the Revised Statutes; autobuses of the New Jersey Transit Corporation and its contract carriers that are under the inspection jurisdiction of the New Jersey Department of Transportation; autobuses that are subject to Federal motor carrier safety regulations; autobuses under the authority of the Interstate Commerce Commission or its successor agency; school buses, as defined pursuant to N.J.S.A. 39:1-1; and hotel, casino, charter, and special buses.

"Diesel emission fluid" or "DEF" means an aqueous solution made with urea and water, used as a consumable in selective catalytic reduction to lower NO<sub>x</sub> concentration in the diesel exhaust emissions from diesel engines.

"Diesel emissions testing equipment" means equipment used to conduct a test of a diesel-powered motor vehicle in accordance with this subchapter and which satisfies all applicable specifications set forth at N.J.A.C. 7:27B-4.2(d) and 4.6. For motor vehicle inspections conducted pursuant to N.J.A.C. 7:27-14 and this subchapter, this term shall include all devices used for performing a motor vehicle inspection including, but not limited to, smoke opacity meters, exhaust gas analyzers, on board diagnostic scanners and analyzers and computers and related software.

"Diesel engine" means a compression ignition type of internal combustion engine.

"Diesel particulate filter" or "DPF" means an exhaust emissions aftertreatment device that physically entraps and prevents from being emitted into the air at least 85 percent of the particulate matter contained in the full exhaust stream emitted by the engine.

"Diesel-powered" means utilizing a diesel engine.

"Element of design" means any part or system on a motor vehicle or a motor vehicle engine pertaining to the vehicle's or engine's certified configuration.

"Emission control apparatus" means any device utilized by the vehicle manufacturer and/or the engine manufacturer to control the emission of any regulated emission, including any associated component, which monitors the function and maintenance of such a device, regardless of the location of the device on the vehicle. This term shall also include any retrofit device added to the vehicle or engine as part of a mandatory or voluntary retrofit program for emission control.

"EPA" means the United States Environmental Protection Agency.

"Exhaust aftertreatment" means any element of design which affects or alters the molecular content of the exhaust emissions of a diesel engine.

"Exhaust emissions" means the emissions (including any liquid or solid particles in the gaseous stream) released into the atmosphere from any opening downstream from the exhaust ports of a motor vehicle engine.

"Exhaust leak" means any condition of the exhaust system which permits exhaust emissions to escape into the atmosphere at any point between the exhaust ports of a motor vehicle engine and the outlet of the engine exhaust pipe.

"Full-flow smokemeter" means a smokemeter which measures smoke opacity by passing a beam of light through the axis of the exhaust plume as the exhaust exits the tailpipe of a motor vehicle.

"Governor" means a mechanism installed on a diesel engine by the original equipment manufacturer for the purpose of limiting the maximum engine RPM.

"Gross combination weight rating" or "GCWR" means the GVWR of a combination (articulated) vehicle, which is defined as the GVWR of the power unit plus the GVWR of the towed unit or units.

"Gross vehicle weight rating" or "GVWR" means the value specified by the vehicle manufacturer as the maximum loaded weight of a single or combination vehicle. When used in connection with a combination or articulated vehicle, GVWR refers to the "gross combination weight rating" or "GCWR" of the combination or articulated vehicle, which is defined as the GVWR of the power unit plus the GVWR of the towed unit or units.

"Heavy-duty diesel vehicle" or "HDDV" means a diesel-powered motor vehicle other than a diesel bus that has a GVWR exceeding 8,500 pounds and is designed primarily for transporting persons or property.

"High idle" means the highest engine speed obtainable when the engine is disengaged from the transmission and is free-wheeling.

"Idle" means an operating mode where the vehicle engine is not engaged in gear and where the engine operates at a speed at the revolutions per minute specified by the engine or vehicle manufacturer.

"Indicator light" means a light that serves to inform about a given condition in a circuit or device, such as a malfunction.

"Inspector" means any person authorized by the State of New Jersey to determine whether a vehicle complies with the requirements of N.J.A.C. 7:27-14 and 32.

"Key on engine off" or "KOEO" means the motor vehicle ignition position of key-on, engine-off. This may be denoted on some ignitions by a "run" position and is the key position just prior to holding the key in the "start" position to start the engine. Although this is the same key position as KOER, the KOEO position implies that the motor vehicle engine is not running.

"Key on engine running" or "KOER" means the motor vehicle ignition position of key-on, engine-running. This may be denoted on some ignitions by a "run" position and is the key position just prior to holding the key in the "start" position to start the engine. Although this is the same key position as KOEO, the KOER position implies that the motor vehicle engine is running.

"Light-duty diesel vehicle" or "LDDV" means a diesel-powered motor vehicle, other than a diesel bus, that has a GVWR of 8,500 pounds or less and is designed primarily for transporting persons or property.

"Low idle" or "curb idle" means the minimum operating speed of an engine with the accelerator pedal released and the transmission disengaged, as specified by the engine manufacturer.

"Malfunction indicator light" or "MIL" means the light located on the dashboard instrument panel of an OBD-equipped motor vehicle that indicates a malfunction detected by the OBD system by illuminating the words "check engine," "service engine" or an engine pictograph with the word "check" or "service."

"Maximum governed RPM" means, for an engine which has a functioning governor, the manufacturer's recommended maximum engine speed as restricted by the governor. For an engine which does not have a functioning governor, this term means a value of 80 percent of the manufacturer's recommended maximum engine speed.

"Measurement path" means the linear path between the sending and receiving points of a full-flow smokemeter.

"Motor vehicle" means all vehicles propelled otherwise than by muscular power, excepting motorized bicycles and such vehicles as run only upon rails or tracks.

"MPH" means miles per hour.

"MVC" means the New Jersey Motor Vehicle Commission.

"Neutral density filter" means a device used to calibrate or verify the accuracy of the raw opaque value within the measurement path of a smokemeter which consists of a lens of neutral particle density and which filters visible light to a known opacity value.

"Nominal stack size" means the exhaust pipe diameter to be used in conducting smoke opacity measurements to determine compliance with diesel smoke opacity standards, based on engine horsepower, as set forth in N.J.A.C. 7:27B-4.3 Table 1.

"On board diagnostics" or "OBD" means an automotive diagnostic system complying with California OBD regulations at Title 13 California Code section 1968.1 or EPA OBD regulations at 40 CFR Part 86.

"Opacity" means the property of a substance whereby it partially or wholly obstructs the transmission of visible light expressed as the percentage to which light is obstructed.

"Partial-flow smokemeter" means a smokemeter which samples, at frequent intervals, a representative portion of the total exhaust flow and directs it to a measurement cell, and which calculates smoke opacity based upon the sample smoke density and the diameter of the exhaust pipe.

"Particles" means any material, except uncombined water, which exists as liquid particles or solid particles at standard conditions.

"Peak smoke opacity" means the highest numerical value of smoke opacity measured during a snap acceleration smoke opacity test at N.J.A.C. 7:27B-4.3(a).

"Person" means an individual, public or private corporation, company, partnership, firm, association, society or joint stock company, municipality, state, interstate body, the United States, or any board, commission, employee, agent, officer or political subdivision of a state, an interstate body or the United States. "Person" expressly includes the Port Authority of New York and New Jersey, and the South Jersey Port Corporation.

"Private inspection facility" or "PIF" means a facility licensed by the MVC to perform emissions inspections that may also offer motor vehicle parts and repair services.

"Readiness" means the state of a motor vehicle's OBD system that has successfully completed self-diagnostic routines on all supported subsystems as indicated by a showing of "ready" on all supported readiness monitors. Readiness does not indicate that the motor vehicle has passed the OBD inspection but only that the motor vehicle's OBD system is ready for inspection.

"Readiness monitors" means the various indicators used by a motor vehicle's on board computer to record the status of subsystem diagnostic routines. A readiness monitor may record a subsystem as "ready," "not ready" or "not supported."

"Regulated emission" means any solid, liquid or gaseous substance which is emitted from a motor vehicle or motor vehicle engine and which is regulated by the EPA pursuant to 40 C.F.R. Part 86.

"Retrofit device" means any emissions control apparatus, including exhaust aftertreatment device, that has been installed on the vehicle or engine after the original manufacturing date of the complete vehicle.

"RPM" means revolutions per minute.

"RPM sensor" means a mechanism integral to the smokemeter which senses the engine speed in revolutions per minute.

"SAE J1667" means the recommended practice incorporated in document number J1667 published by the Society of Automotive Engineers in February 1996, entitled Snap-Acceleration Smoke Test Procedure for Heavy-Duty Diesel-Powered Vehicles, and all appendices attached thereto, incorporated herein by reference.

"SAE J1939" means the recommended practice in document number J1939 published by the Society of Automotive Engineers in April 2000, entitled Recommended Practice for a Serial Control and Communications Vehicle Network, and all appendices attached thereto, incorporated herein by reference, as supplemented or amended ([www.sae.org](http://www.sae.org)).

"School bus" means a school bus as defined under N.J.S.A. 39:1-1.

"Selective catalytic reduction" or "SCR" means an emission control system that injects diesel exhaust fluid into the exhaust stream where it reacts with a catalyst to reduce NO<sub>x</sub> emissions.

"Smoke" means the emissions, including airborne solid and/or liquid particles, exclusive of water vapor, released into the atmosphere from a process of combustion.

"Smokemeter" means, in the context of this subchapter, a component of diesel emissions testing equipment. The smokemeter is not separable from the diesel emissions testing equipment. Inspections performed using a smokemeter must employ diesel emissions testing equipment.

"Tailpipe" means the final downstream section of pipe in a motor vehicle's exhaust system.

"Wide open throttle" or "WOT" means, in reference to a diesel-powered motor vehicle, the positioning of the primary engine power control to deliver maximum potential power and fuel. In most cases this is the positioning of the vehicle's accelerator control at its forward-most or downward-most position.

## **HISTORY:**

Emergency amendment R.1995 d.409, effective June 29, 1995 (expires August 28, 1995).

See: 27 N.J.R. 2752(a).

Adopted concurrent proposal, R.1995 d.527, effective August 28, 1995 (operative October 27, 1995).

See: 27 N.J.R. 2752(a), 27 N.J.R. 3806(a).

Amended by R.1997 d.283, effective July 7, 1997 (operative August 11, 1997).

See: 29 N.J.R. 726(a), 29 N.J.R. 2826(b).

Amended "Chassis dynamometer", "Gasoline-fueled", "Heavy-duty gasoline-fueled vehicle", "Hydrocarbons (HC)", "Idle", and "Motor vehicle emission testing equipment".

Amended by R.1997 d.393, effective September 15, 1997 (operative October 7, 1997).

See: 29 N.J.R. 971(a), 29 N.J.R. 4108(a).

Added "Alternative smoke opacity standard", "California Air Resources Board", "Certified configuration", "Dew point", "Diesel bus", "Diesel emissions inspection center", "Diesel engine", "Diesel-powered", "Division of Motor Vehicles", "Element of design", "Engine RPM hookup", "Exhaust aftertreatment", "Exhaust stack diameter", "Full-flow smokemeter", "Governor", "Light-duty diesel vehicle", "Low speed engine", "Maximum governed RPM", "Measurement path", "Neutral density filter", "Oil temperature probe", "Partial-flow smokemeter", "Particles", "Peak smoke opacity", "Regulated emission", "SAE J667", "Tailpipe" and "Wide open throttle"; deleted "Autobus", "Motor vehicle safety specialist" and "Prescribed inspection test procedure"; and amended "Department", "Emission control apparatus", "Exhaust emissions", "Gasoline-fueled", "Gross vehicle weight rating", "Heavy-duty diesel vehicle", "Idle", "Inspector", "Opacity", "Smoke", and "Smokemeter".

Amended by R.1998 d.309, effective July 6, 1998 (operative July 21, 1998).

See: 30 N.J.R. 901(a), 30 N.J.R. 2476(b).

Deleted "Engine RPM hookup", "Exhaust stack diameter" and "Operating mode"; inserted new "Gross combination weight rating" or "GCWR", "High idle", "High speed diesel engine", "Low idle" or "curb idle", "Medium speed diesel engine", "Nominal stack size" and "RPM sensor"; and rewrote "Gross vehicle weight rating" or "GCWR" and "Low speed diesel engine".

Administrative correction.

See: 31 N.J.R. 872(b).

Amended by R.1999 d.210, effective July 6, 1999 (operative August 10, 1999).

See: 31 N.J.R. 828(a), 31 N.J.R. 1803(b).

In "High speed diesel engine", "Low speed diesel engine" and "Medium speed diesel engine", substituted references to diesel engines for references to heavy-duty diesel engines; and in "Medium speed diesel engine", inserted "maximum" preceding "governed".

Amended by R.1999 d.408, effective November 15, 1999 (operative December 7, 1999).

See: 31 N.J.R. 2572(a), 31 N.J.R. 3627(a).

In "Inspector", changed N.J.A.C. reference.

Administrative change.

See: 33 N.J.R. 3550(a).

Amended by R.2007 d.235, effective August 6, 2007 (operative September 8, 2007).

See: 38 N.J.R. 5244(a), 39 N.J.R. 3352(a).

Added definitions "Best available retrofit technology", "BART 1", "BART 2", "BART 3", "Closed crankcase ventilation system", "MVC", "Person", "Retrofit device" and "School bus"; deleted definition "Division of Motor Vehicles"; in definition "Inspector", updated the N.J.A.C. reference; and in definition "Peak smoke capacity", substituted "power brake" for "stall".

Amended by R.2009 d.343, effective November 16, 2009 (operative December 18, 2009).

See: 41 N.J.R. 1606(a), 41 N.J.R. 4195(b).

Added definitions "Data link connector", "Diesel emissions testing equipment", "Key on engine off", "Key on engine running", "Malfunction indicator light", "On board diagnostics", "Readiness" and "Readiness monitor"; in definition "Emission control apparatus", inserted a comma following "component", inserted ", regardless of the location of the location of the device on the vehicle" and inserted the last sentence; and rewrote definitions "Retrofit

device" and "Smokemeter".

Amended by R.2016 d.124, effective October 3, 2016 (operative December 2, 2016).

See: 48 N.J.R. 748(a), 48 N.J.R. 2049(a).

Deleted definitions "Alternative smoke opacity standard", " 'Chassis dynamometer' or 'dynamometer' ", " 'Diesel emissions inspection center' or 'DEIC' ", "Engine RPM rise time", "High speed diesel engine", "Low speed diesel engine", "Medium speed diesel engine", "Motorized bicycle", and "Oil temperature probe"; added definitions " 'Diesel emission fluid' or 'DEF' ", " 'Diesel particulate filter' or 'DPF' ", "Indicator light", " 'Private inspection facility' or 'PIF' ", "SAE J1939", and " 'Selective catalytic reduction' or 'SCR' "; in definition " 'Data link connector' or 'DLC' ", inserted "nine- or"; and in definition "Peak smoke opacity", deleted " a rolling acceleration smoke opacity test at N.J.A.C. 7:27B-4.3(b), or a power brake smoke opacity test at N.J.A.C. 7:27B-4.3(c)" from the end.