



State of New Jersey

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Diesel Retrofit Program Rule Fact Sheet

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The Diesel Retrofit Program Rules, (N.J.A.C. 7:27-32), are a step toward addressing an urgent public health issue: controlling fine particulate matter (PM_{2.5}) from diesel-powered vehicles. Diesel emissions contain more than 40 known and probable carcinogens, including fine particles, commonly called soot. These pollutants are known to cause or exacerbate asthma, bronchitis, lung cancer, heart disease and premature death. By reducing exposure to diesel particulates through retrofits to vehicles, New Jersey can save lives and reduce health care costs. In addition, controls on emissions from school bus engines are expected to significantly reduce the high levels of particulates that children are exposed to while riding on school buses each day. In total, these reductions will enable us to avoid up to 150 premature deaths each year and save up to \$1.4 billion in health care and related costs annually. **There is no cost to the owners of regulated vehicles to install retrofit technology because the purchase and installation costs for the retrofit technology are reimbursed by the Department of Environmental Protection (NJDEP).**

The Diesel Retrofit Program Rules target diesel-powered vehicles, including garbage trucks and school buses that are publicly-owned or are under public contracts, commercial buses and publicly-owned on-road vehicles and off-road equipment that regularly expose the public to diesel exhaust. Major elements of the regulations include requirements for minimum retrofit emission control levels, inventory and cost estimate submittals, recordkeeping, a one-time verification inspection, warranties for retrofit technology, and reimbursement procedures. The retrofit device must be installed by an authorized installer listed on the state contract specifically issued for the purposes of the Diesel Retrofit Program rules. **No installation shall occur until the NJDEP certifies funding is available to provide reimbursement.**

The retrofit devices are designed to significantly reduce exhaust emissions of diesel particulates by capturing and/or destroying these particles. Most gasoline-fueled vehicles have control technologies like catalytic converters that reduce harmful emissions of air pollutants. Prior to **2008** most diesel vehicles did not have these emission controls, so aftermarket “retrofits” have been developed that can be installed on diesel vehicles. The required tailpipe retrofit technology, called a Best Available Retrofit Technology (BART), must be verified as a diesel emissions control strategy by either the United States Environmental Protection Agency or the California Air Resources Board. The retrofit devices attached at the tailpipe lower emissions by trapping and combusting excess particulates. There are many types of retrofit devices for use on a variety

of vehicles and equipment at varying levels of control efficiency. There are three levels of efficiency defined as BART Level 1, BART Level 2, and BART Level 3.

A BART Level 1 device must be verified to reduce particulate emissions by 25 percent or greater, a BART Level 2 device must be verified to reduce particulate emissions by 50 percent or more, and BART Level 3 to 85 percent or more. Examples of BART Level 1 devices include diesel oxidation catalysts. BART Level 2 devices consist of flow-thru filters, and BART Level 3 devices include actively- and passively-regenerated diesel particulate filters. The specific BART level that must be met by the fleet owner is dependent on the vehicle/equipment type and the engine model year listed in Table 1 at N.J.A.C. 7:27-32.8.

School buses must be retrofitted with closed crankcase ventilation systems (CCVS).

School buses used to transport children are required to install closed crankcase ventilation system (CCVS) devices on the engine crankcase. The CCVS is designed to capture and filter diesel engine crankcase vent emissions and redirect those emissions into the combustion process.

- All regulated publicly and privately owned school buses will be required to complete installation of the CCVS device within two years of the date when the NJDEP certifies that funding is available for this purpose.
- Once funding certification is made, the school bus owner must submit to the NJDEP a Cost Estimate–CCVS spreadsheet. The spreadsheet with instructions can be downloaded at <http://www.nj.gov/dep/stopthesoot/retrofit.htm>
- Costs of installation and purchase of the retrofit devices will be reimbursed by the NJDEP to the authorized installers approved on the state contract. The list of authorized installers and their products can also be obtained from the NJDEP’s website at <http://www.nj.gov/dep/stopthesoot/retrofit.htm>

BART retrofits will be required on the following types of diesel vehicles:

- Garbage trucks that are publicly owned, or privately owned and used in a public contract. Initial Inventory/Cost Estimate - BART spreadsheet must be submitted to the NJDEP by June 6, 2008
- NJ Transit buses. Initial Inventory/Cost Estimate - BART spreadsheet must be submitted to the NJDEP by March 1, 2010.
- Privately-owned commercial buses. Initial Inventory/Cost Estimate - BART spreadsheet must be submitted to the NJDEP by September 1, 2010.
- Publicly-owned heavy-duty on-road and non-road vehicles. Initial Inventory/Cost Estimate - BART spreadsheet must be submitted to the NJDEP by September 8, 2011.

Installation of retrofit equipment is required after the NJDEP approves the Initial Inventory/Cost Estimate - BART submittal and certifies the availability of funding for reimbursement. Costs of installation and purchase of the retrofit devices will be reimbursed by the NJDEP to the authorized installers approved on the state contract.

Tracking compliance with the Diesel Retrofit Program Rules

- NJDEP requires that retrofit installations be verified at a one-time compliance inspection (OTCI) for each vehicle at the vehicle's next regularly scheduled annual periodic inspection by a Diesel Emissions Inspection Center or Motor Vehicle Commission Inspection Unit.
- NJDEP will verify compliance through record reviews and on-site random audits at fleet yards and other places of business.

Steps to complying with the Diesel Retrofit Program Rules

The following contains a summary of the steps to complying with the Diesel Retrofit Program rules. Please note that guidance documents for each type of regulated vehicle will be available prior to appropriate due dates established by the NJDEP.

- Inventory and Submittal

The regulated vehicle owner must submit the required inventory and cost estimate information on NJDEP forms by the deadlines listed above. The submitted inventory shall include all regulated and non-regulated diesel vehicles in a fleet with the exception of school bus submittals, which shall only include regulated school buses. The cost estimate information for the retrofit device to be installed is only required for the regulated vehicles in the fleet and includes the estimated costs as provided by the authorized installer such as the device and hardware costs, and the estimated time for installation.

The inventory / cost estimate submittal forms and instructions can be downloaded from www.stopthesoot.org. Once completed the form must be submitted electronically to the NJDEP via <http://www.njdeponline.com>. Instructions for submitting online are also found on www.stopthesoot.org.

- Review and approval

Upon receipt of the Initial Inventory/Cost Estimate-BART or Cost Estimate- CCVS form the NJDEP will conduct an administrative and technical review for completeness. Installation of the BART or CCVS device shall not begin until the owner receives the following: 1) approval in writing of the inventory and cost estimate information from the NJDEP; and 2) notification from the NJDEP that sufficient funding is available for reimbursement. For BART devices, an installation deadline based on the regulated fleet size in accordance with N.J.A.C. 7:27-32.18 will be provided to the owner with each vehicle approval letter as well as instructions to download the vehicle's Compliance Form. Installation of CCVS devices must be completed within 2 years of the date the Department certifies availability of funding for reimbursement.

The NJDEP issues a one-page compliance form for each approved vehicle. The compliance form contain vehicle and retrofit information and must be kept on the vehicle for which it is issued.

- Installation

Upon receipt of approval from the NJDEP, the fleet owner may begin to install the retrofit devices. The owner must have the approved retrofit devices installed by the deadlines

provided by the NJDEP. The owner must notify the NJDEP when each installation is complete on the provided Compliance Forms.

- Compliance forms and Inspections

The regulated vehicle owner is responsible for submitting the Compliance form to the NJDEP on two separate occasions. The vehicle owner must sign and submit the form to the NJDEP within five business days of the installation certifying that the installation was completed. The vehicle owner is also responsible for resubmitting the compliance form after completion of the one-time compliance inspection (OCTI). The OCTI is performed at the next regularly scheduled annual periodic inspection, where the installation is verified and the compliance form is signed by the inspector. The most current Compliance Form must be retained on the vehicle and in the owner's central file.

- Annual updates

The regulated vehicle owner must report any fleet inventory changes to the NJDEP on an annual basis.

- Reimbursement

The cost of emission control retrofits (including installation) will be paid by the State using funds from the Corporate Business Tax. The funds will be used to reimburse Authorized Installers for the cost of purchasing and installing Best Available Retrofit Technology and Closed Crankcase Ventilation Systems pursuant to the Diesel Retrofit Program Rules.

Purchasing new vehicles for regulated fleets

If possible, regulated vehicle owners are encouraged to purchase on-road diesel vehicles equipped with a 2007 or later model year engine that meet the particulate emissions standard of 0.01 grams per brake-horsepower hour. Since these engines meet the new, more stringent federal emission standards required for all on-road vehicles beginning with model year 2007, these vehicles are not required to install a BART or CCVS device.

Emergency Service Vehicles are not required to install diesel retrofits

While diesel-powered fire trucks, ambulances and other emergency service vehicles fall into the category of publicly owned on-road vehicles, these vehicles are not required to install diesel retrofits.

Contact Information

The NJDEP Diesel Risk Reduction Program can be contacted at (609) 292-7953. Our website, www.stopthesoot.org, includes periodic updates on the status of rules implementing the diesel law, currently available technologies to reduce emissions, and information on idling.