# Chapter 146: DIESEL-POWERED MOTOR VEHICLE EMISSIONS STANDARDS

SUMMARY: This regulation establishes emission opacity standards for diesel-powered motor vehicles having a gross vehicle weight rating of 18,000 or more pounds. This regulation also establishes standards and procedures, including testing methods and standards for test equipment used for roadside testing of diesel-powered motor vehicles.

**1. Scope/Applicability**

A. This regulation applies in all ambient air quality control regions of the State of Maine.

B. This regulation applies to all diesel-powered vehicles which have a gross vehicle weight rating of 18,000 or more pounds.

**2. Exemptions**

The following diesel-powered motor vehicles are exempt from this Chapter:

A. A diesel-powered motor vehicle with a gross vehicle weight rating of less than 18,000 pounds; and

B. A diesel-powered motor vehicle registered as a farm truck.

**3. Definitions**

**A. Certified inspector.** “Certified inspector” means a Department of Environmental Protection employee or person designated by the Department as an inspector who is certified pursuant to the procedures for certification specified in 40 Code of Federal Regulations, Part 60, Appendix A, Method 9.

**B.** **Compliance.** “Compliance” means meeting the emission opacity standards for diesel-powered motor vehicles as established by the Board of Environmental Protection.

**C**. **Diesel emissions.** “Diesel emissions” means diesel smoke that is emitted into the environment from any diesel-powered motor vehicle.

**D. Diesel emissions inspection report or inspection report.** “Diesel emissions inspection report or inspection report” means a document issued by a certified inspector at the time of inspection, in such form as the Commissioner shall prescribe, containing a designation of pass or fail, which shall constitute proof of inspection.

**E**. **Diesel-powered motor vehicle.** “Diesel-powered motor vehicle” means those diesel-powered motor vehicles that have a gross vehicle weight rating of 18,000 or more pounds. Diesel-powered motor vehicle does not include a truck registered as a farm truck.

**F. Diesel smoke.** “Diesel smoke” means particles, including aerosols, suspended in the exhaust stream of a diesel engine which absorb, reflect, or refract light.

**G. Emission opacity standards.** “Emission opacity standards” means the acceptable level of peak smoke opacity for diesel-powered motor vehicles as established by the Board of Environmental Protection.

**H. Emissions related repairs.** “Emissions related repairs” means any emissions repair intended to bring a diesel-powered motor vehicle, which has received a fail designation during an inspection, into compliance with the established emission opacity standards.

**I.** **Fail designation.** “Fail designation” means a designation on an inspection report which signifies that the diesel-powered motor vehicle does not meet the emission opacity standards.

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

**K. Inspection.** “Inspection” means a snap-acceleration smoke opacity test conducted by a certified inspector in accordance with the Society of Automotive Engineers (SAE) J1667 Recommended Practice, and related administrative procedures.

**L. Model year.** “Model year” means the year designated by the manufacturer of the diesel-powered motor vehicle and appearing on the registration certificate.

**M. Opacity.** “Opacity” means the degree of light-obscuring capability of emissions of visible air contaminants expressed as a percentage. For example, complete obscuration shall be expressed as 100% opacity.

**N. Operator.** “Operator” means the person operating the vehicle during a diesel-powered motor vehicle emissions roadside test.

**O. Pass designation.** “Pass designation” means a designation on an inspection report which signifies that the diesel-powered motor vehicle meets the emission opacity standards.

**P. Peak smoke opacity.** “Peak smoke opacity” means the highest numerical value of smoke opacity obtained through the testing procedures for the snap-acceleration smoke opacity test.

**Q. SAE.** “SAE” means the Society of Automotive Engineers.

**R**. **SAE J1667.** “SAE J1667” means the Surface Vehicle 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”, as herein incorporated by reference.

**S. Snap-acceleration smoke opacity test.** “Snap-acceleration smoke opacity test” means a test adopted by the Society of Automotive Engineers for the testing of diesel-powered motor vehicles. This test is commonly referred to as the SAE J1667 Recommended Practice Test. The test includes five phases: vehicle preparation; test preparation and equipment set-up; driver familiarization and vehicle preconditioning; execution of the snap-acceleration test; and calculation and reporting of final results.

**4. Prohibition**

Diesel-powered motor vehicles shall not exceed the following:

A. For model years 1991 and newer, a level of peak smoke opacity of forty (40) percent;

B. For model years 1974 to 1990, a level of peak smoke opacity of fifty-five (55) percent; and

C. For model years 1973 and older, a level of peak smoke opacity of seventy (70) percent. This standard shall remain in effect until January 1, 2003. After January 1, 2003, model years 1973 and older shall be subject to the standard set forth in Subsection 4(B) of this Chapter.

**5. Inspection requirements and procedures**

A. The Department shall perform inspections of diesel-powered motor vehicles in conjunction with the Maine State Police. The purpose of such inspections shall be to determine whether such vehicles are in compliance with the emission opacity standards for diesel-powered motor vehicles.

B. The inspection of diesel-powered motor vehicles shall be performed by a certified inspector at a safety or weight inspection station, or at any other safe location agreed to by the Department and the Maine State Police.

C. Only diesel-powered motor vehicles identified by certified inspectors as potential violators of the program’s emission opacity standards are subject to testing. Inspectors must be certified pursuant to the procedures for certification specified in 40 Code of Federal Regulations, Part 60, Appendix A, Method 9.

D. The inspection procedures for the emissions inspection of diesel-powered motor vehicles shall consist of the following steps:

(1) The vehicle’s wheels are chocked for safety;

(2) The vehicle’s exhaust system is checked for integrity;

(3) The inspector shall ensure ambient temperature at the test location is within the range of SAE J1667;

(4) The inspector shall determine if the governor is in working order by requesting this information from the driver. If a determination cannot be made, with the transmission in either neutral (with the clutch disengaged if so equipped) or park, the driver shall gradually increase engine speed. If the engine speed increases uncontrollably, the inspector shall instruct the operator to immediately release the accelerator pedal and the fuel supply to the engine. Emissions testing of any vehicle with a dysfunctional or out-of-specification engine speed governor shall be discontinued.

(5) A measurement of the vehicle’s exhaust pipe is taken by a certified inspector;

(6) The test equipment is inserted into the vehicle’s exhaust stack;

(7) The vehicle’s brakes are disengaged to activate all emissions control equipment;

(8) The vehicle’s transmission is placed in neutral;

(9) The vehicle’s accelerator is rapidly depressed (snapped) and held at governed speed for several seconds, then returned to idle. This procedure is repeated according to manufacturer’s instructions while the equipment measures the opacity of the smoke; and

(10) The operator will be given an inspection report documenting the final results of the diesel emissions inspection.

**6. Procedure for diesel-powered motor vehicles which meet emission opacity standards at the time of inspection**

A. The owner or operator of a diesel-powered motor vehicle meeting the emission opacity standards shall be issued, at the termination of the inspection, an inspection report indicating a pass designation.

B. A pass designation shall only be provided to diesel-powered motor vehicles found in compliance with the established emission opacity standards.

**7. Procedure for diesel-powered motor vehicles which do not meet emission opacity standards at the time of inspection**

A. The owner or operator of a diesel-powered motor vehicle not meeting the emission opacity standards shall be issued, at the termination of the inspection, an inspection report indicating a fail designation.

B. The owner or operator of any diesel-powered motor vehicle that fails the emission opacity standards for the first time has 30 days from the date that the operator was notified of the failure of the test to certify to the Department that emissions related repairs were made to bring the vehicle into compliance with the emission opacity standards. If certification is not made within 30 days, the owner or operator shall be assessed a two hundred fifty-dollar ($250) fine for the first violation.

C. The owner or operator of any diesel-powered motor vehicle that fails the emission opacity standards for the second and subsequent times shall be assessed a five hundred-dollar ($500) fine. The 30-day period allowed for making repairs and certifying compliance with emission opacity standards referred to in Subsection 7(B) of this Chapter does not apply to second and subsequent test failures.

Note: The State Police issue a summons for a traffic infraction to each operator who fails to certify to the Department that emissions related repairs were made to the vehicle that failed the emission opacity standards. The Maine Judicial Branch Violations Bureau collects the fines.

**8. Test equipment specifications**

A. All test equipment shall, at a minimum, comply with SAE J1667 test procedures.

B. A smokemeter used to measure smoke opacity in the exhaust emissions of a heavy duty diesel vehicle pursuant to this section shall, at a minimum, have the ability to measure, and where appropriate, print out the following:

(1) the smoke opacity value for each snap acceleration in sequence;

(2) the final test result, in percent opacity;

(3) the inspection date and time;

(4) the name of the inspector;

(5) the exhaust pipe diameter;

(6) the smoke emission opacity standard;

(7) “pass” or “fail” of test results compared to appropriate emission opacity standard;

(8) license plate number and state of issuance; and

(9) vehicle identification number (VIN).

**9. Vehicle inspection report**

A. The operator of each vehicle shall receive a vehicle inspection report upon completion of an inspection. The inspection report form shall include:

(1) Inspection location and date;

(2) Inspection test start and end time;

(3) Vehicle year and make;

(4) Vehicle registration number and registration state;

(5) Vehicle identification number;

(6) Registered gross vehicle weight;

(7) Vehicle type;

(8) Engine temperature (hot, cold, or normal);

(9) Vehicle mileage;

(10) Name and address of owner;

(11) Driver’s name, license number, and license state;

(12) Opacity results;

(13) Pass/fail designation;

(14) Signature of driver indicating receipt of inspection report; and

(15) Signature of inspector.

B. The operator of a vehicle failing the emission opacity standards shall complete the diesel emissions inspection report and submit the following information:

(1) Name of repair facility;

(2) An itemized bill of repairs from the repair facility;

(3) Signature of repair facility representative certifying repairs have been made to reduce diesel emissions and date signed; and

(4) Signature of the vehicle owner certifying appropriate emissions related repairs were made to the vehicle.

**10. Reciprocity**

The Department may establish reciprocity agreements with other states that recognize enforcement actions related to diesel-powered motor vehicle testing programs in other states.

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