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CHAPTER 27B

SAMPLING AND ANALYTICAL PROCEDURES

Authority

N.J.S.A. 13:1D-5, 13:1D-9, 26:2C-8.

Source and Effective Date

R.1974 d.360, effective December 30, 1974.
See: 7 N.J.R. 48(a).

Executive Order No. 66(1978) Expiration Date

Chapter 27B, Sampling and Analytical Procedures, is exempt from Executive Order No. 66(1978).

Chapter Historical Note

All provisions of this chapter became effective December 30, 1974 as R.1974 d.360. See: 7 N.J.R. 48(a). Subchapters 2 and 3 and revisions to the original rules became effective March 20, 1975 as R.1975 d.76. See: 7 N.J.R. 144(a). Revisions which consolidated the prior text of Subchapter 3 (making it Reserved) with Subchapter 1 became effective June 21, 1986 as R.1986 d.121. See: 8 N.J.R. 223(a). Subchapter 4 became effective January 21, 1985 (operative July 1, 1985) as R.1985 d.3. See: 16 N.J.R. 2894(a), 17 N.J.R. 184(a). New Subchapter 3 became effective September 8, 1986 (operative October 10, 1986) as R.1986 d.377. See: 17 N.J.R. 2194(a), 18 N.J.R. 1800(a).

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SUBCHAPTER 1. SAMPLING AND ANALYTICAL PROCEDURES FOR DETERMINING EMISSIONS OF PARTICLES FROM MANUFACTURING PROCESSES AND FROM COMBUSTION OF FUELS

Authority

Unless otherwise expressly noted, all provisions of this Subchapter were adopted pursuant to authority of N.J.S.A. 26:2C-1 et seq. and were filed and became effective on December 30, 1974, as R.1974 d.360. See: 7 N.J.R. 48(a). Revisions to the original rules were filed and became effective on May 20, 1975, as R.1975 d.136. See: 7 N.J.R. 261(d). Further revisions were filed on April 21, 1976, as R.1976 d.121 to become effective on June 21, 1976. See: 8 N.J.R. 223(a).

7:27B-1.1 Definitions

The following words and terms, when used in this subchapter, shall have the following meanings, unless the context clearly indicates otherwise. Terms not defined in this section are intended to be used as defined in the New Jersey Air Pollution Control Act, N.J.S.A. 26:2C-1 et seq., and Chapter 27 in Title 7 of the New Jersey Administrative Code, or are used in their common engineering or scientific sense. Symbols and nomenclature are defined in Appendix 6.

“Bureau” means the Bureau of Air Pollution Control.

“Department” means the Department of Environmental Protection.

“Equipment diameter” means the diameter of a circular cross section having the same area as a noncircular cross section.

“Performance test” or “test” means a series of test runs used for the purpose of determining emissions of air contaminants to the outdoor atmosphere.

“Run” or “test run” means a single integrated measurement or procedure used for the purpose of collecting a sample of air contaminants emitted to the outdoor atmosphere during a specified time interval.

“Sample collector” means any device used to selectively separate and collect a sample of a specified contaminant from a gas stream, including, but not limited to, thimbles, filters, impingers, bubblers, cyclones, condensers and absorbers.

“Sampling location” means the specific position at which a sampling port is located in a stack or chimney.

“Sampling port” means an opening in a stack or chimney into which sampling or measuring devices may be inserted or through which a sample is extracted.

“Sampling rate” means the volume rate at which stack gases are drawn through a sampling train.

“Sampling train” means a combination of entrapment devices, instruments, and auxiliary apparatus arranged in a prescribed sequence to selectively separate and collect samples of specified air contaminants.

“Sampling velocity” means the linear velocity at which stack gases are drawn through the nozzle of a sampling train.

“Stack gas velocity” means the linear velocity (in the direction of gas flow) at which stack gases pass the sampling train nozzle.

“Standard conditions” means 70 degrees Fahrenheit and one atmosphere pressure (14.7 psia or 760 mm Hg).

“Traverse point” means a predetermined point at which a sample or measurement is obtained inside a stack or chimney.

7:27B-1.2 Acceptable test methods

(a) Because of size and/or inertial effects on the particles to be measured, they are to be collected under isokinetic conditions to ensure that the sample is representative. With isokinetic sampling, that portion of the gas stream from which the particles are entrapped is made to enter the sampling nozzle in the same direction and at the same velocity as the gas stream in the stack or chimney being sampled. The sample weight is determined gravimetrically after removal of uncombined water.

(b) Performance tests shall be conducted in accordance with test methods set forth hereinafter. Alternate test procedures, equipment and/or materials of construction may be used subject to prior approval and/or conditions prescribed by the Department. The Department may itself employ such alternates when warranted by test conditions or other circumstances.

12. ASTM Designation D2698-73, Standard Test Method for the Determination of the Pigment Content of Solvent Reducible Paints by High Speed Centrifuging, American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103 (\$4.00).

13. ASTM Designation D95-83, Standard Method for Determining Water in Petroleum and Bituminous Materials by Distillation, American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103 (\$4.00).

14. Method 2-1 California Air Resources Board, Test Procedures for Determining the Efficiency of Gasoline Vapor Recovery Systems at Service Stations. Available from State of California, Air Resources Board, 1102 Q Street, Sacramento, California 95812.

15. ASTM Designation D322-80, Standard Test Method for Gasoline Diluent in Used Gasoline Engine Oils by Distillation, American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103 (\$4.00).

16. Code of Federal Regulations, Title 40, Part 60—Reference Methods 2A and 2B are available from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.

Amended by R.1992 d.102, effective March 2, 1992 (operative March 28, 1992).

See: 23 N.J.R. 1858(b), 24 N.J.R. 792(a).

Repealed and replaced (a)3 regarding vapor pressure measurement methods.

Editor's Note: In addition to the above text, Appendices A through H were filed with these rules, but not reproduced herein. Further information regarding these Appendices may be obtained by contacting:

Bureau of Technical Services
Division of Environmental Quality
Department of Environmental Protection
CN 411 (380 Scotch Road)
Trenton, New Jersey 08625-0411

SUBCHAPTER 4. AIR TEST METHOD 4: TESTING PROCEDURES FOR MOTOR VEHICLES

Authority

N.J.S.A. 13:1D-5, 13:1D-9, 26:2C-8, 26:2C-8.1,
26:2C-8.2 and 26:2C-8.5.

Source and Effective Date

R.1985 d.3, effective January 21, 1985 (operative July 1, 1985).
See: 16 N.J.R. 2894, 17 N.J.R. 184(a).

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.

“Autobus” includes all motor vehicles used for the transportation of passengers for hire.

“Carbon monoxide” or “CO” means a gas having a molecular composition of one carbon atom and one oxygen atom.

“Chassis dynamometer” or “dynamometer” means a power absorption device utilizing a set of rollers on which a motor vehicle is driven to simulate on-road vehicle operation.

“Commissioner” means the Commissioner of the Department of Environmental Protection.

“Crankcase emissions” means substances emitted into the atmosphere from any portion of the engine crankcase ventilation or lubrication system.

“Department” means the Department of Environmental Protection.

“Emission control apparatus” means any device employed by the vehicle manufacturer which prevents or controls the emission of any air contaminant, including associated components which monitor the function and maintenance of these devices.

“EPA” means the United States Environmental Protection Agency.

“Exhaust emissions” means substances emitted into the atmosphere from any opening downstream from the exhausted 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.

“Gasoline-fueled” means powered by a hydrocarbon fuel other than diesel fuel, including, but not limited to, gasoline, natural gas, liquefied petroleum gas, or propane or powered by alcohol fuels, hydrocarbon-alcohol fuel blends or hydrogen.

“Gross vehicle weight rating” or “GVWR” means the value specified by the manufacturer as the maximum loaded weight of a single or combination vehicle.

“Heavy-duty diesel vehicle” or “HDDV” means a vehicle that has a GVWR exceeding 8,500 pounds, is self-propelled by a compression ignition type of internal combustion engine, uses diesel oil as its fuel, and is designed primarily for transporting persons or property.

“Heavy-duty gasoline-fueled vehicle” or “HDGV” means a gasoline-fueled motor vehicle that has a GVWR exceeding 8,500 pounds and is designed primarily for transporting persons or property.

“Hydrocarbons (HC)” means any compound or mixture of compounds whose molecules consist of atoms of hydrogen and carbon only.

“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.

“Idle mode” means the vehicle test mode of the prescribed inspection test procedure, consisting of a non-loaded, throttled engine speed at the revolutions per minute specified by the manufacturer.

“Inertia weight” means the vehicle curb weight plus 300 pounds.

“Inspector” means any person authorized by the State of New Jersey to enforce N.J.A.C. 7:27-14.2.

“Light-duty gasoline-fueled vehicle” or “LDGV” means a gasoline-fueled motor vehicle that has a GVWR of 8,500 pounds or less, is designed primarily for use as a passenger car or is a passenger car derivative and is capable of seating no more than 12 passengers.

“Light-duty gasoline-fueled truck” or “LDGT” means a gasoline-fueled motor vehicle that has a GVWR of 8,500 pounds or less, a vehicle curb weight of 6,000 pounds or less, and a basic frontal area of 45 square feet or less, and that is:

1. Designed primarily for the transportation of property or more than 12 passengers; or
2. Available with special features enabling off-street or off-highway operation and use.

“Light-duty gasoline-fueled truck 1” or “LDGT1” means a light-duty gasoline-fueled truck with a GVWR of 6,000 pounds or less.

“Light-duty gasoline-fueled truck 2” or “LDGT2” means a light-duty gasoline-fueled truck with a GVWR of more than 6,000 pounds.

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

“Motor vehicle emission testing equipment” means equipment used to conduct a test of a gasoline-fueled motor vehicle set forth at N.J.A.C. 7:27B, and which satisfies all applicable specifications set forth at N.J.A.C. 7:27B-4.14, Specifications for motor vehicle emission testing equipment for use in the New Jersey Enhanced Inspection and Maintenance Program. For motor vehicle inspections conducted pursuant to N.J.A.C. 7:27-15 and this subchapter, this term shall include all devices used for performing a motor vehicle inspection, including, but not limited to, exhaust gas analyzers, evaporative pressure testing apparatus, evaporative purge testing apparatus, dynamometers, computers and related software.

“Motor vehicle safety specialist” means any person employed by the New Jersey Division of Motor Vehicles to enforce motor vehicle safety and emission test standards.

“Motorized bicycle” means a pedal bicycle having a helper motor characterized in that either the maximum piston displacement is less than 50 cubic centimeters, or said motor is rated at no more than 1.5 brake horsepower and said bicycle is capable of a maximum speed of no more than 25 miles per hour on a flat surface.

“MPH” means miles per hour.

“Opacity” means the property of a substance which renders it partially or wholly obstructive to the transmission of visible light expressed as the percentage to which the light is obstructed.

“Operating mode” means a procedure for operating a diesel-powered motor vehicle or a diesel-powered engine during measurement of smoke opacity in the exhaust emissions.

“Prescribed inspection test procedure” means a method prescribed by the Department for testing exhaust emissions from light and heavy-duty motor vehicles.

“RPM” means revolutions per minute.

“Smoke” means small gasborne and airborne particles, exclusive of water vapor, arising from a process of combustion in sufficient number to be observable.

“Smokemeter” means a device constructed in such a manner as to measure smoke opacity by light obstruction between a light source and photoelectric cell which will indicate the percent of opacity of smoke at a point approximately six inches from the engine exhaust outlet. The device shall be of design meeting “Specifications For A Smoke Opacity Meter” dated April 30, 1981, and on file with the Commissioner and approved for use in accordance with manufacturer’s recommended procedures for calibration, mounting and maintenance.

“Vehicle curb weight” means the actual weight of a motor vehicle in operational status or the weight given by the manufacturer for such a vehicle. Such weight shall include the weight of all standard equipment, of the fuel at nominal tank capacity, and of optional equipment computed in accordance with 40 CFR section 86.082-24.

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".

7:27B-4.2 General instructions for all tests

(a) The inspector shall insure prior to each test that the test equipment is calibrated by checking and, if necessary, adjusting zero and span settings.

(b) All measurements are to be made after the engine is at normal operating temperature.

(c) Any vehicle found to exhibit an exhaust leak shall have said leak repaired before an approved test can be performed.

(d) Standard application of the smoke opacity test procedures is required on exhaust outlets on vehicles equipped with dual, adjacent exhaust outlets.

(e) Any equipment to be used in conducting a motor vehicle emissions test as set forth in this subchapter shall first be approved by the Department. Approval of testing equipment shall be based on the determination by the Department of the following:

1. The equipment meets all applicable specifications;
2. The equipment hardware and software comply with the data collection and transfer protocols in use throughout New Jersey's motor vehicle inspection programs;
3. The equipment maintains compatibility with other test equipment used concurrently during the motor vehicle inspection process with which it is required to interface; and
4. The equipment is complete in that it includes all options and accessories necessary for performing each emissions inspection test procedure for which it was designed and it is to be used.

(f) The Department shall periodically review and evaluate equipment offered by manufacturers of motor vehicle testing equipment of which it is aware or has been made aware and make available a list of approved equipment for specific test procedures. A copy of this list can be obtained from the Bureau of Transportation Control in the Department of Environmental Protection.

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).

Added (e) and (f).

7:27B-4.3 Smoke opacity testing procedures for diesel-powered motor vehicles subject to the inspection rules and regulations of the New Jersey Division of Motor Vehicles

(a) The smoke opacity testing procedures for diesel-powered motor vehicles subject to self-inspection authorized by the Division of Motor Vehicles at the premises or places of

business of the owner or lessee to determine compliance with N.J.A.C. 7:27-14.2(a), are as follows:

1. The vehicle driven on chassis dynamometer with simulated load by power absorption procedure requires that the smokemeter be firmly positioned on the exhaust outlet and that the vehicle be positioned on the chassis dynamometer before the inspector proceeds with the following steps:

i. With vehicle on a chassis dynamometer under no power absorption, select a gear ratio which will produce a maximum vehicle speed of 45-60 MPH at governed engine RPM;

ii. With engine running at governed engine RPM, apply power absorption load to the dynamometer until such loading reduces the engine RPM to 80 percent of the governed speed, the peak smoke opacity measured over a period of five to ten seconds with the engine under such loading shall be the smoke opacity.

2. The vehicle driven in low gear with simulated load by braking action procedure requires that the smokemeter be firmly positioned on the exhaust outlet before proceeding with the following steps:

i. Select a gear ratio which will produce a maximum speed of 10-15 MPH, at governed engine RPM, drive vehicle at 10-15 MPH at governed engine RPM;

ii. Load the engine by applying brakes until engine RPM is lugged down to 80 percent of the governed engine RPM, the peak smoke opacity measured over a period of 5-10 seconds with the engine under such brake loading shall be the smoke opacity.

7:27B-4.4 Smoke opacity testing procedure for diesel-powered autobuses subject to the inspection rules and regulations of the New Jersey Department of Transportation

(a) The smoke opacity testing procedure for diesel-powered autobuses subject to the inspection rules and regulations of the Department of Transportation to determine compliance with N.J.A.C. 7:27-14.2(b) shall be the following:

1. Position smokemeter against exhaust outlet using extension pole and magnet so that the optical axis of the sensor head is perpendicular to the smoke plume;

2. With engine at normal operating temperature, depress accelerator pedal slowly to obtain a fast idle (1200-1300 RPM);

3. Accelerate the engine from fast idle to maximum governed RPM by depressing the accelerator pedal as rapidly as possible;

4. As governed RPM is reached, release the accelerator pedal to allow engine to coast down to fast idle (1200-1300 RPM);

5. Repeat steps 3 and 4; (NOTE: Steps 3, 4, and 5 are to purge the engine.)

6. After the engine purge, repeat steps 3 and 4 three times in succession. After each successive measurement, record peak opacity reading and reset smokemeter. The average of the three peak smoke opacity measurements obtained with the smokemeter shall be the test result as measured using the standing acceleration test procedure.

7:27B-4.5 Procedures for the visible smoke test and the idle test

(a) The testing procedure for the visible smoke test, to be used to determine a motor vehicle's compliance with the standard set forth at N.J.A.C. 7:27-15.6(a) shall be performed as follows:

1. The vehicle shall be placed in neutral gear with all accessories off and the emergency or parking brake secured;
2. The engine speed shall be increased to an engine speed greater than the idle mode, and the exhaust emissions and crankcase emissions observed for visible continuous smoke; and
3. If there is visible smoke in the exhaust emissions or crankcase emissions for a period in excess of three consecutive seconds, the motor vehicle shall be determined to fail the smoke test.

(b) The testing procedure to be used to determine a motor vehicle's compliance with the exhaust emission standards set forth at N.J.A.C. 7:27-15.6(b)1 is the idle test and shall be performed as follows:

1. The engine shall be at normal operating temperature and not overheating (as determined by the vehicle's temperature gauge or temperature warning light, a boiling radiator, or other visual observation) with all accessories off;
2. With the engine operating at idle and transmission in neutral, the sample probe shall be inserted at least 10 inches into the exhaust outlet. If the motor vehicle's exhaust system prevents insertion to this depth, a tailpipe extension shall be used. For motor vehicles equipped with multiple exhaust pipes, exhaust gas measurements shall be taken from all exhaust pipes simultaneously;
3. The exhaust concentrations shall be measured as percent carbon monoxide and parts per million hydrocarbons after stabilized readings are obtained or at the end of 30 seconds, whichever occurs first; and
4. If the percent carbon monoxide or parts per million hydrocarbons recorded in (b)3 above exceeds the applicable standards specified in Table 1 at N.J.A.C. 7:27-15.6, the motor vehicle shall be determined to have failed (that is, not passed) the idle test.

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).

In (b)2, substituted "at idle" for "in the idle mode" and added second sentence.

7:27B-4.6 Procedures for the 2,500 RPM test

(a) The testing procedure for the 2,500 RPM test, to be used to determine a motor vehicle's compliance with the exhaust emission standards set forth at N.J.A.C. 7:27-15.6(b)2, shall be performed as follows:

1. The motor vehicle shall be tested in as-received condition with all accessories off. Its engine shall be at normal operating temperature and not overheating (as determined by the vehicle's temperature gauge or temperature warning light, a boiling radiator, or other visual observation);
2. The sample probe shall be inserted into the motor vehicle's tailpipe to a minimum depth of 10 inches. If the motor vehicle's exhaust system prevents insertion to this depth, a tailpipe extension shall be used. For motor vehicles equipped with multiple exhaust pipes, exhaust gas measurements shall be taken from all exhaust pipes simultaneously;
3. For all pre-1996 model year vehicles, a tachometer or other device approved by the Department shall be used to measure engine speed. The tachometer or other device shall be attached to the motor vehicle in accordance with the tachometer or device manufacturer's instructions. For 1996 and newer model year vehicles, the OBD data link connector shall be used to monitor RPM. In the event that an OBD data link connector is not available or that an RPM signal is not available over the data link, a tachometer shall be used instead;
4. The vehicle's transmission shall be in park or neutral;
5. The vehicle engine speed shall be increased from idle to between 2200 and 2800 RPM and maintained at that level for the duration of the test, not to exceed 30 seconds. If the engine speed falls and remains below 2200 RPM or exceeds and remains above 2800 RPM for more than two consecutive seconds during the test period, the measured value shall be invalidated for that sampling period and the test duration extended accordingly. If any excursion outside of the allowable RPM range lasts for more than ten seconds, the test shall be invalidated, and another 2500 RPM test shall be initiated; and
6. Exhaust concentrations shall be measured as percent carbon monoxide and parts per million hydrocarbons after stabilized readings are obtained or at the end of 30 seconds, whichever occurs first.

(b) A determination shall be made that the motor vehicle has passed the 2500 RPM test if the measurements made of the hydrocarbons and carbon monoxide in the exhaust emissions indicate that the concentration of each is less than or equal to the applicable standards specified in Table 2 at N.J.A.C. 7:27-15.6.

Emergency New Rule, 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).

In (a), inserted "performed" preceding "as follows."; and in (a)3, inserted "For all pre-1996 model year vehicles," and added last two sentences.

Case Notes

Private inspection center license not suspended; licensee did not improperly certify repairs. Division of Motor Vehicles v. Joe's Auto Service, 92 N.J.A.R.2d (MVH) 1.

7:27B-4.7 Procedures for the ASM5015 test

(a) The testing procedure for the ASM5015 test, to be used to determine a motor vehicle's compliance with the exhaust emission standards set forth at N.J.A.C. 7:27-15.6(b)3 shall consist of an ASM5015 test optionally followed by a second chance purge test.

(b) The motor vehicle shall be tested pursuant to (a) above in as-received condition with all accessories off. Its engine shall be at normal operating temperature and not overheating (as determined by the vehicle's temperature gauge or temperature warning light, a boiling radiator, or other visual observation).

(c) The ASM5015 test shall be initiated as follows:

1. The dynamometer shall be warmed up, in stabilized operating condition, adjusted and calibrated in accordance with the procedures recommended by the dynamometer manufacturer;
2. The motor vehicle shall be positioned on the dynamometer and, if necessary, secured according to protocol recommended by the dynamometer manufacturer;
3. The evaporative purge test apparatus shall be connected and the procedures for the evaporative purge test shall be performed as specified in N.J.A.C. 7:27B-4.11;
4. The dynamometer shall be set at a load setting determined by the following equation:

$$L = IW/250$$

where:

L = load, in horsepower; and

IW = vehicle inertia weight, in pounds;

5. The sample probe shall be inserted into the motor vehicle's tailpipe to a minimum depth of 10 inches. If the motor vehicle's exhaust system prevents insertion to this depth, a tailpipe extension shall be used. For motor vehicles equipped with multiple exhaust pipes, exhaust gas measurements shall be taken from all exhaust pipes simultaneously; and

6. A motor vehicle with an automatic transmission shall be operated during the ASM5015 test with the gear selector in drive, and a motor vehicle with a manual transmission shall be operated in first (or, if more appropriate, second) gear.

(d) At the beginning of the ASM5015 test, the motor vehicle shall be accelerated to a speed of 15 MPH as indicated on the dynamometer speed indicator. This speed shall be maintained, ± 1.0 MPH, for the duration of the test sequence. The test sequence shall begin when the dynamometer speed reaches 15 MPH and shall consist of a stabilization period, a pass/fail decision period, and a second chance purge test:

1. The stabilization period shall begin at a test time of zero seconds ($T = 0$) and shall proceed until an elapsed time of $T = 30$ seconds;

2. The pass/fail decision period shall immediately follow the stabilization period, beginning at $T = 31$ seconds. The vehicle shall pass the ASM5015 test if, at any point between $T = 46$ seconds and $T = 106$ seconds, measurements made of the hydrocarbons, carbon monoxide and oxides of nitrogen in the exhaust emissions indicates that the concentration of each is less than or equal to the applicable standards established in Table 3 at N.J.A.C. 7:27-15.6;

3. If, prior to $T = 106$ seconds, the vehicle has passed the ASM5015 test and the evaporative purge test in accordance with N.J.A.C. 7:27B-4.11, the test shall be immediately terminated in accordance with (e) below;

4. If, prior to $T = 106$ seconds, the vehicle has passed the ASM5015 test, but has not passed the evaporative purge test in accordance with N.J.A.C. 7:27B-4.11, the test sequence shall continue until $T = 106$ seconds or until the vehicle passes the evaporative purge test, whichever is less;

5. If, at $T = 106$ seconds, the vehicle has not passed the ASM5015 test, but has passed the evaporative purge test in accordance with N.J.A.C. 7:27B-4.11, the vehicle shall be determined to have failed the ASM5015 test and the test shall be immediately terminated in accordance with (e) below;

6. If, at $T = 106$ seconds, the vehicle has not passed the evaporative purge test in accordance with N.J.A.C. 7:27B-4.11, regardless of the ASM5015 test results, a second chance purge test shall be immediately performed in accordance with (d)7 below;

7. Between $T = 106$ seconds and $T = 116$ seconds, the dynamometer load setting shall be adjusted in accordance with 40 CFR 85.2221(c)(5) and the vehicle accelerated from 15 MPH to a speed of 35 MPH ± 2.0 MPH. If, at any time between $T = 116$ seconds and $T = 146$ seconds, the vehicle has passed the evaporative purge test in accordance with N.J.A.C. 7:27B-4.11, the test shall be terminated in accordance with (e) below;

8. If, at T = 146 seconds, the vehicle has still not passed the evaporative purge test in accordance with N.J.A.C. 7:27B-4.11, the vehicle shall be determined to have failed (that is, not passed) the evaporative purge test and the test shall be immediately terminated in accordance with (e) below.

(e) The ASM5015 test shall be concluded by placing the vehicle's transmission in park or neutral after safely bringing the vehicle's drive wheels to a complete stop using the vehicle's brakes.

Emergency New Rule, 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).

7:27B-4.8 Procedures for the IM240 test

(a) The IM240 testing procedure may be used on motor vehicles subject to the exhaust emission test in accordance with N.J.A.C. 7:27-15.5(g) or on motor vehicles subject to a program evaluation test in accordance with N.J.A.C. 7:27-15.5(l).

(b) The procedures for the IM240 test are specified as follows:

1. On and after the date EPA promulgates the exhaust test procedures to be used for the IM240 test at 40 C.F.R. 85.2221, such procedures and all subsequent revisions thereto shall be incorporated herein by reference;

2. Until EPA promulgates such procedures, the applicable procedures shall be those described in the EPA technical guidance document EPA-AA-RSPD-IM-96-1, entitled High-Tech I/M Test Procedures, Emission Standards, Quality Control Requirements, and Equipment Specifications: IM240 and Functional Evaporative System Tests, June 1996, incorporated herein by reference. A copy of this EPA technical guidance document has been filed with the Office of Administrative Law and may be obtained from the Public Access Center in the Department of Environmental Protection. If the emissions of carbon monoxide, hydrocarbons, or oxides of nitrogen recorded using these procedures exceed the applicable standards specified in Table 4 at N.J.A.C. 7:27-15.6, the motor vehicle shall be determined to fail the IM240 test.

Emergency New Rule, 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).

In amended EPA document references and from where it may be obtained.

7:27B-4.9 Emission control apparatus examination procedure

(a) The procedure for examination of the emission control apparatus of a motor vehicle, required at N.J.A.C. 7:27-15.5(f)3, shall, if the motor vehicle had a catalytic converter as original equipment, consist of a visual check to determine whether a properly installed catalytic converter is present on the motor vehicle.

(b) The absence of a properly installed catalytic converter shall result in a determination of failure to pass the emission control apparatus compliance examination.

(c) A motor vehicle that has failed to pass the emission control apparatus compliance examination in accordance with (b) above shall be required to be properly equipped with a replacement catalytic converter certified according to EPA procedures and subsequently reinspected. The reinspection shall consist of a visual check to verify the proper installation of an appropriate replacement catalytic converter.

New Rule, R.1985 d.331, effective July 1, 1985 (operative December 2, 1985).

See: 17 N.J.R. 781(a), 17 N.J.R. 1649(a).

Old rule "Light-duty gasoline fueled motor vehicle emission control apparatus compliance examination procedure" was repealed and this new section adopted except for (a)2 which is still pending.

Public Notice: The Department has decided not to adopt the proposed Plumbtesmo test procedure.

See: 18 N.J.R. 1714(b).

Emergency recodification from 7:27B-4.6 and 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).

7:27B-4.10 Procedures for the evaporative pressure test

(a) The testing procedure for the evaporative pressure test, to be used to determine a motor vehicle's compliance with the evaporative pressure test requirements at N.J.A.C. 7:27-15.5(f)4, is specified as follows:

1. On and after the date EPA promulgates the procedures to be used for the evaporative pressure test at 40 C.F.R. 85.2222, or elsewhere in Title 40, such procedures and standards and all subsequent revisions thereto shall be incorporated herein by reference;

2. Until EPA promulgates such procedures and standards, the applicable procedures and standards shall be those described in the EPA technical guidance document EPA-AA-RSPD-I/M-96-1, entitled High-Tech I/M Test Procedures, Emission Standards, Quality Control Requirements, and Equipment Specifications: IM240 and Functional Evaporative System Tests, June 1996, incorporated herein by reference. A copy of this EPA technical guidance document has been filed with the Office of Administrative Law and may be obtained from the Public Access Center in the Department of Environmental Protection.

Emergency New Rule, 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).

In (a), substituted "is specified as follows:" for "shall be conducted in accordance with either (b) or (c) below.;" added (a)1 and 2; and deleted (b) and (c).

7:27B-4.11 Procedures for the evaporative purge test

(a) The testing procedure for the evaporative purge test, to be used to determine a motor vehicle's compliance with the evaporative purge test requirements at N.J.A.C. 7:27-15.5(f)5, shall be conducted in accordance with either (b) or (c) below.

(b) (Reserved)

(c) The EPA evaporative purge test shall be performed in accordance with the following:

1. On and after the date EPA promulgates procedures to be used for the evaporative purge test with the IM240 test at 40 C.F.R. 85.2221, such procedures and all subsequent revisions thereto shall be incorporated herein by reference; and

2. Until EPA promulgates such procedures, the procedures to be used shall be, for a motor vehicle being tested with an IM240 test in accordance with N.J.A.C. 7:27B-4.8 or an ASM5015 test in accordance with N.J.A.C. 7:27B-4.7, those procedures described in the EPA technical guidance document EPA-AA-RSPD-IM-96-1, entitled High-Tech I/M Test Procedures, Emission Standards, Quality Control Requirements, and Equipment Specifications: IM240 and Functional Evaporative System Tests, June 1996, incorporated herein by reference. A copy of this EPA technical guidance document has been filed with the Office of Administrative Law and may be obtained from the Public Access Center in the Department of Environmental Protection.

Emergency New Rule, 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).

In (c)2, amended EPA document references and from where it may be obtained.

7:27B-4.12 Procedures for on-board diagnostics testing

The on-board diagnostics test procedure shall be performed in accordance with the procedures at 40 C.F.R. 85.2222, and all subsequent revisions thereto, incorporated herein by reference.

Emergency New Rule, 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).

New Rule, 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).

7:27B-4.13 Procedures for the fuel cap leak test

(a) If the vehicle's fuel cap is missing, the vehicle shall be determined to fail the fuel cap leak test and the fuel cap leak test shall be immediately terminated.

(b) If the vehicle's fuel cap is not missing, the testing procedure for the fuel cap leak test, to be used to determine a motor vehicle's compliance with the fuel cap leak test requirements at N.J.A.C. 7:27-15.5(f)6, shall be as follows:

1. If the fuel cap is not tethered, remove the fuel cap and take it to the flow test device. If the fuel cap is tethered, bring the flow test device to the vehicle;

2. Fit the adapter appropriate for the fuel cap to the flow test device;

3. Install the fuel cap on the adapter and pressurize the flow test device to 30 inches of water;

4. Compare the fuel cap leak rate to the leak rate of an orifice with a flow rate of 60 cubic centimeters per minute of air at 30 inches of water; and

5. If the leak rate of the fuel cap exceeds the leak rate of the orifice, the motor vehicle shall be determined to fail the fuel cap leak test.

New Rule, R.1997 d.56, effective February 3, 1997 (operative March 8, 1997).

See: 28 N.J.R. 2298(b), 29 N.J.R. 498(a).

7:27B-4.14 Specifications for motor vehicle emission testing equipment for use in the New Jersey Enhanced Inspection and Maintenance Program

(a) Equipment used for performing the idle test, as set forth at N.J.A.C. 7:27B-4.5(b), and the 2,500 RPM test, as set forth at N.J.A.C. 7:27B-4.6, shall be in accordance with 40 C.F.R. 51 Subpart S Appendix D—Steady-State Short Test Equipment, and all subsequent revisions thereto, incorporated herein by reference.

(b) Equipment used for performing the ASM5015 test, specified at N.J.A.C. 7:27B-4.7, shall be in accordance with the following:

1. On and after the date EPA promulgates the ASM5015 equipment specifications at 40 C.F.R. 85.3, such specifications and all subsequent revisions thereto shall be incorporated herein by reference;

2. Until EPA promulgates such specifications, the applicable specifications shall be those described in the EPA

technical guidance document EPA-AA-RSPD-IM-96-2, entitled Acceleration Simulation Mode Test Procedures, Emission Standards, Quality Control Requirements, and Equipment Specifications, July 1996, incorporated herein by reference. A copy of this EPA technical guidance document has been filed with the Office of Administrative Law and may be obtained from the Public Access Center in the Department of Environmental Protection.

(c) Equipment used for performing the IM240 test, as set forth at N.J.A.C. 7:27B-4.8, shall be in accordance with the following:

1. On and after the date EPA promulgates the IM240 equipment specifications at 40 C.F.R. 85.2226, such specifications and all subsequent revisions thereto shall be incorporated herein by reference;

2. Until EPA promulgates such specifications, the applicable specifications shall be those described in the EPA technical guidance document EPA-AA-RSPD-IM-96-1, entitled High-Tech I/M Test Procedures, Emission Standards, Quality Control Requirements, and Equipment Specifications: IM240 and Functional Evaporative System Tests, June 1996, incorporated herein by reference. A copy of this EPA technical guidance document has been filed with the Office of Administrative Law and may be obtained from the Public Access Center in the Department of Environmental Protection.

(d) Equipment used for performing the evaporative pressure test, as set forth at N.J.A.C. 7:27B-4.10, the evaporative purge test, as set forth at N.J.A.C. 7:27B-4.11, or the fuel cap leak test, as set forth at N.J.A.C. 7:27B-4.13, shall be in accordance with the following:

1. On and after the date EPA promulgates the evaporative system inspection equipment specifications at 40 C.F.R. 85.2227, such specifications and all subsequent revisions thereto shall be incorporated herein by reference;

2. Until EPA promulgates such specifications, the applicable specifications shall be those described in the EPA technical guidance document EPA-AA-RSPD-IM-96-1, entitled High-Tech I/M Test Procedures, Emission Standards, Quality Control Requirements, and Equipment Specifications: IM240 and Functional Evaporative System Tests, June 1996, incorporated herein by reference. A copy of this EPA technical guidance document has been filed with the Office of Administrative Law and may be obtained from the Public Access Center in the Department of Environmental Protection.

(e) Equipment used for performing the on-board diagnostic test, as set forth at N.J.A.C. 7:27B-4.12, shall be in accordance with 40 C.F.R. 85.2231, and all subsequent revisions thereto, incorporated herein by reference.

New Rule, 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).