

**METROPOLITAN HEALTH DEPARTMENT  
BUREAU OF POLLUTION CONTROL**

**Regulation No. 8**

**REGULATION OF EMISSIONS FROM LIGHT-DUTY MOTOR VEHICLES  
THROUGH MANDATORY VEHICLE INSPECTION AND MAINTENANCE  
PROGRAM**

**SECTION 8-1: DEFINITIONS**

All terms not defined herein shall have the meaning given in Chapter 10.56, "Air Pollution Control," Section 10.56.010, "Definitions," of the Metropolitan Code of Law.

- (a) **"Air Pollutant"** - means any particulate matter or any gas or vapor other than water or any combination thereof including any physical, chemical, biological, radioactive substance or matter which is emitted into or otherwise enters the ambient air.
- (b) **"Antique Motor Vehicle"** - means any motor vehicle over twenty-five (25) years old which is owned solely as a collectors' item and is used for participation in club activities, exhibits, tours, parades and similar uses, but in no event for general transportation.
- (c) **"Carbon Dioxide"** - means a compound consisting of the chemical formula (CO<sub>2</sub>).
- (d) **"Carbon Monoxide"** - means a compound consisting of the chemical formula (CO).
- (e) **"Catalytic Converter"** - means a pollution control device containing a catalyst for converting automobile exhaust into mostly harmless products.
- (f) **"Certificate of Compliance"** - means a certification issued by a Department vehicle inspector or a fleet vehicle inspector that the motor vehicle identified on the certificate complies with the emission performance and anti-tampering criteria appropriate to the vehicle as specified in this Regulation.
- (g) **"Contractor"** - means a person, business firm, partnership, or corporation with whom the Department has a contract which provides for the operation of one or more Official Inspection Stations.
- (h) **"Department"** - means the Department of Health of the Metropolitan Government, including the Metropolitan Board of Health, agents, employees and divisions.

- (i) **"Department Vehicle Inspector"** - means any person employed by the Department and/or contractor who is certified by the Director as qualified to perform vehicle emissions performance and anti-tampering inspections.
- (j) **"Diesel Powered Motor Vehicle"** - means a motor vehicle powered by a compression-ignition internal combustion engine.
- (k) **"Director"** - means the chief administrative officer of the Metropolitan Board of Health or his designated representative.
- (l) **"Electric Powered Motor Vehicle"** - means a motor vehicle which uses a propulsive unit powered exclusively by electricity.
- (m) **"Emission"** - means the act of releasing or discharging air pollutants into the ambient air from any source.
- (n) **"Exhaust emissions"** - means substances emitted into the atmosphere from any opening downstream from the exhaust ports of a motor vehicle engine.
- (o) **"Exhaust Gas Analyzer"** - means a device for sensing the amount of air pollutants, including carbon monoxide and hydrocarbons, in the exhaust emissions of a motor vehicle. For the purposes of this regulation, this shall mean analyzing devices of the non-dispersive infrared type or any other analyzing devices that provide equal or greater accuracy as approved by the Director.
- (p) **"Factory-installed Motor Vehicle Pollutant Control System"** - means a motor vehicle pollution control system installed by the vehicle or engine manufacturer to comply with United States government motor vehicle emission control laws and regulations.
- (q) **"Fleet"** - Fifty (50) or more light duty motor vehicles owned by the same person or business entity which are in-use, registered in Davidson County and not owned or held primarily for the purpose of resale.
- (r) **"Fleet Inspection Location"** - Any motor vehicle inspection facility operated by a fleet operator holding a valid fleet inspection permit.
- (s) **"Fleet Inspection Permit"** - A certificate issued by the Director authorizing a fleet operator to conduct motor vehicle inspections in accordance with this regulation and other requirements as determined by the Department.
- (t) **"Fleet Operator"** - The person owning a group of motor vehicles which constitute a fleet as defined in this regulation.

- (u) **"Fleet Vehicle Inspector"** - means any person retained by a fleet operator holding a valid fleet inspection permit and who is certified by the Director as qualified to perform vehicle emissions performance and anti-tampering inspections.
- (v) **"Gasoline Inlet Restrictor"** - means the leaded fuel nozzle restrictor installed on motor vehicles which was designated for the use of unleaded gasoline only.
- (w) **"Gasoline Powered Motor Vehicle"** - means any motor vehicle powered by a spark-ignition internal combustion engine.
- (x) **"GVWR"** - Gross vehicle weight as determined from combined manufacturer vehicle and maximum load rating.
- (y) **"Heavy-duty Motor Vehicle"** - means any motor vehicle having a combined manufacturer vehicle and maximum loading rate (GVWR) to be carried thereon in excess of 8500 pounds (3855 kilograms).
- (z) **"Hydrocarbon"** - means a class of chemical compounds consisting of hydrogen and carbon.
- (aa) **"Idle Speed"** - means the unloaded engine speed of a motor vehicle when the accelerator pedal is fully released. In a vehicle equipped with an automatic transmission the drive selector shall be in neutral or park. In a vehicle equipped with a manual transmission, the gear selector shall be in neutral and the clutch fully engaged. In all vehicles, engine operated accessories shall be turned off.
- (bb) **"Internal Combustion Engine"** - means any engine in which the combustion of gaseous, liquid or pulverized solid fuel takes place within one or more cylinders.
- (cc) **"Light-duty Motor Vehicle"** - means any motor vehicle having a combined manufacturer vehicle and maximum load rating to be carried thereon (GVWR) of not more than 8500 pounds (3855 kilograms).
- (dd) **"Manufacturers Idle-speed Specification"** - means the engine idle speed specified for a particular motor vehicle as printed on the engine compartment emissions system data plate or in the owners manual.
- (ee) **"Metropolitan Motor Vehicle Regulatory License"** - means the annual motor vehicle license required by Section 5.32.140 of the Metropolitan Code as a condition for legal operation of certain classes of motor vehicles.
- (ff) **"Metropolitan Wheel Tax"** - means the annual commercial vehicle tax required by Section 5.32.020 of the Metropolitan Code as a condition for legal operation of certain classes of motor vehicles.

- (gg) **"Model Year"** - means the annual production period of new motor vehicles or new motor vehicle engines designated by the calendar year in which such production ends. If the manufacturer does not designate a production period, the year with respect to such vehicles or engines shall mean the twelve (12) month period beginning January of the year in which production thereof begins. The model year for a motor vehicle constructed by other than the original manufacturer shall be assigned by the Director.
- (hh) **"Motor Vehicle"** - means any self-propelled vehicle used for transporting persons or commodities on public roads.
- (ii) **"Motorcycle"** - means any motor vehicle having a seat or saddle for the use of the rider and designed to travel on not more than three wheels in contact with the ground and having a curb weight of 2000 pounds (907 kilograms) or less.
- (jj) **"New motor vehicle"** - means any motor vehicle that has never been previously titled or registered in this or any other jurisdiction and whose ownership document remains as a manufacturer's certificate of origin.
- (kk) **"Official Inspection Station"** - means a facility operated by the Department and/or contractor to conduct motor vehicle inspections pursuant to this regulation.
- (ll) **"Opacity"** - means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.
- (mm) **"Person"** - means any individual natural person, trustee, court-appointed representative, syndicate, association, partnership, firm, club, company, corporation, business trust, institution, agency, government corporation, municipal corporation, city, county, municipality, district or other political subdivision, department, bureau, agency or other entity recognized by law as the subject of rights and duties, and any officer, agent, or employee thereof. The masculine, feminine, singular, or plural is included in any circumstances.
- (nn) **"Pollution Control Device"** - means equipment designed by the manufacturer for installation on a motor vehicle for the purpose of reducing pollutants emitted from the vehicle, or a system or engine modification on a motor vehicle which causes a reduction of pollutants emitted from the vehicle.
- (oo) **"PPM"** - means parts per million by volume.
- (pp) **"RPM"** - means engine crankshaft revolutions per minute.
- (qq) **"Tampering"** - means to remove, render inoperative, cause to be removed, or make less operative any emission control device, unless such removal or act to render inoperative or less operative is for the purpose of motor vehicle disposal or salvage operation.

(rr) **"Vehicle Exhaust System"** - means all devices, equipment and systems which transport exhaust emissions from the exhaust ports of the motor vehicle engine to the atmosphere.

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\* *Note: In the submittal made on March 17, 1994, Nashville deleted Regulation Number 8 and replaced it in its entirety with a new I/M regulation.*

**SECTION 8-2: MOTOR VEHICLE INSPECTION REQUIREMENT**

- (a) All light duty motor vehicles either registered in Davidson County, or directly with the motor vehicle division of the Tennessee Department of Revenue pursuant to T.C.A. Section 55-4-207 and used within or assigned to user within Davidson County, except those excepted in Section 8-3 of this Regulation, are required to be inspected annually for compliance with emissions performance and safety equipment criteria in Sections 8-4 and 8-5 of this Regulation. Owners of vehicles so inspected are required to obtain a Certificate of Compliance. A Certificate of Compliance shall be valid for 90 days following the date of issuance, except for those registered pursuant to T.C.A. 55-4-207, which shall be valid for one year.
- (b) A Certificate of Compliance shall be issued only by a Department and/or contractor vehicle inspector or a licensed fleet vehicle inspector and only after the vehicle demonstrates compliance with the test criteria established in Sections 8-4 and 8-5 of this Regulation.
- (c) All light duty motor vehicles required to obtain a Certificate of Compliance except those vehicles contained in a fleet which has a valid fleet inspection permit and those vehicles registered in Davidson County but not subject to either the Metropolitan Wheel Tax or the Metropolitan Motor Vehicle Regulatory License requirements shall obtain a valid Certificate of Compliance within ninety (90) days prior to the required date for payment of the wheel tax or the motor vehicle regulatory license fee as appropriate to the class of motor vehicle.
- (d) All light duty motor vehicles required to obtain a Certificate of Compliance and which are either contained in a fleet having a valid fleet inspection permit or are vehicles registered in Davidson County but exempted from the Metropolitan Wheel Tax and Metropolitan Motor Vehicle Regulatory License requirements shall obtain a valid Certificate of Compliance within ninety (90) days prior to a compliance date for that particular motor vehicle. A schedule of compliance dates for such vehicles shall be established by the Director.
- (e) The Certificate of Compliance must be presented prior to the issuance of the Metropolitan Wheel Tax or the Metropolitan Vehicle Regulatory License.

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**SECTION 8-3: EXEMPTION FROM MOTOR VEHICLE INSPECTION EQUIPMENT**

- (a) The following classes of motor vehicles are exempted from the requirement established in Section 8-2 of this Regulation:
  - (1) New motor vehicles being registered for the first time;
  - (2) Heavy duty motor vehicles;
  - (3) Motorcycles;
  - (4) Antique motor vehicles;
  - (5) Diesel powered light duty motor vehicles;
  - (6) Electric powered light duty motor vehicles; and
  - (7) Gasoline powered light duty motor vehicles with a designated model year prior to 1975.
  
- (b) When a motor vehicle is equipped with other than the original engine, the vehicle shall be classified for purposes of the emission performance test by the model year of the chassis.

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#### **SECTION 8-4: MOTOR VEHICLE EMISSION PERFORMANCE TEST CRITERIA**

- (a) Vehicles shall not be allowed to complete emission performance testing if one or more of the following conditions exist when the vehicle is presented for testing:
  - (1) The vehicle exhaust system leaks in such a way as to dilute the exhaust emissions being sampled by the exhaust gas analyzer; the sum of carbon monoxide and carbon dioxide concentrations recorded for the idle speed reading from an exhaust outlet must not be less than six (6) percent; and
  - (2) The emission of visible air pollutants from the vehicle has a shade or appearance as dark or darker than twenty (20) percent opacity except for periods not exceeding five (5) consecutive seconds.
- (b) Vehicles with idle speed emission values which exceed the test standards specified in Table I shall fail the emission performance test.

TABLE 1

MAXIMUM IDLE SPEED EMISSIONS ALLOWABLE  
DURING IDLE SPEED EMISSIONS TEST

MODEL YEAR THAN	HC (PPM)		CO%	
	VEHICLE LIGHT DUTY		LIGHT DUTY	
	LIGHT DUTY	LIGHT DUTY	VEHICLES LESS	VEHICLES
	VEHICLES LESS THAN OR EQUAL TO 6000 LBS. GVWR GVWR	VEHICLES GREATER THAN 6000 LBS. GVWR	THAN OR EQUAL TO 6000 LBS. GVWR	GREATER 6000 LBS GVWR
1975	5.0	6.5	500	750
1976	5.0	6.5	500	750
1977	5.0	6.5	500	750
1978	4.0	6.0	400	600
1979	4.0	6.0	400	600
1980	3.0	4.5	300	400
1981 and newer	1.2	4.0	220	400

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**SECTION 8-5: MOTOR VEHICLE ANTI-TAMPERING TEST CRITERIA**

- (a) Each vehicle subject to an emission performance test under this Regulation is also subject to visual anti-tampering inspection and shall comply with the following minimum anti-tampering requirements:
  - (1) The emission control devices subject to an inspection are the catalytic converter, gasoline fuel inlet restrictor, and fuel filler cap. If any of these emission control devices are found to be missing or tampered with, the vehicle shall fail the emission test. For the purposes of this Regulation, tampering of the gasoline fuel inlet restrictor shall constitute tampering of the catalytic converter and such catalytic converter shall be replaced prior to any reinspection as provided for in Section 8-9(c).

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**SECTION 8-6: MOTOR VEHICLE EMISSIONS PERFORMANCE TEST METHODS**

- (a) The motor vehicle emissions performance test shall consist of the sampling of exhaust emissions at idle speed and measurement CO<sub>2</sub> dilution, CO concentration and HC concentration.
- (b) Sampling of exhaust emissions shall consist of measurement of CO<sub>2</sub> dilution, CO concentration and HC concentration during idle operation using an approved exhaust gas analyzer. Measurements taken during the initial idle phase may be succeeded by measurements taken during a second idle phase consisting of engine operation at approximately 2500 RPM for approximately 20 seconds. The lowest emission readings from either of these idle speed test phases shall be used to determine pass or failure of the emission performance test.

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**SECTION 8-7: MOTOR VEHICLE SAFETY EQUIPMENT TEST METHODS**

- (a) The motor vehicle anti-tampering test shall consist of the following:
  - (1) The vehicle will be visually checked to see that the appropriate gas cap is securely in place. If the appropriate gas cap is not in place, it will result in the failure of the anti-tampering test.
  - (2) If the gas cap is present, it will be removed and the gasoline inlet restrictor on the vehicle will be checked to see if it has been damaged or removed. If the inlet restrictor has been damaged or removed, it will result in the failure of the anti-tampering test.
  - (3) The vehicle will be visually checked to see if the catalytic converter is the correct type for the certified vehicle configuration and is properly installed. If the catalytic converter has been tampered with, removed or is the incorrect configuration it will result in the failure of the anti-tampering test.
- (b) A pass/fail determination will be made for each of the test elements in Paragraph (a). If a vehicle fails any of the elements in Paragraph (a), it will result in the failure of the motor vehicle inspection test and a Certificate of Compliance will not be issued until the repairs have been made to the vehicle.

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## **SECTION 8-8:        MOTOR VEHICLE INSPECTION PROGRAM**

- (a)     The motor vehicle inspection shall be operated by the Metropolitan Health Department or contractor.
  
- (b)     All vehicle inspections shall be conducted at official inspection stations operated by the Department and/or contractor except those fleet inspections provided for in Section 8-8 (c) of this Regulation.
  
- (c)     In lieu of the requirement in Section 8-8(b) of this Regulation, vehicles owned or operated by a fleet operator to whom a fleet inspection permit has been issued may be inspected by a licensed fleet vehicle inspector at a site other than an official inspection station.
  
- (d)     A light duty fleet vehicle operator may make application to the Director for a fleet inspection permit. Minimum requirements for issuance of a permit shall be:
  - (1)     Possession of an exhaust gas analyzer, tools and equipment determined by the Director to be adequate for conducting the required emission inspections;
  
  - (2)     Demonstration of knowledge of methods and procedures for conducting requiring emissions performance and anti-tampering inspections according to criteria developed by the Director;
  
  - (3)     Provision of appropriate facility for vehicle testing and appropriate secure storage facility for storage of Certificates of Compliance and records of inspections;
  
  - (4)     Agreement to supply inspection and Certificate of Compliance issuance information as requested by the Director and to allow access to testing facility, testing equipment, testing personnel, testing data, Certificate of Compliance inventory and fleet vehicles as requested by the Director; and
  
  - (5)     Retention of licensed fleet vehicle inspector to conduct fleet vehicle inspections.
  
- (e)     A fleet inspection permit shall be valid for one year from date of issuance and may be renewed through application to the Director within thirty (30) days prior to the date of expiration. A fleet inspection permit is not transferable and may be denied, suspended or revoked by the Director for failure to comply with this Regulation and other requirements as determined by the Department.
  
- (f)     A person employed or retained by a fleet operator holding a valid fleet inspection permit may make application to the Director for a fleet vehicle inspector's license. Minimum requirements for issuance of this license shall be:
  - (1)     Successful completion of a vehicle inspector training course prepared and offered

by the Department;

- (2) Successful completion of mechanics training course approved by the Director;
  - (3) Agreement to participate in additional training activities from time to time as specified by the Director;
  - (4) Provision of written evidence that applicant is employed or retained by the fleet operator.
- (g) A fleet inspector's license shall be valid for one year from date of issuance and may be renewed through application to the Director within thirty (30) days prior to the date of expiration. A fleet vehicle inspector's license is not transferable and may be denied, suspended, or revoked by the Director for failure to comply with this Regulation and other requirements as determined by the Department.
- (h) All vehicles issued Certificate of Compliance under the provisions of Section 8-8 (c) of this Regulation shall be subject to retesting at either the fleet inspection location or an official inspection station as deemed necessary by the Director in order to maintain compliance with the intent of this Regulation.

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**SECTION 8-9: MOTOR VEHICLE INSPECTION FEE**

- (a) There shall be a fee of six (\$6.00) dollars for each emission test payable at the time of inspection unless the vehicle qualifies for an inspection without charge as specified in Paragraph (c).
- (b) There shall be a fee of three (\$3.00) dollars for each Certificate of Compliance supplied to licensed fleet inspectors for issuance to motor vehicles which comply with the testing provisions of this Regulation.
- (c) Each vehicle which fails its initial inspection is entitled one reinspection at no charge if the vehicle is accompanied by the entire initial inspection report.
- (d) Motor vehicle owners or operators shall be given in writing the results of all inspection procedures carried out at any official inspection station.
- (e) There shall be a fee of fifty (\$50.00) dollars for each annual Fleet Inspection Permit issued to fleet vehicle operators.
- (f) There shall be a fee of fifty (\$50.00) dollars for each initial annual Fleet Vehicle Inspector's License issued to a fleet vehicle inspector; there shall be a fee of fifteen (\$15.00) dollars for each annual renewal of a Fleet Vehicle Inspector's License.

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**SECTION 8-10 SEVERABILITY**

The provisions of an Part, Section, Subsection, Paragraph, phrase or clause of this Regulation that shall be adjudged invalid or unconstitutional by any court of competent jurisdiction, the judgement shall not affect, compare, or invalidate the remainder of this Regulation, but should be confined in its operation to the Part, Section, Subsection, Paragraph, phrase or clause of this Regulation that shall not be directly involved in the controversy in which such judgement shall have been redeemed.

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