

Chapter 62-242
Motor Vehicle Emissions Standards and Test Procedures

62-242.100 Purpose and Scope.

- (1) The Department of Environmental Protection adopts this chapter pursuant to the Florida Clean Outdoor Air Law, Section 325.201, F.S., and in order to provide the Department of Highway Safety and Motor Vehicles with the necessary rules, standards, and criteria to administer the Florida Motor Vehicle Inspection Program.
- (2) The Legislature has directed that in order to implement the Motor Vehicle Inspection Program, the Department of Environmental Protection will set the standards and criteria listed below.
 - (a) Designation of program area (Section 325.204, F.S.).
 - (b) Emissions testing and inspection procedures (Section 325.206, F.S.).
 - (c) Inspection pass/fail criteria (Section 325.206, F.S.).
 - (d) Test equipment performance specifications (Sections 325.206, 325.212, and 325.213, F.S.).
 - (e) Definition of low emission adjustment (Section 325.209, F.S.).
 - (f) Inspection personnel training criteria (Section 325.213(1)(d), F.S.).
- (3) The Department has set the vehicle in-use emission standards at levels that are achievable with proper operation and maintenance of the various model year vehicles, if they have not been tampered with, and which will result in a significant reduction in ozone-causing air pollutant emissions from automobiles and light duty trucks. It is the Department's intent that eligibility for emission control system performance warranty repairs of these vehicles be protected by reference to 40 CFR 85.2201 (Subpart W) - Emission Control System Performance Warranty Short Tests.
- (4) This chapter, and the Department of Highway Safety and Motor Vehicles rules it references, are intended as an integral part of the Department's program to achieve and maintain the National Ambient Air Quality Standards for ozone, carbon monoxide, and particulate matter; and to control nuisance exhaust.

History: New 2-20-89, Amended 3-21-91, Formerly 17-242.100.

62-242.100

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62-242.200 Definitions.

- (1) "Air pollution control equipment" means any equipment or feature installed by the manufacturer or replaced with a device or system equivalent in design and function to the part that was originally installed on the motor vehicle which constitutes an operational element of the air pollution control system or mechanism of a motor vehicle.
- (2) "Calibration gas" means a gas of known concentration and mixture which is used to establish the response curve of an exhaust gas analyzer. The calibration gas concentration shall be certified and documented by the manufacturer in accordance with the appropriate National Institute of Standards and Technology (NIST) protocol.
- (3) "Constant four-wheel drive vehicle" means any four-wheel drive vehicle which cannot be converted to a two-wheel drive vehicle except by removing one of the vehicle's drive shafts.
- (4) "Department" means the State of Florida Department of Environmental Protection.
- (5) "Dynamometer" means an instrument for measuring mechanical power of an automobile engine. Usually this unit is comprised of floor mounted steel rollers upon which the power wheels of the car are driven and the power measured.
- (6) "Emissions inspection" or "inspection" means the determination of the level of exhaust emissions from a motor vehicle and, when applicable, the performance of a three-point component check.
- (7) "Emissions inspector" means the individual who performs the motor vehicle emissions inspection whether in an inspection station, a reinspection station, or a self-inspection station.
- (8) "Exhaust emissions" means substances emitted into the atmosphere from the tailpipe(s) of a motor vehicle.
- (9) "Exhaust gas analyzer" means a device which employs industry-recognized gas analyzer technology and which will provide vehicle exhaust gas analysis data of acceptable accuracy and precision for carbon monoxide (CO), hydrocarbons (HC) and carbon dioxide CO₂, and with capability for nitric oxide (NO).
- (10) "Fuel" means any material that is burned within the confines of a vehicle that serves as the energy source for propelling the vehicle.
- (11) "Gross Vehicle Weight (GVW)" means the gross vehicle weight of a motor vehicle as specified by Section 320.01 F.S.
- (12) "Idle" means the engine revolutions per minute (rpm) with the vehicle in "neutral" or "park" and no pressure on the throttle.
- (13) "Mode test" means an exhaust emissions test conducted at idle conditions as specified in 40 CFR 85.2212.
- (14) "Inspection lane" means an area located within an inspection station, reinspection station, or self-inspection station which is devoted to and maintained for motor vehicle inspections conducted pursuant to the Florida Clean Outdoor Air Law. In reinspection stations and self-inspection stations this lane may be used for emissions related repairs.
- (15) "Inspection station" means a facility, other than a reinspection or self-inspection station, situated in a permanent structure or a mobile unit, for the purpose of conducting emissions inspections of motor vehicles as required by the Florida Clean Outdoor Air Law.
- (16) "Loaded mode preconditioning" means placing the vehicle's drive wheels on a chassis dynamometer, placing the vehicle's transmission in "drive" for automatics or 3rd gear for manual shift, operating the vehicle at the appropriate roll speed as specified in Rule 62-242.600(2), F.A.C., for gasoline engines for 30 seconds, and then returning the vehicle to idle speed for completion of an idle mode test.
- (17) "Motor vehicle" means any self-propelled vehicle required to be registered under Section 320.02, F.S.
- (18) "Motor Vehicle Inspection Program" or "MVIP" means the emissions inspection program established under the Clean Outdoor Air Law and administered by the Department of Highway Safety and Motor Vehicles.
- (19) "Multipoint calibration" means calibration of the exhaust gas analyzer with a Department-approved standard calibration gas mixture with the range of calibration including zero and two upscale points as follow:

| Span Points | |
|----------------------|----------------------|
| Low | High |
| 300 ppm propane | 1200 ppm propane |
| 1.0% carbon monoxide | 4.0% carbon monoxide |
| 6.0 % carbon dioxide | 12.0% carbon dioxide |

1000 ppm nitric oxide

3000 ppm nitric oxide

- (20) "Net weight" means the net weight of a motor vehicle as specified by Section 320.01, F.S.
- (21) "Nonattainment area" means an area which has been designated by the Administrator of the United States Environmental Protection Agency (EPA), pursuant to the federal Clean Air Act, as exceeding national primary or secondary ambient air quality standards for the pollutants carbon monoxide or ozone.
- (22) "Nonexempt motor vehicle" means any motor vehicle that has not been exempted from the requirement for an emissions inspection pursuant to Department of Highway Safety and Motor Vehicles Rule 15C-6.002, F.A.C.
- (23) "Opacity" means the relative degree that a diesel motor vehicle's tailpipe exhaust gas plume obstructs the transmission of visible light.
- (24) "Program area" means counties designated by Department rule as air quality nonattainment areas, counties which voluntarily request inclusion in the Motor Vehicle Inspection Program pursuant to the provisions of Section 325.204, F.S, and counties previously designated as nonattainment areas that are operating under an EPA-approved maintenance plan. The program area includes all of the following counties which are designated as ozone nonattainment areas or which are operating under EPA-approved maintenance plans:
 - (a) Broward.
 - (b) Dade.
 - (c) Duval.
 - (d) Hillsborough.
 - (e) Palm Beach.
 - (f) Pinellas.
- (25) "Reinspection station" means a facility that has been licensed pursuant to Department of Highway Safety and Motor Vehicles Rule 15C-6.001, F.A.C., as a facility to reinspect motor vehicles which fail the required annual inspection at one of the inspection stations.
- (26) "Self-inspection station" means a facility that has been licensed pursuant to Department of Highway Safety and Motor Vehicles Rule 15C-6.001, F.A.C., for the purpose of conducting required annual emissions inspections on vehicles owned or leased by a self-inspector.
- (27) "Self-inspector" means any person or governmental entity that owns or leases at least 25 motor vehicles, including vehicles held for resale by a motor vehicle dealer licensed under Chapter 320, F.S., and is licensed by the Department of Highway Safety and Motor Vehicles to inspect such vehicles.
- (28) "Span gas" means a calibration gas of known concentration which is used routinely to determine the repeatability of the measurements made by an exhaust gas analyzer.
- (29) "Tamper" means to dismantle, remove, or render ineffective any air pollution control equipment installed on a motor vehicle by the vehicle manufacturer or commercial importer except to replace such device or system with a device or system equivalent in design and function to the part which was originally installed on the motor vehicle.
- (30) "Three-point component check" means an inspection to confirm that the following air pollution control equipment, if installed on the motor vehicle by the vehicle manufacturer or importer, is in place and appears properly connected and undamaged as determined by visual observation:
 - (a) Catalytic converter
 - (b) Unvented fuel cap
 - (c) Fuel inlet restrictor
- (31) "2500 rpm preconditioning" means placing the vehicle's transmission in "park" for automatics or "neutral" for manual shift, increasing the engine rpm to 2500 ± 300 rpm for 30 seconds, while monitoring the engine rpm with a tachometer and then returning the vehicle to idle speed for completion of an idle mode test.

History: New 2-20-89, Amended 3-21-91, 2-2-93, Formerly 17-242.200, Amended 3-13-96.
62-242.200

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62-242.400 Standards and Procedures For Inspection of Gasoline-Fueled Vehicles; Pass/Fail Criteria.

- (1) Three-Point Component Check. Each inspection of a nonexempt gasoline-powered motor vehicle, whether at an inspection station, a reinspection station or self-inspection station, shall include a three-point component check.
 - (a) Successful completion of the three-point component check of a motor vehicle shall confirm that the three specified emission control devices (catalytic converter, unvented fuel cap, and fuel inlet restrictor), if installed on the motor vehicle by the vehicle manufacturer or importer, are in place on the motor vehicle and appear properly connected and undamaged as determined by visual observation. Except as provided in Rule 62-242.400(1)(b), F.A.C., below, any motor vehicle which fails the three-point component check shall fail the inspection.
 - (b) A missing or damaged fuel inlet restrictor shall not cause the motor vehicle to fail the inspection, provided, however, that the Department shall reinstate this requirement in the event that gasoline with a lead content of 0.05 grams per gallon or more is being marketed for highway equipment in Florida.
- (2) Initial Idle Mode Test. When sampling of nitric oxide emissions is not required, the emissions test of a nonexempt gasoline-powered motor vehicle shall commence with an idle sample taken before preconditioning begins. If the motor vehicle meets the applicable motor vehicle exhaust emission standards as given in Table 242.400-1 during this initial test, further testing is not required and the motor vehicle is passed.
- (3) Loaded Mode Preconditioning and Idle Mode Test. When a nonexempt gasoline-powered motor vehicle fails the initial idle mode test, or when sampling of nitric oxide emissions is required, the emission test shall consist of loaded mode preconditioning, followed by an idle mode test to determine pass or fail. The loaded mode preconditioning shall also provide advisory information by analyzing the exhaust for concentrations of hydrocarbons (HC), carbon monoxide (CO), carbon dioxide (CO₂) and, when applicable, nitric oxide (NO).
 - (a) Sampling for nitric oxide shall be required at the inspection stations only, to develop a data base from which future motor vehicle exhaust emissions standards may be established for nitric oxide. Not less than one percent (1%) of the gasoline-powered vehicles tested (randomly) on a calendar year basis in each inspection station shall be sampled for nitric oxide during the loaded mode preconditioning.
 - (b) A gasoline-powered motor vehicle with four cylinders or less shall be preconditioned on the dynamometer by applying a load of 4 HP (±2 HP) while being operated at a drive wheel speed of 25 mph (±2 mph).
 - (c) A gasoline-powered motor vehicle with five cylinders or more shall be preconditioned on the dynamometer by applying a load of 9 HP (±2 HP) while being operated a drive wheel speed of 30 mph (±2 mph).
 - (d) During the loaded mode preconditioning, the drive wheel speed shall not be outside the parameters given in Rule 62-242.400(3)(b) or (c), F.A.C., as applicable, for more than two (2) seconds continuously, or six (6) seconds cumulatively, during the 30-second test period.
 - (e) After the motor vehicle has been preconditioned in the loaded mode, the idle mode test will be completed on the motor vehicle to analyze the exhaust emissions for pass/fail concentrations of hydrocarbons (HC) and carbon monoxide (CO). Any motor vehicle that does not meet the applicable motor vehicle exhaust emission standards as given in Table 242.400-1 during the idle mode test shall fail the inspection.

TABLE 242.400-1
GASOLINE-POWERED MOTOR VEHICLE EXHAUST
EMISSIONS STANDARDS

| Vehicle Class and Model Year | Maximum Emission HC (ppm) | Concentration CO (percent) |
|--|------------------------------|-------------------------------|
| Class I: Net weight or GVW of 6000 pounds or less | | |
| 1975-1977 | 500 | 5.0 |
| 1978-1979 | 400 | 4.0 |
| 1980 | 300 | 3.0 |
| 1981 + | 220 | 1.2 |
| Class II: New weight or GVW of 6,001 pounds to 10,000 pounds | | |
| 1975-1977 | 750 | 6.5 |
| 1978-1979 | 600 | 5.5 |
| 1980 | 400 | 4.5 |
| 1981-1984 | 300 | 3.0 |
| 1985 + | 220 | 1.2 |

- (4) 2500 rpm Preconditioning and Idle Mode Test. When it is necessary to omit the loaded mode preconditioning as specified below, the 2500 rpm preconditioning method shall be used. After the vehicle has been preconditioned in the 2500 rpm mode, the idle mode test for exhaust emissions shall be completed on the motor vehicle to analyze for pass/fail concentrations of hydrocarbons (HC) and carbon monoxide (CO).
- (a) Any motor vehicle that does not meet applicable motor vehicle emissions standards as given in Table 242.400-1 during the idle mode test shall fail the inspection.
 - (b) The loaded mode preconditioning shall be omitted on any motor vehicle if:
 - 1. The motor vehicle is in any condition that precludes loaded mode testing for reasons of health or safety, or both, to personnel, facility, equipment or vehicle.
 - 2. The motor vehicle is unable to be tested because of the vehicle's inability to attain the speeds specified on the dynamometer.
 - 3. The motor vehicle is equipped with a constant four- wheel drive.
- (5) Inspection Rejection. The emissions inspector may refuse to perform the exhaust emissions inspection required by this section for any motor vehicle if the motor vehicle is producing visible emissions (other than water vapor) or has an obvious exhaust system leak or other condition that could affect the validity of the exhaust sample readings, as determined by the emissions inspector.
- (a) The inspection shall be aborted and the vehicle rejected if the motor vehicle exhaust system leaks in such a manner as to dilute the exhaust gas being sampled by the exhaust gas analyzer. Evidence that no leak exists shall be that the sum of the CO and CO₂ concentrations recorded for the idle mode reading from an exhaust outlet are at least 6%.
 - (b) The Department of Highway Safety and Motor Vehicles or its authorized representative may, upon examination of the rejected vehicle's exhaust system and determination that no leak exists (notwithstanding the sum of the CO and CO₂ concentrations), override the rejection decision and allow an emissions test on the vehicle to be performed. Reinspection facilities shall not be allowed to make this determination.
- (6) Dual-Fueled Vehicles. Vehicles fueled by both gasoline and an alternative fuel such as propane or compressed natural gas shall be inspected in accordance with the standards and procedures of this section while being operated on gasoline.

History: New 2-20-89, Amended 3-23-91, 2-2-93, Formerly 17-242.400.

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62-242.500 Standards and Procedures For Inspection of Diesel Fueled Vehicles; Pass/Fail Criteria.

- (1) Dynamometer Conditions.
 - (a) A diesel-powered vehicle with a net weight or GVW of greater than or equal to 6001 pounds and less than or equal to 10,000 pounds shall be tested on a loaded dynamometer by applying a single load of 30 Hp (± 2 Hp) while being operated at a drive wheel speed of 50 mph (± 2 mph).
 - (b) A diesel-powered vehicle with a net weight or GVW of 6000 pounds or less shall be tested on a loaded dynamometer by applying a single load of 9 Hp (± 2 Hp) while being operated at a drive wheel speed of 30 mph (± 2 mph).
 - (c) During the loaded mode test, the drive wheel speed shall not be outside the parameters given in Rule 62-242.500(1)(a) or (b), F.A.C., as applicable, for more than two (2) seconds continuously, or six (6) seconds cumulatively, during the 30-second test period.
- (2) Opacity Standard. No diesel-powered vehicle shall emit visible emissions in excess of 20% opacity for 5 consecutive seconds or more when under the applicable loading described in Rule 62-242.500(1), F.A.C., above.
 - (a) All diesel-powered motor vehicles shall be inspected with an opacity meter that meets the requirements of Rule 62-242.600, F.A.C.
 - (b) Separate measurements shall be made on each exhaust outlet on diesel-powered motor vehicles equipped with multiple exhaust outlets. For vehicles equipped with more than one exhaust pipe, the reading taken from the outlet giving the highest opacity reading shall be used for comparison with the standard. Exhaust tail pipes on diesel-powered motor vehicles shall allow for safe attachment of the opacity meter sensor unit. Dual or multiple exhaust motor vehicles will be tested by sampling all exhaust tail pipes simultaneously or individually.
 - (c) Except as provided in Rule 62-242.500(3), F.A.C., below, any diesel-powered motor vehicle not meeting the opacity standard of Rule 62-242.500(2), F.A.C., shall fail the inspection.
- (3) Idle Mode Test. When it is necessary to omit the loaded mode test, as specified below, an opacity measurement shall be made while the vehicle is operating at idle under no load.
 - (a) If the opacity measured during the idle mode test is greater than 5%, the vehicle shall fail the inspection.
 - (b) The loaded mode test shall be omitted on any motor vehicle if:
 - 1. The motor vehicle is in any condition that precludes loaded mode testing for reasons of health or safety, or both, of personnel, facility, equipment or vehicle.
 - 2. The motor vehicle is unable to be tested because of the vehicle's inability to attain the speeds specified on the dynamometer.
 - 3. The motor vehicle is equipped with a constant four-wheel drive.
 - (c) Reinspection stations shall not be allowed to perform the idle mode test for diesel-fueled vehicles.
- (4) Inspection Rejection. The emissions inspector may refuse to perform the opacity test required by this section for any motor vehicle if the motor vehicle has an obvious exhaust system leak or other condition that could affect the validity of the opacity reading, as determined by the emissions inspector.

History: New 2-20-89, Amended 3-21-91, 2-2-93, Formerly 17-242.500.

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62-242.600 Equipment Performance Specifications.

- (1) General. Each inspection lane shall employ advanced technology to standardize test quality, protect the consumer, and assure the inspection data security, accuracy, storage, retrieval, and forwarding. Computer operated analyzers and dynamometers are required.
- (2) Dynamometer Specifications. The dynamometer shall be a power absorbing unit with defined load versus speed relationships. The dynamometer shall have a roll speed accuracy of ± 1 mile per hour (mph) and a measured torque accuracy of $\pm 5\%$ of the actual torque. The following load versus speed relationships apply to test procedures in Rules 62-242.400 and 62-242.500, F.A.C., and shall be selectable by the dynamometer:

| | | |
|---|---------------------|--------------------------------------|
| Gasoline Engine Size (Cylinders) | Roll Speed (MPH) | Normal Loading (Brake Horsepower) |
| 4 or less | 25 (± 2) | 4 (± 2) |
| 5 or more | 30 (± 2) | 9 (± 2) |
| | | |
| Diesel Vehicles Weight Class | Roll Speed (MPH) | Normal Loading (Brake Horsepower) |
| | | |
| Class I (Net Weight or GVW) 6000 lb. or less | 30 (± 2) | 9 (± 2) |
| | | |
| Class II (Net Weight or GVW) 6001 lb.-10,000 lb. | 50 (± 2) | 30 (± 2) |

- (3) Test Analyzer Specifications.
 - (a) Exhaust Gas Analyzer Specifications. The following equipment specifications apply to all exhaust gas analyzers used to test nonexempt gasoline-powered motor vehicles.
 - 1. Accuracy: The analyzer shall have accuracy as stated in the following ranges.

| Channel | Range | Accuracy |
|---------------------------|-----------|------------|
| HC, ppm hexane | 0-400 | ± 12 |
| | 401-1000 | ± 30 |
| | 1001-2000 | ± 80 |
| CO, percent | 0-2.00 | ± 0.06 |
| | 2.01-5.00 | ± 0.15 |
| | 5.01-9.99 | ± 0.40 |
| CO ₂ , percent | 0-4.0 | ± 0.6 |
| | 4.1-14.0 | ± 0.5 |
| | 14.1-16.0 | ± 0.6 |
| NO, ppm | 0-1000 | ± 32 |
| | 1001-2000 | ± 60 |
| | 2001-4000 | ± 120 |

- 2. Response time: All analyzers shall have a response time of not more than 12 seconds to 95% of the final reading. This applies to HC, CO, and CO₂. For NO, when applicable, analyzers shall have a response time of not more than 20 seconds to 95% of the final value.

3. Analyzer drift: The up-scale, down-scale zero, and span wander of analyzers shall not exceed $\pm 0.06\%$ CO, ± 12 ppm HC (as hexane) and $\pm 0.5\%$ CO₂ on the lowest range capable of reading 1.0% CO, 200 ppm HC (as hexane) or 5% CO₂ during a one-hour period. The up-scale, down-scale zero, and span wander of the NO analyzer, when applicable, shall not exceed ± 32 ppm for range 0-1000 ppm, ± 60 ppm for range 1001-2000 ppm, and ± 120 ppm for range 2001-4000 ppm during a one-hour period.
4. Calibration: All analyzers shall have the capability of being calibrated both electronically and by gas.
5. Flow restriction indicator: All analyzers shall be operated within manufacturer's specifications for sample flow. The sampling system shall be equipped with a visual or audible warning that sample flow is not within operating requirements.
6. Interference Effects:
 - a. Sampling the following concentrations of noninterest gases shall not cause the HC reading to change more than ± 10 ppm: 15% CO₂ in N₂, 10% CO in N₂, 3000 ppm NO in N₂, 10% O₂ in N₂, and 3% H₂O vapor in air.
 - b. Sampling the following concentrations of noninterest gases shall not cause the CO reading to change more than $\pm 0.05\%$: 15% CO₂ in N₂, 1600 ppm HC in N₂, 3000 ppm NO in N₂, 10% O₂ in N₂, and 3% H₂O vapor in air.
 - c. Sampling the following concentrations of noninterest gases shall not cause the CO₂ reading to change more than $\pm 0.5\%$: 1600 ppm HC in N₂, 10% CO in N₂, 3000 ppm NO in N₂, 10% O₂ in N₂, and 3% H₂O vapor in air.
 - d. Sampling the following concentrations of noninterest gases shall not cause the NO reading, when applicable, to change more than ± 20 ppm: 1600 ppm HC in N₂, 15% CO₂ in N₂, 10% O₂ in N₂, and 3% H₂O vapor in air.
7. Repeatability: The repeatability of the exhaust gas analyzer, during five successive measurements of the same sample, shall be within the limits specified for each range as follows:

| Channel | Range | Repeatability |
|---------------------------|-----------|---------------|
| HC, ppm hexane | 0-400 | 8 |
| | 401-1000 | 15 |
| | 1001-2000 | 30 |
| CO, percent | 0-2.00 | 0.03 |
| | 2.01-5.00 | 0.08 |
| | 5.01-9.99 | 0.15 |
| CO ₂ , percent | 0-4.0 | 0.3 |
| | 4.1-14.0 | 0.3 |
| | 14.1-16.0 | 0.3 |
| NO, ppm | 0-1000 | 20 |
| | 1001-2000 | 60 |
| | 2001-4000 | 60 |

8. Sensitivity: All analyzers shall have a sensitivity of 10 ppm HC, .05% CO, and 0.2% CO₂.
9. Temperature and humidity operating range: All analyzers shall be capable of meeting all specifications from zero to 85% relative humidity (non-condensing) and 41° F to 110° F temperature.
10. Range of measurement: All analyzers shall have a range of 0 to 2000 ppm HC (as

- hexane), 0 to 10% CO, 0 to 16% CO₂, and, when applicable, 0 to 4000 ppm NO.
- (b) Opacity Analyzer Specifications. All analyzers used to test nonexempt diesel-powered motor vehicles for tailpipe opacity shall conform with the specifications of 40 CFR 86.884-9 (smoke measurement system).
 - (c) Test Analyzer System Specifications for Reinspection and Self-inspection Stations - All reinspection and self-inspection stations shall employ test analyzer systems approved by the Department as meeting the additional equipment specifications set forth in the Department of Environmental Protection document, "Motor Vehicle Inspection Program - Test Analyzer System Specifications (MVIP-90), Revision 1.0," hereby adopted by reference. A copy of this document is available from the Department of Environmental Protection, Division of Air Resources Management, 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32399-2400.
- (4) Demonstration of Compliance with Equipment Performance Specifications - For all inspection stations, compliance with the equipment performance specifications of this rule shall be demonstrated through successful completion of acceptance test procedures developed by the Department of Highway Safety and Motor Vehicles in cooperation with the Department of Environmental Protection. For reinspection and self-inspection stations, compliance shall be demonstrated through use of a Department-approved test analyzer system as provided in Rule 62-242.600(3)(c), F.A.C.
- (5) Calibration And Maintenance Of Test Equipment. The following calibration and maintenance procedures shall be followed by all inspection stations, reinspection stations, and self-inspection stations. In the absence of appropriate calibration and maintenance procedures in this section, all equipment used for the inspection shall be calibrated and maintained according to the manufacturer's specifications and recommendations.
- (a) Exhaust gas analyzers shall be turned on and warmed up for at least fifteen minutes prior to performing any test or any equipment calibration, span, or zero checks, except for chemiluminescent NO analyzers, which require thirty minutes.
 - (b) If the sampling flow restriction indicator on any analyzer becomes activated during a test, the test shall be stopped and shall recommence only after the necessary analyzer repairs have been completed.
 - (c) An exhaust gas analyzer shall not be used to test vehicles unless it has been spanned electronically prior to each emissions test.
 - (d) An exhaust gas analyzer shall not be used to test vehicles unless a multipoint calibration using calibration gas has been performed within the last 72 hours.
 - (e) An exhaust gas analyzer shall not be used to test vehicles unless a multipoint calibration using calibration gas has been performed following the replacement of any optical or electrical component that can cause a variation in the analyzer reading.
 - (f) All inspection, reinspection, and self-inspection stations shall use calibration gases approved by the Department as meeting the specifications set forth in the Department of Environmental Protection document, "Motor Vehicle Inspection Program - Calibration Gas Specifications, December 3, 1990," hereby adopted by reference. A copy of this document is available from the Department of Environmental Protection, Division of Air Resources Management, 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32399-2400.
 - (g) Complete records, as approved by the Department of Highway Safety and Motor Vehicles, which document the maintenance, repair and calibration of all testing equipment shall be kept on file for a period of 5 years.
 - (h) Any inspection station, reinspection station or self-inspection station may petition the Department of Environmental Protection for approval of alternate procedures to calibrate or maintain equipment, provided the applicant can give adequate assurance to the Department that such alternate procedures shall meet or exceed the standards of accuracy and reliability as set forth above.
- (6) Instrument Audits. The emissions test equipment for each inspection lane shall be subject to a multipoint emissions test instrument audit by an employee or agent of the Department of Highway Safety and Motor

Vehicles on at least a three month frequency. The instrument auditor and the audit equipment used shall be independent of the inspection station contractor, self inspection station licensee, reinspection station licensee, or person who markets the equipment being audited. The purpose of these audits shall be to verify that the mobile source emissions data being collected are of acceptable quality (i.e., precision, accuracy, representativeness, and comparability).

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62-242.700 Tampering Inspection.

- (1) A tampering inspection is required pursuant to the waiver provisions of Section 325.209, F.S., and Department of Highway Safety and Motor Vehicles Rule 15C-6.002, F.A.C.
- (2) For model years 1975 - 1979, the tampering inspection shall determine whether the following emission control devices and systems, if installed on the motor vehicle by the manufacturer or importer have been tampered with:
 - (a) Catalytic converter
 - (b) Unvented fuel cap
- (3) For model years 1980 and newer, the tampering inspection shall determine whether the following emission control devices and systems, if installed on the motor vehicle by the manufacturer or importer, have been tampered with, including all wiring of sensors/switches and vacuum lines to sensors/switches:
 - (a) Catalytic converter
 - (b) Unvented fuel cap
 - (c) Positive crankcase ventilation system (PCV)
 - (d) Thermostatic air cleaner (TAC)
 - (e) Exhaust gas recirculation system (EGR)
 - (f) Air pump and/or air injection system (AIS)
 - (g) Oxygen sensor (O₂)
 - (h) Fuel evaporative emissions system (EVP)
- (4) The tampering inspection shall also determine whether the following conditions are met:
 - (a) A motor vehicle which has been rebuilt, built from parts, or has had an engine exchanged must match exactly any United States Environmental Protection Agency certified configuration of the same or newer model year as the chassis, unless the motor vehicle is considered a "kit car" pursuant to Rule 15C-6.002, F.A.C.
 - (b) An imported nonconforming motor vehicle which has been imported under a certificate of conformity or modification/test procedure pursuant to 40 CFR 85, Subpart P, must comply with the emission control requirements of such certificate or procedure.
 - (c) A motor vehicle which has been made from a manufactured kit body or which is considered a "kit car" pursuant to Rule 15C-6.002, F.A.C., must match exactly any United States Environmental Protection Agency certified configuration of the engine family used in the vehicle.
 - (d) A motor vehicle which has a damaged or missing fuel inlet restrictor, or a restrictor which has been repaired or replaced, must have proof of proper catalytic converter operation. Proof of proper catalytic converter operation shall consist of an invoice from a motor vehicle repair facility showing the catalytic converter has been replaced or tested and found to be functioning.
- (5) Any motor vehicle that is unable to successfully complete a tampering inspection, as defined in this section, shall be considered a tampered vehicle for the purposes of Section 325.209, F.S., and Rule 15C-6.002, F.A.C.

History: New 2-20-89, Amended 3-21-91, 2-2-93, Formerly 17-242.700.

62-242.700

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62-242.800 Low Emissions Adjustment.

- (1) A low emissions adjustment is required pursuant to the waiver provisions of Section 325.209, F.S., and Department of Highway Safety and Motor Vehicles Rule 15C-6.002, F.A.C.
- (2) The low emissions adjustment for a gasoline-powered motor vehicle is designed to adjust and repair or replace common tune-up components of the engine in an effort to restore the vehicle to the manufacturer's specifications and minimize the amount of exhaust emissions. The low emissions adjustment shall consist of performing the following procedures, when applicable.
 - (a) Inspect for dirty or plugged air cleaner or anything that may restrict the air intake system. Replace filter element. Clean and repair as required.
 - (b) Check vacuum hoses for cracks, leaks or blockage and repair or replace as required.
 - (c) Inspect, adjust or replace common ignition components such as points, condenser, rotor, distributor cap, and electronic ignition components. Inspect and clean or replace spark plugs, and repair or replace spark plug wires as required.
 - (d) Check the dwell angle and timing according to manufacturer's specifications, $\pm 2^\circ$ maximum.
 - (e) Inspect and adjust choke fast-idle speed setting. Inspect choke linkage and equivalent components, such as vacuum "pull-offs," as applicable, for proper operation per manufacturer's procedures and specifications.
 - (f) With the air filter installed, check the idle speed and fuel-to-air mixture according to the manufacturer's specifications. Idle should be set to the manufacturer's specification, ± 50 rpm.
 - (g) Check for manufacturer's recommended positive crankcase ventilation valve and its correct operation, verifying free-flow through the positive crankcase ventilation system passages and hoses. Repair or replace system parts as required.
 - (h) Check EGR valve for proper installation and functional operation.
 - (i) If applicable, check the onboard diagnostics system for diagnostic codes and repair according to the manufacturer's specifications.
- (3) The low emissions adjustment for a diesel-powered motor vehicle shall consist of performing the following procedures:
 - (a) Inspect for dirty or plugged air cleaner or anything that may restrict the air intake system. Replace filter element. Clean and repair as required.
 - (b) Check fuel injection system timing according to manufacturer's specification and adjust as required.
 - (c) Check for fuel injector fouling or mismatch and repair or replace as required.
 - (d) If tailpipe exhaust smoke continues to be visually detectable, check fuel pump and air-fuel ratio control according to manufacturer's specifications and adjust or replace as required.

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62-242.900 Training Criteria For Motor Vehicle Emissions Inspection Personnel.

- (1) Inspector Certification. All motor vehicle emissions inspectors in self-inspection and reinspection stations shall be certified through successful completion of a motor vehicle emissions inspector training course approved by the Department as meeting the criteria given in Rule 62-242.900 (2) through (4), F.A.C., below.
 - (a) Successful completion of the training course shall require attendance at all training sessions and a score of 70% or more on the course examination.
 - (b) The inspector certification shall be renewed, as a minimum, every three years. The criteria for renewal shall be for the inspector to pass a written test with a score of 70% or better, which is to be administered by a Department-approved training facility and Department-approved instructor.
- (2) Training Curriculum. The curriculum for certification of motor vehicle emissions inspection personnel shall be the Florida Inspection and Repair Station Training (FIRST) course. The course content is set forth in the Department of Environmental Protection document "Florida Inspection and Repair Station Training, Technician Training Manual," hereby adopted by reference. A copy of this document is available from the Department of Environmental Protection, Division of Air Resources Management, 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32399-2400. The course shall be presented in a Department-approved training facility and shall consist of not less than 40 hours instruction.
- (3) Instructor Qualifications. All course instructors shall have, as a minimum, the following qualifications:
 - (a) Valid Florida teaching certificate covering the area of "Automotive Mechanics - 7" or six years experience as an automobile mechanic or automotive service technician with at least two of those years being at the trained employee or journeyman level.
 - (b) Current proficiency certification in the specialty areas of "Engine Repair," "Engine Performance," and "Electrical Systems" through the National Institute for Automotive Service Excellence (ASE), 13505 Dulles Technology Drive, Herndon, Virginia 22071-3415.
 - (c) Completion of an instructor training course on the Florida Inspection and Repair Station Training Curriculum.
- (4) Training Facility Requirements. All training facilities shall be equipped with test analyzer systems certified by the Department for use in self-inspection and reinspection stations. A list of Department-approved test analyzer systems is hereby incorporated by reference and is available from the Department at the address referenced in Rule 62-242.900(3)(c).
- (5) Approval of Training Facilities and Course Instructors. The Department shall authorize any course instructor and training facility meeting the requirements of Rules 62-242.900(3) and (4), F.A.C., respectively, to certify motor vehicle emissions inspectors in accordance with the provisions of Rule 62-242.900(1), F.A.C.
 - (a) The course instructor shall employ the training curriculum specified in Rule 62-242.900(2), F.A.C.
 - (b) The training facility shall provide the successful student with a certificate of course completion, signed by the course instructor and his or her department head or other authorized representative of the facility.
 - (c) The Department shall maintain and make available to the Department of Highway Safety and Motor Vehicles and the public a list of approved facilities and instructors. This list shall be updated immediately upon approval of any facility or instructor not previously listed.

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