

REGULATION II PROHIBITIONS

Rule 215 **Phase II Vapor Recovery System Requirements**

Part 1.0 **General**

1.1 **Purpose**

To limit the emission of gasoline vapor into the atmosphere during the filling of motor vehicle fuel tanks.

1.2 **Applicability**

The provisions of this Rule shall apply to the transfer of gasoline from any stationary storage tank or delivery vessel into any motor vehicle fuel tank. Requirements of this Rule depend on whether an area is designated as attainment/unclassified or non-attainment for any federal ozone standard. Part 3.0 applies to areas that have not been federally designated as non-attainment and Part 4.0 applies to areas that have been designated as non-attainment. Parts 1.0 (General), 2.0 (Definitions) and 5.0 (Monitoring and Records) apply to all areas.

Part 2.0 **Definitions**

APCO: Air Pollution Control Officer or Executive Director of the Northern Sierra Air Quality Management District, or an authorized representative thereof.

Background: A reading as methane on a portable hydrocarbon detection instruction which is observed at least three (3) meters upwind from the device to be inspected and reasonably uninfluenced by any specific emission point.

CARB: The California Air Resources Board.

CARB Certified: A Phase I or Phase II vapor recovery system, equipment, or any component thereof, for which CARB has evaluated its performance and issued a valid Executive Order pursuant to Health and Safety Code Section 41954. Each component of a system is a separate CARB certified item and cannot be replaced with a non-certified item or other items that are not certified for use with that particular system. Except for qualified repairs, a CARB certified component shall be as supplied by the qualified manufacturer. A rebuilt component shall not be deemed as CARB certified unless the person who rebuilds the component is authorized by CARB to rebuild that specific CARB certified component.

Delivery Vessel: Any motor vehicle, trailer, or rail car used for the transportation of gasoline.

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E85: Any Alternative vehicle fuel with a nominal 85 percent ethanol composition, having a Reid vapor pressure of 4 pounds per square inch or greater and meeting the specifications of Title 13 CCR Section 2292.4.

Emergency: An unforeseen combination of circumstances that calls for immediate action to prevent further injury, loss of life or damage to property.

Emergency Motor Vehicle: A motor vehicle used for fire fighting purposes.

Executive Order: A document issued by CARB pursuant to Health and Safety Code Section 41954 certifying that a specific vapor recovery system meets the applicable performance specifications and setting conditions for the certification.

Gasoline: Any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 4 pounds per square inch absolute or greater as determined by a method specified in Section 5.1(A).

Gasoline Dispensing Facility: A mobile fueler or a stationary source consisting of one or more storage tanks and associated equipment that receives, stores and dispenses gasoline to motor vehicle fuel tanks.

Hold-open Latches: A hold-open latch is any device permanently attached to a gasoline dispensing nozzle for the purpose of providing a continuous flow of gasoline after the operator has started the flow, without the operator's continued assistance.

Installer/Contractor: A person(s) engaged in the installation, alteration, repair or replacement of a vapor recovery system or its components at a gasoline dispensing facility.

Leak Free: A liquid leak of less than three drops in any minute.

Mobile Fueler: Any gasoline delivery vessel with an attached container that is used to transport and dispense gasoline from an onboard storage container into any motor vehicle fuel tank.

Motor Vehicle: Any self-propelled vehicle as defined in Section 415 of the California Vehicle Code.

Onboard Refueling Vapor Recovery (ORVR): A vehicle-based vapor recovery system required by California Code of Regulations, Title 13, Section 1978, or Title 40, Code of Federal Regulations, Part 86.

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Owner/Operator: Any person who owns, leases, or operates a gasoline dispensing facility.

Rebuild/Rebuilt: Repairs, replacement, or reconstructions to any part of a component of a vapor recovery system that forms the gasoline vapor passage of the component, or that comes in contact with the recovered gasoline vapors in the component. Rebuild does not include the replacement of a complete component with another CARB certified complete component; nor does it include the replacement of a spout, bellows, or vapor guard of a CARB certified nozzle. The new part shall be CARB certified and as supplied by the qualified manufacturer specifically for the CARB certified nozzle.

Retail Gasoline Dispensing Facility: A gasoline dispensing facility subject to payment of California sales tax on gasoline sales.

Six Month Average Monthly Gasoline Throughput: The sum of a gasoline dispensing facility's total gasoline throughput for six months divided by six.

Summer Fuel: Gasoline that is required to comply with the requirements of Title 13 CCR, Section 2262.4.

Tester: Any person(s) who conducts a performance or re-verification test as required by this Rule or by a CARB Executive Order.

Topping Off: An attempt by a person filling up a motor vehicle to dispense gasoline after the dispensing nozzle primary shut-off mechanism has engaged. The filling of a motor vehicle tank that, because of the configuration of the fill pipe, causes premature activation of the primary shutoff mechanism shall not be considered topping off.

Vapor Recovery Equipment Defects List: A list of defects CARB has identified as substantially impairing the efficiency of the vapor recovery system, incorporated by reference in Title 17 CCR Section 94006, pursuant to California Health & Safety Code Section 41960.2(c).

Vapor Tight: A condition under which the concentration of total organic compounds does not exceed 10,000 ppmv (expressed as methane) above background, as determined pursuant to Section 5.1(B).

VRED List: Vapor Recovery Equipment Defects List.

Winter Fuel: Gasoline that is not required to comply with the regulations that are applicable to summer fuel.

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Part 3.0 Federal Ozone Attainment/Unclassified Areas

The following provisions (3.1 through 3.5) shall apply only in those portions of the District that have not been designated as non-attainment for any national ambient air quality standard for ozone.

3.1 Phase II Vapor Recovery System Required

No owner or operator of a retail service station shall transfer, permit the transfer, or provide equipment for the transfer of gasoline from a stationary storage tank at a retail service station into a motor vehicle fuel tank unless a CARB-certified Phase II vapor recovery system is installed and used during transfer.

3.2 Exemptions To 3.1

A. Phase I Exempted Tanks

A transfer of gasoline from a stationary storage tank which is exempt from Phase I requirements pursuant to Rule 214.

B. Facilities With Less than 480,000 Gallons Annual Throughput

A transfer of gasoline from an existing retail service station with an annual gasoline throughput of 480,000 or fewer gallons. After the throughput exceeds 480,000 gallons this exemption shall expire on January 1 of the following year.

3.3 Compliance Schedule

A. Throughput in Excess of 480,000 Gallons

If during any calendar year or portion of a calendar year, the gasoline throughput from an existing retail service station meets or exceeds 480,000 gallons, the exemption pursuant to Section 3.2(B) of this Rule will expire. Upon expiration of this exemption the owner or operator of the retail service station shall:

- i. Immediately notify the APCO, in writing, in advance of the intended Phase II vapor recovery installation.
- ii. Secure all necessary permits and other approvals for the installation of the Phase II vapor recovery system within fifteen (15) months from the date the exemption expires.
- iii. Install the Phase II vapor recovery system within two (2) years from the date the exemption expires.

B. New Retail Service Station

The owner or operator of any new retail service station shall install and use a CARB-certified Phase II vapor recovery

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system at the time gasoline is first delivered to the facility.

C. Tank Replacement

At the time of tank replacement at an existing service station, a CARB-certified Phase II vapor recovery system shall be installed and used thereafter on all of the station's facilities, unless exempted by Rule 214.

3.4 Operation and Maintenance

A. Fuel Transfer

A person shall not transfer, permit the transfer, or provide equipment for the transfer of gasoline from a stationary storage tank subject to the provisions of this Rule (Phase II) into any motor vehicle fuel tank unless:

- i. The vapor recovery system is operating in accordance with the manufacturer's specifications and is maintained to be leak free, vapor tight, and in good working order.
- ii. The equipment subject to this Rule is operated and maintained with none of the defects contained in the California Code of Regulations, Section 94006.

B. Posting of Operating Instructions

The owner or operator of each gasoline dispensing facility requiring a Phase II vapor recovery system shall conspicuously post in the gasoline dispensing area operating instructions for the system and the Northern Sierra Air Quality Management District's or CARB's telephone number for complaints. The instructions shall clearly describe how to fuel vehicles correctly with the vapor recovery nozzles, and shall include a warning that topping off may result in spillage or recirculation of gasoline.

3.5 Defective Phase II Equipment - Prohibition of Use

Whenever the APCO determines that a Phase II vapor recovery system, or any component thereof, contains a defect specified by CARB pursuant to Section 3.4(A) of this Rule, the APCO shall mark such system or component "Out of Order." No person shall use or permit the use of such marked component or system until it has been repaired, replaced, or adjusted as required to permit proper operation, and the APCO has re-inspected it or has authorized its use pending re-inspection.

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Part 4.0 Federal Ozone Non-attainment Areas

The following provisions (Sections 4.1 through 4.6) shall apply only in areas designated as non-attainment for any federal ambient air quality standard for ozone. These are in addition to and supersede all other provisions of this Rule.

4.1 Exemptions

A. Dispensing Equipment for Emergency Motor Vehicles

The provisions of this Rule shall not apply to dispensing equipment that is used exclusively for the fueling of emergency motor vehicles while on location at an emergency.

B. Dispensing Equipment for Implements of Husbandry

The provisions of this Rule shall not apply to dispensing equipment which is used primarily for the fueling of implements of husbandry as such vehicles are defined in Division 16 (Section 36000 et seq) of the California Vehicle Code, if such container is equipped with a permanent submerged fill pipe.

C. Maintenance Inspection

The maintenance inspection requirements in Section 4.2(C) shall not apply on Saturdays, Sundays, and holidays for gasoline dispensing facilities with a six month average monthly gasoline throughput of less than 100,000 gallons.

D. E85

The requirements of this Rule shall not apply to the dispensing of E85 into a vehicle fuel tank until CARB certifies Phase II vapor recovery systems for the dispensing of E85.

E. Onboard Refueling Vapor Recovery

Except for Sections 4.2(H) and 5.3, the requirements of this Rule shall not apply to non-retail gasoline dispensing facilities where 100 percent of the vehicles being refueled are equipped with onboard refueling vapor recovery (ORVR) systems.

F. International Code Council (ICC) Certification

The requirements of Section 4.4 shall not apply to the owner/operator of a gasoline dispensing facility or his/her direct employee(s) when replacing any defective nozzles, hoses and breakaways with new or CARB certified re-

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manufactured components of the same make and model, or alternatives specifically identified in the latest applicable CARB Executive Order.

4.2

Standards

A. Vapor Recovery and Control Efficiency Requirements

A person shall not transfer, or permit the transfer of, gasoline from a stationary storage container with a capacity of 250 gallons or more, or mobile fueler with a capacity of 120 gallons or more, into any motor vehicle fuel tank with a capacity of 5 gallons or more unless the displaced gasoline vapors are processed by a CARB certified vapor recovery system. The vapor recovery system shall meet the following control efficiency requirements.

- i. For summer fuel, a gasoline vapor control efficiency of at least 95% by weight and a mass emission factor not exceeding 0.38 pounds of gasoline vapors per 1,000 gallons of gasoline dispensed.
- ii. For winter fuel, a gasoline vapor control efficiency of at least 95% by weight or a mass emission factor not exceeding 0.38 pounds of gasoline vapors per 1,000 gallons of gasoline dispensed.

B. Equipment Maintenance

A person shall not transfer, or permit the transfer, or provide equipment for the transfer, of gasoline from a stationary storage container or mobile fueler subject to the provisions of Section 4.2(A) into any motor vehicle fuel tank of 5 gallons or more capacity unless the following requirements are met.

- i. The vapor recovery system is operating in accordance with the applicable CARB Executive Orders, the manufacturer's specifications, and is maintained to be leak free, vapor tight, and in good working order.
- ii. The equipment is operated and maintained without any of the applicable defects listed in the VRED list.

C. Maintenance Inspection

- i. Maintenance inspections, except as provided in Section 4.1(C), shall be conducted for each day the vapor recovery system is operated to ensure that vapor recovery systems components that are verifiable through direct measurement or observation are in proper working order.
- ii. Any equipment with a major defect listed in the VRED

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List shall be removed from service and tagged to ensure that it is not used until it is repaired and brought into compliance before being returned to service. The owner or operator of a vapor recovery system shall insure that the removal from service of one component of a vapor recovery system with multiple components will not result in gasoline liquid or vapors entering the atmosphere.

- iii. Defects discovered during the maintenance inspection and repaired in accordance with Title 17, Division 3, Subchapter 7.5, Chapter 1, Section 93101 of California Code of Regulations such that after repair gasoline liquid or vapors do not enter the atmosphere shall not constitute a violation of this Rule.

D. Prohibition of Use

Whenever a Phase II vapor recovery system, or any component thereof, contains a defect listed in the VRED List, the operator shall mark such system or component "Out of Order." No person shall use or permit the use of such marked component or system until it has been repaired, replaced, or adjusted, as required to permit proper operation, and the APCO has re-inspected it or has authorized its use pending re-inspection.

E. Posting of Operating Instructions

The operator of each retail facility utilizing a Phase II system shall conspicuously post in the gasoline dispensing area operating instructions for the system and the CARB's telephone number for complaints. The instructions shall clearly describe how to fuel motor vehicles correctly with vapor recovery nozzles utilized at the station, and shall include a warning that topping off may result in spillage or re-circulation of gasoline and therefore is prohibited.

F. Hold-open Latches

All gasoline dispensing nozzles subject to Section 4.2(A) shall be equipped with hold open latches unless the usage of the hold open latch is prohibited by the local Fire Marshall.

G. Prohibition of Sale

A person shall not supply, offer for sale, sell, install or allow the installation of any new or rebuilt vapor recovery system or any of its components, unless the system and component are CARB certified. Each vapor recover system and its

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components shall be clearly and permanently marked with the qualified manufacturer's name and model number as certified by CARB. In addition, any qualified manufacturer who rebuilds a component shall also clearly and permanently mark the corresponding information on the component.

H. Onboard Refueling Vapor Recovery

The owner or operator of a non-retail gasoline dispensing facility claiming exemption pursuant to Section 4.1(E) shall submit an application pursuant to Rule 401 – Authority to Construct Regulations for an Authority to Construct and Permit to Operate the gasoline dispensing facility and agree to comply with the following conditions.

- i. No fuel shall be dispensed into a vehicle that is not owned or under direct control of the owner/operator, except for a vehicle being used in an emergency;
- ii. No fuel shall be dispensed into a vehicle not equipped with an ORVR system, except for a vehicle being used in an emergency.
- iii. The gasoline dispensing facility shall use nozzles that are part of a CARB certified vapor recovery system, except that the vapor return line shall be sealed off.

4.3 Test Requirements for Vapor Recovery Systems

The following requirements shall apply to verification of proper operation of any vapor recovery system.

A. Required Tests

Unless otherwise specified in the relevant CARB Executive Orders, performance and re-verification tests shall include the following, as applicable, according to the test methods specified in Section 5.1 of this Rule.

- i. Static Pressure (Leak Decay) Test
- ii. Air-to-Liquid (A/L) ratio test
- iii. Dynamic Back Pressure Test, and
- iv. Liquid Removal Test for balance systems with liquid removal device required by the CARB Executive Orders if more than 100 ml of liquid is found in the vapor path. This shall be determined by lowering the gasoline dispensing nozzle into a container and draining all liquid, then measuring the amount of liquid using a graduated cylinder or graduated beaker.

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B. Initial Tests

Within 30 calendar days of completion of construction or modification of any vapor recovery system, the owner or operator shall conduct and pass all applicable performance tests.

C. Testing Frequency

The owner/operator of a gasoline dispensing facility shall perform and pass all applicable re-verification tests annually, or more frequently as required by the applicable CARB Executive Order.

- i. Gasoline dispensing facilities shall conduct and pass re-verification tests within 30 days of the end of each required period following the most recent successful test.
- ii. If CARB-certified in-station diagnostics are used, the APCO may change the required frequency of re-verification testing to no less than once every two years if allowed by the applicable CARB Executive Orders.

4.4 Certification

A. Installers/Contractors

Installers/contractors shall not install, alter, repair or replace a vapor recovery system unless they meet all of the following requirements.

- i. Be certified by the International Code Council (ICC) for Vapor Recovery System installation and Repair, and , if required, be certified by the system manufacturer.
- ii. Maintain valid certifications as required in paragraph (i).
- iii. Have and make available on site proof of any and all certifications required by this Rule, the Executive Order and the installation. Operation and Maintenance Manual in order to install or maintain specific systems.

B. Testers

Testers shall not test a vapor recovery system unless they meet all of the following requirements.

- i. Effective 3 months after a certification test is available, be certified by the International Code Council (ICC) for Vapor Recovery System Testing and Repair.

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- ii. If required by the Executive Order, be certified by the system manufacturer.
- iii. Maintain valid certifications required in paragraphs (i) and (ii).
- iv. Have and make available on site proof of any and all certifications required by this Rule, the Executive Order and the Installation, Operation and Maintenance Manual in order to test specific systems.

4.5 Operation and Maintenance Manual

The owner/operator of a vapor recovery system shall have available an operation and maintenance manual. The manual shall be kept on-site and made available to any person who operates, inspects, maintains, repairs, or tests the vapor recovery equipment as well as the APCO upon request. The manual shall, at a minimum, include the following current information.

- A.** All applicable CARB Executive Orders and associated installation, Operation and Maintenance Manuals, Approval Letters, and District permits.
- B.** Manufacturer's manual(s) for all installation, operation and maintenance procedures as required to be provided by CARB CP-201 and CP-206 and any additional instruction provided by the manufacturer.
- C.** System and/or component testing requirements, including test schedules and passing criteria for each of the standard tests listed in Section 4.3.
- D.** Protocol for performing daily maintenance inspections, including the components to be inspected and the defects requiring repair.

4.6 Notification of Testing

At least 7 days prior to performance or re-verification testing, the owner or operator shall notify the APCO of the exact date and time of the test. If the vapor recovery system fails any of the applicable tests and the necessary repairs are performed that same day, the owner or operator may retest the vapor recovery system on the same day without re-notification, provided that the reasons for the test failure and any repairs performed are properly documented in the test reports and repair records.

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Part 5.0 Monitoring and Records

5.1 Testing Procedure

The performance and re-verification tests shall be conducted in accordance with the following test methods. All test methods referenced in the section shall be the most recent version approved by the U.S. Environmental Protection Agency, CARB, the APCO or as stated in the applicable Executive Orders.

- A.** Vapor pressures shall be determined by ASTM D2879-97 (Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope, 1997); ASTM D323-94 (Test Method for Vapor Pressure of Petroleum Products ((Reid Method)), 1994); or ASTM D5191-07 (Standard Test Method for Vapor Pressure of Petroleum Products ((Mini Method)), 2007).
- B.** Vapor tightness shall be determined using EPA Reference Method 21.
- C.** The static pressure (leak decay) test shall be performed according to the Bay Area Air quality Management district Manual of Procedures, Source Test Procedure ST-30 or CARB TP-201.3 or TP-201.3B or TP-206.3, as applicable.
- D.** The dynamic back pressure test shall be performed according to the Bay Area Air Quality Management District Manual of Procedures, Source Test Procedure ST-27, or CARB TP-201.4
- E.** The air-to-liquid volume ratio of a Phase II vapor recovery system shall be determined by CARB TP-201.5.
- F.** The liquid removal rate of a Phase II vapor recovery system shall be determined by the Bay Area Air Quality Management District Manual of Procedures, Source Test Procedures St-37, or CARB TP-201.6.
- G.** Only calibrated equipment meeting the calibration range and intervals specified by CARB and the equipment manufacturer shall be used to conduct any performance or re-verification test.
- H.** Those vapor recovery systems whose CARB Executive Orders specify different tests to be performed instead of, or in addition to, the referenced test methods, or which, by their

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design, preclude the use of the referenced test methods, shall be tested in accordance with the test procedures specified in the applicable CARB Executive Orders or their equivalents as approved by the APCO and EPA.

- J.** Multiple Test Methods: When more than one test method or set of test methods is specified for any testing, a violation of any requirement of this Rule established by any one of the specified test methods or set of test methods shall constitute a violation of this Rule.

5.2 Recordkeeping

A person subject to this Rule shall maintain the following records on-site and make them available for review by the APCO immediately upon request.

- A.** Results of the tests specified in Section 4.3 shall be delivered to the APCO within thirty (30) days of the completion of test. The test results shall contain the following information.
 - i. Name, location, address, and telephone number of the facility tested, and the Northern Sierra Air Quality Management District permit number
 - ii. Name, address and phone number of the person or company performing the test.
 - iii. Date of the test
 - iv. Test data
 - v. Number of nozzles tested
 - vi. Number of tanks tested
 - vii. Statement of pass or fail

- B.** Daily maintenance inspection reports shall include at least the following.
 - i. Date and time of inspection
 - ii. List of defects from the VRED List that are applicable to the vapor recovery equipment and have a verification procedure of “direct observation” or “direct measurement”
 - iii. Notification by person performing inspection whether each defect is present
 - iv. Description of any defects discovered
 - v. Action taken upon discovery of a defect
 - vi. Name and signature of person performing inspection

- C.** The following records must be retained by the owner or operator for a period not less than 3 years (5 years for a

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source subject to the requirement of Rule 522, Title V-Federal Operating Permits).

- i. Maintenance records for the vapor recovery system
- ii. Repair records for the vapor recovery system
- iii. Daily maintenance inspection reports
- iv. Performance test results
- v. Re-verification of performance test results
- vi. Monthly gasoline throughput

5.3 Records for ORVR Exemption

The owner or operator of a non-retail gasoline dispensing facility claiming exemption pursuant to Section 4.1(E) shall maintain the following records on site and make them available to the APCO immediately upon request.

- A.** Records of the date and quantity of fuel dispensed, by vehicle.
- B.** Records of the make, model, model year, and vehicle identification number of all vehicles refueled at the gasoline dispensing facility.