

RULE 4622 GASOLINE TRANSFER INTO MOTOR VEHICLE FUEL TANKS (Adopted May 21, 1992; Amended November 18, 1992; Amended December 17, 1992; Amended February 17, 1994; Amended June 18, 1998; Amended September 19, 2002; Amended December 20, 2007)

1.0 Purpose

The purpose of this rule is to limit emissions of gasoline vapors from the transfer of gasoline into motor vehicle fuel tanks.

2.0 Applicability

This rule applies to any gasoline storage and dispensing operation or mobile fueler from which gasoline is transferred into motor vehicle fuel tanks, except as provided in Section 4.0.

3.0 Definitions

For the purpose of this rule, the following definitions shall apply:

3.1 APCO: as defined in Rule 1020 (Definitions).

3.2 ARB: California Air Resource Board.

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

3.4 ASTM: American Society for Testing and Materials.

3.5 Background: the ambient concentration of organic compounds determined at least two (2) meters upwind from any component to be inspected and which is uninfluenced by any specific emission permit unit.

3.6 Business Day: any weekday, including Monday, Tuesday, Wednesday, Thursday, and Friday.

- 3.7 Component: includes, but is not limited to, any valve, latch, fitting, pressure relief device, hose, nozzle, dispenser, or module in VOC service.
- 3.8 Emergency: a fire, flood, earthquake, or other similar catastrophe.
- 3.9 EPA: United States Environmental Protection Agency.
- 3.10 Existing Storage Container: a gasoline storage container which was in existence on or before May 21, 1992.
- 3.11 Gasoline: any petroleum distillate, or petroleum distillate/alcohol blend or alcohol having a Reid vapor pressure of four (4) pounds per square inch absolute or greater, which is used as a motor vehicle fuel, or any fuel which is commonly or commercially known or sold as gasoline.
- 3.12 Gasoline Storage and Dispensing Operation: an aggregate of one or more stationary storage containers, any of which is subject to the provisions of Rule 4621 (Gasoline Transfer into Stationary Storage Containers, Delivery Vessels, and Bulk Plants) and this rule together with dispensers and control equipment required by the rules.
- 3.13 Gasoline Vapors: the organic compounds in the displaced vapors including any entrained liquid gasoline.
- 3.14 Highway: a way or place of whatever nature, publicly maintained and open to the use of the public for purposes of vehicular travel. Highway includes street.
- 3.15 Hold-Open Latch: the integral component of a gasoline dispensing nozzle which permits the nozzle to remain open without a sustained effort on the part of the refueler.
- 3.16 ICC: The International Code Council.
- 3.17 Leak: the dripping of VOC-containing liquid at a rate of more than three (3) drops per minute, or the detection of any gaseous or vapor emissions with a concentration or total organic compound greater than 10,000 ppmv, as methane, above background when measured in accordance with the test method in Section 6.5.4. Any liquid or gas coming from a component undergoing repair or replacement, or during sampling of process fluid from a component or equipment into a container is not considered sampling of a leak provided such activities are accomplished as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere.
- 3.18 Major Defect: any defect that meets the criteria of California Code of Regulations, Title 17, Division III, Chapter 1, Subchapter 8, Article 1, Section 94006 and is

listed on ARB's Vapor Recovery Equipment Defects (VRED) list or is specified within the Executive Order certifying the vapor recovery system, as applicable.

- 3.19 Major Modification: the addition, replacement, or removal of fifty percent or more of the buried vapor piping, or the replacement of dispensers. The replacement of a dispenser is not a major modification when the replacement is occasioned by end user damage to a dispenser.
- 3.20 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.
- 3.21 Motor Vehicle: a vehicle that is self propelled.
- 3.22 Normal Business Hours: Monday through Friday, 8:00 am to 5:00 pm.
- 3.23 Portable Hydrocarbon Detection Instrument: a hand-held hydrocarbon analyzer that meets the criteria specified in US EPA Method 21, 40 CFR Part 60. The instrument shall be calibrated with methane.
- 3.24 Phase II Vapor Recovery System: a vapor recovery system that controls vapors during the transfer of gasoline from the gasoline dispensing operation to the vehicle and storage of gasoline at the gasoline dispensing operation.
- 3.25 Retail Gasoline Outlet: an establishment at which gasoline is sold or offered for sale to the general public for use in motor vehicles.
- 3.26 Topping Off: to attempt to dispense gasoline to a motor vehicle fuel tank after a vapor recovery dispensing nozzle has shut off automatically. The filling of a vehicle tank which can be filled only after the seal between the fill pipe and the nozzle is broken, due to the nature and configuration of the fill pipe which causes premature shut-off of the dispensing nozzle, shall not be considered topping off.
- 3.27 Vehicle: a device by which any person or property may be propelled, moved, or drawn upon a highway, excepting a device moved exclusively by human power or used exclusively upon stationary rails or tracks.
- 3.28 Vehicle Fleet: a group of vehicles operated under the control of a single owner/operator.

4.0 Exemptions

- 4.1 Except for the provisions of Section 6.1.1 and 6.1.2, requirements of this rule shall not apply to the transfer of gasoline into motor vehicle fuel tanks from any existing storage container, as defined in Section 3.10, with an aggregate dispensing operation throughput of:
 - 4.1.1 less than or equal to 24,000 gallons per calendar year; and
 - 4.1.2 less than or equal to 10,000 gallons in any consecutive 30-day period.
 - 4.1.3 Any facility which exceeds the throughput limitations under Section 4.1.1 or 4.1.2 shall be subject to all provisions of this rule on and after the date the throughput limitations were exceeded and shall be in compliance according to the schedule in Section 7.1.
- 4.2 The requirements of this rule shall not apply to gasoline storage containers that are exempt pursuant to Section 4.0 of Rule 4621 (Gasoline Transfer into Stationary Storage Containers, Delivery Vessels, and Bulk Plants).
- 4.3 Except for Section 6.1.3 and 7.5, the requirements of this rule shall not apply to vehicle fleets where 100 percent of the vehicles are equipped with onboard refueling vapor recovery (ORVR) systems. To qualify for this exemption, the operator must also own the gasoline dispensing operation that services the vehicle fleet.
- 4.4 The requirements of this rule shall not apply to a mobile fueler that exclusively fuels aircraft.

5.0 Requirements

- 5.1 A person shall not transfer or permit the transfer of gasoline from any stationary storage container, or from any mobile fueler with a capacity greater than 120 gallons, into a motor vehicle fuel tank with a capacity greater than 5 gallons, unless the gasoline dispensing unit used to transfer the gasoline is equipped with and has in operation an ARB certified Phase II vapor recovery system.
 - 5.1.1 All ARB certified Phase II vapor recovery systems shall be maintained according to ARB certifications and the manufacturer specifications applicable to the system.
 - 5.1.2 All ARB certified Phase II vapor recovery systems and gasoline dispensing equipment shall be maintained without leaks as determined in accordance with the test method in Section 6.5.4.

5.2 Installation

- 5.2.1 Any gasoline dispensing system subject to this rule shall comply with the provisions of this rule at the time of installation.
- 5.2.2 Operators shall have all underground storage container installations and all underground piping configurations inspected by the APCO prior to backfilling. The operator shall notify the District by telephone or other District-approved method and obtain a confirmation number at least three business days prior to the backfilling.
- 5.2.3 Installation and maintenance contractors shall comply with the following requirements on and after June 20, 2008:
 - 5.2.3.1 Be certified by the ICC for Vapor Recovery System Installation and Repair; and
 - 5.2.3.2 Renew the ICC certification for Vapor Recovery System Installation and Repair every 24 months.
 - 5.2.3.3 Make available onsite proof of ICC certification, and
 - 5.2.3.4 Have and make available on site proof of any and all certifications required by the Executive Order and installation and operation manual in order to install or maintain specific systems.
- 5.2.4 In lieu of complying with Sections 5.2.3.1 through 5.2.3.4, installation and maintenance contractors may work under the direct and personal supervision of an individual physically present at the work site who possesses and makes available on site current certifications from the ICC, indicating the individual has passed the ICC Vapor Recovery System Installation and Repair exam and all other certifications required by the applicable Executive Order.
- 5.2.5 Notwithstanding any provisions of this rule, any gasoline dispensing operation which has installed and obtained a permit to operate an ARB certified Phase II vapor recovery system shall continue to use such system and shall maintain the system and all of its components in good-repair in order that such system can continue to comply with the certification recovery efficiency.

5.2.6 Any ARB certified Phase II vapor recovery system that has been installed shall not be removed regardless of the amount of gasoline dispensed or how the gasoline is delivered to the operation.

5.2.6.1 This requirement shall not include those operations that are exempt or become exempt per Section 4.3.

5.2.6.2 This requirement shall not preclude the installation of a new ARB certified Phase II vapor recovery system.

5.3 Inspections

5.3.1 The owner or operator of an ARB certified Phase II vapor recovery system shall conduct periodic maintenance inspections to ensure that components of the vapor recovery system are in proper operating condition.

5.3.2 The frequency of inspections shall be based on the operation's largest monthly gasoline throughput from the previous calendar year as indicated in Table 1.

Table 1 – Schedule of Maintenance Inspection

Gasoline Dispensed by the facility during largest monthly throughput of previous year	Frequency of Inspections
A. Retail Gasoline Outlets	
1. Less than 25,000 gallons	One day per week
2. 25,000 gallons or greater	Five days per week
B. Non-Retail Gasoline Outlets and other gasoline dispensing operations	
1. Less than 2,500 gallons	One day per month
2. 2,500 to less than 25,000 gallons	One day per week
3. 25,000 gallons or greater	Five days per week

5.3.3 Until June 20, 2008, except for gasoline dispensing operations identified in Table 1 Category B.1, the vapor path shall be inspected at least once per week. Until June 20, 2008, for facilities identified in Table 1 Category B.1, the vapor path shall be inspected at least once per calendar month.

5.3.4 On and after June 20, 2008, the frequency of vapor path inspections shall be based on the amount of gasoline dispensed by the operation in a calendar month as indicated in Table 1.

5.3.5 The person conducting the inspections shall at a minimum, verify the following during inspections:

5.3.5.1 That the fueling instructions required by Section 5.5 are clearly displayed with the appropriate toll-free complaint phone number and toxic warning signs.

5.3.5.2 That the following nozzle components are in place and in good condition as specified in ARB Executive Orders: faceplate/facecone, bellows, latching device spring, vapor check valve, spout (proper diameter/vapor collection holes), insertion interlock mechanism, automatic shut-off mechanism, hold open latch.

5.3.5.3 That the hoses are not torn, flattened or crimped.

5.3.5.4 That the vapor path of coaxial hoses associated with bellows equipped nozzles does not contain more than 100 ml of liquid.

5.3.5.4.1 The amount of liquid in the vapor path shall be determined by lowering the gasoline dispensing nozzle into a container, opening the vapor check valve, and allowing the hose to drain until such time that no more liquid drains from the nozzle.

5.3.5.4.2 The amount of liquid drained into the container shall be measured using a graduated cylinder or graduated beaker.

5.3.5.5 That the vapor processing unit is functioning properly, for operations that are required to have or possess such a unit.

5.4 Maintenance and Repair

5.4.1 No person shall operate any ARB certified Phase II vapor recovery system or any portion thereof that has a major defect or an equipment defect that is identified in any applicable ARB Executive Order, until:

5.4.1.1 The defect has been repaired, replaced, or adjusted as necessary to correct the defect;

5.4.1.2 The District has been notified, and the District has reinspected the system or authorized the system for use. Such authorization shall

not include the authority to operate the equipment prior to the correction of the defective components; and

- 5.4.1.3 All major defects, after repair, are duly entered into the Operations and Maintenance (O&M) manual.
- 5.4.2 Upon identification of any major defect, the owner or operator shall tag "Out-of-Order" all dispensing equipment for which vapor recovery has been impaired.
 - 5.4.2.1 Tagged equipment shall be rendered inoperable and the tag(s) shall not be removed until the defective equipment has been repaired, replaced, or adjusted, as necessary.
 - 5.4.2.2 In the case of defects identified by the District, tagged equipment shall be rendered inoperable, and the tag shall not be removed until the District has been notified of the repairs, and the District has either reinspected the system or authorized the tagged equipment for use.
- 5.4.3 Breakaway valves, hoses, and nozzles shall be ARB certified.
- 5.4.4 In the event of a separation due to a drive off, the owner or operator shall complete one of the following, unless otherwise specified in the applicable ARB Executive Order, and document the activities in accordance with Section 6.2, before placing the affected equipment back in service:
 - 5.4.4.1 Conduct a visual inspection of the affected equipment, perform qualified repairs on any damaged components, and conduct applicable reverification tests pursuant to Sections 6.5.1.1 and 6.5.1.4, or
 - 5.4.4.2 Conduct a visual inspection of the affected equipment and replace the affected nozzles, coaxial hoses, breakaway couplings, and any other damaged components with new or certified rebuilt components that are ARB certified, before placing affected equipment back in service.
- 5.5 No owner or operator of a retail gasoline outlet shall operate or allow the operation of an ARB certified Phase II vapor recovery system unless operating instructions for the system:
 - 5.5.1 Are posted, noticeable, and readable from any place from which gasoline may be dispensed from the operation,

- 5.5.2 Describe clearly how to fuel vehicles correctly using the station's dispensing nozzles,
 - 5.5.3 Include a warning that topping off may result in spillage or recirculation of gasoline and is prohibited, and
 - 5.5.4 Display prominently the District's or the ARBs toll-free telephone number, or both, and the information that such number or numbers can be used to register complaints regarding the operation of the vapor recovery system.
- 5.6 No person shall top off a motor vehicle fuel tank.
- 5.7 Each retail gasoline outlet shall utilize hold-open latches on all gasoline dispensing nozzles.
- 5.7.1 Any gasoline dispensing nozzle which is installed, repaired, or replaced shall be equipped with a hold-open latch.
 - 5.7.2 The hold-open latch shall be installed on the gasoline dispensing nozzle by the original manufacturer of the nozzle, or if retrofitted, shall be installed using components and procedures approved by the nozzle manufacturer.
- 5.8 The requirements of Section 5.7 shall not apply to operations where the use of hold-open latches is prohibited by law or the local fire control authority.
- 5.9 No owner or operator shall tamper with, or permit tampering with, the system in a manner that would impair the operation or effectiveness of the system.
- 5.10 All liquid removal devices required by ARB Executive Order shall be maintained to achieve a minimum liquid removal rate of five milliliters per gallon. This standard shall apply at dispensing rates exceeding five gallons per minute, unless a higher removal rate is specified in the applicable Executive Order.
- 5.11 Mobile Fueler Registration Requirements

On and after December 20, 2008, the owner of a mobile fueler shall register such mobile fueler pursuant to Rule 2250 (Permit-Exempt Equipment Registration), except for a mobile fueler that is not required to comply with Section 5.1 of this rule.

6.0 Administrative Requirements

6.1 Recordkeeping and Reporting for Exempt Operations:

- 6.1.1 Gasoline dispensing operations that are exempt under Section 4.1 shall maintain gasoline throughput records which will allow the gasoline throughput for any 30-day period to be continuously determined. These records shall be maintained on the premises as long as exempt status is claimed.
- 6.1.2 Any gasoline dispensing operation previously exempt under Section 4.1 whose gasoline throughput exceeds the exemption levels in Sections 4.1.1 and 4.1.2 shall notify the District within 30 days of the date of exceeding the exemption levels.
- 6.1.3 An operator claiming exemption under Section 4.3 shall keep a record of the make, model, model year, and vehicle identification number of all vehicles refueled at the gasoline dispensing operation. These records shall be maintained on the premises for at least five calendar years.

6.2 Recordkeeping and Reporting for Non-exempt Operations

- 6.2.1 Operators shall retain the test result verification that each ARB certified Phase II vapor recovery system meets or exceeds the requirements of the tests specified in Section 6.5. These verifications shall be maintained for at least five years. These test results shall be dated and shall contain the names, addresses, and telephone numbers of the companies responsible for system installation and testing.
- 6.2.2 A person who performs repairs on any ARB certified Phase I or Phase II vapor recovery system shall provide to the owner or operator a repair log, which the owner or operator shall maintain on the premises for at least five years and which shall include all of the following:
 - 6.2.2.1 Date and time of each repair;
 - 6.2.2.2 The name and applicable certification numbers of the person(s) who performed the repair, and, if applicable, the name, address and phone number of the person's employer;
 - 6.2.2.3 Description of service performed;
 - 6.2.2.4 Each component that was repaired, serviced, or removed;

- 6.2.2.5 Each component that was installed as replacement, if applicable;
- 6.2.2.6 Receipts or other documents for parts used in the repair and, if applicable, work orders which shall include the name and signature of the person responsible for performing the repairs.
- 6.2.3 Each operator who is required to perform periodic maintenance inspections under Section 5.3 shall maintain monthly gasoline throughput records on the premises for a minimum of five years, make them available on site during normal business hours to the APCO, ARB, or EPA, and submit them to the APCO, ARB, or EPA upon request.
- 6.3 Recordkeeping Requirements for the Operations & Maintenance Manual (O&M Manual)
 - 6.3.1 The owner or operator of a gasoline dispensing operation shall maintain an O&M Manual in accordance with Section 6.3.
 - 6.3.2 The O&M manual shall be kept at the dispensing operation and made available to any person who operates, inspects, maintains, repairs, or tests the equipment at the operation as well as to District personnel upon request.
 - 6.3.3 The O&M manual shall, at a minimum, include the following current information:
 - 6.3.3.1 Copies of all vapor recovery performance tests,
 - 6.3.3.2 All applicable ARB Executive Orders, Approval Letters, and District Permits,
 - 6.3.3.3 Manufacturer's specifications and instructions for installation, operation, repair, and maintenance required pursuant to ARB Certification Procedure CP-201, and any additional instruction provided by the manufacturer,
 - 6.3.3.4 System and/or component testing requirements, including test schedules and passing criteria for each of the standard tests listed in Section 6.0. The owner/operator may include any non-ARB required diagnostic and other tests as part of the testing requirements, and
 - 6.3.3.5 Additional O&M instructions, if any, that are designed to ensure compliance with the applicable rules, regulations, ARB Executive

Orders, and District permit conditions, including replacement schedules for failure or wear prone components.

- 6.3.4 Owners or operators of gasoline dispensing operations shall document the periodic maintenance inspection program in the O&M manual.

6.4 Testing Requirements

- 6.4.1 Operators shall comply with the ARB certified Phase II vapor recovery system performance tests specified in Sections 6.4.1.1 through 6.4.1.4 and shall conduct all applicable performance tests at start up and thereafter (no more than 30 days before or after the required compliance testing date) as required by ARB Executive Order and installation and operation manuals.

- 6.4.1.1 Conduct and pass a Static Leak Test of the ARB certified Phase II vapor recovery system at least once every twelve months.

- 6.4.1.2 Conduct and pass a Dynamic Back-Pressure Test of the ARB certified Phase II vapor recovery system at least once every twelve months except for those aboveground storage tanks that have integral dispensers (non-remote), unless otherwise required under ARB Executive Order.

- 6.4.1.3 For ARB certified Phase II vapor recovery systems with bellows-less nozzles, conduct and pass, as applicable, an Air-to-Liquid Volume Ratio Test or a Vapor-to-Liquid Ratio Test at least once every six months.

- 6.4.1.4 For ARB certified Phase II vapor recovery systems with a liquid removal device required by ARB Executive Orders, conduct and pass a Liquid Removal Test whenever the liquid in the vapor path exceeds 100 ml of liquid. The amount of liquid in the vapor path shall be determined in accordance with the procedure specified in Section 5.3.5.4.

- 6.4.2 The person responsible for conducting the tests specified in Section 6.4 shall use calibrated equipment meeting the calibration range and calibration intervals specified by the manufacturer, ARB Executive Order, or ARB test procedure.

- 6.4.3 Until March 20, 2008 persons responsible for conducting the tests specified in Section 6.5 shall have completed a District-approved training program or the District's orientation class for testing and any subsequent required refresher class.

- 6.4.4 Effective on and after March 21, 2008, persons responsible for conducting the tests specified in Section 6.5 shall be in full compliance with all provisions of Rule 1177 (Gasoline Dispensing Facility Tester Certification).
- 6.4.5 Each gasoline dispensing operation shall notify the District at least seven days prior to any performance testing.
- 6.4.6 Each ARB certified Phase II vapor recovery system shall be tested within 60 days of completion of installation or modification.

6.5 Test Methods

- 6.5.1 Tests shall be conducted in accordance with the latest version of the following ARB and EPA approved test methods, or their equivalents as approved by the EPA, and the APCO.
 - 6.5.1.1 Static Leak Test for Underground Tanks, ARB TP-201.3
 - 6.5.1.2 Dynamic Back-Pressure Test, ARB TP-201.4
 - 6.5.1.3 Air-to-Liquid Volume Ratio Test, ARB TP-201.5
 - 6.5.1.4 Liquid Removal Test, ARB TP-201.6C
 - 6.5.1.5 Static Leak Test for Aboveground Tanks, ARB TP-206.3 or TP-201.3B as applicable.
- 6.5.2 Those vapor recovery systems whose ARB Executive Orders specify different tests to be performed instead of, or in addition to, the referenced test methods, or which, by their design, preclude the use of the referenced test methods, shall be tested in accordance with the test procedures specified in the applicable ARB Executive Orders or their equivalents as approved by the APCO and EPA.
- 6.5.3 The Reid Vapor Pressure of gasoline shall be determined in accordance with ASTM D5191-01.
- 6.5.4 Detection of leaks shall be in accordance with EPA Test Method 21.

7.0 Compliance Schedule

- 7.1 Any person who becomes subject to the requirements of this rule through loss of exemption shall comply with the following increments of progress:
 - 7.1.1 Within 30 days of loss of exemption from this rule, a complete application for an Authority to Construct must be submitted.
 - 7.1.2 Construction and testing for compliance with this rule shall be completed within six (6) months from issuing date of Authority to Construct.
- 7.2 Gasoline dispensing operations that commence operation after June 20, 2008 shall be in full compliance with this rule upon initial operation and thereafter, unless otherwise specified in the certain provisions in this rule.
- 7.3 Gasoline dispensing operations and persons not previously subject to this rule shall comply with all provisions by December 20, 2008, unless otherwise specified in the certain provisions in this rule.
- 7.4 Except as specified in this rule, all provisions of this rule remain in effect on and after June 20, 2008.
- 7.5 Prior to operating under the exemption in Section 4.3, operators shall modify their Permits to Operate conditions, to allow such operations, pursuant to District Rule 2201 (New and Modified Stationary Sources Review Rule).