



FACT SHEET

R307-328 Gasoline Transfer and Storage

Overview

Utah Division of Air Quality Rule R307-328 establishes controls on gasoline vapors during the filling of gasoline cargo tanks and storage tanks. Based on federal guidance documents, these requirements are commonly referred to as stage I vapor recovery.

Applicability

Effective May 1, 2023, Rule R307-328 applies to all gasoline cargo tanks and gasoline dispensing sources that operate within Utah, as defined, and owners and operators of any cargo tank that loads or unloads gasoline; and/or any bulk terminal, bulk plant, stationary storage container, or service station that dispenses 10,000 gallons or more in any one calendar month. All tanks in the State, that meet these criteria regardless of location, are subject to the vapor control requirements found in section 5-3(c).

Required emission controls during loading of tank trucks, trailers, railroad tank cars, and other transport vehicles and during stationary source container loadings

- Emissions must be controlled by use of a vapor collection and control system and bottom filling. Vapor emissions to the atmosphere shall not exceed 0.640 pounds per 1,000 gallons transferred.
- Loading device shall not leak and shall utilize the dry-break loading design couplings and allow no more than an average of 15 cc drainage per disconnect for 5 consecutive disconnects.
- Have a vapor tight connection that when disconnected automatically closes to prevent release.
- A gasoline storage and transfer installation (bulk plant) That does not have a daily average throughput of more than 3,900 gallons or 15,000 or more liters of gasoline based upon a 30-day rolling average does not apply if it on-loads and off-loads gasoline by use of bottom or submerged filling.
- Hatches must be closed during loading operations, except or during emergency situations. Pressure relief valves on storage tanks and gasoline cargo tanks set to release at the highest possible pressure. Pressure in the vapor collection system shall not exceed the gasoline cargo tank pressure relief setting.
- Semi-annual testing shall be conducted and records maintained of such test for two years.

Utah Division of Air Quality

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Contact
801-536-4000

General Air Quality information, regulations, and contact information:
<https://deq.utah.gov/Divisions/daq/index.htm>

This fact sheet provides general information concerning the Gasoline Transfer and Storage rule. See:
<https://rules.utah.gov/publicat/cod/e/r307/r307-328.htm> for the entire rule.

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- Vapor equipment shall be designed and operated to prevent gauge pressure in the gasoline cargo tank from exceeding 18 inches of water and prevent vacuum from exceeding 6 inches of water. During testing and monitoring, there shall be no reading greater than or equal to 100% of the lower explosive limit measured at 1.04 inches around the perimeter of all potential leak sources as detected by a combustible gas detector. No visible liquid leaks are permitted during testing or monitoring.

Stationary source containers with a capacity of 250 gallons or greater

- Must be equipped with a submerged fill pipe that extends to no more than twelve inches from the bottom of the storage tank for fill pipes installed on or before November 9, 2006, or extends no more than six inches from the bottom of the storage tank for fill pipes installed after November 9, 2006 and at least 90% of the gasoline vapor, by weight, displaced during the filling of the stationary storage container is prevented from being released to the atmosphere.
- The 90% performance standard of the vapor control system shall be based on operating procedures and equipment specifications. The design effectiveness of such equipment and the operating procedure must be documented and submitted to and approved by the director.
- Each owner or operator of a gasoline storage tank or the owner or operator of the gasoline cargo tank shall install vapor control equipment which includes:
 - Vapor return lines and connections sufficiently free of restrictions to allow transfer of vapor to the gasoline cargo tank or to the vapor control system, and to achieve the required recovery. A means of assuring that the vapor return lines are connected to the gasoline cargo tank, or vapor control system, and storage tank during tank filling.
 - Restrictions in the storage tank vent line (pressure/vacuum relief valve) to prevent the release of gasoline vapors to the atmosphere during normal operation; and gauge pressure in the gasoline cargo tank from exceeding 18 inches of water and vacuum from exceeding 6 inches of water; and a pressure vacuum relief valve on the vent line of each storage tank that is set to open at eight oz. per square inch or greater pressure and four oz. per square inch or greater vacuum; and is tested initially and every three years thereafter using the California Air Resources Board Test Procedure 201.1E. Test records shall be submitted to the director.

Gasoline Cargo Tank

- Gasoline cargo tanks must be designed and maintained to be vapor tight during loading and unloading operations as well as during transport, except for normal pressure venting required under United States Department of Transportation Regulations.
- The design of the vapor recovery system shall be such that when the gasoline cargo tank is connected to an approved storage tank vapor recovery system or loading terminal, 90% vapor recovery efficiencies are realized. The connectors of the gasoline cargo tanks shall be compatible with the fittings on the fill pipes and vapor vents at the storage containers and gasoline loading terminals where the gasoline cargo tank will service or be serviced. Adapters may be used to achieve compatibility.
- No person shall knowingly allow the introduction of gasoline into, dispensing of gasoline from, or transportation of gasoline in a gasoline cargo tank that does not meet the leak tight testing requirements.
- A vapor-laden gasoline cargo tank may be refilled only at installations equipped to recover, process, or dispose of vapors. Gasoline cargo tanks that only service locations with storage containers specifically exempted from some requirements, provided such gasoline cargo tanks are loaded through a submerged fill pipe or equivalent equipment provided the design and effectiveness of such equipment are documented and submitted to and approved by the director.

Vapor Tightness Testing

- Gasoline cargo tanks and their vapor collection systems shall be tested annually for leakage in accordance with the test methods and vapor tightness standards in 40 CFR 63.425(e) which are incorporated by reference.
- Each owner or operator of a gasoline cargo tank shall have documentation in their possession demonstrating that the gasoline cargo tank has passed the annual test within the preceding 12 months.
- Vapor tightness documentation, as well as record of any maintenance performed, shall be retained by the owner or operator of the gasoline cargo tank for a two-year period and be available for review by the director.

- The owner or operator of a railcar gasoline cargo tank may use the testing, recordkeeping, and reporting requirements in 40 CFR 63.425(i), which is incorporated by reference as an alternative to the annual testing requirements.

Alternate Methods of Control

- Any person may apply to the director for approval of an alternate test method, an alternate method of control, an alternate compliance period, an alternate emission limit, or an alternate monitoring schedule. The application must include a demonstration that the proposed alternate produces an equal or greater air quality benefit or that the alternate test method is equivalent to that required in rule R307-328. The director shall obtain concurrence from EPA when approving an alternate test method, an alternate method of control, an alternate compliance period, an alternate emission limit, or an alternate monitoring schedule.
- Manufacturer's operational specifications, records, and testing of any control system shall use the applicable EPA Reference Methods of 40 CFR Part 60 or other EPA-approved methods, to determine the efficiency of the control device. In addition, the owner or operator must meet the applicable requirements of record keeping for any control device. A record of all tests, monitoring, and inspections required by Rule R307-328 shall be maintained by the owner or operator for a minimum of two years and shall be made available to the director or the director's representative upon request. Any malfunctioning control device shall be repaired within 15 calendar days after it is found by the owner or operator to be malfunctioning unless otherwise approved by the director.
- For purposes of determining compliance with emission limits, volatile organic compounds and nitrogen oxides will be measured by the test methods identified in federal regulations or approved by the director. Where such a method also inadvertently measures compounds with negligible photochemical reactivity, an owner or operator may exclude these negligibly reactive compounds when determining compliance with an emissions standard.

Authorized Contractors

Modifications performed on underground storage tanks regulated by Title 19, Chapter 6, Part 4, the Utah Underground Storage Tank Act shall be performed by contractors certified under Rule R311-201 to bring these underground storage tanks into compliance with Rule R307-328.