PROPANE POINTERS

COMPLIANT SOLUTIONS TO FREQUENTLY VIOLATED SECTIONS OF LP-GAS CODES OR STANDARDS

RAILROAD COMMISSION OF TEXAS

INTRODUCTION

Every month since February 2006 AFRED's *Propane Insider* newsletter has included an article under the heading "Propane Pointers."

The articles cover the most common violations of state and national codes and standards that the Railroad Commission's LP-gas inspectors encounter in the field. The "point" of the articles is to facilitate compliance by reminding marketers and their employees about the applicable requirements of NFPA 58 (2008 edition), NFPA 54 (2006 edition), Title 49 of the Code of Federal Regulations, and 16 Texas Administrative Code Chapter 9, the Railroad Commission's *LP-Gas Safety Rules*.

This online edition collects all the articles, indexes them by topic, and adds explanatory graphics that enhance their usefulness as in-house training materials or customer handouts. We hope you find them beneficial in your business, and we welcome your comments or suggestions.

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HOW TO USE THIS BOOK

The Table of Contents on the next page lists the articles by category. As some pointers may fall under more than one category, each article may be listed more than once. To navigate to the desired topic, simply click on its title in the Table of Contents and you will be taken to that page. To return to the Table of Contents, simply click on the words "Propane Pointers" at the bottom of any page.

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MARKINGS AT STATIONARY INSTALLATIONS

LP-GAS SAFETY RULES §9.140(G)

Table 1 of LP-Gas Safety Rule §9.140(g), Uniform Protection Standards, sets out the requirements for signage at stationary LP-gas installations.

The 13 types of notice required by §9.140(g) serve two main purposes. They inform customers of precautions they must take during transfer operations—for example, NO SMOKING and TURN OFF ENGINE. In the event of an emergency, the notices also alert first responders to the locations of propane emergency shutoffs and identify tank contents and characteristics—for example, PROPANE and FLAMMABLE.

Most violations of this rule occur when the required lettering is either missing or is badly faded and unreadable.

24-HOUR EMERGENCY TELEPHONE NUMBER

LP-GAS SAFETY RULES §9.140(G)(12)

LP-Gas Safety Rule §9.140(g)(12) relates to the posting of a 24-hour emergency telephone number at four specified types of licensees' business locations.

This rule requires licensees to post a 24-hour emergency telephone number, in a location that is readily visible to the public, at four types of installations that are operated exclusively by a licensee.

The rule applies to:

(1) self-service dispenser areas,
(2) storage racks for portable DOT cylinders at retail cylinder exchange facilities,
(3) installations with ASME containers of 4,001 gallons or more aggregate water gallons (AWG) capacity used exclusively by a licensee, and
(4) retail DOT cylinder filling and/or service stations operated by a licensee.

The rule requires the emergency number to be posted in letters at least two inches high on a contrasting color background.

Violations occur when an emergency telephone number is either not posted at a covered installation, or is posted but does not meet the visibility or lettering specifications.

In the event of a hazardous LP-gas incident, compliance with the 24-hour emergency phone number posting is critical for providing emergency responders and the general public with a contact person who has knowledge of the hazards related to LP-gas and can provide emergency response information as required by LP-gas safety rules §§9.140(g)(8)(A) and 9.140(g)(8)(B).

Marketers should ensure that their 24-hour emergency telephone number postings comply with all applicable requirements. Immediate corrective action must be taken if the phone number is incorrect, if the phone is not in working order, or if the posting does not comply with the lettering and visibility requirements.

NOTE: The 24-hour emergency phone number requirement does not apply to installations operated by non-licensees, such as consumers or companies utilizing forklift cylinder storage racks or facilities with ASME containers 4,001 gallons or more AWG.

MARKING OF MANUALLY ACTIVATED REMOTE SHUTOFF DEVICES

49 CODE OF FEDERAL REGULATIONS §172.328(D)

49 CFR §172.328(d) requires each on-vehicle manually activated remote shutoff device for closure of the internal self-closing stop valve to be marked with the words "Emergency Shutoff"' in letters at least 3/4 inch high. The lettering must be in a color that contrasts with its background and must be located in an area immediately adjacent to the means of closure.

A violation of this rule occurs when the required marking is absent, illegible, or out of compliance with the size, color or placement requirements.

Compliance is critical to ensure quick action by emergency response personnel in an emergency situation. If the required marking is not provided, is placed inappropriately, or is illegible because it is faded or too inconspicuous for emergency response personnel to recognize, they may not activate the internal stop valve in a cargo tank during an emergency.

Marketers should make certain their drivers routinely inspect all the required markings on their motor vehicles to ensure compliance with the applicable requirements. If the required markings are out of compliance, immediate steps must be taken to eliminate the violation. In addition, if the markings are covered with mud or not readily visible, the markings should be cleaned so they can be seen and read.

MARKING OF CARGO TANKS WITH PROPER SHIPPING NAMES

49 CODE OF FEDERAL REGULATIONS §172.328(B)

49 CFR §172.328(b)(1)(2) requires cargo tanks to be marked with the proper shipping name or appropriate common name of hazardous materials being transported.

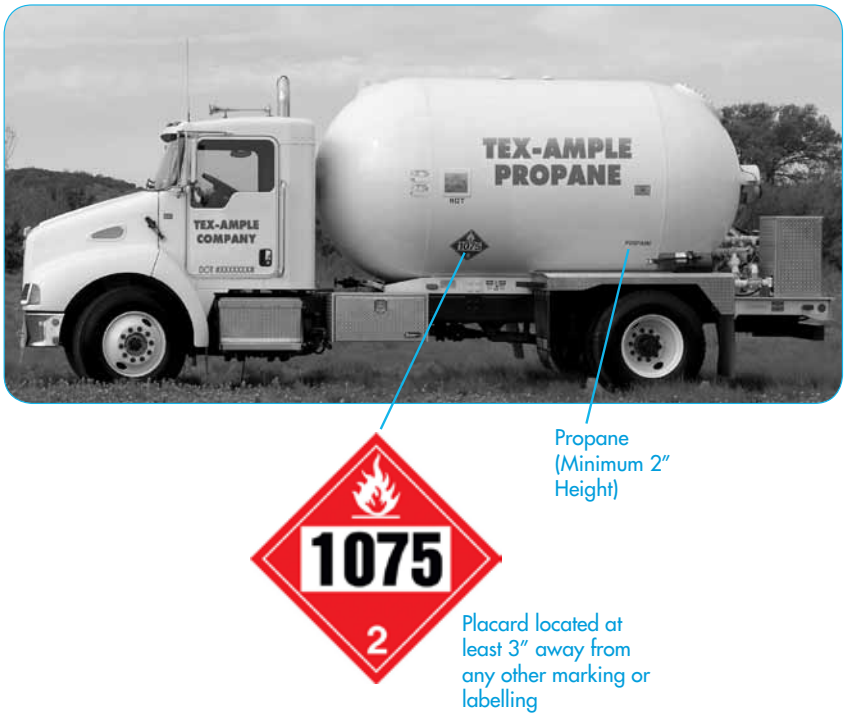
49 CFR §172.328(b) addresses required markings for cargo tanks transporting a Class 2 material, which includes LP-gas. These markings must be in letters no less than 2 inches high and located on both sides and each end of the cargo tank.

Cargo tanks may be marked with the proper shipping name specified for the gas in the table published in 49 CFR §172.101, or with an appropriate common name for the material. Typically, LP-gas licensees mark their bobtail and semi-trailer cargo tanks with the words "Propane" or "Liquefied Petroleum Gas" and use 1075 as the product identification number.

A violation occurs when the required marking is absent, illegible, or out of compliance with the size or location requirements.

Compliance with this standard is critical to ensure that first responders can readily identify the contents of the cargo container and take appropriate action in an emergency situation, such as a truck rollover or an accidental discharge of gas.

Marketers should make certain each employee assigned to drive an LP-gas bobtail or transport knows the requirement and routinely verifies that their vehicle is properly marked with the appropriate information in clearly legible lettering to comply with 49 CFR §172.328.



QT/NQT, EMERGENCY SHUTOFF AND NON-ODORIZED LOAD MARKINGS

49 CFR §§172.328(C)-(E), 178.337-17

49 CFR §172.328 is the federal regulation relating to markings on LP-gas cargo tanks. Subsections 172.328(c), (d) and (e) apply to QT/NQT markings, emergency shutoff markings, and markings of non-odorized loads, respectively.

§172.328(c) requires each MC 330 and MC 331 cargo tank to be marked QT if the tank is made of quenched and tempered steel, or marked NQT if it is not. The lettering must be at least 2 inches tall and must be located near the tank's specification plate.

§172.328(d) requires manually activated remote shutoff devices to be marked Emergency Shutoff, immediately adjacent to the device. The lettering must be at least 3/4 inch tall and in a color that contrasts with its background.

§172.328(e) requires cargo tanks containing non-odorized LPG to be marked NON-ODORIZED or NOT ODORIZED on two opposing sides, in legible letters located near the 1075 placards or near the shipping name, e.g., "Propane" or "Liquefied petroleum gas."

These markings are in addition to the manufacturer's name plate and DOT specification plate that are required on all LPG cargo tanks certified after October 1, 2004, under 49 CFR §178.337-17.

The most commonly cited violations of this regulation involve faded, incorrect, or missing markings. Compliance with the rule is important because the required markings allow inspectors and first responders to identify the type of tank construction, locate the manual emergency shutoff, and identify the contents of a cargo tank.

Marketers should routinely inspect their transports and bobtails to ensure that all the required markings are in good condition and are properly placed on each side and each end of the cargo tank.

CARGO TANK TEST AND INSPECTION MARKINGS

49 CODE OF FEDERAL REGULATIONS §180.415

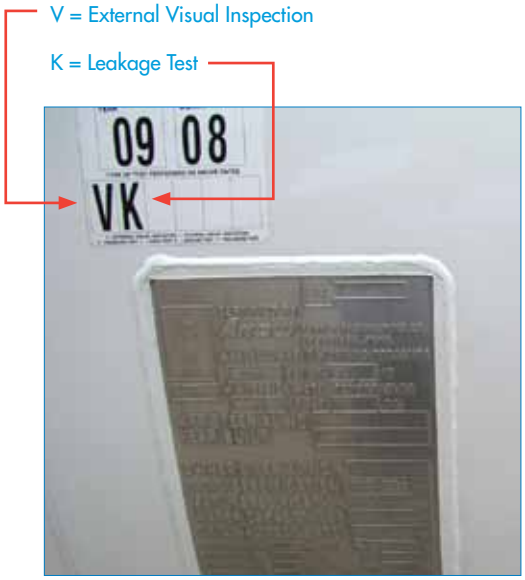
49 CFR §180.415 is the federal regulation relating to test and inspection markings on LPG cargo tanks.

Cargo tanks that successfully complete their DOT test and inspection requirements must be marked in accordance with §180.415, indicating the month and year (e.g., 06-11) and the type of test or inspection performed. Lettering must be at least 1 1/4 inches tall and must be located near the specification plate or anywhere on the front head of the cargo tank.

The type of test or inspection may be indicated as follows:

- V for external visual inspection
- I for internal visual inspection
- P for pressure test
- L for lining inspection
- T for thickness test
- K for leakage test (under §180.407(h)(1))

The most commonly cited violations of this regulation involve faded, incorrect, or missing markings. Compliance with the rule is important because the required markings allow inspectors to verify that DOT health and safety requirements have been met. Marketers should routinely inspect their transports and bobtails to ensure that all the required markings are in good condition and are properly placed on each side and each end of the cargo tank.



LABELING OF INLET AND OUTLET CONNECTIONS

NFPA 58 §5.7.8.5

NFPA 58 §5.7.8.5 requires the inlet and outlet connections on ASME containers of more than 2,000 gallons water capacity to be labeled to designate whether they communicate with the vapor or liquid space of the container.

The labels may be either at the container or on the valves. Labeling to designate communication with the vapor or liquid space is not required for pressure gauges, liquid level gauging devices or connections for pressure-relief devices.

A violation occurs when the required labels are absent, illegible or incorrect.

Compliance with this standard is critical to ensure that service and installation personnel connect piping to the appropriate container connection. Piping connected to the wrong connection could damage equipment or result in an accident.

ASME CONTAINER NAMEPLATES

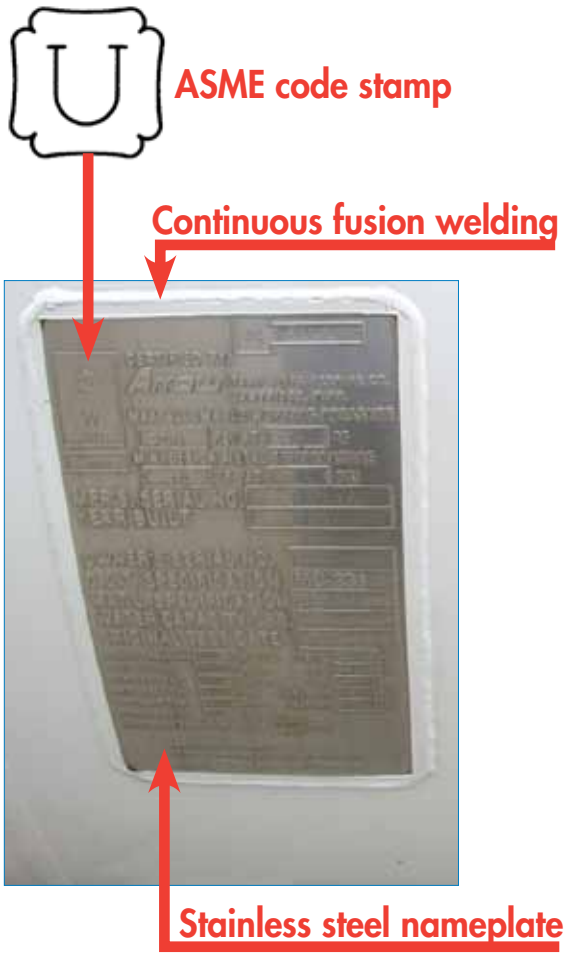
LP-GAS SAFETY RULE §9.129

LP-Gas Safety Rule §9.129 sets out the Commission's requirements for the manufacturer's nameplate and markings on ASME containers.

Marketers should pay special attention to §9.129(e), which requires nameplates on ASME containers built on or after September 1, 1984, to be made of stainless steel and permanently attached to the container by continuous fusion welding around the perimeter.

A special exception to the continuous welding requirement for certain motor/mobile fuel containers is found in §9.129(g). The exception allows the nameplate on these containers to be raised at least 1/4 inch but no more than 1/2 inch from the container surface.

LP-gas safety inspectors have found ASME containers built after September 1, 1984, with nameplates that were not stainless steel and were not attached by continuous welding around the perimeter of the nameplate. These containers were purchased from an out-of-state vendor who was selling reconditioned tanks in Texas that did not meet the requirements found in §9.129. All containers that did not meet the requirements found in §9.129 were removed from service.



POSTING OF TELEPHONE NUMBERS

LP-GAS SAFETY RULE §9.140(g)

LP-Gas Safety Rule §9.140(g) requires certain installations to have signage and lettering as set out in Table 1 of this subsection. Items 12 and 13 of Table 1 address two different requirements for posting telephone numbers. These requirements apply only to specific installations owned or operated by licensees.

24-Hour Emergency Number. Item 12 of the signage table requires a 24-hour emergency telephone number to be posted at a licensee's

- self-service dispenser,
- storage rack for sale or exchange of DOT cylinders,
- installation with a 4,001 gallons aggregate water capacity or greater, and
- cylinder filling and/or service station.

Note: Item 12 does not apply to non-licensee, ultimate consumer owned/operated installations.

This signage must be in letters at least 2 inches high on a contrasting background, readily visible to the public, stating: "24-Hour Emergency Number _____."

This Railroad Commission rule closely tracks 49 CFR §172.604, the U.S. DOT rule for hazardous materials transportation, but applies the requirements to certain stationary installations.

LP-Gas Safety Rule §9.140(g)(8) requires the 24-hour emergency telephone number to be monitored at all times and to be answered by a person who is knowledgeable about the hazards of LP-gas and who either has comprehensive LP-gas emergency response and incident information, or has immediate access to a person who possesses such knowledge and information.

Responsible Company Employee Number. Item 13 of the signage table applies to the same licensee installations as item 12. Item 13 requires posting the telephone number of the certified employee or operations supervisor who is directly responsible for the proper maintenance and operation of the outlet. The phone number must be posted in characters that are at least 3/4" high. This requirement allows Railroad Commission inspectors to contact the responsible company employee immediately if access to the installation or corrections are required.

CYLINDER MARKING AND LABELING

NFPA 58, §§5.2.8.1 AND 5.2.8.4

In addition to the markings required at the time of manufacture, LP-gas cylinders must be marked and labeled in accordance with U.S. Department of Transportation, U.S. Occupational Safety and Health Administration (OSHA) and NFPA 58 requirements. These requirements differ according to how the cylinders are transported and used.

1. A cylinder filled at a licensee's site and transported to a cylinder rack must be marked, labeled and provided with a hazard warning to comply with U.S. DOT regulations. These regulations apply because the cylinder is filled and transported "in commerce." Each such cylinder must be marked with the proper U.S. DOT shipping name ("propane" or "liquefied petroleum gas") and shipping identification number (1075 or 1978) and must be labeled with a 3.9-inch diamond with a red background containing the text "flammable gas" and the hazard class (2) or division (2.1) in white letters. Cylinders of 100 pounds propane capacity or less that are filled and transported in commerce must also have a label warning the user about the potential hazards of LP-gas. DOT does not specify the text of this warning label.

2. A cylinder is not considered to be "in commerce" if it is filled at a licensee's facility and transported by the ultimate consumer to the consumer's home or other location that is not a work site. However, such a cylinder is required by NFPA 58, §5.2.8.1(B) to be marked and labeled in accordance with U.S. DOT rules and to have a label warning about the potential hazards of LP-gas applied to the cylinder as specified in NFPA 58 §5.2.8.4(2). The marking, labeling and warning requirements for these cylinders are the same as those in #1 above.

3. In addition to these U.S. DOT and NFPA 58 requirements, a cylinder filled at a licensee's facility and transported to a work site must also comply with OSHA's labeling rules (29 CFR 1910.110(c)(2)) and hazard-communication rules (29 CFR 1910.1200(f)). While these requirements are not adopted or enforced by the Railroad Commission, companies that are subject to OSHA requirements have an obligation to comply with them.

The propane industry has developed labels that comply with all three of these requirements. One example is shown below. Others may work equally well. The important things to keep in mind are that the public must be warned of the hazards of LP-gas and that cylinders are required by law to be properly marked and labeled. All licensees are encouraged to review NFPA 58, §5.2.8, "Container Markings."

MARKING OF TRANSPORTS AND CONTAINER DELIVERY UNITS

LP-GAS SAFETY RULE §9.211

Railroad Commission LP-Gas Safety Rule §9.211 covers the marking of LP-gas transports and container delivery units.

§9.211 requires each transport and container delivery unit to be marked on each side and the rear with the name of the licensee or ultimate consumer operating the unit. The lettering must be at least 2 inches in height and in sharp color contrast to the background.

One of the most frequently cited violations of §9.211 is missing lettering on the rear of the unit. The purpose of lettering on the rear is to allow emergency responders to identify the operator in the event of an accident, even if the vehicle is lying on its side so that both side markings are out of sight.

Another frequently cited violation is for lettering that has faded and become unreadable.

Additional signage and marking requirements for LP-gas transports are found in Title 49, Code of Federal Regulations:

§172.328(b) requires cargo tanks to display the proper shipping name or appropriate common name of the material being transported.

§172.328(c)(1)(2) requires cargo tanks to be marked quenched and tempered (QT) or not quenched and tempered (NQT).

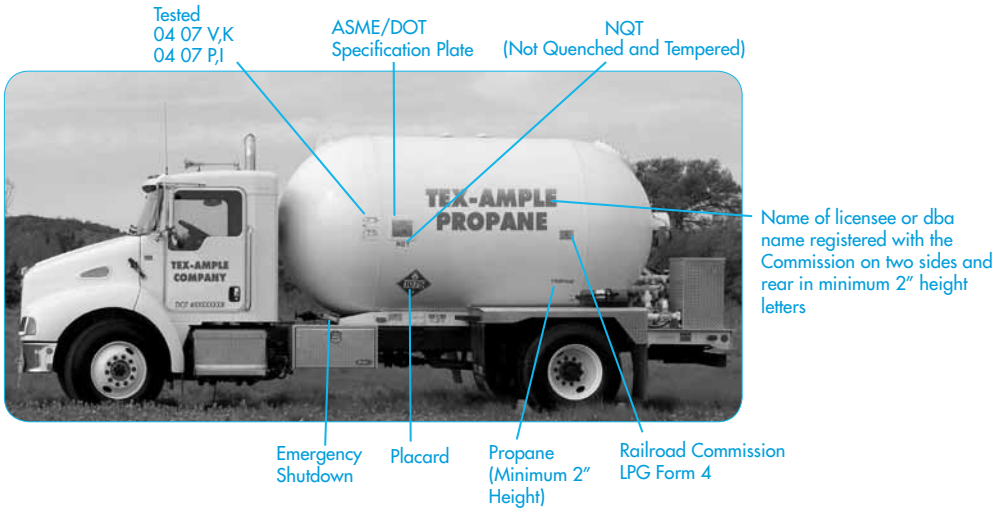
§172.504(a) requires placarding of each side and each end of the unit.

§172.328(d) requires each on-vehicle manually activated remote emergency shutoff system to be identified by marking "Emergency shutoff."

§178.337-9(c) requires inlets and outlets to be marked "liquid" or "vapor."

§180.415(b) requires test dates and types to be marked on cargo tanks:
P for pressure test,
I for internal visual inspection,
V for external visual inspection and test,
K for leakage test.

The Hazardous Materials Regulations (HMR: 49 CFR, parts 100-185) can be accessed online at http://phmsa.dot.gov/hazmat/regs.



TRUCK VALVES AND REMOTE SHUTOFFS

49 CODE OF FEDERAL REGULATIONS §180.407(D)(2)(IV)

49 CFR §180.407(d)(2)(iv) requires external visual inspection and testing of emergency devices on transports and bobtails, to make sure they are free from corrosion, distortion, erosion or external damage that keeps them from working correctly. The code requires testing of remote closure devices, self-closing stop valves and excess flow valves to make sure they will work properly to prevent or minimize accidents.

A DOT-registered inspector must perform the required annual external visual inspection, and the test date must be properly affixed to the cargo tank.

The bobtail or transport operator's daily responsibility is to inspect the cargo tank discharge system, including the delivery hose assembly and piping, before the first unloading operation each day. When a bobtail is equipped with an emergency discharge control system, the off-truck remote shut-off activation device (radio transmitter) must also be tested daily, no more than 18 hours before the first LP-gas unloading operation. The remote device must shut down the self-closing internal stop valves (belly valve and internal vapor equalizing valve) and stop the truck's engine from a distance of 150 feet. If the off-truck remote fails to actuate properly, the truck must not be used to transport LP-gas until the emergency discharge control system has been repaired, retested and works properly.

In addition, each month a specific internal self-closing stop-valve test called the "meter creep test" must be performed on the emergency discharge control system. The results must be documented and a copy placed in the vehicle's maintenance file.

Inspecting Discharge System Piping

Inspecting Hose Reels, Meter and Connecting Piping

Inspecting Delivery Hose Assembly After Each Delivery

Testing Off-Truck Remote Emergency Shutdown Device

LP-GAS VEHICLE MAINTENANCE

LP-GAS SAFETY RULES §9.204

LP-Gas Safety Rule §9.204 requires all LP-gas vehicles and associated equipment to be maintained in safe working order and in accordance with the manufacturer's instructions and all applicable Railroad Commission rules.

Railroad Commission inspectors may order any vehicle or container, valve, dispenser, accessory, piping, transfer equipment or appliance that is not in safe working order to be immediately removed from LP-gas service until the necessary repairs have been made.

The most commonly cited violations of this rule occur when shutoff valve handles are missing, shutoff valve stems are seized, hoses are frayed, valves are leaking, or there is other damage to the container appurtenances, fuel system or appliances on a vehicle.

Compliance with this rule is critical to provide a safe, properly operational vehicle that remains in uninterrupted service. Marketers should ensure that their employees are properly trained to observe and immediately report any unsafe condition, potential safety concern or possibly dangerous situation to supervisory personnel. After the unsafe condition or dangerous situation is reported, the marketer should ensure proper repairs are made, to avoid having to immediately remove a bobtail or other company vehicle from service, especially at critical times.

MISSING RAIN CAPS

NFPA 58, §§6.7.2.4 AND 6.7.2.5

One of the most commonly issued citations in Texas is for violations of NFPA 58, §§6.7.2.4 and 6.7.2.5.

"6.7.2.4. Rain caps or other means shall be provided to minimize the possibility of the entrance of water or other extraneous matter into the relief device or any discharge piping. Provision shall be made for drainage where the accumulation of water is anticipated.

6.7.2.5. The rain cap or other protector shall be designed to remain in place, except during pressure relief device operation, and shall not restrict pressure relief device flow."

Most citations are the result of missing rain caps on 125-1,000 gallon residential and commercial tanks. Replacement protective caps can be ordered from your relief valve supplier to correct the problem.

Rain caps are also required on pressure relief valves installed on cargo tanks [49 CFR §173.315(i)(8)], on motor/mobile fuel containers [NFPA 58, §11.7.5.2(F)] and on industrial trucks [NFPA 58, §11.12.2.7].

Rain cap protecting pressure relief valve on a residential tank

PROPERLY PAINTED TANKS AND COMBUSTIBLE MATERIALS NEAR CONTAINERS

LP-GAS SAFETY RULES §9.141(A)(1); NFPA 58, §6.4.5.2

Railroad Commission LP-Gas Safety Rule §9.141(a)(1) requires that ASME containers be painted white, aluminum, or another heat-reflective color, such as light green or light blue. Darker, heat-absorbing colors such as black or navy blue are not permitted.

Tanks with faded paint, no paint, or paint that has lost its heat-reflecting qualities must be repainted. The light color will help cool the tank, thereby reducing container pressure. Maintaining a nominal pressure within a container greatly reduces the risk of the pressure relief valve discharging flammable gas to the atmosphere. A properly painted tank will also provide corrosion protection.

§9.141(a)(1) does not apply to DOT cylinders or to ASME motor/mobile fuel containers. Although such containers are not required to be painted a heat-reflective color, they are required to be painted to retard corrosion.

To minimize fire risk, NFPA 58, §6.4.5.2 requires that any loose or piled combustible materials, weeds, and long, dry grass be kept at least 10 feet away from any LP-gas container. This requirement does not apply to live vegetation or to wood fences.

Compliance with §6.4.5.2 is especially critical in areas where heat or drought has increased the risk of brush fires. Bobtail drivers must inspect the required distance around all LP-gas containers, including tanks at residential, commercial and public locations, to make sure no prohibited materials are within 10 feet of the tank.

INSTALLING HORIZONTAL ASME CONTAINERS PART I: DOMESTIC CONTAINERS

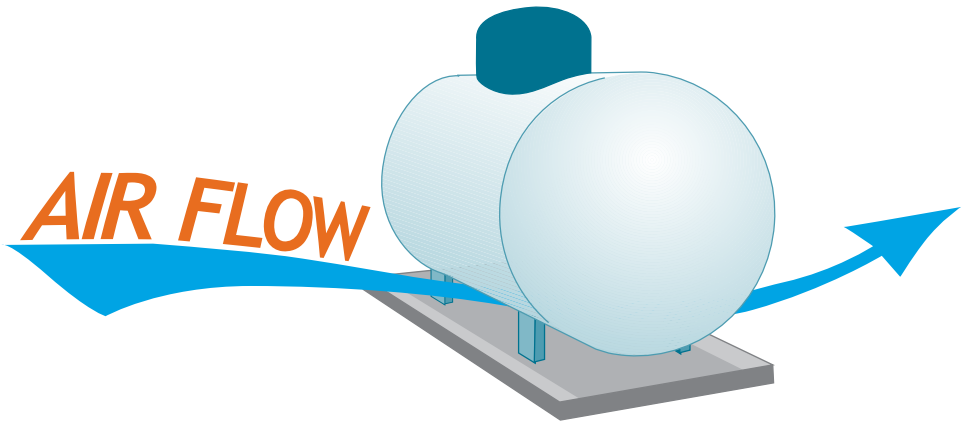
NFPA 58, §6.6.3.1

NFPA 58, §6.6.3.1 is the standard governing installations of horizontal ASME containers.

ASME containers installed for propane service at residential and commercial installations typically have water capacities of 1,000 gallons or less. These vessels must be placed on solid masonry blocks. Hollow blocks and concrete masonry units (CMU's, commonly called "cinder blocks") are prohibited.

A properly installed container does not touch the ground, so that air can circulate under it. Often after a tank is installed, animals dig under it or the ground shifts and the tank settles down onto the soil. When this occurs, the container must be raised and reinstalled so that it does not touch the ground.

Air flowing under a container helps moisture on the tank evaporate and reduces the risk of corrosion damage. A container sitting in direct contact with the soil is subject to pitting and rusting from moisture and chemicals in the soil. In addition, when properly installed, the bottom of the container is exposed and can be inspected for corrosion damage prior to servicing. A tank that is excessively damaged by corrosion presents a serious safety hazard and must be removed from LP-gas service.



INSTALLING HORIZONTAL ASME CONTAINERS PART II: INDUSTRIAL, COMMERCIAL AND BULK-STORAGE CONTAINERS

NFPA 58, §6.6.3.1

NFPA 58, §6.6.3 establishes 2,000 gallons water capacity as the biggest ASME horizontal container that may be installed on a masonry footing without supports formed to fit the contour of the container. Larger tanks require a saddle. Hollow-brick ("cinder block") or brick foundations do not comply with the standard.

Containers larger than 2,000 gallons w.c. in propane service at industrial, commercial and bulk-storage installations require concrete or masonry foundations that are formed to fit the container contour. Containers furnished with appropriate steel saddles must be placed on flat-topped concrete foundations with the bottom of the container no more than 6 inches above the foundation.

If concrete/masonry foundations or steel saddles are installed, §6.6.3.5 requires the part of the container in contact with the saddles to be coated or protected to minimize corrosion. If a container becomes corroded, it may have to be tested to ensure that it is safe for continued LP-gas service.

When installing horizontal ASME containers that have liquid interconnections, §6.6.3.2 requires the maximum permitted filling level of each container to be at the same elevation, to reduce the possibility of liquid migration between containers. Such migration could result in an overfill condition in one or more of the interconnected containers.

EQUIPMENT MAINTENANCE

LP-GAS SAFETY RULES §9.113

LP-Gas Safety Rule §9.113, Maintenance, covers a broad range of equipment violations at stationary installations. These violations include such problems as inoperable valves (seized valve stems, missing handles, or other defects), a filler hose adapter used on a leaking filler valve, excessively worn threads on a cylinder-filling adapter or ACME-threaded hose couplings, appliances not operating properly, and leaking valves or fittings.

§9.113 applies to any maintenance-related situation that an inspector considers hazardous, but is not specifically referenced in the *LP-Gas Safety Rules*, NFPA 54, or NFPA 58.

A similar rule, §9.204, covering maintenance of LP-gas equipment and containers installed on vehicles, took effect in September 2005.

As an LP-gas marketer or technician, you need to be constantly observant and take immediate steps to prevent or correct any maintenance-related hazard arising at your or your customers' stationary installations or vehicles. Your prompt attention to any potential problem will pay off in the form of avoided accidents and enforcement actions.

DISTANCE FROM A PRESSURE RELIEF VALVE TO A BUILDING OPENING

NFPA 58 (2008), §6.3.9

NFPA 58, §6.3.9 establishes the minimum required separation distance between a container's pressure-relief valve and a building opening that is below the valve's point of discharge.

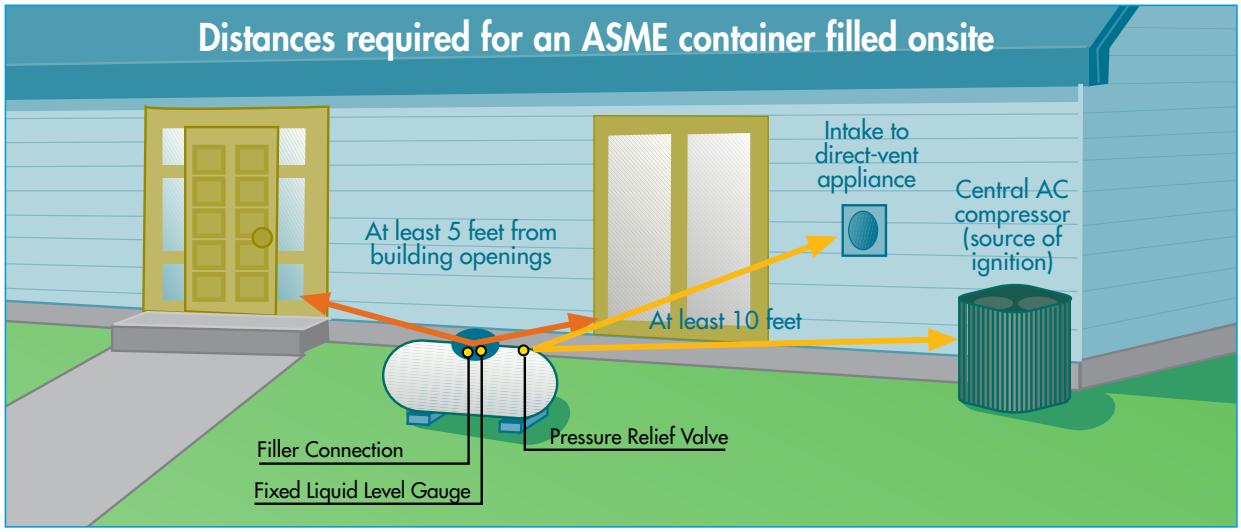
The relief valve of a DOT cylinder must be at least 3 feet, measured horizontally, from any such opening. The relief valve of an ASME container that is filled on-site must be at least 5 feet from any such opening.

A closely related standard, NFPA 58, §6.3.10, establishes the minimum required separation distance between a container's relief-valve discharge, fixed maximum liquid level gauge vent, and filling connection and any exterior source of ignition, any opening into a direct-vent appliance, or any mechanical ventilation air intake. This distance is 10 feet for ASME or DOT containers filled on-site, and 5 feet for DOT cylinders that are exchanged.

Violations occur when the specified LP-gas container appurtenances are not located the minimum required distance from any exterior source of ignition or from any building opening or air intake.

Compliance with this standard is critical to reduce the risk of ignition when a container is filled or a pressure relief valve discharges. Before filling a container, delivery truck drivers should observe the LP-gas container and surrounding area for building openings and sources of ignition that are closer than the required separation distance. The driver should not place LP-gas into any ASME container or DOT cylinder that is closer than the required separation distance to a building opening, air intake or source of ignition.

Through training and safety meetings, marketers should ensure that their delivery truck drivers and service and installation technicians are aware of these minimum distance requirements, can identify exterior sources of ignition, building openings and air intakes, and can effectively communicate to the customer the importance of complying with LP-gas safety regulations.



SEDIMENT TRAPS

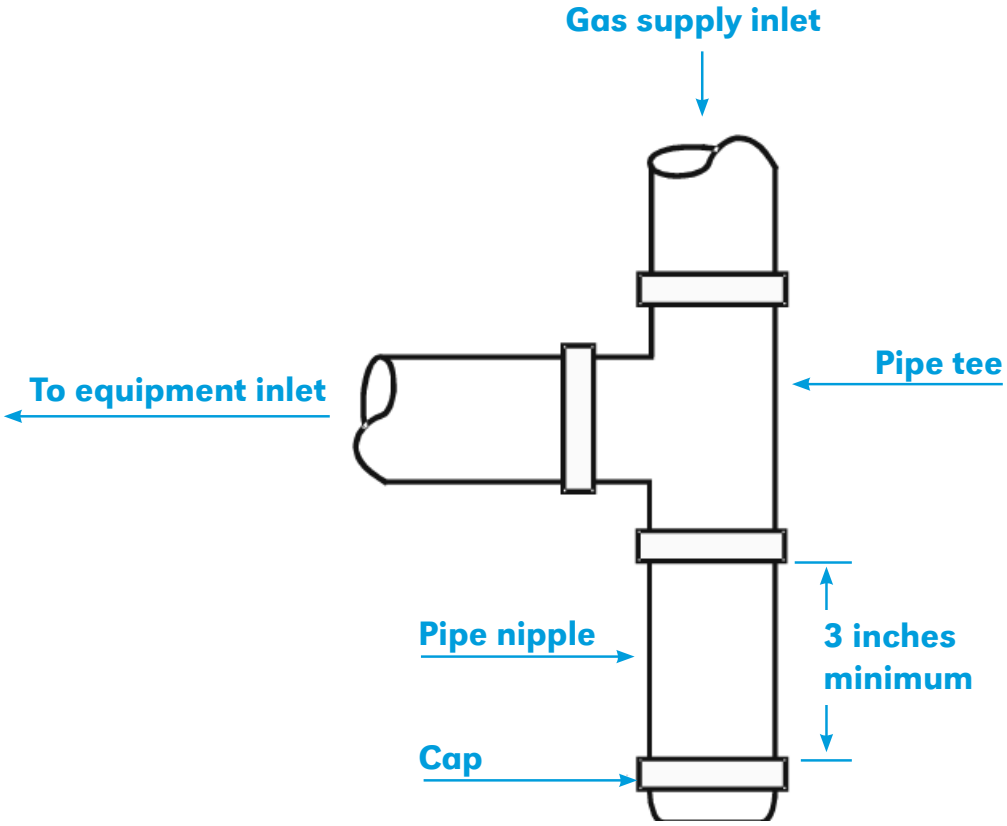
NFPA 54, §9.6.7

NFPA 54, §9.6.7 requires a sediment trap to be installed as close as practicable to the inlet of certain LP-gas appliances at the time the appliance is installed, unless a sediment trap is already present as part of the appliance.

Sediment traps help ensure safe operation and reduce unnecessary service calls, by keeping solid particles from entering and possibly clogging the valves or orifices of water heaters, furnaces, and other propane appliances.

§9.6.7 exempts the following appliances from the sediment-trap requirement:

- gas lights and other illuminating appliances,
- ranges,
- clothes dryers,
- decorative appliances for installation in vented fireplaces,
- decorative vented appliances, and
- outdoor grills.



GAS VENT TERMINATIONS

NFPA 54, §12.7.2(2)

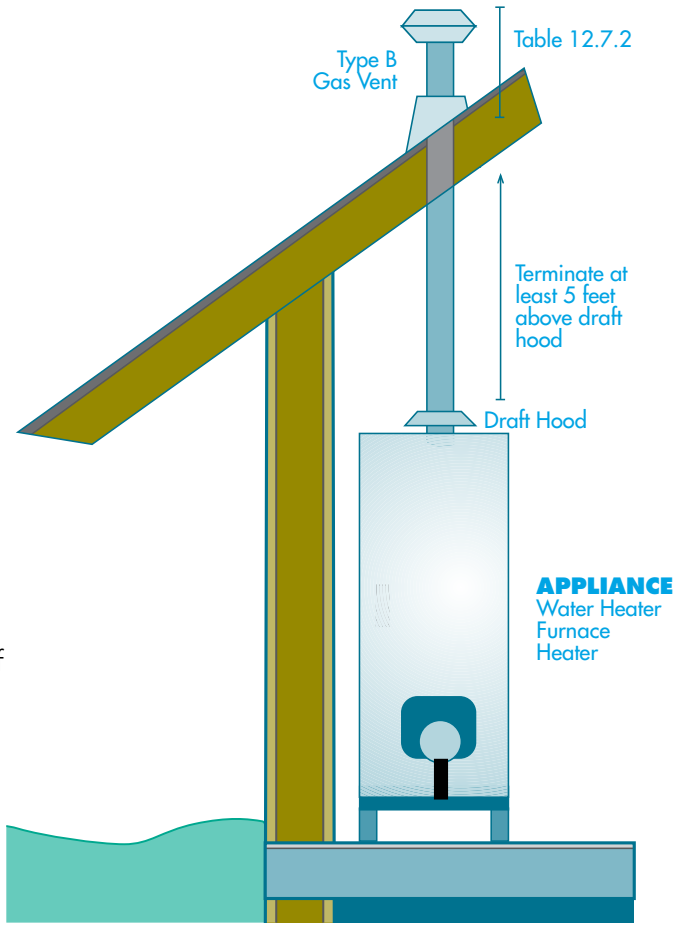
NFPA 54, §12.7.2(2), covers the terminations of Type B and Type L gas vents.

NFPA 54 §12.7.2(2) requires a Type B or Type L gas vent to terminate at least 5 feet vertically above the highest connected appliance draft hood or flue collar. Type B and Type L are Underwriters Laboratories (UL) vent designations. Type B vent is used on appliances such as furnaces, heaters, and water heaters that typically have draft hoods or flue collars and outlet temperatures in the range of 400°F above room temperature. Type L vent is used on appliances that have negative or neutral pressure venting systems and outlet temperatures up to 570°F.

Violations of §12.7.2(2) occur when the vents terminate less than 5 feet, measured vertically, above the highest connected appliance draft hood or flue collar.

Compliance with this standard is critical to ensure that the vent is of sufficient height to remove flue gases safely to the outside atmosphere. Any vent in violation of this requirement has the potential to back draft, which could cause a dangerous situation by permitting toxic products of combustion to enter a building.

Marketers should make certain that their service and installation technicians know about the 5-foot requirement and are properly trained to install vents correctly and to identify and correct noncompliant vent systems.



APLLIANCE SHUTOFF VALVES AND CONNECTIONS

NFPA 54, §9.6.4

NFPA 54, §9.6.4 requires each appliance connected to an LP-gas piping system to be equipped with either an accessible, approved manual shutoff valve with a nondisplaceable valve member or a listed gas convenience outlet. Shutoff valves that are 1 inch National Pipe Thread (NPT) and smaller must be listed as required by NFPA 54, §5.12. Each shutoff valve must serve a single appliance only and must be installed in accordance with NFPA 54, §9.6.4.1.

Where a connector is used, the valve must be installed upstream of the connector. A union or flanged connection must be provided downstream from this valve to permit removal of controls.

§9.6.4.1 requires the shutoff valve to be installed within 6 feet of the appliance it serves, except as provided in §9.6.4.2 and §9.6.4.3 for shutoff valves that serve vented fireplaces, ventless firebox enclosures, or that are installed at a manifold.

Shutoff valves serving decorative gas appliances are permitted to be installed in fireplaces if they are listed for such use.

A violation of §9.6.4 occurs when a required shutoff valve is either not accessible or not approved. Failing to provide or to properly install a manual shutoff valve or listed convenience outlet is also a violation of §9.6.4.

Compliance with this standard is critical to ensure that a manual shutoff valve or gas convenience outlet does not leak and is available to isolate an appliance for servicing, removal or replacement without shutting off the gas supply to other appliances.

Shutoff valves with displaceable valve members are prohibited. Leakage can occur in these shutoff valves if the spring at the bottom of the valve is compressed, allowing the valve member to be displaced and gas to flow through the valve or leak from the valve stem. Leakage can occur even when the shutoff valve is equipped with a cap or plug.

Marketers should make sure their bobtail drivers and service and installation personnel are properly trained to identify both compliant and noncompliant installations. Employees should also be trained to inform customers of unsafe installations and offer corrective action.

Figure 1 Approved shutoff valve with a nondisplaceable valve member.

Figure 2 Unapproved shutoff valve. The spring and nut are located outside the valve body.

Q&A ON MANUAL SHUTOFF VALVES

NFPA 54, §9.6.4

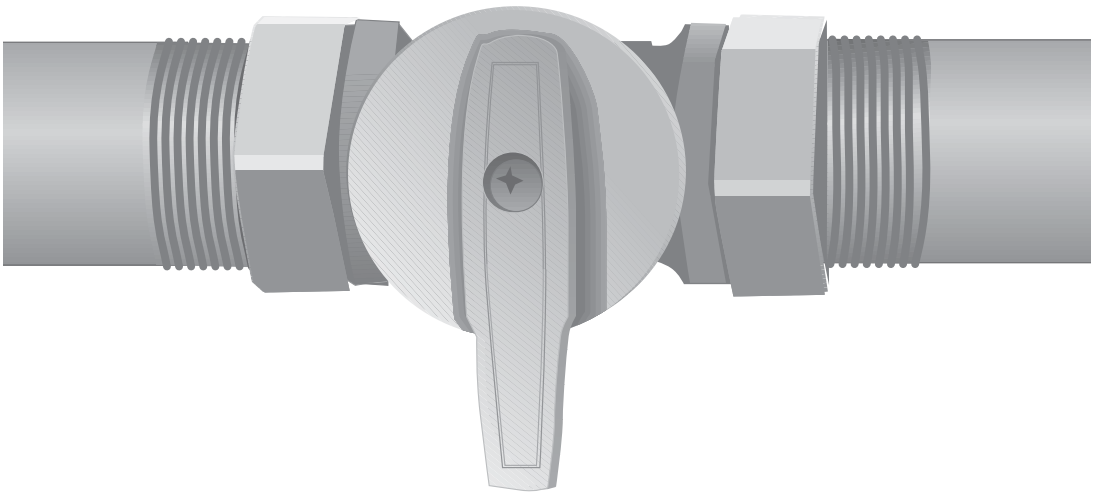
A recent article about manual shutoff valves with non-displaceable valve members raised two questions from alert marketers. LPG Operations Director Jim Osterhaus responds:

Q. Are manual shutoff valves installed on appliances required to have non-displaceable valve members?

A. No. NFPA 54, §9.6.4 applies to a manual shutoff valve installed on fixed piping upstream and within 6 feet of an appliance. The standard does not apply to a valve that is a component of a listed or approved manufactured appliance.

Q. Do all manual shutoff valves with displaceable valve members have to be replaced, regardless of when they were installed?

A. No. This requirement applies only to new installations completed on or after June 1, 1997, the date the Commission adopted the 1996 edition of NFPA 54, *National Fuel Gas Code*. Valves with displaceable valve members on installations completed before June 1, 1997, do not have to replaced. However, if these valves are not in proper working order, they must be replaced with a valve having a nondisplaceable valve member.



FIXED ELECTRICAL EQUIPMENT AND WIRING

NFPA 58, §6.22.2.2

NFPA 58, §6.22.2.2 is the standard on fixed electrical equipment and wiring.

Fixed electrical equipment and wiring within the classified areas specified in Table 6.22.2.2 must be installed in accordance with NFPA 70, National Electrical Code (NEC). Commonly encountered violations include exposed wiring, loose connections, and use of unapproved electrical equipment.

Other violations are:

- No seal fittings installed in the electric conduit within 18" of electrical switches.
- Seal fittings without sealant or filled with unapproved electrical conduit sealant.
- Electrical junction boxes or cover plates missing screws.
- Liquid-tight flex connector used in NEC, Class 1, Division 1 locations.
- Broken or corrosion damaged conduit.
- Conduit joined with set screws instead of threaded conduit.
- Missing seal fittings where electric conduit enters/exits Division 1 and 2 locations.
- Copper tubing used as electric conduit.

An improper electrical installation is hazardous and provides a possible ignition source in the event of an LP-gas leak. To ensure a safe and proper electrical installation, all electrical work should be performed by a qualified electrician.

Exception: The requirements in Table 6.22.2.2 do not apply to fixed electrical equipment at residential installations of LP-gas systems or to LP-gas systems (other than engine fuel systems) on vehicles.

INSTALLATION OF ELECTRICAL EQUIPMENT IN CLASSIFIED AREAS

NFPA 58 (2008), §6.22.2.2

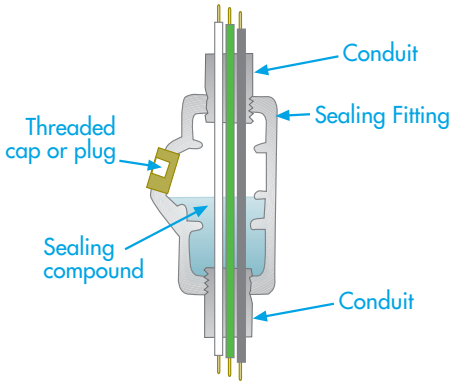
NFPA 58, §6.22.2.2 relates to the installation of electrical equipment in classified areas.

NFPA 58, §6.22.2.2 requires fixed electrical equipment and wiring installed in any of the 12 locations specified in Table 6.22.2.2 to be installed in accordance with NFPA 70, National Electrical Code. Table 6.22.2.2 defines the extent of each classified area, states the required setback distances if applicable, and identifies the category of NFPA 70 approval required for the electrical equipment being installed.

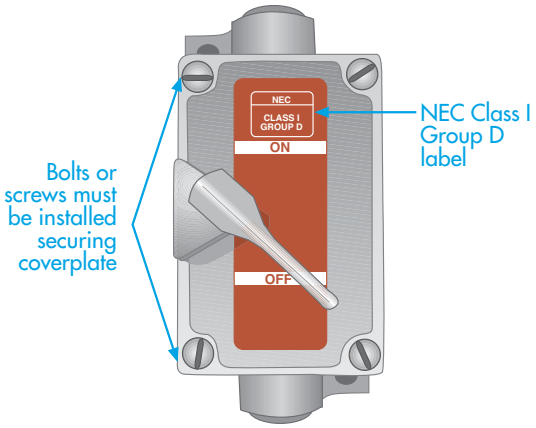
The most commonly cited violations of this standard occur when a sealant compound is not installed within the seal-off fixture; when bolts on explosion-proof fixtures are loose or missing; and when wiring, lights, switches, or other electrical components installed in a classified area do not comply with Class I, Group D, Division 1 or 2.

Compliance with this standard is critical to prevent electrical equipment from igniting propane, which could cause injury, death or property damage.

Marketers should ensure that their employees who install or repair electrical equipment in classified areas are knowledgeable about the requirements of both NFPA 58 and NFPA 70 and are properly trained and equipped to comply with all applicable requirements.



Sealing fitting cross section



Explosion-proof switch

Lighting

CYLINDER REQUALIFICATION

NFPA 58, §§5.2.2.1 AND 5.2.2.2

NFPA 58, §5.2.2.1 requires cylinders to be continued in service and transported in accordance with DOT regulations. §5.2.2.2 prohibits filling of out-of-date cylinders.

The most frequently cited violations of these standards occur when cylinders are found in LP-gas service past their requalification date. Steel and aluminum cylinders must be requalified for continued service no later than 12 years from their date of manufacture. In addition, NFPA 58, §11.12.4.4, requires all cylinders used in industrial truck service (including forklift cylinders) to have their pressure-relief valves replaced with new or unused valves within 12 years of the cylinder's date of manufacture and every 10 years thereafter.

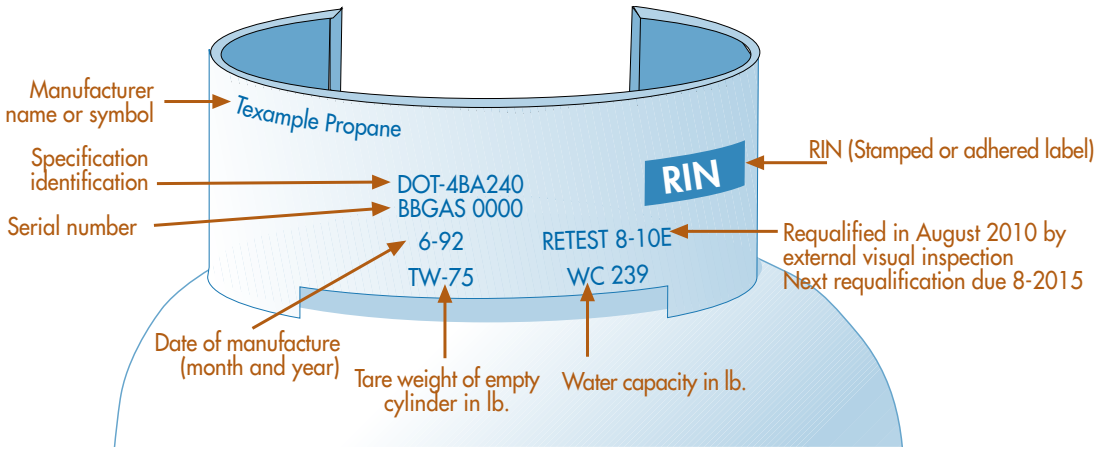
Most cylinders are requalifed by external visual inspection. This method requalifies the cylinder for an additional five years. DOT regulations (49 CFR §180.209(g)) require visual inspections to be done in accordance with Compressed Gas Association Pamphlet C-6 or C-6.3 and list the required inspection activity to be performed.

In addition, since June 1, 2004, DOT regulations require visual inspections to be performed only by persons holding a current DOT requalification identification number (RIN), and the results of the inspections must be recorded and maintained in accordance with 49 CFR §180.215. Cylinders requalified by external visual inspection must be marked as required in 49 CFR §180.213 or as described in DOT's official letter of authorization and issuance of a RIN.

Information on obtaining a RIN is available online at www.npga.org/i4a/pages/index.cfm?pageid=732.

In addition, before any cylinder is filled, Railroad Commission LP-Gas Safety Rule §9.137 requires the cylinder to be examined for dents, bulges, gouging and evidence of corrosion that substantially reduces the cylinder's integrity.

All employees who fill cylinders should be properly trained to comply with these safety codes and standards. AFRED's course No. 2.1, Dispenser Operations, provides thorough coverage of cylinder-related topics.



Important markings on attached collar

REPLACEMENT OF RELIEF VALVES ON FORKLIFT CYLINDERS

NFPA 58, §8.3.7

NFPA 58, §11.12.4.4 sets the schedule for replacing the relief valves on forklift cylinders.

NFPA 58, §11.12.4.4 requires forklift cylinders and all other cylinders used in industrial truck service to have their pressure relief valve replaced by a new or unused valve within 12 years of the date of manufacture of the cylinder and every 10 years after that.

Employees who fill industrial truck cylinders– and customers who fill their own cylinders– need to be reminded of this requirement. The relief valve's date of manufacture or replacement date is stamped on the valve body and should be checked each time a cylinder is examined prior to being filled.

Openings and Valves on a Forklift Cylinder

1 – Filler valve with dust cap
2 - Float gauge (not an approved gauging device)
3 – Liquid service valve with male quick-connect connector
4 – Fixed maximum liquid level gauge
5 – Pressure relief valve with weather cap

CYLINDERS INSTALLED IN ENGINE-FUEL SYSTEMS

NFPA 58, §§11.3.1 AND 11.3.3

NFPA 58, §§11.3.1 and 11.3.3 set out the standards for containers installed on engine-fuel systems, including industrial truck cylinders.

NFPA 58, §11.3.1.1 requires engine-fuel containers to be designed, fabricated, tested and marked in accordance with all applicable DOT regulations, ASME codes or API-ASME codes. §11.3.1.7 requires cylinders to be continued in service and transported in accordance with U.S. DOT regulations. §11.3.3.1 requires containers to be removed from service if they show excessive denting, bulging, gouging or corrosion.

The pressure relief valve on an industrial truck cylinder must also have a loose-fitting cover or rain cap to prevent accumulations of moisture or contaminants. Cylinders installed horizontally on a forklift must utilize the orientation pin on the mounting bracket or another means to ensure that the pressure relief valve communicates directly with the cylinder's vapor space. If the orientation pin is missing or broken, or if a mounting bracket is defective, the forklift must not be used until these conditions are remedied.

§11.3.1.4(A) requires cylinders to be requalified by a manufacturer of that type of cylinder or by a repair facility approved by DOT.

The most commonly cited violations of §11.3.1.7 occur when a forklift cylinder is found in service with an expired qualification date. NFPA 58, §11.3.1.5 prohibits the refilling of a cylinder with an expired requalification date until it is requalified by the methods prescribed in DOT regulations. A new cylinder must be requalified within 12 years of its date of manufacture. A visual cylinder requalification certifies a cylinder for continued LP-gas service for 5 years. After the first requalification, subsequent visual requalification of a DOT cylinder is required at five-year intervals.

Marketers who have customers that fill cylinders on their premises should make them aware of the requalification requirement.

AFRED has a free DVD and safety meeting outline on DOT cylinders available for propane marketers to train their staff. Contact Pat Wilson at 512-475-2911 or click on this link to view the 5 1/2-minute video: http://www.youtube.com/watch?v=j2jM33cs6lo.

PROTECTION OF CYLINDER STORAGE RACKS

LP-GAS SAFETY RULES §9.140(h)(2)(B)

LP-Gas Safety Rule §9.140(h)(2)(B) sets out the requirements for protecting cylinder storage racks from vehicular damage.

Effective February 1, 2008, a cylinder storage rack in Texas must be protected in one of three ways:

- With guardrails that comply with 16 TAC §9.140(d).
- With guard posts that comply with 16 TAC §9.140(h)(2)(A). The posts must be 30 inches above ground or taller, made of three-inch or larger Schedule 40 steel pipe, capped on top to prevent water damage, spaced no more than 4 feet apart, set at least 18 inches away from the storage rack, and anchored in concrete at least 30 inches below ground.
- With guard posts that comply with 16 TAC §9.140(h)(2)(B). The posts must be made of four-inch or larger Schedule 40 steel pipe, capped on top, and welded to a steel plate that is at least 8" x 8" and 1/2 inch thick. Both the posts and plate must be permanently installed and securely anchored to a concrete driveway or parking area.

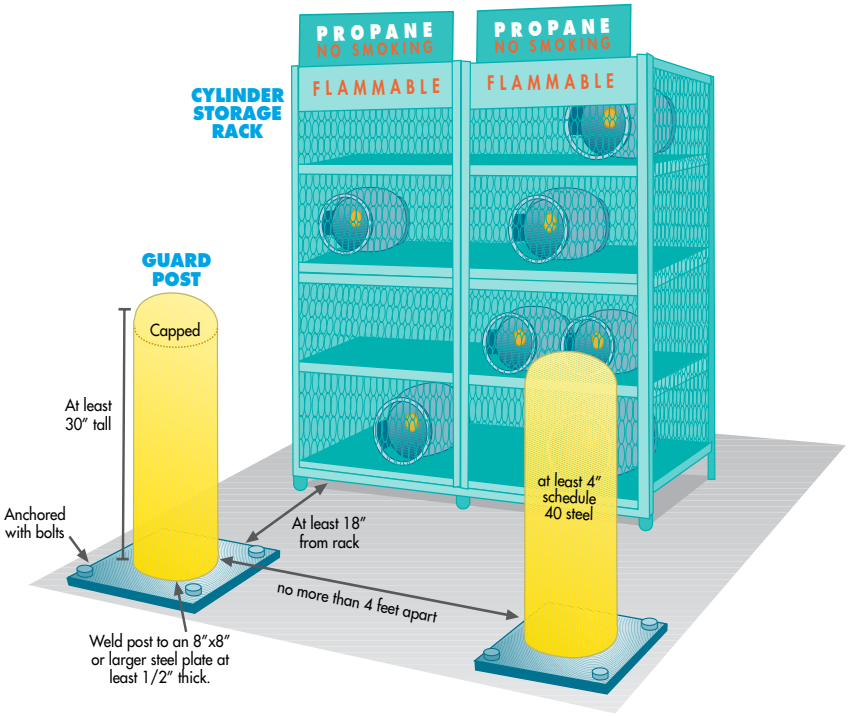
A guardrail or guard posts are not required to be installed if the cylinder storage rack is located at least 48 inches behind a 5-inch concrete curb or concrete wheel stop [§9.140(h)(3)(A)]; or

If the requirements of subparagraph (A) cannot be met, the cylinder storage rack must be installed at least 48 inches behind a 4-inch concrete curb or concrete wheel stop, and another 4-inch concrete wheel stop must be installed at least 12 inches from the curb or first wheel stop [§9.140(h)(4)].

All parking wheel stops and cylinder storage racks in paragraph (3) of this subsection must be secured against displacement.

The most commonly cited violations of §9.140(h)(2)(B) involve racks that have no protection against vehicular damage, whose existing guard posts are damaged, or whose steel plates are not securely anchored against displacement.

Compliance with §9.140(h)(2)(B) is critical for protecting cylinder storage racks against vehicular damage and reducing the risk of a hazardous LP-gas incident. Marketers should make certain their cylinder delivery personnel are familiar with the applicable cylinder rack and protection requirements and are thoroughly trained to inspect and verify that each cylinder rack, guardrail, concrete curb or concrete wheel stop is properly installed prior to delivery of cylinders to a storage rack.



MANUALS FOR CATEGORY P LICENSEES

LP-GAS SAFETY RULES §§9.17(D)(1) AND 9.17(D)(2)

Railroad Commission LP-Gas Safety Rules §§9.17(d)(1) and §9.17(d)(2) require marketers who service cylinder-exchange facilities to provide their Category P customers with a manual for display at each of the customer's outlets or locations. The manual must include information on 14 subjects, including the properties of LP-gas; the operation, transportation, storage and handling of portable cylinders; and procedures for handling and reporting emergencies. The manual must also include a description of the training provided to each employee of the Category P licensee who may engage in activities covered by the Category P license.

The most commonly cited violations of this rule occur when the required manual is not available or not on display, when the employees who handle propane cylinders are not aware of the manual's content or its location within the store, or when the manual does not contain all the required material or information.

Compliance with these rules is critical to prevent a propane cylinder accident or incident that could result in property damage or an injury or death of an employee or customer.

To ensure compliance, marketers covered by the rule should update their manuals as needed and train their employees on the requirements relating to Category P licensees and installations. A document signed by the responsible person at each Category P location acknowledging receipt and understanding of the manual and its related requirements would document the marketer's actions. Cylinder delivery drivers should periodically observe and review the manual during routine stops to deliver and retrieve cylinders.

Some Category E or J managers are listed as the company representative for one or more Category P licensees. §9.17(f) authorizes these managers to assign and remove any employee who does not comply with the LP-Gas Safety Rules or who performs any unsafe LP-gas activities. In addition, the Category E or J manager listed as the company representative for one or more Category P licensees should advise the individuals operating a Category P licensed facility that a Category P licensee is directly responsible for complying with the requirements of §9.17(e).

Failure to provide employee training, maintain and display a safety manual and comply with the operational requirements in §9.17 of the LP-Gas Safety Rules may result in the filing of an administrative penalty against the Category P licensee, as well as against the Category E or J marketer providing cylinders to the Category P licensee.

EMERGENCY SHUTOFF SWITCHES

NFPA 58, §§6.24.3.14 AND 6.24.3.15

NFPA 58, §6.24.3.14 requires LP-gas cylinder filling and motor fuel dispensing facilities to be provided with an emergency shutoff switch or circuit breaker that is marked and installed in an accessible location at least 20 feet, but not more than 100 feet, from any LPG dispenser.

NFPA 58, §6.24.3.15 requires the sign marking the location of the shutoff switch to be visible at the point of liquid transfer.

Marketers should ensure that these distance and signage requirements are observed. A shutoff switch or breaker that is located too close to the dispensing device could be inaccessible in the event of a fire or emergency, and one that is located too far away could delay an emergency response. The required signage should clearly identify the emergency shutoff and indicate how it operates. Table 1 of §9.140(g)(6) of the Railroad Commission's *LP-Gas Safety Rules* requires the lettering on the sign to be at least 2 inches in height, displayed on a background of contrasting color.

NFPA 58, §§6.24.3.14 and 6.24.3.15 are not addressed solely to your employees' safety. If your employee is incapacitated or injured in an emergency and cannot perform the function, a customer or someone else may have to activate the equipment.

SHUTOFF VALVES ON VEHICLE FUEL DISPENSER HOSES

LP-GAS SAFETY RULES §9.403(A)/NFPA 58, §6.24.3.13

LP-Gas Safety Rule §9.403(a)/NFPA 58 §6.24.3.13 requires a quick-acting shutoff valve or a quarter-turn ball valve with a locking handle to be installed at the discharge end of the transfer hose of a vehicle fuel dispenser.

A quick-acting shutoff valve means a listed valve with a toggle handle identified by the manufacturer as a quick-acting shutoff valve, or a listed quarter-turn ball valve with a handle that locks in the closed position. Quick-acting shutoff valves must quickly stop the flow of liquid through the valve when a container reaches its maximum capacity and must be designed to prevent the handle on the valve from being accidentally opened, resulting in an uncontrolled discharge of gas.

A violation occurs when a noncompliant valve, such as a globe valve or a quarter-turn valve that lacks a locking handle, is installed on the discharge end of a fuel dispenser or dispensing station's transfer hose.

Compliance with this standard is critical to prevent overfilling of containers, quickly stopping the flow of fuel in an emergency, and reducing the risk of an uncontrolled discharge of LP-gas from a valve that is accidentally opened when a transfer hose is moved or dropped.

Licensees should ensure that their service and installation technicians and motor/mobile fuel dispensers are aware of this important requirement. Employee training should include the types of valves that are acceptable, proper installation procedures and valve maintenance.

CAPPING AND PLUGGING OF OUTLETS

NFPA 54, §7.7.2

NFPA 54, §7.7.2 requires outlets to be plugged or capped when not in use.

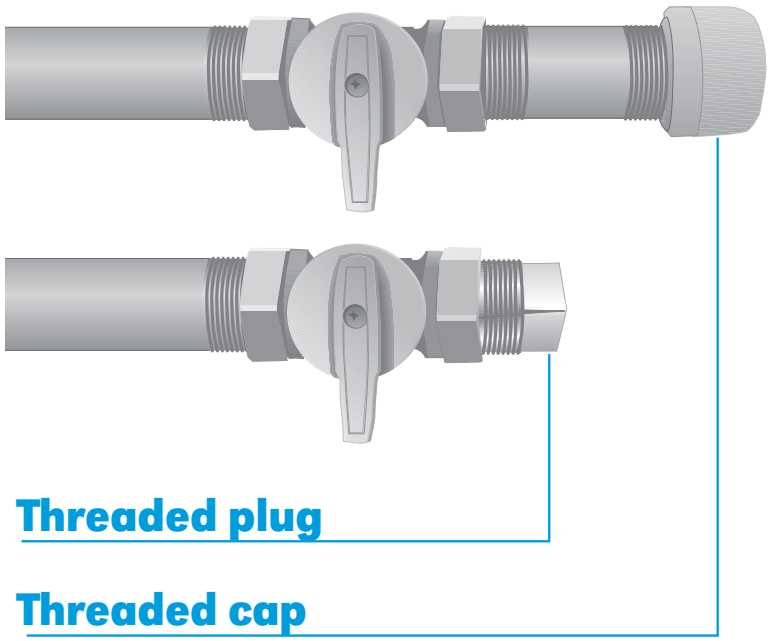
NFPA 54, §7.7.2 requires every outlet, including a valve or cock outlet, to be closed gas-tight with a threaded plug or cap immediately after installation until an appliance is connected to the outlet, and again when the appliance is disconnected and the outlet is not immediately used again.

This standard prohibits tin caps, wooden plugs, corks and other improvised methods. Exceptions are provided for laboratory equipment installed in accordance with NFPA 54, §9.6.2(1) and for the use of a listed quick-disconnect device with integral shutoff or listed gas convenience outlet.

The standard also requires that shutoff valves installed in fireplaces be removed and the piping capped gas-tight where the fireplace is used for solid fuel burning.

The most common violations of §7.7.2 are:

- **Equipment disconnected or removed, outlet or valve not capped or plugged.**
- **New piping installed, outlet or valve not capped or plugged.**
- **Outlet or valve installed behind equipment and not readily accessible. Outlets or valves must be capped or plugged even if they are inaccessible.**



CORROSION PROTECTION

NFPA 54, §7.1.3

NFPA 54, §7.1.3 requires gas piping that is subject to corrosion to be properly protected.

NFPA 54, §7.1.3 states: "Gas piping in contact with earth or other material that could corrode the piping shall be protected against corrosion in an approved manner. When dissimilar metals are joined underground, an insulating coupling or fitting shall be used. Piping shall not be laid in contact with cinders. Uncoated threaded or socket-welded joints shall not be used in piping in contact with soil or where internal or external crevice corrosion is known to occur."

Anode Bag

The proper protection of piping that contacts the earth or other materials that can cause corrosion is extremely important to prevent leaks and accidents. The slightest void or "holiday" in corrosion protection as the result of improper application can accelerate corrosion.

Service and installation personnel must take the time and have the knowledge and equipment to properly protect piping against corrosion. In addition, employees who inspect piping installations need to be properly trained to detect and address potential corrosion problems.

An insulating coupling or fitting is required whenever dissimilar metals are connected underground, such as when copper tubing is connected to steel pipe. Buried copper tubing and copper pipe typically do not require corrosion protection, unless they are installed in soil known to be corrosive to copper.

However, steel pipe installed underground or in contact with water must be provided with means for corrosion protection. The lack of corrosion protection on steel piping in direct contact with soil or water is the most commonly cited violation of §7.1.3.

FIRE PROTECTION OF STORED CYLINDERS

NFPA 58, §§8.5.1 AND 8.5.2

NFPA 58, §§8.5.1 and 8.5.2 establish standards for the fire protection of certain cylinder storage locations.

NFPA 58, §§8.5.1 and 8.5.2 require at least one approved portable B:C rated fire extinguisher, with at least 18 lb. dry chemical capacity, to be provided for any location in which more than 720 total pounds of propane is stored. The fire extinguisher must be placed no more than 50 feet from the storage location.

The most commonly cited violations of this standard occur when a fire extinguisher is present but does not have the proper B:C rating, is not fully charged, or is more than 50 feet away from the area where the propane is stored.

Compliance with this standard is critical to provide a safe workplace for both employees and the general public and to possibly prevent a small fire from developing into a large fire.

Marketers should ensure that employees are properly trained in determining if a fire extinguisher has the proper B:C rating and is fully charged. Marketers should double-check to make sure the fire extinguisher is within 50 feet of the storage area and ensure that their employees know where the fire extinguisher is located and how to use it properly.

AFRED's in-house training outline on portable fire extinguishers is available free online. Go to www.propane.tx.gov and click on "Marketer Safety Meeting Outlines" under "Services for Marketers."

CERTIFICATION OF INDIVIDUALS

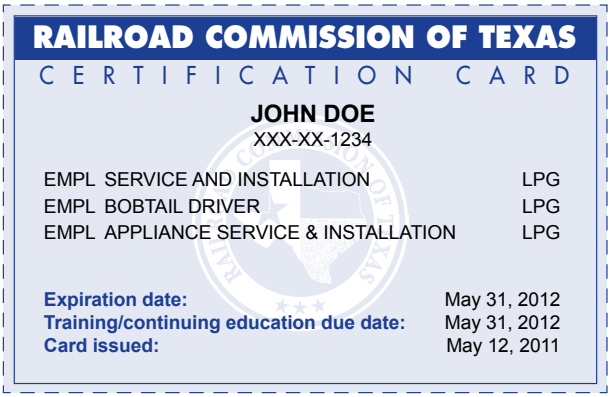
LP-GAS SAFETY RULES §9.7(A)

Railroad Commission LP-Gas Safety Rule §9.7(a) requires that individuals be properly certified before working or being employed in any capacity requiring contact with LP-gas.

The rule prohibits any person from performing work or being employed in any capacity requiring contact with LP-gas unless:

(1) that individual has taken and passed any applicable rules examination specified in §9.10 of this title (relating to Rules Examination) and in §9.17 of this title (relating to Designation and Responsibilities of Company Representatives and Operations Supervisors);
(2) the individual is in compliance with the training and continuing education requirements beginning in §9.51 of this title (relating to General Requirements for Training and Continuing Education), except for a trainee described in §9.12 of this title (relating to Trainees);
(3) prior to performing authorized LP-gas activities in Texas, the individual is employed by a licensee or by a license-exempt entity, such as a political subdivision or a state agency; or
(4) the individual holds a current examination exemption certificate pursuant to §9.13 of this title (relating to General Installers and Repairman Exemption) and is therefore exempt from the requirements of this subsection.

The most commonly cited violations of §9.7(a) involve individuals performing LP-gas activities without being properly certified or after their certification has expired. Violations typically occur when the individual has not paid the $35 annual certificate renewal fee on time or failed to complete a required training or continuing education class by the deadline printed on his or her blue Railroad Commission certification card.



DOCUMENTS AVAILABLE AT RETAIL OUTLETS

LP-GAS SAFETY RULES §9.7(D)

Railroad Commission LP-Gas Safety Rule §9.7(d) relates to documents that are required to be present at each retail outlet and available to employees.

§9.7(d) requires that copies of all current company licenses and certification cards for employees at each outlet be available for inspection during regular business hours. The rule also requires licensees to provide each company representative and outlet supervisor with at least one copy of the current LP-Gas Safety Rules and make these copies available to employees during business hours.

Violations occur when these documents are either not available or out of date.

Compliance with §9.7(d) is important to verify that employees are properly and currently certified for the types of LP-gas activities they perform. Having a current edition of the LP-Gas Safety Rules readily available also provides an excellent opportunity for staff to review up-to-date LP-gas requirements whenever the need arises.

Marketers should periodically review their employees' certification cards to ensure that all personnel performing LP-gas activities are properly and currently certified for the type of LP-gas activities they perform. The only uncertified individuals who may perform LP-gas activities are employees in training. LP-Gas Safety Rule §9.12 allows uncertified employees in training to perform LP-gas activities for a maximum of 45 calendar days, provided they work under the direct supervision of someone who is currently certified to perform the LP-gas activities the trainee is performing. If an individual in training does not become certified within the 45-calendar day training period or at any time fails the appropriate rules examination, he or she must cease all LP-gas activities requiring certification until properly certified.

Certification information and the complete text of the LP-Gas Safety Rules in PDF format are posted on the AFRED web site at www.propane.tx.gov.

FILINGS REQUIRED FOR STATIONARY INSTALLATIONS

LP-GAS SAFETY RULES §9.101

Railroad Commission LP-Gas Safety Rule §9.101 specifies the forms and other documents that must be filed with the Commission for certain LP-gas stationary installations.

For installations with an aggregate water capacity of 10,000 gallons or more, these filings include LPG Form 500, "Notice of a Stationary LPG Installation"; LPG Form 500A, "Notice of LPG Installation"; a plat drawing from the appropriate appraisal district, and a site plan of the proposed installation. These documents must all be filed at least 30 days prior to construction if adjacent property owners require notification in accordance with LP-Gas Safety Rule §9.102.

LP-Gas Safety Rules §9.101(b)(1) requires licensees to submit LPG Form 501, "Completion Report for Commercial Installations of Less Than 10,000 Gallons Aggregate Water Capacity," within 30 calendar days following the installation of a stationary container or cylinder, cylinder storage rack or cylinder storage area. A commercial installation is defined in §9.2(12) as any "installation located on premises other than a single-family dwelling used as a residence." A completion report verifies that the installation complies with Texas statutes and regulations, all necessary licenses and certificates have been issued, and states the date the installation was placed in service.

The LP-gas installation may be placed in service before the Form 501 is submitted and prior to an inspection by a Commission inspector, if the facility complies with the LP-Gas Safety Rules.

A violation occurs when the required forms, fees and other documents are either not submitted or not submitted within the required time.

Compliance with this rule enhances safety by ensuring that timely, accurate information about the installation I on file with the Railroad Commission to record the site, schedule an inspection, and prevent possible enforcement action.

Marketers should ensure that appropriate staff is properly trained on the forms and submission requirements. Many marketers' service order forms include a space for the installer to record the date that a container or rack installation is completed. This reminds office staff reviewing the service order to submit a Form 501 and reduces the chance of an inadvertent violation.

TESTING REQUIREMENTS FOR LP-GAS SYSTEMS IN SCHOOL FACILITIES

LP-GAS SAFETY RULES §9.41

Effective December 29, 2009, LP-Gas Safety Rule §9.41 was amended to require LP-gas piping systems in all public and private primary and secondary schools to be leak tested every two years. The leakage test must be performed by a person licensed and certified by the Commission, a licensed plumber registered with the Commission, or a school employee who has been certified by the Commission. The test results must be documented on LPG Form 30 and retained for five years by the school district. The school district must also provide a copy of the LPG Form 30 to the school's LP-gas supplier.

A violation of the LP-Gas Safety Rules occurs if

(1) the LP-gas supplier does not terminate service when an LP-gas piping system fails a school leakage test,

(2) the person conducting the test is not registered or certified with the Commission,

(3) the leakage test was not properly conducted, or

(4) the school district fails to provide a properly completed LPG Form 30.