

State Code

**Liquefied Petroleum Gas
Containers and Equipment**

State of Arkansas

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THE
LIQUEFIED PETROLEUM GAS
BOARD

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FOREWORD

Act 31, Ark. Acts of 1965, creates a State Liquefied Petroleum Gas Board with the authority to formulate and promulgate rules and regulations applicable to this code, to issue and revoke permits, and to generally enforce the provisions of this Act for the purpose of improving standards of safety.

The Liquefied Petroleum Gas Board is charged with the responsibility of enforcing the following rules and regulations applicable to this code which shall be complied with by all persons, firms, or corporations who are engaged in the manufacture, sale, installation, or use of containers and equipment in the storage, transportation, dispensing, and utilization of Liquefied Petroleum Gases in the State of Arkansas.

This code has been promulgated from the current law of the State of Arkansas which appears immediately following. The second section of the code is devoted to the rules and regulations passed to implement the law currently existing. For purposes of clarification, citations of the existing statutes have been made to coincide with the citations of Bobbs-Merrill Arkansas Statutes Annotated Edition.

Chapter 75

Liquefied Petroleum Gases

Subchapter 1 — General Provisions

Subchapter 2 — Liquefied Petroleum Gas Board

Subchapter 3 — Permits and Certificates of Competency

Subchapter 4 — Containers

SUBCHAPTER I — GENERAL PROVISIONS

15-75-101. Title.

15-75-102. Definitions.

15-75-103. Penalty.

15-75-104. Actions for injunction against violation.

15-75-105. Schedule of inspection and registration fees.

15-75-106. Disposition of funds.

15-75-107. Odorization of gas.

15-75-108. Dealers' safety meetings for employees.

15-75-109. Liability of persons rendering aid with respect to accidents involving transportation of compressed gases.

15-75-110. Reports.

15-75-111. Discretionary suspension of inspection and registration fees.

15-75-112. Affirmative defense.

15-75-101. Title.

This act may be known and cited as the "Liquefied Petroleum Gas Board Act".

History. Acts 1965, No. 31, § 1; A.S.A. 1947, § 53-701.

15-75-102. Definitions.

As used in this act, unless the context otherwise requires:

(1) "Liquefied petroleum gases" means gases derived from petroleum or natural gas which are in a gaseous state at normal atmospheric temperature and pressure, but may be maintained in a liquid state at normal atmospheric temperature by the application of sufficient pressure. Normal storage of these gases is as a liquid under pressure. Pentane, gasoline, and oil are not included in the above as they are liquids at normal temperature without application of pressure;

(2) "Board" means the Liquefied Petroleum Gas Board;

(3) "Liquefied petroleum gas systems" means all piping and fittings, exclusive of containers and appliances, which are connected to containers and appliances for the utilization of liquefied petroleum gases;

(4) "Container" means any tank or vessel in which liquefied petroleum gases are stored or transported or in which liquefied petroleum gases are placed for utilization through a liquefied petroleum gas system, except containers used in marine or railroad service which are inspected under federal law or regulation;

(5) "Appliance" means any apparatus or fixture attached to a liquefied petroleum gas plant or system for the purpose of utilizing, burning, or consuming gas contained in the plant or system;

(6) "Manufacturer" means any person manufacturing any container offered for sale in this state;

(7) "Jobber" means any person other than a manufacturer who sells or offers for sale to dealers containers and liquefied petroleum gases;

(8) "Dealer" means any person who sells or offers for sale liquefied petroleum gases or containers in the state directly to a user;

(9) "Vendor" means any person who sells or offers for sale appliances in this state; and

(10) "Person" means any individual, partnership, firm, corporation, company, or association or the trustee, receiver, assignee, or personal representative thereof.

History. Acts 1965, No. 31, §§ 1, 15; A.S.A. 1947, §§ 53-701, 53-714.

15-75-103. Penalty.

Any person violating any of the provisions of this act or any regulation adopted pursuant thereto shall be guilty of a misdemeanor and upon conviction shall be fined in a sum of not less than twenty-five dollars (\$25.00) nor more than one thousand dollars (\$1,000) and, in addition, may be imprisoned for not more than one (1) year, or both.

History. Acts 1965, No. 31, § 30; A.S.A. 1947, § 53-729.

15-75-104. Actions for injunction against violation.

The board, in accordance with the laws of the state governing injunctions, may maintain an action in the name of the state against any person to enjoin the violation of any provision of this act; provided, no bond shall be required prior to obtaining any such injunction.

History. Acts 1965, No. 31, § 29; A.S.A. 1947, § 53-728.

15-75-105. Schedule of inspection and registration fees.

The board shall have authority to charge the following maximum fees for the inspection or registration of the following:

- (1) Containers of fifty (50) water gallon capacity or less \$5.00
- Over fifty (50) water gallon through one hundred twenty (120) gallon capacity \$10.00
- Over one hundred twenty (120) water gallon through two thousand (2,000) gallon capacity..... \$20.00
- (2) Over two thousand (2,000) water gallon capacity..... \$25.00
- (3) Fuel containers used on mobile equipment, such as automobiles, tractors, and trucks \$5.00
- (4) D.O.T. or I.C.C. cylinders shall comply with D.O.T. or I.C.C. regulations and cylinders with one hundred pound (100lb.) capacity or less shall require no fee.

- (5) Containers used for bulk storage, regardless of size \$35.00
- (6) Cargo containers mounted on trucks or semitrailers, regardless of size \$150.00
- (7) Containers used for commercial or industrial storage, cylinder filling plants, service stations \$25.00
- (8) Public buildings using liquefied petroleum gas \$35.00
- (9) Domestic, commercial, industrial, or other type building \$25.00
- (10) Shop inspection, per day \$35.00
- (11) Certificate of competency \$25.00

History. Acts 1965, No. 31, § 14; 1977, No. 396, § 1; 1985, No. 909, § 1; A.S.A. 1947, § 53-713; Acts 1991, No. 300, § 1.

15-75-106. Disposition of funds.

(a) All moneys collected as liquefied petroleum gas inspection, registration, permit, or other fees under the provisions of this subchapter shall be deposited in the State Treasury, and the Treasurer of State shall credit the moneys to the Liquefied Petroleum Gas Fund.

(b) All moneys deposited in the Liquefied Petroleum Gas Fund shall be used for the maintenance, operation, and improvement of the Liquefied Petroleum Gas Board.

History. Acts 1965, No. 31, § 13; A.S.A. 1947, § 53-712.

15-75-107. Odorization of gas.

All liquefied petroleum gases shall be effectively odorized with a distinctive agent at the time of manufacture by the use of an approved chemical agent of such character as to positively indicate the presence of gas in concentrations not to exceed one-fifth (1/5) of the lowest limit of flammability of such gas, except where used in connection with a chemical or other manufacturing processes in which it would prove harmful and would serve no useful purpose as a warning agent.

History. Acts 1965, No. 31, § 17; A.S.A. 1947, § 53-716.

15-75-108. Dealers' safety meetings for employees.

Each dealer authorized to engage in the liquefied petroleum gas business generally in this state, in conjunction with representatives of the Liquefied Petroleum Gas Board, an insurance company, or other recognized safety organization, shall conduct with all employees handling liquefied petroleum gases one (1) general safety meeting during each twelve-month period.

History. Acts 1965, No. 31, § 23; A.S.A. 1947, § 53-722; Acts 1995, No. 477, § 1.

15-75-109. Liability of persons rendering aid with respect to accidents involving transportation of compressed gases.

(a) Notwithstanding any provisions of law to the contrary, no individual, partnership, corporation, association, or other entity shall be liable in civil damages as a result of acts taken in the course of rendering care, assistance, or advice with respect to an incident creating a danger to person, property, or the environment as a result of spillage, seepage, fire, explosion, or other release of compressed gases, or the possibility thereof, during the course of transportation of those gases by any mode whatsoever, including loading and unloading.

(b) Notwithstanding any other provision of this section to the contrary, the civil immunity granted by this section shall not extend to any individual, partnership, corporation, association, or other entity engaged in the business of the transportation of compressed gases or to any of their employees.

(c) This section shall not preclude liability for civil damages as the result of gross negligence or intentional misconduct. Reckless, willful, or wanton misconduct shall constitute gross negligence.

History. Acts 1981, No. 839, §§ 1-3; A.S.A. 1947, §§ 53-1401 — 53-1403.

15-75-110. Reports.

Reports of the sales, shipment, and installation of containers and systems shall be made by manufacturers, jobbers, and dealers on such forms and in such manner as may be provided by regulation of the board.

History. Acts 1965, No. 31, § 19; A.S.A. 1947, § 53-718.

15-75-111. Discretionary suspension of inspection and registration fees.

If the balance of the Liquefied Petroleum Gas Fund reaches five hundred thousand dollars (\$500,000), the Liquefied Petroleum Gas Board shall have the discretion to dispense with all inspection and registration fees for a one-year period. At the expiration of the one-year period, if the balance of the fund is below five hundred thousand dollars (\$500,000), the board may reinstate the inspection and registration fees.

History. Acts 1997, No. 1277, § 5.

15-75-112. Affirmative defense.

(a) As used in this section:

(1) "Liquefied petroleum gas equipment" means any appliance, equipment, or piping system that uses, stores, or transports liquefied petroleum gas; and

(2) "Liquefied petroleum gas provider" means any person or entity engaged in the business of supplying, handling, transporting, or selling liquefied petroleum gas.

(b) A liquefied petroleum gas provider shall have an affirmative defense to any action for civil liability for damage or injury caused by:

(1) An alteration or modification of liquefied petroleum gas equipment that was not reasonably foreseeable by the provider and caused the equipment to be unsafe for use in its altered or modified form; or

(2) The end-user's use of liquefied petroleum gas equipment:

(A) Was outside of the manner or purpose that could reasonably have been intended to be used or rendered the equipment unsafe; and

(B) The liquefied petroleum gas provider or the equipment's manufacturer provided a reasonable warning about the consequences of misusing the equipment.

History. Acts 2007, No. 119, § 1.

Subchapter 2 — Liquefied Petroleum Gas Board

15-75-201. Members.

15-75-202. Meetings.

15-75-203. Office — Seal.

15-75-204. Officers.

15-75-205. [Repealed.]

15-75-206. Personnel — Counsel.

15-75-207. Rules and regulations.

15-75-208. Standards for containers, systems, etc.

15-75-209. Access for inspections — Investigation of explosions.

15-75-201. Members.

(a) The Liquefied Petroleum Gas Board shall consist of seven (7) members who are residents of the State of Arkansas, at least twenty-one (21) years of age, of good moral character, and who shall be appointed by the Governor and confirmed by the Senate.

(b) (1) There shall be one (1) member appointed by the Governor from each congressional district, as the districts existed on January 1, 2007.

(2) There shall be three (3) at-large members appointed by the Governor.

(3) (A) (i) A board member appointed before July 31, 2007 shall serve the remainder of his or her previously appointed six-year term.

(ii) For a board member appointed after July 31, 2007 the term of office shall be four (4) years.

(B) (i) No board member appointed after July 31, 2007 may serve more than two (2) consecutive four-year terms.

(ii) Subdivision (b)(3)(B)(i) of this section does not preclude a former board member from serving again if he or she has not served as a member of the board for at least four (4) consecutive years.

(4) The board shall have at least one (1) member who:

(A) Represents the general public; and

(B) Is not employed by, engaged in, or retired from the liquefied petroleum gas industry in any manner.

(c) After appointment and before entering upon his or her respective duties, each member of the board shall take and subscribe and file in the office of the Secretary of State the oath of office prescribed by Arkansas Constitution, Article 19, § 20.

(d) Members of the board shall not receive compensation for their services but may receive expense reimbursement and stipends in accordance with § 25-16-901 et seq.

History. Acts 1965, No. 31, §§ 2, 3, 6, 9; 1975 (Ex. Sess., 1976), No. 1035, § 1; A.S.A. 1947, §§ 6-616, 53-702, 53-703, 53-705, 53-708; reen. Acts 1987, No. 862, § 1; Acts 1997, No. 250, § 113; 1999, No. 1577, § 1; 2001, No. 440, § 1; 2007, No. 733, § 1.

15-75-202. Meetings.

(a) The Liquefied Petroleum Gas Board shall adopt and may modify rules for the conduct of its business and shall keep a record of its transactions.

(b) Meetings shall be at the call of the chair or of the vice chair if he or she is for any reason the acting chair, either at his or her own instance or upon the written request of at least four (4) members.

(c) A quorum shall consist of not less than four (4) members present at any regular or special meeting, and a majority affirmative vote of that number shall be necessary for the disposition of any business.

(d) No meeting shall be for a longer period of time than is absolutely necessary to transact the business of the board.

(e) The board shall meet at least once in each calendar quarter, but no more than one (1) meeting shall be held during any sixty-day period for which any member is to receive compensation or reimbursement of expenses incurred.

History. Acts 1965, No. 31, §§ 8, 9; A.S.A. 1947, §§ 53-707, 53-708; Acts 1999, No. 1577, § 2.

15-75-203. Office — Seal.

The Liquefied Petroleum Gas Board shall:

(1) Maintain its office in Pulaski County;

(2) Acquire suitable quarters for the conduct of its business; and

(3) Adopt and use a common seal for the authentication of its orders and records.

History. Acts 1965, No. 31, §§ 1, 10; A.S.A. 1947, §§ 53-701, 53-709; Acts 1999, No. 225, § 1.

15-75-204. Officers.

(a) The board shall select from its membership a chairman and a vice chairman.

(b) No such officer shall serve in the same capacity for more than one (1) year during his or her term.

(c) The board may also select an individual to act as recording secretary who does not necessarily have to be a member of the board.

History. Acts 1965, No. 31, § 7; A.S.A. 1947, § 53-706; Acts 2007, No. 733, § 2.

15-75-205. [Repealed.]

15-75-206. Personnel — Counsel.

(a) The Liquefied Petroleum Gas Board shall appoint a Director of the Liquefied Petroleum Gas Board to serve with the approval and at the pleasure of the Governor.

(b) The director shall have the authority to:

(1) Employ assistants, inspectors, and other personnel; and

(2) Retain counsel as may be necessary to aid it properly in the administration of this subchapter, with the approval of the board.

(c) (1) (A) The director shall have the power and duty to receive applications and to review and approve applications for all classes of permits after applications and supporting papers have been on file for at least thirty (30) days.

(B) The director may issue class one permits once all conditions or prerequisites have been met as set out in § 15-75-307 and the application has been approved by the board.

(C) The director may issue all class two through class ten permits after all conditions and prerequisites have been met as set out in §§ 15-75-308 — 15-75-317.

(2) The director may refuse to approve applications for permits for safety reasons.

(d) The director's decisions on the approval of the applications for class one permits shall be reviewed by the board at its next regularly scheduled meeting.

History. Acts 1965, No. 31, § 11; 1983, No. 691, § 9; A.S.A. 1947, §§ 53701.1, 53-710; Acts 1999, No. 1577, § 3; 2001, No. 440, § 2; 2007, No. 733, § 3.

15-75-207. Rules and regulations.

(a) The Liquefied Petroleum Gas Board is empowered to make reasonable rules and regulations to carry out the provisions of this subchapter. Such rules and regulations shall have the force and effect of law.

(b) In addition to the functions, powers, and duties conferred and imposed upon the board by this subchapter, and the regulation of its

own procedure and carrying out its functions, powers, and duties, it shall have the authority from time to time to make, amend, and enforce all reasonable rules and regulations not inconsistent with law, which will aid in the performance of any of the functions, powers, or duties conferred or imposed upon it by law.

(c) All permanent rules and regulations promulgated for the regulation of liquefied petroleum gases as published in the state code governing liquefied petroleum gas containers and equipment dated May 1, 1964, shall remain in full force and effect until changed, altered, amended, or abolished by the board.

History. Acts 1965, No. 31, §§ 12, 28; A.S.A. 1947, §§ 53-711, 53-727.

15-75-208. Standards for containers, systems, etc.

The board shall provide additional standards or specifications for containers, systems, appliances, and appurtenances, as may be reasonably necessary for the public safety. The standards or specifications are to be set forth in the rules and regulations of the state code governing liquefied petroleum gas containers and equipment.

History. Acts 1965, No. 31, § 23; A.S.A. 1947, § 53-722.

15-75-209. Access for inspections — Investigation of explosions.

(a) The board shall have free access at all reasonable times to any premises in this state where a container or system is for sale, or being used or installed, for the purpose of ascertaining whether the container or system complies with the provisions of this act.

(b) The board shall examine into and make report of the causes of explosions of containers and shall keep a record of the names of all owners or users of the containers or systems, together with the location, make, dimension, age, condition, pressure allowed, and the date of the last inspection of all the containers or systems.

History. Acts 1965, No. 31, § 21; A.S.A. 1947, § 53-720.

SUBCHAPTER 3 — PERMITS AND CERTIFICATES OF COMPETENCY

15-75-301. Definitions.

15-75-302. Annual permit required.

15-75-303. Certification of competency required.

15-75-304. Certificates of competency — Qualifications.

15-75-305. Applicants for permits.

15-75-306. Issuance of permits — Classification.

15-75-307. Class one permit.

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15-75-313. Class seven permit.
15-75-314. Class eight permit.
15-75-315. Class nine permit.
15-75-316. Class ten permit.
15-75-317. Approval prerequisite to supplying or acquiring certain equipment and products.
15-75-318. Fees — Times payable.
15-75-3 19. Reinstatement or transfer of permits — Automatic revocation upon suspension of business.
15-75-320. Sales restrictions.
15-75-321. Suspension of certificate of competency — Revocation of permit or certificate.
15-75-322. Shortage emergencies.
15-75-323. Civil penalty.
15-75-324. Permit application approvals.

A.C.R.C. Notes. References to "this subchapter" in §§ 15-75-301 — 15-75-321 may not apply to § 15-75-322 which was enacted subsequently.

Acts 1993, No. 112, § 1, provided, in part, that:

"Persons licensed by the LP Gas Board pursuant to Chapter 75 of Title 15 of the Arkansas Code are exempt from the provisions of Chapter 33 of Title 17 of the Arkansas Code pertaining to heating, ventilation, air conditioning, and refrigeration when: (a) engaged in the installation, repair or replacement of an LP gas appliance so long as the appliance is not connected to a refrigeration system except that such person may also engage in the replacement or repair of an LP gas central heating unit when it is combined with an air conditioning unit, and (b) engaged in the installation of a venting system required for a vented-type LP appliance."

Publisher's Notes. The terms of the members of the Liquefied Petroleum Gas Board are arranged so that one term expires on January 14 of every year.

Persons licensed by the LP Gas Board pursuant to Chapter 75 of Title 15 of the Arkansas Code are exempt from the provisions of Chapter 33 of Title 17 of the Arkansas Code pertaining to heating, ventilation, air conditioning, and refrigeration when: (a) engaged in the installation, repair or replacement of an LP gas appliance so long as the appliance is not connected to a refrigeration system except that such person may also engage in the replacement or repair of an LP gas central heating unit when it is combined with an air conditioning unit, and (b) engaged in the installation of a venting system required for a vented-type LP appliance.

Cross References. Licenses and permits, removal of disqualification for criminal offenses, § 17-1-103.

Effective Dates. Acts 1987, No. 375, § 3: Mar. 23, 1987; 1987, No. 842, § 3: Apr. 8, 1987. Emergency clauses provided: "It has been found and is declared by the General Assembly that a severe hardship exists in the rural areas of this

State, as a result of extreme inconvenience being experienced by the users of liquefied petroleum gas in obtaining portable replacement cylinders for empty ones. It is further declared that the establishment of appropriate cylinder exchange stations throughout the rural areas will greatly reduce the hardship and offer greater convenience in obtaining replacement service for the users. Therefore, an emergency is hereby declared to exist and this Act, being immediately necessary for the preservation of the public peace, health, and safety, shall be in full force and effect from and after its passage and approval." Acts 1991, No. 6, § 5: Jan. 29, 1991. Emergency clause provided: "It is hereby found and determined by the Seventy-Eighth General Assembly that Arkansas is chiefly a rural state and that we are entering the coldest portion of the winter season; that shortages of LP gas threaten the health of our citizenry who reside in the rural areas of this state; and further that LP gas shortages result in major damage and loss to the poultry industry of this state. Therefore, an emergency is hereby declared to exist and this act being necessary for the immediate preservation of the public peace, health and safety shall be in full force from and after its passage and approval."

Acts 1995, No. 604, § 7: Mar. 13, 1995. Emergency clause provided: "It is hereby found and determined by the General Assembly that certain provisions in the Arkansas Code regulating Class 2, Class 3, and Class 5 dealers in liquefied petroleum gas are obsolete and overly burdensome, and that the same should be amended as soon as possible to make those laws more equitable. Therefore, an emergency is hereby declared to exist, and this act being immediately necessary for the preservation of the public peace, health, and safety shall be in full force and effect from and after its passage and approval."

Acts 1997, No. 1277, § 11: July 1, 1997. Emergency clause provided: "It is hereby found and determined by the Eighty-First General Assembly, that the Constitution of the State of Arkansas prohibits the appropriation of funds for more than a two (2) year period; that the effectiveness of this Act on July 1, 1997 is essential to the operation of the agency for which the appropriations in this Act are provided, and that in the event of an extension of the Regular Session, the delay in the effective date of this Act beyond July 1, 1997 could work irreparable harm upon the proper administration and provision of essential governmental programs. Therefore, an emergency is hereby declared to exist and this Act being necessary for the immediate preservation of the public peace, health and safety shall be in full force and effect from and after July 1, 1997."

Acts 1999, No. 514, § 11: July 1, 1999. Emergency clause provided: "It is hereby found and determined by the Eighty-second General Assembly, that the Constitution of the State of Arkansas prohibits the appropriation of funds for more than a two (2) year period; that the effectiveness of this Act on July 1, 1999 is essential to the operation of the agency for which the appropriations in this Act are provided, and that in the event of an extension of the Regular Session, the delay in the effective date of this Act beyond July 1, 1999 could work irreparable harm upon the proper administration and provision of essential governmental

programs. Therefore, an emergency is hereby declared to exist and this Act being necessary for the immediate preservation of the public peace, health and safety shall be in full force and effect from and after July 1, 1999."

Acts 1999, No. 1577, § 14: July 1, 1999. Emergency clause provided: "It is hereby found and determined by the Eighty-second General Assembly that current areas of service for persons engaged in the liquefied petroleum gas business are inadequate and need to be expanded, that procedures for making applications for permits and for issuing permits are too lengthy and need to be revised in order to provide better service to the citizens of Arkansas, and that it is necessary for this law to take effect with the beginning on the state's new fiscal year. Therefore, an emergency is declared to exist and this act being immediately necessary for the preservation of the public peace, health and safety shall become effective on July 1, 1999."

Acts 2001, No. 440, § 7: Feb. 23, 2001. Emergency clause provided: "It is hereby found and determined by the Eighty-third General Assembly that revisions to the Liquefied Petroleum Gas laws in 1999 have caused a backlog in certain classes of LP gas license permits; that this backlog reduces the gas supply being distributed to the citizens of Arkansas; and that this act must take effect immediately in order to clarify the provisions of the class one permit process and to simplify the permit process for classes two through ten LP gas licensees so that the licensing backlog can be eliminated as quickly as possible. Therefore, an emergency is declared to exist and this act being immediately necessary for the preservation of the public peace, health and safety shall become effective on the date of its approval by the Governor. If the bill is neither approved nor vetoed by the Governor, it shall become effective on the expiration of the period of time during which the Governor may veto the bill. If the bill is vetoed by the Governor and the veto is overridden, it shall become effective on the date the last house overrides the veto."

15-75-301. Definitions.

As used in this subchapter:

(1) "Certificate of competency" means approval by the Liquefied Petroleum Gas Board of the employees to be placed in charge of operations, service, installation, and transportation by permit holders;

(2) "Director" means the Director of the Liquefied Petroleum Gas Board appointed by the board and serving with the approval and at the pleasure of the Governor; and

(3) "Permits" means the written authorization granted by the director with the board's approval to persons to engage in the liquefied petroleum gas business.

History. Acts 1965, No. 31, § 24; A.S.A. 1947, § 53-723; Acts 1999, No. 1577, § 4.

15-75-302. Annual permit required.

(a) Every person, as a condition to his or her right to store, sell, or transport liquefied petroleum gases in this state or to his or her right to install systems or to sell or install containers for the use of liquefied petroleum gases or to engage in the business of liquefied petroleum gases generally, shall first obtain a permit from the Director of the Liquefied Petroleum Gas Board with the board's approval as herein prescribed.

(b) Each permit shall be renewed annually.

History. Acts 1965, No. 31, § 24; A.S.A. 1947, § 53-723; Acts 1999, No. 1577, § 5.

15-75-303. Certification of competency required.

(a) No person shall transport, deliver, or handle liquefied petroleum gases or install any container or system, or connect any container to any liquefied petroleum gas system unless and until he shall have been certified by the board, which shall conduct an examination to determine whether he has sufficient knowledge and skill to perform the work in a safe and satisfactory manner.

(b) No certificate or permit shall be required for the storing and handling of portable containers or cylinders constructed in compliance with federal Department of Transportation regulations at cylinder exchange stations set up and established by authorized liquefied petroleum gas dealers as a means of furnishing adequate facilities for the convenient exchange of exhausted containers for fully serviced ones by their customers if:

(1) The water gallon capacity of any container does not exceed thirty (30) gallons;

(2) All cylinders are serviced by the authorized dealer at approved cylinder filling plants and transported to the exchange station by accepted methods;

(3) There is no sale of containers or their contents to the exchange station for resale to the user;

(4) The exchange station operator is properly instructed by the dealer in the appropriate safety procedures necessary for the operation of the station.

History. Acts 1965, No. 31, § 22; A.S.A. 1947, § 53-721; Acts 1987, No. 375, § 1; 1987, No. 842, § 1.

15-75-304. Certificates of competency — Qualifications.

(a) To be entitled to a "certificate of co-inpetency," a person must have:

(1) Satisfactory experience in the liquefied petroleum gas business or must give proof of previous on-the-job training in the liquefied petroleum gas business satisfactory to the Liquefied Petroleum Gas Board as prescribed by its rules and regulations;

(2) Had not less than thirty (30) days' experience in the liquefied petroleum gas installation or transportation business; and

(3) Passed a written or oral examination as prescribed by the board.

(b) All new class one employees must attend a forty-hour basic course in liquefied petroleum gas, as prescribed by the board, within the first year of their employment, or their certification certificate will be suspended until the course has been completed.

(c) All class one employees who change from one class one employer to another class one employer who has not previously had the forty-hour basic training course, as prescribed by the board, must do so within one (1) year of the transfer date of employment, or their certification certificate will be suspended until the course has been completed.

(d) The board may accept as its own a reciprocal state's transportation and delivery examination for transport drivers only that contains substantially equivalent requirements as those required by the board. Substantial uniformity shall be demonstrated by a letter from the issuing authority of the state or a copy of a current and valid card issued by the reciprocal state. All applicable fees shall be paid to the board prior to issuance of the certification card.

History. Acts 1965, No. 31, § 24; A.S.A. 1947, § 53-723; Acts 1995, No. 477, § 2; 1999, No. 224, § 1; 2007, No. 733, § 4.

15-75-305. Applicants for permits.

(a) (1) (A) (i) Any person desiring to engage in the liquefied petroleum gas business in this state must file a formal application and supporting papers, together with a filing fee of fifty dollars (\$50.00), with the Director of the Liquefied Petroleum Gas Board at least thirty (30) days prior to the approval of the application by the director.

(ii) Should the applicant be a corporation or partnership, copies of the articles of incorporation or partnership agreement, if any, shall accompany the application together with a certificate from the Revenue Division of the Department of Finance and Administration evidencing that all taxes due have been paid or otherwise negating state tax liability.

(iii) Application forms will be furnished by the Director at any time upon request.

(B) (i) In determining whether to grant permits or certificates, the director shall be given a reasonable time in which to investigate the applicant.

(ii) If the permit or certificate is denied, the applicant shall be notified by registered mail.

(iii) The board shall review the director's decision on the approval of class one permit applications at its next regularly scheduled meeting.

(2) (A) (i) The Director shall have the power and duty to receive, review, and approve applications for all classes of permits after applications and supporting papers have been filed with the director for at least thirty (30) days. The director may refuse to approve applications for permits for safety reasons.

(ii) The Director may issue class one permits once all conditions and prerequisites have been met as set out in § 15-75-307 and the application has been approved by the board.

(iii) The Director may issue class two through class ten permits after application and supporting papers have been on file for at least thirty (30) days and all conditions and prerequisites for those permits have been met as set out in §§ 15-75-308 — 15-75-317.

(B) The board, at its regularly scheduled meetings, shall review the director's decisions on the approval of applications for class one permits. The board may refuse to issue permits for safety reasons.

(3) Any applicant aggrieved by a denial by the director or any person or group of persons who are aggrieved by safety concerns because of the issuance of the permits by the director after the board's approval may appeal the decision within thirty (30) days thereof, to the board by filing a notice of appeal with the board. The notice of appeal of the board's or director's decision shall be on a written form provided by the board. The notice of appeal shall suspend the action of the director in denying an application or in issuing or denying a permit until the next regular meeting of the board or until a special hearing by the board can be held.

(4) A meeting or hearing shall be held within at least thirty (30) days after the date of the filing of the notice of appeal unless the person appealing shall consent to a later hearing.

(5) Within five (5) days after the hearing is concluded, the board shall render its written decision on the appeal.

(6) The board is authorized on its own motion to review any action of the director in denying an application or in issuing or refusing to issue a permit and, upon review, to set aside any action of the director in any of these respects insofar as it pertains to safety issues.

(b) Applicants for class one permits, as defined in § 15-75-307, shall be present at the board meeting at which the review of the director's action on the application is to be considered.

(c) Before any application may be considered by the director and reviewed by the board, the applicant must have on file in the office of the director a certificate of intended insurance evidencing the kinds and amounts as required by this subchapter for the class of permit requested. After approval of the application and before the permit may be issued, a certificate of required insurance must be furnished bearing the clause, "The insurance company will notify the Director, Liquefied Petroleum Gas Board, thirty (30) days prior to cancellation of the insurance referred to herein." Binders by insurance agents are not acceptable for the purposes of this subchapter.

(d) All applicants must agree to provide adequate equipment and products, which are satisfactory to the board.

(e) All persons in charge of operations and servicemen, installation men, and truck drivers must have a certificate of competency from the board. Each certificate of competency shall be renewed annually.

(f) (1) Applicants must have satisfactory experience in the liquefied petroleum gas business or have employed a recognized operator of the business with experience and competency. In order that the director or the board may be assured as to competency insofar as safety is concerned, applicants for permits to engage in the liquefied petroleum gas business generally shall qualify for new certificates of competency. One (1) or more employees who are to be engaged in the delivery and transportation of liquefied petroleum gas, and one (1) or more separate employees who are to be engaged in the installation of liquefied petroleum gas containers and systems, as well as a general safety supervisor, shall have a general knowledge of the characteristics of liquefied petroleum gases, as well as of its proper handling and utilization, along with a thorough knowledge and understanding of the National Fire Protection Association Pamphlet No. 58 and the State Liquefied Petroleum Gas Code covering the storage and handling of liquefied petroleum gases, as established by a current written or oral examination prepared and conducted by the director with the approval of the board.

(2) Applicants must agree to furnish whatever information the director or the board may require as to their ability to engage in the liquefied petroleum gas business and must also furnish whatever references the director or the board may require.

(g) (1) In order that the public or the user of liquefied petroleum gases may be assured of competent and efficient service to any container, system, or appurtenance, each dealer who has been issued a current permit or any applicant therefore in addition to competent gas delivery and transportation personnel, shall provide separate competent personnel for the installation and servicing of containers, systems, and appurtenances.

(2) In determining whether or not to grant a permit, the director and the board shall determine whether or not an applicant can provide safe and efficient service to the public or the users in the area in which liquefied petroleum gas operations are to be conducted.

(h) In addition to the foregoing requirements, applicants must also meet the additional requirements listed under the specific class of permit desired.

(i) All foreign corporations doing business in this state in any phase of the liquefied petroleum gas business must furnish evidence of their qualifications to do business in the state as a foreign corporation.

(j) In addition to the foregoing, the board shall have the power to make reasonable application requirements by rules and regulations and

shall adopt rules and regulations as it shall deem necessary to govern the procedures in any hearing to review the issuance or denial of permits.

(k) (1) Applicants for a class one permit must attend a forty-hour basic course in liquefied petroleum gas, as prescribed by the board, prior to the board meeting at which the review of the final action on their application may be heard.

(2) All owners, managers or officials, and employees connected to or listed on the class one application must attend the basic training course prior to the board meeting at which the review of their application may be heard.

History. Acts 1965, No. 31, § 24; A.S.A. 1947, § 53-723; Acts 1991, No. 300, § 2; 1995, No. 477, § 3; 1999, No. 1577, § 6; 2001, No. 440, §§ 36; 2007, No. 733, § 5, Acts 1999, No. 514, § 4.

15-75-306. Issuance of permits — Classification.

(a) After approval of the application by the Director of the Liquefied Petroleum Gas Board and review by the Liquefied Petroleum Gas Board as provided in § 15-75-305, the director may issue the classes of permits set out in §§ 15-75-307 — 15-75-317 on the conditions indicated in those sections.

(b) All class one (1) permit application approvals must have all prerequisites met and the permit issued within one (1) year of approval by the Liquefied Petroleum Gas Board. If not issued within one (1) year of approval, the application will be returned to the applicant and a new application must be submitted to the board thirty (30) days prior to the date of the regular meeting at which the application is to be considered.

History. Acts 1965, No. 31, § 24; A.S.A. 1947, § 53-723; Acts 1997, No. 1277, § 4; 1999, No. 1577, § 7; 2007, No. 733, § 6.

15-75-307. Class one permit.

(a) The holder of a class one permit may engage in any phase of the liquefied petroleum gas business in a county or contiguous counties if he or she pays an annual permit fee of five hundred dollars (\$500) for the first county under the permit and three hundred dollars (\$300) for each contiguous county included under the permit.

(b) An applicant for a class one permit:

(1) Shall furnish to the Liquefied Petroleum Gas Board evidence of the following insurance:

(A) Manufacturers' and Contractor's Bodily Injury Liability Insurance	Each Person	\$500,000
	Each Accident	500,000
(B) Manufacturers' and Contractors' Property Damage Liability Insurance	Each Accident	500,000
	Aggregate	500,000

(C) Products Bodily Injury Liability Insurance	Each Person Each Accident Aggregate	\$500,000 500,000 500,000
(D) Products Property Damage Liability Insurance	Each Person Aggregate	\$500,000 500,000
(E) Automobile Bodily Injury Liability Insurance	Each Person Each Accident	\$500,000 500,000
(F) Automobile Property Damage Liability Insurance	Each Accident	500,000

- (2) (A)** Shall designate a county in this state for:
- (i)** The location of the proposed principal place of business of the applicant; and
 - (ii)** The proposed location of the principal bulk storage tank facility; and
- (B)** Shall maintain a twenty-four-hour emergency telephone number;
- (3) (A)** Must provide a list of counties in which the operation is to be conducted.
- (B) (i)** The applicant shall designate within one (1) Arkansas county the location of the proposed principal place of business of the applicant and the proposed location of the principal bulk storage tank facility.
 - (ii)** The designated county shall be the home county area of operation of the applicant.
 - (C)** The permit fee shall be paid for each county in which the applicant operates;
- (4) (A)** Shall provide full-time employment of qualified personnel whose competency shall be proven through a current written or oral examination.
- (B)** There shall be a minimum of three (3) employees.
 - (C)** For each permit, one (1) employee shall be certified as a general safety supervisor and one (1) employee shall be certified as an installation personnel.
 - (D)** One (1) employee may be certified as both transport and delivery/installation, a combination certification, but that combination certification shall not relieve the requirement for a minimum of three (3) employees;
- (5) (A)** Shall provide a bulk storage capacity of not less than thirty thousand (30,000) water gallons at the principal location of the permitted facility, the location of which must be approved by the board in advance of the application and which must be maintained by the applicant in safe working condition throughout the duration of the

permit applied for under penalty of permit forfeiture by action of the board.

(B) Storage containers being used in connection with cotton gins, rice dryers, manufacturing plants, or any other type commercial use, regardless of size, will not be accepted as bulk storage and cannot be included in the requirements for the thirty thousand gallons (30,000 gals.) storage.

(C) (i) Shall maintain one (1) place of business within the state that shall be the principal working location for the employees of the permitted facility; and

(ii) Shall maintain a posted twenty-four-hour emergency telephone number;

(6) (A) Shall provide approved-type cylinder or bottle-filling facilities consisting of a separate pump, the capacity of which shall not be in excess of twenty (20) gallons per minute and shall be designed for the primary purpose of filling bottles.

(B) Where a manifold or multiple filling system is contemplated, the board shall be consulted regarding pump capacity;

(7) Shall provide equipment satisfactory to the board;

(8) (A) Shall provide switch track or tank loading and unloading facilities satisfactory to the board.

(B) All auxiliary equipment such as pumps, hoses, electrical switches, etc., shall be Underwriters' Laboratory-approved for liquefied petroleum gases; and

(9) In addition to the foregoing requirements, all class one applicants must comply with all other applicable requirements.

History. Acts 1965, No. 31, § 24; 1977, No. 396, § 2; A.S.A. 1947, § 53-723; Acts 1991, No. 300, § 3; 1995, No. 477, § 4; 1999, No. 1577, § 8; 2001, No. 1219, § 1; 2007, No. 733, § 7.

15-75-308. Class two permit.

(a) The holder of a class two permit:

(1) May install liquefied petroleum gas piping and install and sell liquefied petroleum gas containers and appliances but may not deliver gas; and

(2) Must pay an annual permit fee in the sum of one hundred dollars (\$100).

(b) The applicant for a class two permit:

(1) Must furnish evidence of the following insurance:

(A) Manufacturers' and Contractors' Bodily Injury Liability Insurance	Each Person	\$250,000
	Each Accident	500,000

(B) Manufacturers' and Contractors' Property Damage Liability Insurance	Each Accident	\$250,000
	Aggregate	500,000

(C) Products Bodily Injury Liability Insurance	Each Person	\$250,000
	Each Accident	500,000
	Aggregate	500,000
(D) Products Property Damage Liability Insurance	Each Accident	\$250,000
	Aggregate	500,000

(2) Must provide a certified or notarized financial statement, which has been compiled within the past sixty (60) days;

(3) Must provide full-time employment of qualified personnel whose competency shall be proven through a current written or oral examination; and

(4) Must comply with all other applicable requirements for class two applicants.

History. Acts 1965, No. 31, § 24; A.S.A. 1947, § 53-723; Acts 1991, No. 300, § 4; 1995, No. 604, § 1.

15-75-309. Class three permit.

(a) The holder of a class three permit:

(1) May fill, sell, and deliver ICC/DOT cylinders and ASME motor fuel cylinders only;

(2) May establish cylinder exchange stations, deliver filled cylinders to ICC/DOT cylinder and ASME cylinder exchange stations, and service cylinders throughout the state;

(3) Must pay an annual permit fee in the sum of one hundred dollars (\$100);

(4) Must provide liquefied petroleum gas for the cylinders by the following method:

(A) Furnish a storage container to be located in Arkansas, with a capacity of not less than one thousand (1,000) gallons, unless the board authorizes a smaller container, in connection with the proper type filling facilities;

(B) Cylinders, not to exceed thirty (30) gallons, must be filled by weight or other approved method only at cylinder filling facilities approved by the Liquefied Petroleum Gas Board.

(b) The storage container furnished by the class three permit must be inspected and approved by the board prior to its first use in the class three operation and once annually thereafter.

(c) When any cylinder exchange station location changes status from active to inactive or inactive to active the class three permit holder must notify the board within thirty (30) days after the change of status.

(d) The applicant for a class three permit:

(1) Must furnish evidence of the following insurance:

(A) Manufacturers' and Contractors' Bodily Injury Liability Insurance	Each Person	\$500,000
	Each Accident	500,000

(B) Manufacturers' and Contractors' Property Damage Liability Insurance	Each Accident	\$500,000
	Aggregate	500,000
(C) Products Bodily Injury Liability Insurance	Each Person	\$500,000
	Each Accident	500,000
	Aggregate	500,000
(D) Products Property Damage Liability Insurance	Each Accident	\$500,000
	Aggregate	500,000

(2) Must provide full-time employment of qualified personnel whose competency shall be proved through a current written or oral examination;

(3) Must provide a certified or notarized financial statement which has been compiled within the past sixty (60) days; and

(4) Must comply with all other applicable requirements.

History. Acts 1965, No. 31, § 24; A.S.A. 1947, § 53-723; Acts 1991, No. 300, § 5; 1995, No. 604, § 2.

15-75-310. Class four permit.

The holder of a class four permit:

(1) May sell and install liquefied petroleum gas equipment used on internal combustion engines, permanently mounted on mobile equipment only;

(2) May not deliver liquefied petroleum gas;

(3) May not sell or install any other type of containers or appliances;

(4) Must comply with all applicable requirements; and

(5) Must pay an annual permit fee in the sum of fifty dollars (\$50.00).

History. Acts 1965, No. 31, § 24; A.S.A. 1947, § 53-723; Acts 1991, No. 300, § 6.

15-75-311. Class five permit.

(a) The holder of a class five permit:

(1) May deliver liquefied petroleum gas to or for class one dealers but shall not retail liquefied petroleum gas or sell or install liquefied petroleum gas containers or systems;

(2) Shall not use motor fuel directly from cargo trailer tanks;

(3) May deliver liquefied petroleum gas to class three dealers engaged in cylinder exchange, delivery, or service if the class three permit holder has installed an approved storage container with a minimum capacity of six thousand (6,000) gallons;

(4) (A) Shall be required to undergo an annual safety inspection on all transport delivery trucks. The safety inspection or documentation of the safety inspection shall be received by the office

of the Director of the Liquefied Petroleum Gas Board prior to operation of the transport delivery trucks over Arkansas roads. All permit and inspection fees for Arkansas are applicable.

(B) The inspection shall be performed by:

(i) The Liquefied Petroleum Gas Board inspector; or

(ii) An acceptable qualified agency having jurisdiction or authority over liquefied petroleum gas;

(5) Must notify the board prior to the first delivery of liquefied petroleum gas to a class three permit holder to ensure that proper inspection of cylinder exchange filling facilities has been performed, and no delivery may be made until the facility has been inspected and approved by the board and the notice transmitted to the board; and

(6) Must pay an annual permit fee in the sum of two hundred dollars (\$200).

(b) An applicant for a class five permit:

(1) Must furnish evidence of the following insurance:

(A) Automobile Bodily Injury	Each Person	\$500,000
Liability Insurance	Each Accident	500,000
(B) Automobile Property Damage	Each Accident	\$500,000
Liability Insurance		

(2) Must provide a certified or notarized financial statement which has been compiled within the past sixty (60) days;

(3) Must provide full-time employment of qualified personnel whose competency shall be proved through a current written or oral examination; and

(4) Must comply with all other applicable requirements.

History. Acts 1965, No. 31, § 24; A.S.A. 1947, § 53-723; Acts 1991, No. 300, § 7; 1995, No. 604, § 3; 1999, No. 223, § 1.

15-75-312. Class six permit.

(a) The holder of a class six permit

(1) May transport liquefied petroleum gas over the highways of the state for delivery to points outside the state only;

(2) May not deliver liquefied petroleum gas to any Arkansas dealer, commercial or industrial plant, or directly to a consumer;

(3) May not sell or install any type of container or system;

(4) Must have all delivery equipment inspected and approved before being placed in operation and annually thereafter;

(5) Shall not use motor fuel directly from cargo tanks; and

(6) Must pay an annual permit fee in the sum of two hundred dollars (\$200).

(b) All transport truck operators must have certificates of competency from the Liquefied Petroleum Gas Board.

(c) An applicant for a class six permit:

(1) Must furnish evidence of the following insurance on each truck used in operations in this state:

- (A) Automobile Bodily Injury Each Person \$500,000
 Liability Insurance Each Accident 500,000
- (B) Automobile Property Damage Each Accident \$500,000
 Liability Insurance

(2) Must submit an inventory of all trucks traveling in this state showing the following information:

- (A) Name of liquefied petroleum gas tank manufacturer;
- (B) Code under which constructed;
- (C) Design working pressure and water capacity;
- (D) Relief valve setting;
- (E) Tank manufacturer's serial number;
- (F) Type and size of fuel tanks;
- (G) Number, type, and size of fire extinguishers;
- (H) Manufacturer's data sheet for each container, including fuel tanks; and

(3) Must comply with all other applicable requirements.

History. Acts 1965, No. 31, § 24; A.S.A. 1947, § 53-723; Acts 1991, No. 300, § 8; 1995, No. 477, § 5.

15-75-313. Class seven permit.

(a) The holder of a class seven permit:

- (1) May operate liquefied petroleum gas service stations;
- (2) May sell liquefied petroleum gas to operators of mobile equipment only;
- (3) May not sell or install any type container or appliance;
- (4) May not fill any type container except those permanently mounted on mobile equipment;
- (5) Must provide storage and dispensing facilities suitable to the Liquefied Petroleum Gas Board;
- (6) Must furnish evidence of the following insurance:

- (A) Manufacturers' and Contractors' Bodily Injury Each Person \$500,000
 Liability Insurance Each Accident 500,000
- (B) Manufacturers' and Contractors' Property Damage Each Accident \$500,000
 Liability Insurance Aggregate 500,000
- (C) Products Bodily Injury Each Person \$500,000
 Liability Insurance Each Accident 500,000
 Aggregate 500,000
- (D) Products Property Damage Each Accident \$500,000
 Liability Insurance Aggregate 500,000

or

Garage Liability Bodily Liability Insurance	Each Person Each Accident	500,000 500,000
	or	
Garage Liability Property Damage Liability Insurance	Each Accident	500,000

(7) Must pay an annual permit fee in the sum of one hundred dollars (\$100).

(b) In addition to the foregoing requirements, all class seven applicants must comply with all other applicable requirements.

History. Acts 1965, No. 31, § 24; A.S.A. 1947, § 53-723; Acts 1991, No. 300, § 9; 1995, No. 477, § 6.

15-75-314. Class eight permit.

(a) Class eight permits may be issued to, but not limited to, refineries, jobbers, or sellers of liquefied petroleum gas.

(b) Holders of class eight permits:

(1) May sell to permit holders exclusively; and

(2) Must pay an annual permit fee in the sum of two hundred dollars (\$200).

History. Acts 1965, No. 31, § 24; A.S.A. 1947, § 53-723; Acts 1991, No. 300, § 10.

15-75-315. Class nine permit.

(a) Holders of class nine permits:

(1) May sell liquefied petroleum gas containers or equipment to permit holders exclusively;

(2) Must furnish evidence of the following insurance:

(A) Manufacturers' and Contractors' Bodily Injury Liability Insurance	Each Person Each Accident	\$500,000 500,000
(B) Manufacturers' and Contractors' Property Damage Liability Insurance	Each Accident Aggregate	\$500,000 500,000
(C) Products Bodily Injury Liability Insurance	Each Person Each Accident Aggregate	\$500,000 500,000 500,000
(D) Products Property Damage Liability Insurance	Each Accident Aggregate	\$500,000 500,000

(3) Shall submit, for approval by the Director of the Liquefied Petroleum Gas Board, blueprints and specifications in duplicate for each type of container before any liquefied petroleum gas containers

are shipped into the state. All fittings and the manufacturer thereof shall be listed, and no variation from prints submitted will be permitted until the variations from the plans submitted have received approval by the director;

(4) (A) Must file a report of containers shipped. On the date of shipment, the manufacturer must forward a list of each container on an approved form, together with one (1) data sheet for each container shipped into the state, showing manufacturer's serial number, capacity in gallons, and to whom shipped.

(B) Each manufacturer and jobber of liquefied petroleum gas containers shall forward to the Liquefied Petroleum Gas Board, together with the required notice of shipment and data sheet on the same day shipment is made, the following registration fees for each container shipped into the state:

- (i) Containers of fifty (50) water gallon capacity or less..... \$5.00
- (ii) Over fifty (50) water gallon through one hundred twenty (120) gallon capacity \$10.00
- (iii) Over one hundred twenty (120) water gallon through five hundred (500) gallon capacity \$20.00
- (iv) Over five hundred (500) water gallon through two thousand (2,000) gallon capacity \$20.00
- (v) Over two thousand (2,000) water gallon capacity \$25.00
- (vi) Fuel containers used on mobile equipment such as automobiles, tractors, and trucks \$5.00

(5) Must attach a registration tag to each container shipped. However, bulk storage containers, delivery trucks, transport trucks, and containers of thirty (30) water gallon capacity or less manufactured in compliance with the federal Interstate Commerce Commission are exempt from registration tags and fees;

(6) Must furnish photostats of current American Society of Mechanical Engineers certificate of authorization and field card of shop inspector;

(7) Must sell liquefied petroleum gas containers or equipment to permit holders exclusively; and

(8) Must pay an annual permit fee in the sum of one hundred dollars (\$100).

(b) In addition to the foregoing requirements, all class nine applicants must comply with all other applicable requirements.

History. Acts 1965, No. 31, § 24; A.S.A. 1947, § 53-723; Acts 1991, No. 300, § 11; 1995, No. 477, § 7.

15-75-316. Class ten permit.

(a) Holders of class ten permits:

(1) May engage in the installation of liquefied petroleum gas piping and appliances in any type building, but may not sell or install liquefied petroleum gas containers; and

(2) Must pay an annual permit fee in the sum of one hundred dollars (\$100).

(b) Applicants for class ten permits:

(1) Must furnish evidence of the following insurance:

(A) Mfg.'s' and Contractors' Bodily Injury Liability Insurance	Each Person	\$500,000
	Each Accident	500,000

(B) Mfgs' and Contractors' Property Damage Aggregate Liability Insurance	Each Accident	\$500,000
		500,000

(2) Must provide a certified or notarized financial statement which has been compiled within the past sixty (60) days;

(3) Must provide full-time employment of qualified personnel whose competency shall be proved through a current written or oral examination; and

(4) Must comply with all other applicable requirements.

History. Acts 1965, No. 31, § 24; A.S.A. 1947, § 53-723; Acts 1991, No. 300, § 12; 1995, No. 477, § 8.

15-75-317. Approval prerequisite to supplying or acquiring certain equipment and products.

(a) No applicant for a permit shall purchase, lease, rent, or furnish any equipment or product which is subject to inspection or regulation by the Liquefied Petroleum Gas Board until the application has been approved and authority to purchase has been granted by the Director of the Liquefied Petroleum Gas Board.

(b) No permit holder shall sell, lease, rent, or furnish any equipment or product which is subject to inspection or regulation by the board to any applicant until the application has been approved and the authority to purchase has been granted by the director.

History. Acts 1965, No. 31, § 24; A.S.A. 1947, § 53-723; Acts 1999, No. 1577, § 9.

15-75-318. Fees — Times payable.

(a) All fees for permits as classified in §§ 15-75-307 — 15-75-316 are payable on or before January 1 each year.

(b) All fees for inspection must be paid not later than thirty (30) days after inspections are made.

History. Acts 1965, No. 31, § 24; A.S.A. 1947, § 53-723.

15-75-319. Reinstatement or transfer of permits — Automatic revocation upon suspension of business.

(a) Each permit authorized by the board shall be issued in the name of the person for whom approval was granted.

(b) No permit shall be transferable to any other person without prior approval by the board.

(c) The permits of all holders who shall cease doing business as authorized by their permits for a period of twenty (20) days shall be automatically revoked and may be reinstated only by action of the board.

(d) A transfer of an existing permit or a reinstatement of an automatic revocation of an existing permit pursuant to this subchapter may be made only upon compliance with this subchapter and rules and regulations pertaining to new applications, and the proposed transfers or reinstatements shall meet all requirements for new applications.

History. Acts 1965, No. 31, § 26; A.S.A. 1947, § 53-725.

15-75-320. Sales restrictions.

(a) No dealer shall sell or offer for sale liquefied petroleum gas or conduct liquefied petroleum gas operations of any type in any area of this state in which certified personnel are not readily available for proper and efficient service to the users' containers, systems, or appurtenances.

(b) Each existing or new permit issued by the board shall designate accurately the county or counties in which the holder may conduct liquefied petroleum gas operations.

(c) No dealer shall sell or offer for sale liquefied petroleum gas or conduct liquefied petroleum gas operations of any type in any county or counties not shown on and authorized by a current permit.

(d) (1) Any dealer desiring to enlarge or expand liquefied petroleum gas service beyond his or her permitted counties may add a contiguous county to his or her permit by:

(A) Providing thirty (30) days' written notice of his or her intention to the director; and

(B) Paying a permit fee of three hundred dollars (\$300) for each additional county to be included under the permit.

(2) The director shall report any additional counties included under a class one permit issued under subdivision (d)(1) of this section to the board at its next meeting.

History. Acts 1965, No. 31, § 25; A.S.A. 1947, § 53-724; Acts 1999, No. 1577, § 10; 2001, No. 1219, § 2; 2007, No. 733, § 8.

15-75-321. Suspension of certificate of competency — Revocation of permit or certificate.

(a) The Director, or any inspector, of the Liquefied Petroleum Gas Board is authorized to temporarily suspend the certificate of competency of any person subject to this subchapter if it shall be determined that the person, while engaged in liquefied petroleum gas operations, is so engaged in a reckless, careless, or unsafe manner or in an intoxicated state which endangers human life, provided that those

persons shall have an opportunity to contest the suspension under the provisions of this sub-chapter as hereinafter provided for.

(b) The Liquefied Petroleum Gas Board, upon sufficient proof, may revoke, suspend, reprimand, place on probation, refuse to renew, or refuse to issue the permit or certificate of competency of any holder or person for cause or willful violation of any of the laws or rules and regulations as promulgated by the board after due notice, provided that all persons shall be entitled to a hearing before the board to show cause why the permit or certificate of competency should not be revoked. Any person whose certificate of competency has been temporarily suspended by the director or an inspector of the board shall be entitled to a hearing before the board at its next meeting to show cause why the certificate of competency should not be permanently revoked. No person whose permit or certificate of competency is suspended temporarily or permanently revoked hereunder shall engage in any phase of the liquefied petroleum gas business until authorized to do so by order of the board.

(c) The board is empowered to administer oaths and affirmations, to take depositions, to certify to official actions, and to issue subpoenas to compel the attendance of witnesses and the production of books, papers, and records deemed necessary as evidence in connection with any matter properly before it. In case of contumacy by a witness or a party or a refusal by any person to obey a subpoena, any court within the jurisdiction in which the witness, party, or other person is found or resides or transacts business, upon application by the board, shall issue to the witness, party, or other person as aforesaid an order requiring the person to appear before the board and to produce evidence if so ordered or to give testimony touching on the matter involved. Any failure to obey the order of the court may be punished by the court as a contempt thereof. A person who without just cause fails or refuses to attend and testify or answer any lawful inquiry or to produce books, papers, or records in obedience to a subpoena of the board shall be punished by a fine of not less than two hundred dollars (\$200) or by imprisonment of not longer than sixty (60) days, or by both. Each day the violation continues is a separate offense and may be punished as such. If a holder of a permit or a certificate of competency violates any provision of this subsection, the board may immediately revoke his or her permit or certificate of competency, and the person shall not thereafter engage in any phase of the liquefied petroleum gas business until he or she has complied with reasonable orders the board may make in connection therewith.

(d) All action taken by the board pursuant to this section is subject to judicial review by the Pulaski County Circuit Court as provided for in the Arkansas Administrative Procedure Act, § 25-15-201 et seq.

(e) An applicant for or holder of a permit may not engage in any phase of the liquefied petroleum gas business covered by the permit during any period of refusal to grant or of revocation by the board,

including the period of the pendency of any appeal from action by the board.

(f) All suppliers of liquefied petroleum gases, containers, and equipment, when notified by the board of a revoked permit, may not legally sell liquefied petroleum gas, containers, or equipment to any person whose permit shall have been revoked.

(g) All fines, penalties, forfeitures, and moneys of all description received by the board shall be deposited in the State Treasury to the credit of the Liquefied Petroleum Gas Fund.

History. Acts 1965, No. 31, § 27; A.S.A. 1947, § 53-726; Acts 1995, No. 477, § § 9, 10.

15-75-322. Shortage emergencies.

(a) The Governor of the State of Arkansas may join with the governor of any other state in declaring a liquefied petroleum gas shortage emergency.

(b) When the declaration is issued, liquefied petroleum gas trucks and operators meeting all certification, permit, and licensing requirements of the federal government and their home state shall be permitted to transport liquefied petroleum gas in and through Arkansas without obtaining any license, permit, or certification by an agency of the State of Arkansas.

(c) The waiver of Arkansas licensing, permitting, and certification laws and regulations regarding liquefied petroleum gas trucks and operators thereof shall be valid only during the time of the emergency.

History. Acts 1991, No. 6, § 1.

15-75-323. Civil penalty.

(a) In addition to any other penalty provided in this chapter, any person who violates any provision of this chapter, or any rule or regulation pertaining thereto, shall pay to the Liquefied Petroleum Gas Board a civil penalty of not more than five thousand dollars (\$5,000) for each offense.

(b) If a person against whom a civil penalty has been imposed by the board fails to pay the penalty, the board may file an action in the Pulaski County Circuit Court to collect the civil penalty.

(c) If the board prevails in the action, the defendant shall be directed to pay, in addition to the civil penalty, reasonable attorney's fees and costs incurred by the board in prosecuting the action.

History. Acts 1995, No. 477, § 11.

15-75-324. Permit application approvals.

All class one (1) permit application approvals must have all prerequisites met and the permit issued within one (1) year of approval by the Liquefied Petroleum Gas Board. If not issued within one (1) year of approval, the application will be returned to the applicant and a new

application must be submitted to the board thirty (30) days prior to the date of the regular meeting at which the application is to be considered.

History. Acts 1999, No. 514, § 4.

SUBCHAPTER 4 — CONTAINERS

15-75-401. Vapor pressure.

15-75-402. Strength of butane containers.

15-75-403. Strength of propane containers.

15-75-404. Inspection.

15-75-405. Use of unapproved containers and systems.

15-75-406. Unlawful use of containers.

15-75-407. Retail sellers to furnish account statements to certain customers.

15-75-401. Vapor pressure.

The vapor pressure of any gases delivered for use in any container shall not exceed, at one hundred degrees Fahrenheit (100°F), the allowable pressure for gas to be used in the container as fixed by the manufacturer.

History. Acts 1965, No. 31, § 16; A.S.A. 1947, § 53-715.

15-75-402. Strength of butane containers.

Each container, except containers designed to operate under refrigerated or cryogenic conditions, where used in the transportation or storage of a liquefied petroleum gas mixture known as butane gas shall be designed and constructed to withstand an internal pressure of not less than one hundred twenty-five pounds (125 lbs.) per square inch.

History. Acts 1965, No. 31, § 16; A.S.A. 1947, § 53-715.

15-75-403. Strength of propane containers.

Each container, except containers designed to operate under refrigerated or cryogenic conditions, where used for the storage or transportation of a liquefied petroleum gas mixture known as propane gas shall be designed and constructed to withstand an internal pressure of not less than two hundred fifty pounds (250 lbs.) per square inch.

History. Acts 1965, No. 31, § 16; A.S.A. 1947, § 53-715.

15-75-404. Inspection.

(a) Each container used for the storage or transportation of liquefied petroleum gases for distribution or resale shall be inspected at least once annually.

(b) Each container which is to be used or connected as a part of a plant or to a system for the utilization of liquefied petroleum gases shall have a state registration tag of approval attached before installation and shall be inspected thereafter at such times and in such manner as may be determined under the rules and regulations of the board.

(c) No bulk or commercial storage container shall be installed or moved and reinstalled at any location prior to approval by the board.

(d) Any inspector of the Liquefied Petroleum Gas Board who, after inspection of any container or system, shall find it unsafe, shall forbid its further use.

History. Acts 1965, No. 31, § 18; 1981, No. 199, § 1; 1985, No. 909, § 2; A.S.A. 1947, § 53-717.

15-75-405. Use of unapproved containers and systems.

(a) No person shall use, install, or operate or cause to be used, installed, or operated any container or system until approved by the board.

(b) No person shall sell, service, or deliver any gases for use in any container or system prior to approval of the containers or system by the board, nor shall any person sell, service, or deliver gases for use in any container or system, the approval of which has been denied by the board.

History. Acts 1965, No. 31, § 20; A.S.A. 1947, § 53-719.

15-75-406. Unlawful use of containers.

(a) If a liquefied petroleum gas container shall bear upon the surface thereof in plainly legible characters the name, mark, initials, or other identifying device of the owner thereof, it shall be unlawful for any person except the owner or a person authorized in writing by him or her:

(1) To fill or refill the container with liquefied petroleum gas or any other gas or compound;

(2) To buy, sell, offer for sale, give, take, loan, deliver, or permit to be delivered, or otherwise use, dispose of, or traffic in any such container; or

(3) To deface, erase, obliterate, cover up, or otherwise remove, conceal, or change any such name, mark, initials, or other identifying device of the owner or to place the name, mark, initials, or other identifying device of any person other than the owner on the container.

(b) The use of liquefied petroleum gas containers by any person other than the person whose name, mark, initial, or device shall be or shall have been upon the liquefied petroleum gas containers, without written consent or purchase of the marked and distinguished liquefied petroleum gas container, for the sale of liquefied petroleum gas or filling or refilling with liquefied petroleum gas, or the possession of the liquefied petroleum gas containers by any person other than the person having his or her name, mark, initial, or other device thereon, without the written consent of the owner, shall be and is declared to be presumptive evidence of the unlawful use, filling or refilling, transition of, or trafficking in the liquefied petroleum gas containers.

(c) Whenever any person or the president, secretary, treasurer, or other officer of any corporation mentioned in subsection (e) of this section or his, her, its, or their authorized agent who has personal knowledge of the facts, shall make oath in writing before any justice of the peace, municipal judge, or other magistrate that the party so making the affidavit has reason to believe and does believe that any of his, her, its, or their liquefied petroleum gas containers marked with the name, initials, mark, or other device of the owner are in the possession of or being used by or being filled or refilled or transferred by any person whose name, initials, mark, or other device does not appear on the containers, and who is in the possession of, filling or refilling, or using any of the containers without the written consent of the owner of the name, initials, or trademark, the magistrate may, when satisfied that there is reasonable cause:

(1) Issue a search warrant and cause the premises designated to be searched for the purpose of discovering and obtaining the containers; and

(2) May also cause to be brought before him or her the person in whose possession such containers may be found and shall then inquire into the circumstances of such a possession. If the magistrate finds that the person has been guilty of a violation of this section, he or she shall impose the punishment herein prescribed, and he or she shall also award the possession of property taken upon the search warrant to the owner thereof.

(d) Any person who shall fail to comply with any of the foregoing provisions of this section shall be deemed guilty of a misdemeanor and upon conviction shall be punished by imprisonment for not more than ninety (90) days or by a fine of not less than twenty-five dollars (\$25.00) and not exceeding three hundred dollars (\$300), or by both fine and imprisonment, for each separate offense.

(e) As used in this section, unless the context otherwise requires:

(1) "Person" means and includes any person, firm, or corporation; and

(2) "Owner" means and includes:

(A) Any person who holds a written bill of sale or other instrument under which title to the container was transferred to the person;

(B) Any person who holds a paid or receipted invoice showing purchase and payment of the container;

(C) Any person whose name, initials, mark, or other identifying device has been plainly and legibly stamped or otherwise shown upon the surface of the container for a period of not less than one (1) year prior to March 12, 1957; or

(D) Any manufacturer of a container who has not sold or transferred ownership thereof by written bill of sale or otherwise.

(f) (1) If a seller of liquefied petroleum gas is unable to

promptly respond to a request for the delivery of liquefied petroleum gas from a person lawfully in possession of a liquefied petroleum gas container bearing upon the surface thereof the name, mark, initials, or other identifying device of that seller, the seller shall immediately authorize in writing some other seller, or sellers, to fill or refill the liquefied petroleum gas container. This authorization, including the name, address, and telephone number of the authorized seller, shall be immediately communicated to any customer of the original seller who inquires regarding the delivery of liquefied petroleum gas.

(2) For the purposes of this subsection, a seller is able to "promptly respond to a request" to deliver liquefied petroleum gas if the seller can complete the delivery within ninety-six (96) hours of the request.

(3) This section shall not apply when a seller of liquefied petroleum gas has determined that:

(A) The gas container in the possession of the person requesting delivery is more than ten percent (10%) full;

(B) Delivery of the liquefied petroleum gas would create a safety hazard because of equipment defects;

(C) The person requesting delivery has failed to pay the seller for a previous delivery of liquefied petroleum gas; or

(D) Credit has not been established with the seller by the person requesting delivery, and the person requesting delivery is unable to pay for the liquefied petroleum gas in full at the time of delivery.

(4) In order to expedite the delivery of liquefied petroleum gas, the required pressure testing by the seller is waived for any delivery of liquefied petroleum gas under this subsection only.

(g) (1) The Director of the Liquefied Petroleum Gas Board may allow a liquefied petroleum gas company to fill or service another liquefied petroleum gas company's container during a declared state of emergency by the Governor if the liquefied petroleum gas company owning the container will not or cannot fill or service the container within twenty-four (24) hours after the request for service by a person or company.

(2) If the director determines that there is an immediate need to fill the liquefied petroleum gas container during the declared emergency, the director may authorize the filling of the container in less than the twenty-four-hour period if the company owning the container will not or cannot fill or service the container in less than the twenty-four-hour period.

(3) To expedite the delivery of liquefied petroleum gas, the required pressure testing by the seller is waived for any delivery of liquefied petroleum gas under this subsection during a declared emergency.

History. Acts 1957, No. 257, §§ 1-5; A.S.A. 1947, §§ 53-730-53-734; Acts 2001, No. 918, § 1. Acts 528, 2009.

15-75-407. Retail sellers to furnish account statements to certain customers.

(a) Each person, corporation, partnership, association, or other entity engaging in the business of selling liquefied petroleum gas at retail in the state shall, within the first twenty (20) days of each calendar month, furnish to each retail customer in the state having a credit balance of twenty dollars (\$20.00) or more a statement of the customer's account showing that credit balance.

(b) The Liquefied Petroleum Gas Board shall see that every propane dealer doing business in the State of Arkansas receives a copy of this section and shall monitor compliance with this section.

(c) The failure of any person, corporation, partnership, association, or other entity to comply with the provisions of this section or the rules and regulations of the board adopted pursuant to the provisions of this section shall constitute grounds for the revocation or suspension of the license or permit of each person or entity to engage in the business of selling liquefied petroleum gas at retail in this state.

History. Acts 1985, No. 247, §§ 1-3; A.S.A. 1947, §§ 53-735—53-737.

GENERAL ORDER

STATE LIQUEFIED PETROLEUM GAS BOARD CODE RULES AND REGULATIONS

1. WAIVER—To the extent permitted by Statute, where the application of a Code rule would be unreasonable under the facts of the particular case, and safety may be obtained in other ways, the Board may, upon adequate showing by the person affected, grant exemption or modification of the rule complained of under such requirements as will secure a reasonable condition of safety, provided such exemption or modification be not in conflict with the law.

2. DEFINITIONS—In the application of the rules and regulations of this Code, the terms "Liquefied Petroleum Gases", "Liquefied Petroleum Gas System", "Container", "Appliance", "Manufacturer", "Jobber", "Dealer", "Vendor", and "Person" shall be construed to mean the same as defined by Act 31, Ark. Acts of 1965 (Ark. Stats. [1965]. Section 53-714).

3. LIQUEFIED PETROLEUM GASES—REFINERIES

A. Liquefied Petroleum Gases sold for use in the State shall comply with specifications as published by the Natural Gasoline Association of America.

B. The refineries shall furnish the distributor with a delivery slip showing the vapor pressure of the gas at 100 degrees Fahrenheit and

specific gravity of the gas at 60 degrees Fahrenheit for every load of gas sold to the distributor.

- C. No container shall be filled or partially filled at the loading station of a refinery with a gas with higher vapor pressure at 100 degrees Fahrenheit than that for which the container is constructed and stamped on the container, and shall not be filled in excess of 90 percent of the water gallon capacity, as shown on the name plate or by the strapping on the tank.

4. RESERVED FOR FUTURE LEGISLATION.

5. SAFETY SUPERVISORS.

- A. Each dealer or company who has been issued a Class 1 Permit shall have in his full-time employ a person who shall be designated the Safety Supervisor to have charge of the company's Safety Operations. The person assigned this position shall be required to have a general knowledge of the characteristics of Liquefied Petroleum Gases, as well as its proper handling and utilization, along with a thorough knowledge and understanding of the National Fire Protection Association Pamphlet No. 58 and the State LP Gas Code, covering the storage and handling of Liquefied Petroleum Gases. Proof of such person's competency shall be evidenced by a written or oral examination, indicative as to the knowledge required to engage safely in the handling of Liquefied Petroleum Gases, as well as the regulations governing such operation.

6. PROBATION OF PERMIT HOLDERS OR HOLDERS OF CERTIFICATES OF COMPETENCY.

- A. In the event the Board should find violations of the LP Gas laws or the rules and regulations which do not merit revocation or suspension, the Board may in its discretion place such Permit holder or holder of a certificate of competency upon probation for a period not to exceed one (1) year, during which time the Board or its representative shall investigate in order to ascertain whether or not the violation complained of has been corrected or terminated, and not repeated.

7. LIQUEFIED PETROLEUM GAS PERMIT HOLDERS.

- A. After the expiration of the Permit fee payment date, which has been set by law as January 1st, any dealer continuing in operation without payment of the fee as required shall be considered as operating in violation of the law, and the Board may or may not issue a Permit, as in their judgment they decide.

- B. Dealers shall report to the office of the Director the explosion of any Liquefied Petroleum Gas container.
- C. All Liquefied Petroleum Gas containers must be purchased from a manufacturer who has been issued a Permit by the Board. A list of such manufacturers will be furnished upon request. No person shall use or install, or cause to be used or installed in this State any container upon which the applicable fee has not been paid and which does not have the State tag of approval attached.
- D. Applicants for Certificate of Competency through Liquefied Petroleum Gas examination must present proof of satisfactory previous on-the-job training to the Liquefied Petroleum Gas Board before they shall be allowed to participate in an examination. Minimum period of training for liquefied petroleum gas installation personnel and liquefied petroleum gas transport & delivery truck operators or drivers shall be not less than thirty (30) days. Any applicant participating in a liquefied petroleum gas examination who fails to obtain a passing grade shall not be eligible for re-examination for at least thirty (30) days. In the event applicant fails to obtain a passing grade on the second examination, a period of ninety (90) day will be required before participating again in another similar examination. In the event the applicant should fail to make a successful grade on the third examination, a period of not less than one (1) year will be required before re-examinations. Certified personnel who have not been employed for one year or more by a dealer who has been issued a current permit will be required to be recertified through a current written or oral examination. (The issuance of a temporary Certificate of Competency is prohibited.)

8. DEALERS' AREA OF OPERATION.

- A. No dealer shall sell or offer for sale Liquefied Petroleum Gas or conduct Liquefied Petroleum Gas operations of any type in any area or location not shown on and authorized by a current Permit.
- B. Each holder of a Class 5 permit with a customer outside the area of the Class 1 dealer for which the Class 5 permit holder delivers shall, receive written authorization from the board for each customer outside the Class 1 dealer's area. This provision shall apply to only those Class 5 permit holders with customers outside the area of the Class 1 dealer as of March 31, 1995.

Each Class 5 permit holder shall submit to the board adequate proof of each customer outside their Class 1 dealer's area. Such proof shall be that which is sufficient to establish to the board's satisfaction that the service existed on or before March 31, 1995. The Board shall consider only such proof as establishes a customer relationship in the twelve-month period immediately preceding the March 31, 1995 deadline.

After March 31, 1995, each Class 5 permit holder must apply for and acquire a Class 1 permit for any customer outside the area of the Class 1 dealer for which they deliver.

Any Class 5 permit holders who were formerly, but are not currently, serving customers outside the area of a Class 1 dealer, must apply for and be granted a Class 1 permit if they desire to resume service to such customers.

9. REPORT OF INSTALLATION.

A. Dealers shall forward to the Board on an approved type form not later than the 15th of each month, a Report of Installation covering each container and system installed during the preceding month. For Report of Installation covering public buildings see Section 19, Par. F.

10. CONTAINERS.

A. Design and Construction

(1) All containers, except containers designed to operate under refrigerated or cryogenic conditions, in which liquefied petroleum gases are stored and/or transported or in which liquefied petroleum gases are placed for utilization through a liquefied petroleum gas system, shall be constructed to comply with the provisions of the latest edition of Section VIII, ASME Boiler Construction Code. All vessels shall be constructed for a safe working pressure of not less than 250 PSIG. For motor fuel containers mounted on automobiles, buses, industrial and forklift trucks, see Section 13, Par. A. (1).

EXCEPTIONS—Vessels, except those designed to operate under refrigerated or cryogenic conditions, used for commercial fuel purposes located at cotton gins, rice dryers, and rice wells, and vessels used for any other stationary fuel purposes, underground installation where permitted, vessels used in connection with a vaporizer, and vessels used exclusively for the storage and/or transportation of Butane, may be constructed for a safe working pressure of not less than 125 PSIG. The safety valves on all containers must be set to start to discharge at the maximum allowable working pressure of the container. A plus 10% tolerance will be permitted.

(2) Blueprints showing the type or types of all containers shall be filed with the Board for approval before shipment is made into the State.

(3) REFRIGERATED OR CRYOGENIC STORAGE OF LIQUEFIED PETROLEUM GASES—All

plans and specifications covering the storage of Liquefied Petroleum Gases aboveground or underground under refrigerated or cryogenic conditions shall be submitted to the Board for review and approval prior to installation.

The location or site for the storage of Liquefied Petroleum Gases aboveground or underground under refrigerated or cryogenic conditions shall be examined and approved by a representative of the Board prior to installation.

B. Shop inspection shall be made of all containers during construction by a duly authorized inspector who holds a National Board Commission, and who is employed by an insurance company, state, or municipality.

C. EXCEPTION: Small containers of thirty (30) water gallon capacity, or less, may be constructed to comply with the regulations of the United States Department of Transportation (DOT) covering containers used for the storage of liquefied petroleum gases. Such containers shall be constructed for a pressure of not less than two-hundred and forty (240) pounds per square inch, shall be used only for the storage of a liquefied petroleum gas mixture known as Propane. These small containers shall be filled only by weight at approved central filling stations, the amount of gas placed in a container to be determined by weighing in accordance with the appropriate densities given in Table No. 4, page 93, of these regulations. (Department of Transportation [DOT] formerly Interstate Commerce Commissions [ICC].)

Larger DOT containers are approved for domestic use, but, must be filled on the customer's premise. DOT containers larger than thirty (30) water gallon capacity are not to be transported for filling. These stationary DOT containers must be set the proper distance from a building according to distance chart outlined in rules and regulations.

All DOT cylinders using liquefied petroleum gases shall be maintained and inspected in compliance with DOT requirements. (For location of bottle filling plants, see Section 17.)

DOT forklift cylinders may be filled by volume rather than weight, if, so equipped and designed for filling by volume .

The volumetric method shall be permitted to be used for the following containers if designed and equipped for filling by volume:

(a) DOT specifications cylinders of less than 2001b (91 kg) water

capacity that are not subject to DOT jurisdiction (such as, but not limited to, motor fuel containers on vehicles not in interstate commerce or cylinders filled at the installation).

(b) DOT specification cylinders of 2001b (91 kg) water capacity or more. (*See DOT regulations requiring spot weight checks.*)

(c) Cargo tanks or portable tank containers complying with DOT Specifications MC-330, MC-331 or DOT 51.

(d) ASME and API-ASME containers complying with the latest edition Pamphlet No. 58, National Fire Protection Association.

4-4.3.3 When the volumetric method is used, it shall be in accordance with the following:

(a) If a maximum fixed liquid level gauge, or a variable liquid level gauge without liquid volume temperature correction is used, the liquid level indicated by these gauges must be computed on the basis of the maximum permitted filling density when the liquid is at 40°F (4.4°C) for aboveground containers or at 50°F (10°C) for underground containers.

(b) When a variable liquid level gauge is used and the liquid volume is corrected for temperature, the maximum permitted liquid level shall be in accordance with Table 4.

(c) Containers with a water capacity of 2,000 gal (7.6 m³) or less, filled at consumer sites, shall be gauged in accordance with the following:

(1) The variable gauge shall have been checked for accuracy by comparison with the liquid level indicated by the fixed maximum liquid level gauge.

(2) If the container is to be filled beyond the level indicated by the fixed maximum liquid level gauge, the reading of the variable gauge, adjusted for the error indicated by the check with the fixed maximum liquid level gauge, shall be corrected for the LP-Gas liquid temperature.

Exception: Containers fabricated on or before December 31, 1965, shall be exempt from this provision.

When containers are to be filled volumetrically by a variable liquid level gauge, provisions shall be made for determining the liquid temperature.

FILLING OF DOT FORK LIFT CYLINDERS FROM A DELIVERY TRUCK IS PROHIBITED.

- (1) TRANSPORTATION OF DOT CYLINDERS - Containers having an individual water capacity not exceeding 45 lbs. (LP Gas capacity) transported in open vehicles may be transported in other than the upright position.

One Hundred pound (LP Gas capacity) cylinders shall not be transported in the trunk of an automobile or in any vehicle unless it can be transported in an upright manner with the vapor space in communication with the safety relief device.

D. All containers shall have the manufacturer's name plate firmly attached to the container, designating the manufacturer's serial number, maximum allowable working pressure, year built, diameter, length, shell and head thickness, and capacity in water gallons.

On underground containers, the manufacturer's name plate shall also be attached in a firm manner in the dome cover, as well as on the tank itself.

E. All containers, except storage, shall be fully equipped by the manufacturer with the required fittings, and all connections tested under air pressure of not less than 75 psi gauge. Air pressure of not less than 25 psi gauge or more than 75 psi gauge shall be left in the container when shipment is made into the State by the manufacturer or jobber, and this information shall be included in the report of shipment provided for in the following paragraph.

F. Manufacturers and jobbers shall forward to the Board notice of shipment and manufacturer's data report, together with the applicable fee, for each container on the same day that shipment of container is made into the State.

G. All containers constructed for domestic, fuel, or commercial use, equipped with liquid and vapor outlets, shall have the liquid and vapor outlets plainly marked with the words "LIQUID" and "VAPOR" on a permanent plate in letters not less than three-sixteenth (3/16) inch in height, this plate to be attached to the tank as near the liquid and vapor outlet valves as possible, or to the valve connections at the time the valves are installed. When a connection is provided for liquid transfer purposes, this connection must be equipped with both an excess flow check valve and a liquid shutoff valve.

H. Containers with foundations attached (portable or semiportable containers with suitable steel "runners" or "skids" and popularly

known in the industry as "skid tanks") shall be equipped with skids not less than two (2) inches or more than twelve (12) inches below the outside bottom of the container shell.

- (1) When connected to the piping, and not permanently located on fire resisting foundations, such connections shall be sufficiently flexible to minimize the possibility of breakage or leakage of connections if container settles, moves, or is otherwise displaced.
- (2) Skids, or lugs for attachment of skids shall be secured to container in accordance with the code or rules under which the container is designed and built (with a minimum factor of safety of four) to withstand loading in any direction equal to four times the weight of the container and attachments filled to the maximum permissible loaded weight.
- (3) Field welding where necessary shall be made only on saddle plates or brackets which were applied by the manufacturer of tank.

11. FITTINGS AND ASSEMBLING

- A. All fittings, such as hand shutoff valves, filler valves, vapor return valves, excess flow check valves, or other type fittings that may be attached to liquefied petroleum gas containers, shall have their correctness as to design, construction, and performance certified as follows: Tested and listed as approved for use with Liquefied Petroleum Gases by the Underwriters' Laboratories, Inc., or approved through test by any other competent Laboratory recognized by the Liquefied Petroleum Gas Board and copy of test reports on file with the Board. All such fittings shall be constructed for a safe working pressure of not less than 250 psi.
- B. Couplings and internally threaded fittings or equivalent bolting pads not exceeding three (3) inch pipe size may be attached to vessels having a wall thickness not greater than 3/8 inch by a fillet weld deposited from the outside only, having the minimum dimensions as required by Section VIII of the ASME Code. The use of nipples in lieu of couplings or flanges is prohibited. Stand pipes where used on containers may be welded from one side, in which case the shell of the vessel shall be beveled to assure full penetration and the weld adequately reinforced, as required by Section VIII of the ASME Code.

- C. Water drain flanges and plugs when used on small underground containers shall be placed at the top of the container.
- D. Unions with gaskets shall not be used where the pressure exceeds forty (40) pounds per square inch.
- E. All couplings, flanges, stand pipes, adapters, or any other connections attached directly to the container itself by welding and subjected to tank pressure, shall be at least extra heavy.
- F. Aboveground containers thirty-one (31) gallon capacity to one hundred fifty-one (151) gallon capacity, used for domestic service, may be equipped with individual fittings or compact heads. If compact heads are used, they shall have not less than a 1-inch pipe thread connection for attaching to the container. All such containers shall be equipped with a filler valve, service line valve, pressure relief valve, fixed outage gauge, and liquid level gauge.
- G. Aboveground containers, thirty-one (31) gallon capacity to one hundred fifty-one (151) gallon capacity, equipped with individual fittings shall have the same fittings attached as those contained in the compact head described in Paragraph F. If equipped with a vapor and liquid outlet valve, the valve shall be of the same type and marked as outlined in Section 10, paragraph G. The fittings shall be screwed directly into the couplings. The use of nipples is prohibited.
- H. All underground containers shall be equipped with compact heads. The diameter of the riser pipe (or pipes) shall be comparable to the size fittings used, with no reductions. Containers installed underground shall be so placed that the top of the container is not less than two feet below the normal surface of the ground, except for approved underground/ aboveground (UG/AG) containers marked as such in accordance with the Manufacturer's Name Plates and Markings on ASME Containers, which may be installed not less than six inches below grade from the top of the UG/AG container. All containers shall be protected against mechanical injury if the container is subject to vehicular traffic. Aboveground containers, one hundred fifty-one (151) gallon capacity and over, used for domestic service, may be equipped with compact heads or individual fittings. The diameter of the riser pipe (or pipes) shall be comparable to the size fitting used, with no reductions, and not more than six (6) inches in height. Compact heads for either aboveground or underground containers of one hundred fifty-one (151) gallon capacity, and over shall be equipped with a filler valve, service line valve, vapor return valve, pressure relief valve, pressure gauge, fixed outage gauge, and liquid level gauge. The pressure gauge shall

be graduated to not less than one and one-half (1 1/2) times the designed working pressure on the container, but need not exceed 300 PSI.

- I. Aboveground containers having a capacity of one hundred and fifty-one (151) gallons, or over, used for domestic service, may be equipped with individual fittings or compact heads. If equipped with individual fittings, they shall have the same type fittings attached as those included in the compact head, as outlined in Paragraph H. If equipped with a liquid outlet valve, the valve shall be of the same type and marked, as outlined in Section 10, Paragraph G. The fittings shall be screwed directly into the couplings. The use of nipples is prohibited.

All above ground type containers supplying gas in the vapor phase directly from the tank for domestic service shall be constructed to comply with the provisions of the latest edition of Section VIII, ASME Boiler Construction Code, and shall be constructed for a safe working pressure of not less than 250 pounds.

- J. Safety relief valves on all containers shall have direct communication with the vapor space of the container with the discharge of the valve upward wherever practicable, and shall be set to start to discharge as follows:

CONTAINER	MINIMUM	MAXIMUM
ASME U-68 or U-69	100%	125%
ASME 1950 or later edition	80%	100%

EXCEPTION: Containers of thirty (30) water gallons, or less, which are under the jurisdiction of the Department of Transportation (formerly ICC), may be equipped with safety valves installed in accordance with the regulations of the Bureau of Explosives.

- K. Containers to be used for commercial or domestic purposes shall be equipped by the manufacturer with a regulator of sufficient size to supply adequately the gas consuming appliances at the maximum output of the container. All containers used for domestic and commercial purposes and first stage regulating equipment shall be located as set forth in the table given in Section 17, paragraph T.
- L. Each regulator shall be installed on a true or inclined vertical plane with the outlet at the bottom, or in some other such manner, to prevent any condensation or accumulation of a substance of a foreign nature that might exist from coming in direct contact with regulator diaphragm. Containers and/or fittings shall be so designed as to eliminate the possibility of liquid being drawn

into or entering the house or service line outlet during the filling operation.

M. For domestic use, no excess flow valve will be required in the vapor withdrawal service line PROVIDED:

- (1) The total water capacity of the system does not exceed 1200 U.S. Gallons.
- (2) The discharge from the service outlet is controlled by a suitable manually operated shutoff.
 - (a) Threaded directly into the service outlet of the container, or
 - (b) Is an integral part of a substantial fitting threaded into, or on, the service outlet of the container, or
 - (c) Threaded directly into a substantial fitting threaded into, or on, the service outlet of the container.
- (3) The shutoff valve is equipped with an attached handwheel, or the equivalent.
- (4) The controlling orifice between the contents of the container and the outlet of the shutoff valve does not exceed five sixteenths (5/16) inch in diameter.

N. No excess flow valve shall be required in the vapor or liquid withdrawal line on containers mounted on or transported by farm tractors or other type farm vehicles where used for the purpose of flame cultivation or the destruction of obnoxious weeds, grasses, etc., **PROVIDED:**

- (1) Such containers total water gallon capacity is not in excess of 500 U.S. Gallons.
- (2) The discharge from the withdrawal outlet is controlled by an approved manually operated shut-off valve, threaded directly into the outlet of the container.
- (3) The shut-off valve is equipped with an attached handwheel or the equivalent.
- (4) The controlling orifice between the contents of the container and the outlet of the shut-off valve does not exceed 5/16 inch in diameter for vapor withdrawal and 1/8 inch in diameter for liquid withdrawal.

- (5) An approved pressure-reducing regulator is directly attached to the outlet of the shut-off valve by rigid connection, or an approved pressure-reducing regulator is attached to the outlet of the shut-off valve by means of a suitable flexible or rigid connection not in excess of 6 inches in length. Where flexible connection is used, pressure-reducing regulator shall be adequately supported. On containers of 150 gallons capacity or less, the regulator may be installed at a location other than the outlet of the shut-off valve providing it is adequately supported and not exposed or subjected to undue stress.
- (6) Hand shut-off valve for liquid withdrawal is so designed that in the event the valve is sheared from the container there will be no loss or flow of gas from the container in excess of that permitted through an opening of #54 drill size.
- O. All dip or evacuation tubes shall be welded, or screwed and seal welded to the fitting as a precaution against leakage.
- P. Underground containers shall be painted by the manufacturer at the shop with one coat of red lead, or equivalent, in a color other than black. Aboveground containers shall be painted with a light reflecting color equivalent to white or aluminum paint.

12. TANK TRUCKS CONSTRUCTION AND ASSEMBLY

The following paragraphs, A to Z, inclusive, apply to the construction and assembly of tank trucks used for transportation and delivery of liquefied petroleum gases:

- A. Blueprints of the design of all containers to be used on delivery and transport trucks, showing location of pump, meter, fittings, baffles, piping arrangement, mounting details, etc., shall be submitted to the Board for approval before the container is constructed.
- B. Each container to be mounted on a delivery truck, transport, or trailer shall be equipped with suitable baffle plates and shall be attached in such manner as to allow for any expansion or contraction of shell plates under internal pressure due to any out-of-roundness. All containers used for transportation and delivery of liquefied petroleum gases shall have the safety valves installed in the top center line of the container shell; and when of the external type, they shall be recessed to a sufficient depth that no part of the valves will extend above the shell of the container. The safety valves shall have direct

communication with the vapor space of the container. The safety valve recesses shall be protected from rain and snow with a loose fitting cover. Provisions shall be made to prevent the covers from being held down against the recesses, thus obstructing or decreasing the flow rate of the valve in the event a truck overturns and comes to rest on the top portion of the tanks. If internal type valve is used, the sump or recess may be eliminated provided the distance between the top of the tank shell and the highest point of the valve does not exceed 2¹/₂ inches and that the valve is fully protected by a metal ring of not less than three-eighths (3/8) inch plate material. All safety valves must have sufficient relieving capacity as required by National Board of Fire Underwriters for the size tank on which they are to be installed.

- C. Adequate protection consisting of a permanent fixture without hinges shall be provided for all fittings extending above the shell of the container.

Fittings shall not be installed in the ends of the tank between the tractor and the tank on trailers and semi-trailers, but shall be located at the rear or the bottom portion of the container at a distance from the front of the container of not less than one-third (1/3) the length of the container. Fittings such as liquid level gauges (rotary or float), fixed outage gauge, pressure gauge, and thermometer may be located in the side of the container at a distance from the front of the container of not less than one-third (1/3) the container length, providing the fittings are recessed to the extent that no portion of the fittings extends beyond the outer surface of the shell or recess.

- D. All piping shall be installed in a straight line as nearly as possible with a minimum amount of pipe, and shall not be restricted by an excessive amount of elbows and bends. The piping between the excess flow valve and the pump shall not be reduced in size. The pipe must be of the same size as the outlet of the excess flow valve. All piping, tubing, and fittings shall be securely mounted and protected against damage and breakage, and shall be at least extra heavy to the first hand shutoff valve. All piping shall be at least extra heavy (Schedule 80) if joints are threaded, or threaded and back welded. At least single strength (Schedule 40) shall be used if joints are welded, or welded and flanged.
- E. Fittings located on the bottom of tank trucks, trailers, and semi-trailers shall be adequately guarded and protected from mud and other foreign objects that might be thrown from the roadbed.

F. Twin or multiple installation of tanks on trucks, trailers, and semitrailers shall have flexible connections installed in the liquid and vap manifolds between the tanks. All trucks equipped with a pump shall have a flexible connection between the tank and pump, unless the pump is attached directly to the tank outlet by the use of a flanged connection welded to the container. The flexible connection shall be of an approved type, and where hose is used for this purpose it shall consist of a hose with a minimum bursting pressure of not less than twelve hundred fifty (1250) PSI. There shall be etched, cast, or impressed on the hose at 5 foot intervals, or on a name plate permanently attached thereto, the following information:

L. P. G.
Bursting Pressure
Manufacturer's Name or Trade-Mark Year of Manufacture

G. All containers attached to delivery or transport trucks by the use of saddles with metal bands for holding the containers in place shall have belting or other fibrous, resilient material of not less than one-fourth (1/4) inch in thickness installed between the tank and the cradle, or saddle, supports.

H. A safety relief valve shall be installed between each pair of shut off valves on all liquid lines to relieve into a safe atmosphere any excess pressure that may exist. The start-to-discharge pressure shall not be less than 400 PSIG or in excess of 500 PSIG.

I. A hand shut off valve shall be installed as close as possible to the tank on all liquid and vapor lines, and shall be easily accessible to the operator at all times.

J. All manually operated valves on delivery and transport trucks shall be so located that the operator can close them conveniently.

K. Metallic connection shall be made between tank, chassis, axles, and springs.

L. Pumps of suitable design and properly protected shall be provided for all liquefied petroleum gas containers used for delivery purposes and may be driven by the truck motor power take-off or explosion proof internal combustion engine, hand, hydraulic, or explosion-proof type electric motor. The pump shall be equipped with suitable pressure actuated bypass valve permitting flow from pump discharge to pump suction before the pump discharge pressure rises above the safety relief valve

setting of the tank being filled. Pump discharge shall also be equipped with a spring-loaded safety relief valve, which shall be set to discharge at a pressure in excess of the setting of the pressure actuated bypass valve at the pump. When pumps are mounted on containers for transport service, they shall be mounted in the same manner as those used for delivery purposes.

- M. The pump shall be mounted on the chassis of the truck or trailer at a location where it can be under the observation of the operator while being used.
- N. In all cases where the pump extends below the chassis of the truck, it must be adequately protected.
- O. All trucks delivering liquefied petroleum gases for domestic use shall be equipped with a suitable measuring device which shall be used to gauge accurately the amount of gas placed in each system, either by meter or by weight. When meters are used, they must be equipped with a constant differential back pressure valve, regardless of make of meter. The spring setting on the valve shall be not more than 15 pounds.
- P. The bottom of all containers mounted on delivery and transport trucks in contact with the saddle supports shall be painted with at least two (2) coats of red lead, or its equivalent, before the containers are installed in the saddle supports.
- Q. All containers used for delivery and transport purposes shall be painted with white or aluminum paint, or any other light-colored paint with equivalent heat-reflective characteristics. The word "FLAMMABLE" shall be painted in red letters at least six (6) inches in height on both sides and rear of tanks. This regulation shall apply to all new installations and to containers now in service when tanks are repainted and relettered.
- R. Dealers shall be required to paint the name of their company, and a company number in letters not less than four (4) inches in height on both sides of trucks and semitrailers.
- S. A suitable "stop" or "stops" shall be mounted on the truck, semi-trailer, or trailer, or on the container, in such a way that the container shall not be dislodged from its mounting due to the vehicle coming to a sudden stop. Back slippage shall also be prevented by proper methods. A suitable "hold down" device shall be provided which will anchor the container at one or more places on each side of the container to the truck, semitrailer or trailer frame so as to minimize loosening caused by vibration.

- T. Tank trucks, tank trailers, and tank semi-trailers, shall not be equipped with any artificial light other than electricity. Lighting circuits shall have suitable over-current protection (fuses or automatic circuit breakers); the wiring shall have sufficient carrying capacity and mechanical strength and shall be suitably secured, insulated, and protected against physical damage.
- U. Each delivery or transport truck shall be equipped with suitable side lights, tail lights, and stop light.
- V. All trailers shall be firmly and securely attached to the vehicle drawing them by means of suitable drawbars. Every trailer or semi-trailer shall be equipped with a reliable system of brakes, and adequate provision shall be made for efficient operation from the driver's seat of the vehicle drawing the trailer. Every trailer or semi-trailer shall be provided with side lights, tail light, and stop light. Four-wheeled trailers shall be of a type of construction which will prevent the towed vehicle from whipping or swerving from side to side dangerously or unreasonably, but will enable it to follow substantially in the path of the towing vehicle.
- W. Where a fifth wheel is employed, it shall be ruggedly designed, securely fastened to both units, and equipped with a positive locking mechanism which will prevent separation of the two units, except by manual release.
- X. The exhaust system, including muffler and exhaust line, shall have ample clearance from the fuel system and combustible materials. Truck muffler and exhaust pipe shall be placed as far as practicable from any tank valves, pumps, or piping. Muffler cutout shall not be used.
- Y. Each tank truck and trailer shall be provided with properly attached metal bumpers or the chassis extension shall be so arranged as to protect the tank, piping, valves, and fittings in case of collision.
- Z. Tank trucks and trailers owned and operated by dealers holding permits and having previously been approved by the Liquefied Petroleum Gas Board may be allowed to remain in service, but in the event such truck tank or trailer is shopped for major repairs, it shall be equipped to meet all of the requirements of this Code.

13. FUEL TANKS AND VAPORIZERS

The following paragraphs, A to Y, inclusive apply to the design, construction and assembly of motor fuel containers and vaporizers

mounted on motor vehicles such as automobiles, trucks, buses, pick-ups, forklifts and other type vehicles or mobile equipment.

(FUEL TANKS)

- A. Fuel containers mounted on trucks, tractors and all other mobile or portable equipment (except automobiles, buses, industrial and folk-lift trucks) shall be constructed in compliance with Section 10, Par. A, and shall be constructed for a safe working pressure of not less than 250 PSIG.
- (1) Motor fuel containers mounted or installed on automobiles, industrial and forklift trucks, and all buses having a seating or carrying-capacity of six (6) or more passengers, shall be designed for a safe working pressure of not less than 312 PSIG.
 - (2) The use of liquefied petroleum gas for the direct heating or air conditioning of any automobile, truck cab, bus, etc., is strictly prohibited. It is not the intent of this rule to prevent the use of liquefied petroleum gas for the purpose of heating or cooling the cargo portion of a truck, transport, or trailer.
 - (3) All motor fuel containers mounted on motor homes, campers or similar type vehicles shall be used exclusively for the supply of liquefied petroleum gas to the engine of the vehicle upon which it is mounted or installed. There shall be no other attachments or lines extending from the container, nor shall said container be used for the supply of fuel to any appliance within the vehicle. All gas consuming appliances installed for use by the vehicle shall be supplied fuel from a separate container designed and constructed for vapor service only.
 - (4) Each container for installation or mounting on motor vehicles shall be designed and fabricated, along with proper and adequate mounting brackets by the manufacturer of the container, for the type installation or service intended, and shall be installed or mounted in accordance with the manufacturers specifications or requirements. Each set of mounting brackets not permanently attached to the container shall bear the manufacturer's name, initials, mark, or other identifying device, permanently and legibly stamped upon each bracket indicating the brackets are intended for use with said container.
- B. Motor fuel containers shall be equipped with safety relief valve, filler valve, shut-off valve, fixed outage gauge, and a liquid level gauge of one of the following types: Slip tube, rotary, or visible float. If the container is to be equipped with both vapor and liquid outlets, the liquid outlet shall be marked as outlined in Section 10, Par. G. All

openings exceeding No. 54 drill size, except safety relief valves, shall be equipped with an excess flow check valve.

- (1) All motor fuel containers for installation on buses shall have an automatic device incorporated into the fill connection to prevent overfilling of the container.
- C. No single fuel container used exclusively for supplying fuel to the motor of a delivery truck, transport, or bus shall exceed one hundred (100) water gallon capacity.
- D. No single fuel container used exclusively for supplying fuel to the motor of a passenger automobile shall exceed thirty-five (35) water gallon capacity.
- E. The use of a D.O.T. cylinder or container for a fuel tank on mobile equipment operating over public thoroughfare is prohibited.
- F. Fuel may be used from the cargo containers of a delivery truck, but not from the cargo containers on trailers or semi-trailers. Where fuel tanks commonly referred to as saddle tanks are used to supply fuel to the engine, there shall be no piping, hose, or other connection between the cargo container and the saddle tanks while the unit is in operation.
- G. Fuel container shall be located in a place and in a manner such as to minimize the possibility of mechanical injury. Containers located in the rear of trucks, cars, and buses, when protected by substantial bumpers will be considered in conformance with this requirement.
- H. Fuel containers shall be installed with as much clearance as practicable but never less than the minimum normal road clearance of the vehicle under maximum load conditions. This minimum clearance shall be to the bottom of the container or to the lowest fitting on the container or housing, whichever is lower.
- I. Fuel containers may be permanently installed or may be removable, provided proper anchorage is assured.
- J. Fuel containers shall be adequately secured to the vehicle to prevent jarring-loose, slipping, or rotating; and the mounting attachments shall be designed and constructed to withstand without deformation static loading in any direction equal to four (4) times the weight of the container filled with fuel. Field welding where necessary, shall be made only on saddle plates, lugs, or

brackets originally attached to the container by the manufacturer.

- K. Fuel containers from which gas is to be withdrawn only in gaseous phase shall be installed and equipped with suitable valves and connections to prevent the accidental withdrawal of liquid.
- L. Valves and connections shall have a rated working pressure of at least two hundred fifty (250) pounds per square inch gauge and shall be of a suitable type for liquefied petroleum gas service.
- M. The filling connection shall be fitted with an approved combination back-pressure check valve, and excess flow valve; one double or two single back pressure check valves; or a positive shutoff valve, in conjunction with either an internal back-pressure check valve or an internal excess flow valve. Main shutoff valve adjacent to the tank on liquid and vapor lines shall be accessible at all times.
- N. All connections to fuel containers, having openings for the flow of gas in excess of a No. 54 drill size, except safety relief device connections, shall be equipped with approved automatic excess flow valve or their equivalent (except in the case of filling connections, which may be equipped with an approved automatic back pressure check valve) to prevent discharge of contents in case connections are broken.
- O. All piping from the fuel container to first stage regulator, shall be type K or L seamless copper tubing; its equivalent, or stainless steel wire braid hose with a minimum bursting pressure of 1750 PSIG (35 PSIG working pressure) and shall be properly marked at not more than 5-foot intervals. Fuel lines shall be adequately supported and protect against mechanical injury, vibration, strain, or wear; and to eliminate any working loose while in transit.
 - (1) Where fuel line passes through the bed, truck, floor or other metallic or structural portion of a motor vehicle, a bulkhead, rubber grommet, or other type fitting shall be used to prevent the possibility of chafing or other wear to the line.
- P. Fuel lines shall not be installed in close proximity to sources of extreme heat unless adequately insulated. Fuel lines installed on automobiles and buses shall be of stainless steel wire braid hose, meeting the requirements of Par. O. Hydrostatic relief valve designed to relieve the hydrostatic pressure should be installed in the fuel line where liquid fuel may be isolated or trapped between closed shut-off valves. The start-to-discharge pressure shall not be less than 400 PSIG or more than 500 PSIG.

Q. Motor fuel containers installed on passenger-carrying vehicles (except buses) shall be installed and fitted so that no gas from fueling and gauging operations, or from relief valves, can be released inside the passenger or luggage compartment, or within any space containing radio equipment. The discharge from relief valve shall be piped to the outside and directed upwards in such a manner as to minimize the possibility of gas impingement on other vehicles or objects.

(1) Relief valve discharge on containers installed on buses and other type vehicles having skirting, panels or similar design, shall be located in such manner as to minimize the possibility of impingement of escaping gas upon a container, vehicle parts, or other vehicles or objects. The relief valve discharge shall terminate outside the skirting or paneling of the unit in an upward direction.

(2) Safety relief valve discharge lines shall be metallic (other than aluminum tubing) and shall be sized, located and secured in such manner as to not obstruct or restrict discharge capacity. Flexible metal hose or tubing when used, shall be able to withstand the pressure from the relief valve discharge when the valve is in the full open position. The end of the discharge piping shall be equipped with a loose fitting rain cap or other suitable type device to eliminate the entrance of water, dirt, or other foreign matter into the piping or valve. The cap or device shall remain in place except when the relief valve is in operation and shall not interfere or restrict full flow or function of the valve.

R. Containers that are to be used for mobile fuel purposes, regardless of size, shall be equipped with individual fittings; the use of domestic compact head is prohibited.

(VAPORIZERS-Motor Fuel)

S. All vaporizers used in connection with liquefied petroleum gas as a fuel shall have their correctness as to design, construction, and performance certified as follows: Tested and listed as approved by Underwriters Laboratories, Inc., or approved by test by any other competent laboratory recognized by the Liquefied Petroleum Gas Board.

T. Vaporizers and any part thereof, and other carbureting devices, which may be subjected to full container pressure shall have a designated working pressure of at least two hundred fifty (250) pounds per square inch gauge.

- U. Each vaporizer shall have a valve or suitable drain plug located at or near the lowest portion of the section occupied by the water or other heating medium, which will put substantially complete draining of the vaporizer.
- V. Vaporizers shall be securely fastened to the vehicle body or to the engine in such manner as to minimize the possibility of their becoming loosened by vibration or impact.
- W. Each vaporizer shall be permanently marked at a visible point as follows:
 - (1) With the designed working pressure in pounds per square inch.
 - (2) With the water capacity of the gas-containing portion of the vaporizer in pounds.
- X. Approved automatic pressure reducing equipment shall be installed between the fuel supply container and gas air mixer for the purpose of reducing the pressure of the liquefied gas coming to the gas air mixer.
- Y. An approved automatic shutoff valve shall be installed in the fuel system at some point ahead of the inlet of the gas regulator designed to prevent the flow of fuel to the gas-air mixer when the engine is not running. Automatic type regulators (zero governors) shall not be considered as automatic shutoff valves except for portable engines of 12 horsepower or less with magneto ignition and used exclusively outdoors.

14. TANK TRUCKS-OPERATION.

- A. No liquefied petroleum gases shall be transferred from one container to another or from another vehicle to a motor vehicle on any public highway, street, or road except in case of emergency. This shall not prohibit the fueling of machinery or vehicle in road construction or maintenance.
- B. Smoking by truck drivers or their helpers shall not be permitted while they are driving their trucks on the road, while they are making deliveries, filling truck tanks, or making any repairs to trucks.
- C. No repairs shall be performed on any tank truck whether loaded or empty unless such repairs can be made without hazard.
- D. No repairs shall be performed on a tank truck, container, nor any tank used for fuel of whatsoever nature requiring the use of

flame, arc, or other means of welding unless the tank or compartment shall first have been made gas free by steaming or other acceptable method to ensure complete removal of all combustible product.

- E. Accidents involving tank trucks should be reported to the Office of the Director immediately or not later than twenty four (24) hours after the accident. Tank trucks that have undergone a road accident which would cause repairs shall be removed from service until inspection and approval by the Board.
- F. When not in service, tank trucks shall be stored at a safe location.
- G. When a tank truck is stored in a garage the garage shall be adequately ventilated.
- H. Each delivery and transport unit not equipped with acceptable locking devices shall be equipped with suitable chock blocks or their equivalent adequately stored in a suitable location. The blocks shall be placed at the rear wheels to prevent rolling of the vehicle whenever it is parked on an incline or uneven surface where rolling is possible, and during loading and unloading operations.
- I. Skid tanks shall not be used in place of tank trucks, tank trailers, or tank semi-trailers for regular deliveries.
- J. Each delivery truck shall be equipped with two (2) hand fire extinguishers with an aggregate capacity of not less than twenty (20) pounds and shall be of the dry chemical type. (One twenty (20) pound dry chemical type and one quart size Pyrene, or any other type extinguisher will be considered as complying with the requirement for two extinguishers on delivery trucks only.) Each transport truck shall be equipped with two (2) hand fire extinguishers with an aggregate capacity of not less than twenty-four (24) pounds and which shall be of the dry chemical type. One shall be located at the rear of the transport; the other at or near the cab.

15. SERVICING OR FILLING CONTAINERS.

- A. The filling of any container which does not have an attached approval tag is prohibited.
- B. The discharge end of the filling hose shall be fitted with an approved valve and the operator shall control the liquid flow with this valve.

- C. The liquid volume of the connection between the discharge hose outlet valve and the consumer's system filling valve shall not exceed eight (8) ounces.
- D. No tank shall be filled when it is located within ten (10) feet of any important building or adjoining property line without special permission from the Board.
- E. At least one attendant shall remain close to the transfer connection from the time the connections are first made until they are finally disconnected.
- F. No liquid transfer hose, pipe, or tubing containing more than eight (8) ounces of liquid shall be vented to the atmosphere.
- G. The vapor pressure in any container shall not be lowered by blowing or venting to the atmosphere; however, where a container used solely for farm implement or industrial service cannot be adequately filled due to vapor pressure, the pressure may be reduced to facilitate filling by venting to the atmosphere, providing this can be safely performed in an open area without undue hazard to any building or surrounding property, and there is no open flame or other source of ignition in the area.
- H. Mobile fuel tanks shall be charged only in the open air.
- I. No underground container shall be filled or serviced unless the maximum allowable working pressure of the container can be readily determined.
- J. Where a customer's premises does not offer safe and adequate facilities for turning a delivery or transport truck around, it is recommended that the driver back into the driveway to fill the customer's container.
- K. When it becomes necessary to service a container after dark, a vapor-proof type flashlight, or other approved explosion-proof type lighting shall be used. The use of a standard type flashlight is prohibited.
- L. No container shall be filled that shows evidence of improper or faulty installation, leakage, defective fittings; or which is not equipped with a safety relief valve and liquid level gauge.

16. FARM VEHICLES AND TRAILERS.

The following regulations of this code apply to liquefied petroleum gas containers mounted on trailers or motor vehicles of the farm type used in con-

nection with the transporting of liquefied petroleum gas on the farm and from one farm to another where owned by the same user, and shall not exceed 1,200 water gallon capacity.

Before the Director may grant approval, it will be necessary that each farm user desiring to operate liquefied petroleum gas equipment under the provisions of this Section submit to the Board a written report covering the complete phase of the intended operation, and confirm the fact that the conditions under which approval may be granted are thoroughly understood and agreed to by the user.

- A. All liquefied petroleum gas containers for use on farm trailers or motor vehicles shall be constructed for a safe working pressure of not less than 250 psi.
- B. Four-wheel trailers shall be of a type construction which will prevent the towed vehicle from whipping or swerving from side to side in a dangerous or unreasonable manner but will enable it to follow substantially in the path of the towing vehicle.
- C. Containers having a water capacity not in excess of 35 gallons may be mounted on two-wheeled trailers, provided the container and trailer is properly balance.
- D. All trailers shall be firmly and securely attached to the vehicle drawing them by means of drawbars of the pintle hook type, equipped with a positive locking device which will prevent separation of the two units, and supplemented by suitable safety chains.
- E. All trailers shall be equipped with axle and wheel assemblies of sufficient size to support the weight of the container and contents adequately and safely when loaded to capacity.
- F. All containers shall be mounted on trailers in such a manner that the bottom of the container will be as close to the ground level as possible, but in no case shall they be over 36 inches above ground level.
- G. When containers are placed on trailers that do not have a swivel in front axle to allow for a rocking action when the trailer is moving over rough or uneven ground, the container shall be bolted to the rear axle only and strapped by a band over the top of the tank at both the front and rear of the tank.
- H. No container mounted on a farm trailer or motor vehicle shall be permitted on public highways except where necessary for travel from one farm to another, both of which are owned by the user.

- I. All hose connections on farm trailers or motor vehicles shall have a hand operated shut-off valve at the tank end of the hose. This shut-off valve shall be attached to an excess flow valve of adequate size: The spring, seat, and poppet valve parts of the excess flow valve shall be inside of the tank or even with the outer portion of the container. In no case shall the working mechanism of the excess flow valve extend beyond the outer shell of the container.
- J. All containers mounted on farm trailers or motor vehicles that have a fuel transfer hose attached to the container shall have a bracket attached to them to support the hose properly and keep it from becoming loose and dragging while the trailer is in motion.
- K. It will be permissible to use explosion proof 110-volt electric pump, hand pumps, and vapor piston-type pumps on farm trailers and motor vehicles, provided they are adequately protected and securely mounted. Where equipped with a pump, an excess flow valve shall be installed in the tank outlet with a manual hand shutoff valve attached to the excess flow valve. Internal combustion engines of the explosion-proof type may be used for supplying power to the pump provided they are adequately protected and securely mounted.
- L. A flexible connection shall be installed between the tank and pump, unless the pump is attached directly to the tank outlet by the use of a flanged connection welded to the container. The flexible connection shall be of an approved type, and where hose is used for this purpose it shall consist of a hose with a minimum bursting pressure of not less than twelve hundred fifty (1250) PSI. There shall be etched, cast, or impressed on the hose at 5 foot intervals, or on a name plate permanently attached thereto, the following information:
 - L. P.G.
 - Bursting Pressure
 - Manufacturer's Name or Trade-Mark Year of Manufacture
- M. The piping or connections between the excess flow valve and the pump shall not be reduced in size.
- N. The pump shall be equipped with a suitable pressure actuated bypass valve, permitting flow from pump discharge to pump suction before the pump discharge pressure rises above the safety relief valve setting of the tank being filled. Pump discharge shall also be equipped with a spring-loaded safety relief valve.

- O. A safety relief valve shall be installed between each pair of shutoff valves on all liquid lines to relieve into a safe atmosphere any excess pressure that may exist. The start-to-discharge pressure shall not be less than 400 PSIG or in excess of 500 PSIG.
- P. Containers mounted on motor vehicles of the farm type may be equipped with a pump driven by the power take-off of the vehicle provided the pump does not have a rated capacity in excess of twenty (20) GPM.
- Q. Containers mounted on motor vehicles shall be properly anchored to the vehicle in a safe manner. No portion of the tank or fittings shall extend beyond the bed or bumper of the vehicle.
- R. Any container mounted on a farm trailer or motor vehicle where transfer of liquid is made from such container into a container used to supply fuel to a stationary engine, tractor, weed burner, or other portable farming device, shall be located not less than thirty (30) feet from any residence or publicly occupied building.
- S. Where necessary to travel on a public highway in going from one farm to another, all containers mounted on farm trailers shall be towed by a farm tractor or motor vehicle at a speed not in excess of twenty (20) miles per hour. Any motor vehicle having a liquefied petroleum gas container mounted there on shall not be operated at a speed in excess of twenty (20) miles per hour.
- T. Any farm trailer or motor vehicle operated upon any public highway or road after dark shall be equipped with clearance lights and a tail light. It is recommended that such travel be made during the daylight hours only.
- U. All containers shall be painted with a light heat-reflecting paint, equivalent to white or aluminum and shall have painted on the sides and rear in red letters at least four (4) inches in height the word "FLAMMABLE"- also, in letters two (2) inches in height, the words, "NO SMOKING OR OPEN FLAME PERMITTED WITHIN TEN FEET".
- V. No container mounted on a farm trailer or motor vehicle is to be used to transfer liquefied petroleum gas to any container except those used to supply fuel to a stationary engine, tractors, weed burners, or other farming devices owned by the user.
- W. The filling or servicing of any container, regardless of type or size, as outlined under the above regulations, which is not under the ownership of the user, is prohibited.

- X. All containers used for the purpose of supplying or the transfer of liquefied petroleum gas to farm trailers or motor vehicles shall be under the sole ownership or lesseeship of the user. The transfer of any liquefied petroleum gas to these units from a container owned or operated on a cooperative or partnership basis, or where liquid is withdrawn for resale or redistribution by others, is prohibited .
- Y. Commercial storage containers installed at gins, rice dryers, etc., shall not be used to supply or transfer liquid into a farm trailer or motor vehicle unless owned or controlled by the individual user for his own personal operation.
- Z. A report of all containers installed on farm trailers or motor vehicles shall be made to the Board upon completion of the installation, together with a report signed by the farm user, to the effect that he thoroughly understands and agrees to the condition under which he will be permitted to operate this equipment It will be the user's responsibility that each employee operating this equipment has a thorough knowledge of the regulations governing this operation.

17. STORAGE CONTAINERS:

(The words "Storage Containers" shall be construed to mean all vessels used for bulk storage and commercial storage of liquefied petroleum gases.)

The use of a railway tank car as a bulk storage container is prohibited and the transferring of liquefied petroleum gases from a railway tank car into delivery trucks, trailers, or semi-trailers is strictly prohibited. The gas must be transferred directly into adequate and approved bulk storage containers as outlined in the following paragraphs:

- A. Containers used for bulk storage, and commercial storage vessels located at cotton gins, rice dryers, schools, hospitals, bottle filling plants, etc., having a capacity of twelve hundred (1200) water gallons, or over, shall be located not less than fifty (50) feet from the nearest important building or group of buildings or line of adjoining property which may be built on. They shall not be less than fifty (50) feet from main line or passing track of a railroad, or public highway. Waiver of this requirement may be made by the Director providing no undue hazards exist, but in no case shall they be located closer than twenty-five (25) feet, regardless of size of the container. EXCEPTION: Bulk storage containers used for the transferring of liquefied petroleum gases into delivery trucks shall be not less than four hundred (400) feet from any school, hospital, or other place of public assembly.

- B. Storage containers shall be provided with substantial reinforced concrete footings and foundations and shall be mounted on saddles in such a manner as to permit expansion and contraction. Every container shall be so supported as to prevent the concentration of excessive loads on the supporting portion of the shell. Suitable means of preventing corrosion shall be provided on that portion of the container in contact with the foundation or saddles. There shall be a resilient cushion of road expansion, or other suitable material placed between the saddle and tank to allow for minor imperfections in pier surface, to protect the tank from corrosion and to act a lubricant in tank expansion and contraction. That portion of the tank surface that is to be in contact with the pier, or saddle, shall be painted with at least two (2) coats of red lead, or its equivalent, before installing on the supports. Blueprints of approved-type footings, and foundations may be obtained from the Board upon request. EXCEPTION: Containers used for storage of Propane gas, not exceeding 2500 water gallon capacity, and containers used for storage of Butane gas, not exceeding 3000 water gallon capacity may be mounted on prefabricated concrete blocks, providing the design has been reviewed and approved by the Director prior to installation.
- C. Storage containers shall be equipped with the necessary safety relief valves as outlined in the latest edition of Pamphlet No. 58, National Fire Protection Association, and shall have direct communication with the vapor space of the container. The discharge from the safety relief valve shall be upward and unobstructed to the open air.
- D. Safety relief valves shall be so arranged that possibility of tampering will be minimized: if pressure setting or adjustment is external, the relief valve shall be provided with approved means for sealing adjustment.
- E. No shut-off valve shall be installed between the safety relief valves and the container.
- F. Loose-fitting caps, or covers, shall be placed over the safety valves to prevent rain or other substance from entering the valves.
- G. Storage containers of all types shall be equipped with suitable ground wire, excess flow check valves in the liquid and vapor outlets, liquid level gauging device, safety relief valves, and vapor pressure gauge graduated to not less than one and one-half (1 1/2) times the designed working pressure of the container, but need not exceed 300 PSI. The coupling for the excess flow check valve and vapor return valve on containers of 1200 gallons capacity, and over, shall be not less than one and one-fourth (1 1/4) inches standard pipe size. All piping shall be wrought iron or steel and shall be at least extra heavy

to the first hand shut-off valve. All piping past the first hand shut-off valve shall be at least extra heavy (Schedule 80) if joints are threaded, or threaded and back welded. At least single strength (Schedule 40) shall be used if joints are welded, or welded and flanged. The use of cast iron plugs or fittings is prohibited. Stop valves shall be placed as near the outlet as possible on all liquid and vapor lines. The piping leading to and from the excess flow check valves shall be sufficient in size to prevent pressure drops reaching the point where the excess flow check valve would not function, and in no case shall such piping be reduced in size between the check valve and the first hand shut-off valve, but must be equal to, or greater in size than that of the excess flow check valve outlet.

- (1). Each LP-gas stationary storage installation of 6,000 gallons or more, aggregate capacity, installed on or after July 1, 1993, shall incorporate in its design bulkheads and emergency shutoff valves (ESVs) for liquid and vapor transfer systems. NOTE: This section shall not apply where the liquid transfer hose is connected directly to a 1 3/4 inch or less acme-threaded filler valve when such valve is installed directly into the container.
- (2). Bulkheads shall be of concrete or steel and anchored sufficiently to prevent displacement of piping and fittings in the event of a truck pull-away while the transfer hose is connected.
 - (A). Piping through a bulkhead shall be secured to the bulkhead to prevent shifting. Piping shall terminate through the bulkhead with a Schedule 80 pipe collar and a 12 inch length of Schedule 80 pipe and forged steel elbow between the bulkhead and hose coupling.
 - (B). Bulkheads shall not be less than 10 feet from a container.
- (3). Emergency shutoff valves (ESVs) shall be installed in fixed piping of the transfer system upstream of the bulkhead and within four feet of the bulkhead with a flexible wire braided hose not more than 24 inches installed between the ESVs and the bulkhead.
 - (A). ESVs shall be installed according to the manufacturer's instructions.
 - (B). ESVs shall incorporate all of the following means of closing.

- (1). automatic shutoff through thermal (fire) actuation using fusible elements with a melting point not to exceed 250F;
 - (2). manual shutoff at the installed location; and
 - (3). manual shutoff from a remote location. Remote controls shall be connected to each ESV. Emergency remote controls shall be conspicuously marked and shall be located and maintained to be readily accessible in emergencies.
- (4). Where the flow of LP-gas is in one direction only, a backflow check valve may be used in lieu of an ESV in the fixed piping, provided that the back-flow check valve has a metal-to-metal seat or a primary resilient seat with a secondary metal seat not hinged with combustible material.
 - (5). ESVs or back-flow check valves shall be installed in the piping system in such a manner that any break resulting from a pull-away will occur on the transfer hose side of the bulkhead and the valves and piping on the container side of the bulkhead will remain intact.
 - (6). The bulkhead(s) and ESV's must be kept in proper working order at all times in accordance with the manufacturer's instructions.

See Diagrams on page 96.

- H. A safety relief valve shall be installed between each pair of shut-off valves on all liquid lines to relieve into a safe atmosphere, any excess pressure that may exist. The start-to-discharge pressure shall not be less than 400 PSIG or in excess of 500 PSIG.
- I. All bulk storage containers, regardless of size and containers used for fuel purposes such as mounted on automobiles, trucks, buses, tractors, or other mobile or portable equipment, regardless of size, and all commercial and industrial storage containers exceeding 1200 water gallon capacity shall be equipped with individual fittings: the use of domestic compact head and fittings is prohibited.
- J. Where two or more containers are connected rigidly together in a battery, provisions shall be made in all liquid and vapor manifolds for the expansion or contraction of the vessels or piping.
- K. The operator shall be in attendance at all times while the container, regardless of type, is being loaded or unloaded: the operator shall

be stationed close to point of cutoff at all times during filling or unloading operation.

- L. Each opening in container exceeding a No.54 drill size, except safety relief valves and gauging devices of the float, or equivalent type which do not require flow for their operation, shall be equipped with an excess flow valve or its equivalent.
- M. The welding or brazing of any malleable fitting is prohibited.
- N. All pipe and fittings subjected to tank pressure where buried underground shall be at least extra heavy (Schedule 80).
- O. The installation of any storage container underground, or the covering of any storage container with a mound of earth, or other material, except containers designed to operate under refrigerated or cryogenic conditions, is prohibited.
- P. Gauge glasses of the columnar type shall be restricted to filling plants where the fuel is withdrawn in the liquid phase only. They shall be equipped with valves having metallic handwheels, with excess flow valves and with extra-heavy glass adequately protected with a metal housing applied by the gauge manufacturer. They shall be shielded against the direct rays of the sun. Gauge glasses of the columnar type are prohibited on truck tanks, motor fuel tanks, and on containers used in domestic, commercial, and industrial installations.
- Q. Any container where transfer of liquids is made from such container into portable container such as tractors, skid tanks, and motor fuel tanks, shall be located not less than thirty (30) feet from any residence or publicly occupied building. This does not include DOT cylinders, as they must be filled by weight at approved filling stations in compliance with Section 10, Par. C., and located in compliance with Par. A. of this Section.
- R. Storage containers shall be painted at the time of installation with white or aluminum paint, or any other light colored paint with equivalent, heat-reflective characteristics, and shall have painted on both sides and both heads where readily visible the word "FLAMMABLE" in red letters at least six (6) inches in height. Warning signs with the following words, "No Smoking Or Open Flame Permitted Within Ten (10) Feet", shall be painted on the container or a sign adjacent to the container in letters of at least one and one-half (1^{1/2}) inches in height, in black or red, on a white or aluminum background. Where considered necessary by a representative of the Board, containers shall be adequately protected by

a suitable guard rail to protect vessel from moving vehicles or objects, a fence, or provisions made for locking the service line valves to prevent pranksters or prowlers or unauthorized persons from opening the valves, allowing gas to escape. The premises around the container shall be maintained in good order. Combustible matter of any type shall not be allowed to accumulate near the container.

S. Electric motors and switches or internal combustion engines used in connection with compressors or pumps for loading and unloading at bulk plants shall be explosion-proof type.

T. All containers used for domestic and commercial purposes and first stage regulating equipment shall be located outside of buildings, other than those especially provided for this purpose, except DOT cylinders which may be used indoors under the following conditions:

- (1) If temporarily used for demonstration purposes and the container has a maximum water capacity of 12 pounds.
- (2) If used with a completely self-contained gas hand torch or similar equipment, and the container has a maximum water capacity of 2¹/₂ pounds.

Where portability of containers is necessary, making their location outside the building or structure impracticable, DOT Cylinders having a capacity not in excess of 30 water gallons may be located for use but not for storage inside the building or structure under the following conditions

- (1) Where gas is used for industrial processing or repair work in an industrial building or structure being employed for industrial purposes.
- (2) Where temporarily used in the construction, repair, or improvement of buildings or structures and their fixtures and equipment.
- (3) Provided regulator is attached directly to the cylinder valve or to a manifold connected to the cylinder valves and that no more than three (3) cylinders are connected to any one manifold, in any one room unless separated by at least fifty (50) feet.
- (4) Cylinders shall not be located or used where exposed to possible excessive temperature, physical damage or tampering by unauthorized persons, and shall be removed to the outside when not in use.

Each individual container shall be located with respect to the nearest important building or group of buildings, or line of adjoining property which may be built on in accordance with the following table:

EXCEPTION: - DOT cylinders of 30 water gallon capacity, or less.

Water Capacity Per Container	Minimum Distances Container		Between Above Ground Containers
	Under- Ground	Above Ground	
Less than 125 Gallons	10 Feet	10 Feet	1 Foot
125 to 500 Gallons	10 feet	10 Feet	3 Feet
501 to 1200 Gallons	25 Feet	25 Feet	3 Feet
1201 to 30,000 Gallons	50 Feet	50 Feet	5 Feet
30,001 to 70,000 Gallons	50 Feet	75 Feet	¹ / ₄ of Sum of
70,000 to 100,000 Gallons	50 Feet	100 Feet	diameters of adjacent containers

The distance between liquefied petroleum gas containers and any anhydrous ammonia container shall be not less than 25 feet. No liquefied petroleum gas container except containers designed to operate under refrigerated or cryogenic conditions and containers located at marine or pipe line terminals shall exceed 90,000 Standard U.S. Gallon capacity. Containers located at marine or pipe line terminals not designed to operate under refrigerated or cryogenic conditions shall not be in excess of 100,000 water gallon capacity.

No liquefied petroleum gas container in excess of 30,000 water gallon capacity shall be installed prior to approval by the Board

Containers that have been in use for the storage of anhydrous ammonia shall not be used for the storage of liquefied petroleum gases unless that container has been completely emptied and made free of all anhydrous ammonia. The container shall be completely refitted in accordance with the rules and regulations of this Code.

U. Flexible hose for use with liquefied petroleum gases shall consist of a hose with a minimum bursting pressure of not less than twelve hundred fifty (1250) PSI. There shall be etched, cast, or impressed on the hose at 5 foot intervals, or on a name plate permanently attached thereto, the following information:

L.P.G.
Bursting Pressure
Manufacturer's name or trademark
Year of manufacture

- V. Each storage container used in connection with a service station operation not exceeding 1200 water gallon capacity shall be located not less than twenty-five (25) feet from any building, group of buildings and adjoining property lines which may be built upon. Storage containers in excess of 1200 water gallon capacity shall not be located closer than fifty (50) feet in relation to the above.
- W. Readily ignitable material including weeds, dry grass, etc., shall be removed within ten (10) feet of the container. Where quantity of combustible material is large, it may be necessary that the distance between the container and material exceed ten (10) feet.
- X. The minimum distance between LP-Gas containers and flammable or combustible liquid tanks or containers shall be not less than twenty (20) feet.
- Y. No bulk or commercial storage container shall be installed or moved and reinstalled at any location prior to approval by the Director.

18. VAPORIZERS AND HOUSING:

- A. Vaporizers shall have their correctness as to design, construction, and performance certified as follows: Constructed in accordance with the requirements of the American Society of Mechanical Engineers Unfired Pressure Vessel Code, Underwriters Laboratories, Inc., American Gas Association, approval through tests by any other competent Laboratory recognized by the Liquefied Petroleum Gas Board.
- B. Indirect fired vaporizers utilizing steam, water, or other heated medium shall be constructed in accordance with the requirements of the American Society of Mechanical Engineers Unfired Pressure Vessel Code, and shall be permanently marked as follows:
 - (1) With the code markings signifying the specifications to which vaporizer is constructed.
 - (2) With the allowable working pressure and temperature for which the vaporizer is designed.
 - (3) With the outside surface and the inside heat exchange surface expressed in square feet.
- C. Vaporizers having an inside diameter of six (6) inches or less exempted by the A.S.M.E. Unfired Pressure Vessel Code

shall have a designed working pressure of not less than two hundred and fifty (250) per square inch gauge, and need not be permanently marked.

- D. Vaporizers may be an integral part of a fuel storage container directly connected to the liquid section, gas section, or both.
- E. Vaporizers may be installed in buildings, rooms, sheds, or lean-tos used exclusively for gas manufacturing or distribution, or in other structures of light, fire resistive construction or equivalent, well ventilated near the floor line and roof constructed for the purpose of housing the vaporizer.
- F. Vaporizers shall have at or near the discharge, a safety relief valve providing an effective rate of discharge in accordance with the latest edition of Pamphlet No. 58, National Fire Protection Association.
- G. Vaporizers shall be provided with suitable automatic means to prevent liquid passing from the vaporizers to the gas discharge piping.
- H. The device that supplies the necessary heat for producing steam, hot water, or other heating medium may be installed in a building, compartment, room or lean-to which shall be ventilated near the floor line and roof to the outside. This device location shall be separated from all compartments or rooms containing liquefied petroleum gas vaporizers,, pumps, and central gas mixing devices by a wall of substantially fire resistant material and vapor tight construction. This requirement does not apply to the domestic water heaters which may supply heat for a vaporizer in a domestic system.
- I. Gas fired heating systems supplying heat exclusively for vaporization purposes shall be equipped with automatic safety devices to shut off the flow of gas to main burners if pilot light should fail.
- J. Atmospheric vaporizers employing heat from the ground or surrounding air shall be installed as follows:
 - (1) Buried underground, or
 - (2) Located inside building close to a point at which pipe enters the building provided capacity of unit does not exceed one (1) quart.

- (3) Vaporizers of less than one (1) quart capacity, heated by the ground or surrounding air, need not be equipped with safety relief valves provided that adequate tests certified by any of the authorities listed in Paragraph A demonstrate that the assembly is safe without safety relief valves.
- K. Vaporizers designed primarily for domestic service shall be protected against tampering and mechanical injury.
- L. No gas in the liquid phase shall be piped into any building for fuel purposes except:
 - (1) Buildings devoted exclusively to housing equipment for vaporization, pressure reduction, gas mixing, gas manufacturing, or distribution.
 - (2) Buildings, or separate fire divisions of buildings, used exclusively to house internal combustion engines or industrial processes.
 - (3) In domestic installations no liquid or gas shall be piped into a building at a pressure of more than twenty (20) psi gauge. The initial pressure reducing devices shall be installed outside the building.
- M. No vaporizer shall be equipped with fusible plugs.
- N. In industrial and gas manufacturing plants, safety relief valves on vaporizers within a building shall be piped to a point outside the building and be discharged upward.

19. INSTALLATION AND PAINTING OF CONTAINERS

- A. Underground containers shall be coated or protected to minimize corrosion. Any damage to the coating shall be repaired before backfilling. Containers shall be set level and shall be surrounded by earth or sand firmly tamped in place. Back-fill shall be free of rocks and abrasives. The container shall be so lowered into place as to prevent abrasion or other damage to the container or coating. Cathodic protection shall be provided for the container. Underground containers that have been removed from the ground shall not be reinstalled until they have been thoroughly cleaned, inspected, and approved by a representative of the Board. All underground containers that have been installed for a period of one (1) year or longer and are removed from the ground to be reinstalled shall be equipped with a new regulator.

The reinstallation of any underground Butane container that has been removed from the ground for resale, change of user or ownership is prohibited.

- (1) Underground containers constructed for a safe working pressure of 200 or 250 PSI may be removed from the ground and reinstalled above-ground provided:
 - (a) The container has been thoroughly cleaned, inspected, and approved for reinstallation by a representative of the Board.
 - (b) The standpipe is reduced to a length not in excess of eight (8) inches and properly threaded.
 - (c) The container is equipped with the necessary safety relief valves to meet the current requirements of the National Fire Protection Association for aboveground containers.
 - (d) Each container shall be installed on adequate supports or saddles. The attachment of any fitting or other connection to the container by the use of a welding process shall be performed by a welder approved by a representative of the Board. Approval for the attachment of any fitting or connection under this process shall be obtained prior to welding. After welding, each fitting or connection shall be adequately tested for any leakage.
- B. Aboveground containers shall be painted at the time of installation with a light reflecting color equivalent to white or aluminum paint and shall be maintained in good condition. Combustible material shall not be allowed to accumulate near the container. Aboveground containers shall not be installed underground; nor shall they be covered with any type material.
- C. ASME container assemblies listed for underground installation, including interchangeable aboveground-underground container assemblies may be installed underground as follows:
 - (1) The container shell shall be placed at least 6 inches below grade unless the container might be subject to abrasive action or physical damage from vehicular traffic within a parking lot area, driveway, or similar area. In this case, a non-interchangeable underground container shall be used and the container shell placed at least 18 in. below grade or equivalent protection shall be

otherwise provided, such as the use of a concrete slab to prevent imposing the weight of a vehicle directly on the container shell. Protection of the fitting housing, housing cover, tank connections, and piping shall be provided to protect against vehicular damage.

- (2) Where containers are installed underground within 10 ft. (3 m) where vehicular traffic may be reasonably expected, such as driveways and streets or within a utility easement subject to vehicular traffic, protection of the fitting housing, housing cover, tank connections, and piping shall be provided to protect against vehicular damage.
- (3) Approved interchangeable aboveground-underground container assemblies installed underground shall not be placed with the container shell more than 12 in. below grade.
- (4) The portion of the container to which the fitting cover or other connections are attached need not be covered. The discharge of the regulator vent shall be above the highest probable water level.
- (5) Containers shall be protected against corrosion for the soil conditions at the container site by a method in accordance with good engineering practice. Precaution shall be taken to prevent damage to the coating during handling. Any damage to the coating shall be repaired before backfilling.
- (6) Containers shall be set substantially level on a firm foundation (firm earth may be used) and surrounded by earth or sand firmly tamped in place. Backfill shall be free of rocks or similar abrasives.

Underground piping systems shall be installed with at least 18 inches of cover. The cover may be reduced to 12 inches if external damage to the pipe is not likely to result. If a minimum of 12 inches of cover cannot be maintained, the pipe shall be installed in conduit or bridged (shielded). The pipe shall be graded at least one (1) inch in ten (10) feet and a drip shall be provided at any point in the line of pipe where condensation may collect. All drips shall be installed only in such location that they will be readily accessible to permit cleaning or emptying. All piping under houses shall be graded at least two (2) inches in ten (10) feet with proper drips at low points where condensate may collect and shall be supported with hangers as outlined in paragraph DD of this Section.

- D. The use of an aboveground Butane container to supply vapor directly to a gas consuming appliance without use of a vaporizer or some other means of artificially vaporizing the liquid to vapor form is prohibited. A pressure reducing regulator of either high or low pressure type shall be installed at the service line outlet on all aboveground and underground type installations. No gas in the vapor phase at tank pressure shall be permitted in the system piping.
- E. The piping between the container and the several service openings shall not be less in size than that recommended in Tables No. 1 and 2, Pages 80 and 81 of these regulations. Underground piping shall in no case be less than one-half (1/2) inch in diameter.
- F. The installation of a system for use with liquefied petroleum gas at a public building or structure such as a school, church, hospital, theater, motel, rest home, but not limited to, shall be examined and tested under an air pressure of not less than twenty-five (25) PSIG for a period of time commensurate or proportionate to the size and length of the piping, but in no case shall the test be for a period of less than thirty (30) minutes. The test shall be witnessed by the owner, user, or representative thereof.

A Report of Installation on an approved type form, obtainable from the Department, shall be completed at the time of installation, and forwarded to the Board, by the dealer on the same date; separate and apart from any and all other reports that may be required.

Upon receipt of the Report of Installation, a representative of the Board shall, within a period of time not to exceed one hundred twenty (120) days, make an inspection of the installation to determine that the container, visible piping, and appliances are properly installed.

Any extension, change, or alteration in the system shall be performed in accordance with the above procedure.

- G. No piping may be buried under public buildings, such as schools, churches, hospitals, theaters, motels, and rest homes, but not limited to. All piping shall be installed aboveground and shall be supported with hangers as outlined in paragraph DD of this Section. EXCEPTION -Piping from the container to the building shall be installed underground. When it is not practical to install piping below ground, adequate protection suitable to the Board shall be provided where installed aboveground.
- H. DOT cylinders (commonly called bottles) shall not be buried underground. The discharge from safety relief valves shall

be located not less than five (5) feet horizontally away from any building opening. The discharge from safety relief valves shall not terminate in any building, nor beneath any building, unless the space is well ventilated to the outside. Containers shall be set upon firm foundations or otherwise firmly secured; the possible effect on outlet piping from settling of the container shall be guarded against by a flexible connection or special fitting. Storage outside of buildings, for containers awaiting use or resale, shall be located at least five (5) feet from any doorway in a building frequented by the public. (1) Valves in the assembly of multiple container systems shall be arranged so that replacement of containers can be made without shutting off the flow of gas in the system.

Note: This provision is not to be construed as requiring an automatic change-over device.

- (2) Container valves and pressure regulating equipment shall be protected against tampering when installed for use.
- (3) Valves and connections to the containers shall be protected while in transit, in storage, and while being moved into final utilization, as follows:
 - (a) By setting into recess of container to prevent possibility of their being struck if container is dropped upon a flat surface, or
 - (b) By ventilated cap or collar, fastened to container, capable of withstanding blow from any direction equivalent to that of a thirty (30) pound weight dropped four (4) feet. Construction must be such that a blow will not be transmitted to valve or other connection .
- I. When containers, regardless of type or size, are not connected to the system, the outlet valves shall be kept closed tight or plugged, even though containers are considered empty.
- J. All piping where subject to tank pressure shall be at least extra heavy (Schedule 80) to the first hand shut-off valve. All other piping subject to tank pressure shall be at least extra heavy (Schedule 80) if joints are threaded, or threaded and back welded. At least single strength (Schedule 40) shall be used if joints are welded and flanged.
- K. Piping covered in these regulations shall be wrought iron, steel, (either black or galvanized), brass or copper pipe, polyethylene (PE) plastic pipe and tubing (see par. 1), or seamless copper or

other approved nonferrous metal tubing. All iron or steel pipe shall be schedule 40 or schedule 80 pipe. Copper tubing may be either grade (K) or (L). The use of conduit pipe is prohibited.

- (1) Plastic (PE) pipe or tubing fabricated in compliance with and meeting the requirements for ASTM D2513, specifications for thermoplastic gas pressure pipe, tubing and fittings may be used for outside piping; underground only within the following limitations:
 - (a) Plastic pipe, tubing and fittings shall be used to distribute liquefied petroleum gas in the vapor state only, at a pressure not to exceed twenty (20) PSIG.
 - (b) No portion of the pipe, tubing or fittings shall extend or be exposed above-ground, but shall be installed not less than (12) inches below-ground.
 - (c) The installation or use of any plastic pipe, tubing or fitting beneath any type building or structure is prohibited.
 - (d) Heat-fusion or mechanical joints shall be used when joining plastic (PE) pipe, tubing or fittings. All fittings and attachments shall be of the permanent (onetime use only) type.
 - (e) Heat-fusion joints shall be made in accordance with qualified procedures which have been established and proven by test to produce gas-tight joints at least as strong as the pipe or tubing joined.
 - (f) When compression type mechanical joints are used, the gasket material in the fitting shall be compatible with the plastic piping and the gas distributed. An internal tubular rigid stiffener shall be used in conjunction with the fitting, and the stiffener shall be flush with the end of the pipe or tubing and extend at least to the outside end of the compression fitting when installed. The stiffener shall be free of rough or sharp edges and shall not be a force fit in the plastic. A split tubular stiffener shall not be used.
 - (g) The installation shall be performed in such a manner as to eliminate any undue stresses resulting from thermal contraction. All joints, attachments and fittings shall be designed and installed to effectively resist or sustain the longitudinal pull-out forces resulting from thermal change in the piping or by external loading.

- (h) Plastic pipe shall be provided with an electrically continuous corrosion resistant tracer wire (min AWG 14) or tape buried with the plastic pipe to facilitate locating. One end shall be brought above ground at a building or riser.
- L. Iron or steel pipe shall not be bent or rolled. Where a change in directions is necessary, proper fittings shall be used.
- M. Screw fittings for use with wrought iron or steel pipe shall be either malleable iron or steel fittings and shall have a working pressure of not less than 300 psi gauge. (WOG)
- N. Pipe joints may be screwed, flanged, or welded. Joints in copper or other non-ferrous tubing shall be of either of the following types: flare, compression, soldered, sweated, or welded. An air pressure test of not less than twenty-five (25) psi gauge shall be applied to these connections for a period of not less than 30 minutes.
- O. Valves used with liquefied petroleum gas piping shall be of an approved type suitable for use with liquefied petroleum gas. Valve seat material, packing, gaskets, etc., shall be of a type resistant to the action of liquefied petroleum gases in the liquid phase. Every valve or gas cock shall be readily accessible for operation or repair.
- P. Gas appliances burning not more than ninety (90) cubic feet per hour may be connected with seamless metal tubing connectors meeting the following requirements:
 - (1) End fittings shall be screw type or union type, permanently attached 'at the factory.
 - (2) The method of attaching such tubing connectors to the house piping and the gas appliances shall not depend upon separate ferrules, washers, gaskets, or other detachable parts for gas tightness, nor shall such separate parts be used to establish and maintain the methods of seal provided within the connector and fittings.
 - (3) The over-all length of such connectors shall not exceed six (6) feet.
- Q. After new piping is installed, all outlets shall be capped and tested at a pressure of not less than twenty-five (25) pounds per square inch air pressure for a period of not less than thirty (30) minutes. There shall be no loss of pressure during this test.

- (1) When an interruption of service occurs because of an addition to the piping system, or an existing system has been repaired or replaced, all additions, repaired, or replaced piping shall be tested at a pressure of not less than twenty-five (25) pounds per square inch air pressure for a period of not less than thirty (30) minutes. There shall be no loss of pressure during this test.
- (2) A manometer, pressure gauge, or equivalent test shall be performed on an existing installation whenever there is an interruption of service caused by an out of gas situation, or if the dealer is servicing the system for the first time. Also, if servicing the system for the first time, the dealer shall do a visible systems check to insure the gas system is installed correctly. This shall be done before placing the system in service.

**Interruption of service means systems which require repair, replacement, or addition to the piping system as well as out of gas systems*

- (a)
 - i Existing installations in a single family dwelling or small commercial building shall be tested between a minimum of 85% and a maximum of 95% of the operating pressure of the system at the location of the test. No gain or loss in pressure shall occur during this test for a period of three (3) minutes.
 - ii Existing installations in a larger piping application shall be tested between a minimum of 85% and a maximum of 95% of the operating pressure of the system at the location of the test. The duration of the test shall be not less than thirty (30) minutes for each 500 cubic feet of pipe volume or fraction thereof. No gain or loss in pressure shall occur during this test.
- (b) An alternative test method may be used for systems serving appliances that receive gas at pressures of $\frac{1}{2}$ % psig or less, by inserting a water manometer or pressure gauge into the system downstream of the final system regulator, pressurizing the system with either fuel gas or air to a test pressure of 9 inches + or - $\sqrt{2}$ in. w.c., and observing the device for a pressure change. If fuel gas is used as a pressure source, it is necessary to pressurize the system to full operating pressure, close the container service valve, and then release enough gas from the system through a range burner valve or other suitable means to drop the system pressure to 9 in. + or - $\sqrt{2}$ in. w.c. This insures that all regulators in the system are unlocked and that

a leak anywhere in the system is communicated to the gauging device. No gain or loss of pressure shall occur during this test for a period of three minutes. For larger piping systems, the duration of the test shall not be less than thirty (30) minutes for each 500 cubic feet of pipe volume or fraction thereof. No gain or loss in pressure shall occur during this test.

There shall be no gain or loss of pressure during these tests.

(3) If a pressure gain or loss is noted in any of the above test procedures, the source of the leak must be determined and repaired immediately before the system can be placed in operation.

R. A second test shall then be applied after gas cocks and appliances have been connected. This test shall be made by filling the lines with gas at operating pressure and shall be held long enough to prove all connections free from leaks by the use of a soapy water test at all connections. This test shall include the connections at the regulator and service line valve.

(1) The piping system shall withstand the test pressure specified without showing any evidence of leakage or other defects. Any reduction of test pressures as indicated by pressure gauge shall be deemed to indicate the presence of a leak unless such reduction can be readily attributed to some other cause.

(2) The leakage shall be located by means of an approved combustible gas detector, soap and water, or equivalent nonflammable solution, as applicable.

CAUTION: Since some leak test solutions, including soap and water, may cause corrosion or stress cracking, the piping shall be rinsed with water after testing, unless it has been determined the leak test solution is noncorrosive.

(3) When leakage or other defects are located, the affected portion of the piping system shall be repaired or replaced and retested.

(4) Before gas is introduced into a system of new gas piping, or back into an existing system after being shut off for repair, the entire system shall be checked to determine that there are no open fittings or ends and that all manual valves at outlets on equipment are closed and all unused valves at outlets are closed and plugged or capped. Immediately after turning on the gas, the piping system shall be checked to ascertain that no

gas is escaping. If leakage is indicated, the gas supply shall be shut off until the necessary repairs have been made.

- (5) Dealers shall then forward to the board, on an approved type form not later than the 15th of each month, a Report of Installation covering each container and system installed and/or tested during the preceding month. Additionally, the dealer shall provide the customer with a copy of the Report for Installation.
- S. In searching for leaks, soap suds, peppermint, or other approved methods shall be used. The use of a flame for searching leaks is prohibited.
- T. The pressure gauge used for testing the piping shall be graduated at intervals not exceeding two (2) pounds, with a maximum overall graduation of not more than 0 to 60 pounds.
- U. Layout of piping shall be in such manner as to insure its being run as directly as possible, and shall be installed in a safe manner and in conformity with generally accepted liquefied petroleum gas piping practice.
- V. All piping installation shall have provisions for expansion, contraction, vibration, and for settling to insure that the system remains gas tight.
- W. No piping should be run or concealed in walls, partitions, etc. However, where the construction details of a building or structure render this impractical, approval may be granted, providing the piping has been tested under an air pressure of not less than 25 PSIG for a period of not less than thirty (30) minutes. The test must be witnessed by the owner, or user or a representative thereof, and a Report of Installation forwarded in accordance with Section 9, Par. A. All piping must be wrought iron or steel (either black or galvanized). The use of brass or copper pipe or seamless copper or other non-ferrous metal tubing is prohibited unless installed in approved type wrought iron or steel pipe chases or metal conduit. In the event an addition to the unit is made after the initial test or any alteration added it shall be tested in compliance with this requirement.
- (1) When installing gas piping that is to be concealed unions, tubing fittings, running threads, right and left couplings, bushings, swing joints, and compression couplings made by combinations of fittings shall not be used. Exception No. 1: Tubing joints shall either be made with approved gas tubing fittings or be brazed with a material having a melting point in excess of 1000 °F (538 °C). Brazing alloys shall not contain more than 0.05 percent phosphorus.

Exception No. 2: Fittings listed for use in concealed spaces that have been demonstrated to sustain, without leakage, any forces due to temperature expansion or contraction, vibration or fatigue based on their geographic location, application, or operation shall be permitted to be used.

- X. No piping or tubing for use with liquefied petroleum gases shall be installed in concrete, and where installed below concrete floors (prohibited for public buildings. see Par. G.) there shall be a minimum covering of six (6) inches of sand or earth between the top of the piping and the bottom of the concrete. It is recommended where piping is installed below concrete floors, that it be adequately painted or wrapped as a preventative against corrosion.
- Y. Where a riser or piping enters a room through a concrete floor it shall enter through a metal or other type conduit slightly larger in diameter than the piping itself; or the piping shall be painted and wrapped with a soft, resilient material of not less than one-eighth (1/8) inch in thickness where in contact with the concrete.
- Z. No piping shall be installed across any floor where subject to being molested or stepped on, but shall be run along, and adequately supported to, wall baseboard near floor level.
- AA. All pipe and fittings to be welded must be of the weldable type. The welding or brazing of any malleable fitting is prohibited.
- BB. The welding of any liquefied petroleum gas pipe or fitting shall be performed by a certified welder, or one approved by a representative of the Board.
- CC. The use of aluminum tubing in exterior locations, or where it is in contact with masonry or plaster walls or insulation, is prohibited.
- DD. Horizontal runs of piping shall be supported by hangers in accordance with the following tables:

SIZE OF PIPE	SPACING OF SUPPORTS
1/2 inch and smaller	6 feet
3/4 inch to 1 inch	8 feet
1 1/4 inch and larger	10 feet

- EE. Branch lines shall be installed so as to come out of side or top of running lines, and not from the bottom.

- FF. Where risers are placed outside of building walls, they shall not be more than four (4) inches from such wall, unless protected by a substantial post to prevent mechanical injury, and shall be insulated where Butane or Butane-Propane mixture is used. No insulation is required where straight Propane is used. The piping shall be coated with two (2) coats of asphalt base paint, or other type inhibitor or preservative prior to applying the insulation.
- GG. No person, firm, or corporation shall connect a liquefied petroleum gas container to any piping installation without having first determined that all visible piping of such installation complies with the rules and regulations of the Liquefied Petroleum Gas Board as contained in the latest edition of the State Code relative to liquefied petroleum gas piping.

20. APPLIANCES

- A. All domestic and commercial liquefied petroleum gas consuming appliances except ranges shall have their correctness as to design construction, and performance certified as follows: Tested and listed as approved for use with liquefied petroleum gases by the American Gas Association, Underwriters Laboratory, Inc., or any other nationally recognized testing laboratory approved by the Board and bearing their approval seal for use with Liquefied Petroleum Gases. Domestic and commercial ranges shall have their correctness as to design and shall bear the manufacturer's seal or label designating that the appliance is for use with Liquefied Petroleum Gases.
- (EXCEPTION)** - Conversion of manually-controlled domestic ranges and space heaters from natural or manufactured gas use to that of Liquefied Petroleum Gases shall be permitted only by qualified dealers who have been issued a permit. The conversion of new stoves and stoves with automatic controls, as well as the conversion of floor furnaces, hot water heaters, or any other continuous-burning appliances, regardless of type, is prohibited unless the conversion is authorized by and in accordance with the manufacturer's instructions. The American Gas Association or the Underwriters Laboratory, Inc., seal of approval for use with Liquefied Petroleum Gas as authorized and furnished by the manufacturer shall be attached at the time of conversion.
- B. All liquefied petroleum gas consuming appliances for use with industrial systems such as rice mills, cotton gins, sawmills, etc., shall have their correctness as to design, construction, and performance.
- C. Suspended type unit heaters shall be safely and adequately supported with due consideration given to their weight and vibration characteristics. Hangers and brackets shall be of noncombustible material.

- D. All hot water heaters shall be vented to the outside air or into an effective flue.
- E. Each hot water heating appliance shall be equipped with an approved type pressure relief valve having sufficient capacity to match the gross heat output of the appliance. The discharge capacity as well as the set-to-discharge pressure shall be shown on the valve.
- F. Where a temperature relief valve is used there shall also be a pressure relief valve installed having sufficient capacity to match the gross heat output of the appliance.
- G. It is recommended that a combination temperature-and-pressure relief valve be used with the AGA water rating on the temperature side and the steam rating on the pressure side of the valve.
- H. Temperature or pressure relief valves or combination thereof for water heating systems may be provided with a suitable pipe or other metal conduit for proper disposal of waste water.
- I. Automatic shutoff valves, 100 percent type, shall be installed on all appliances where the appliance is in continuous service, such as water heaters, boilers, etc., or where such valves are considered necessary by the Board.
- J. Hot water heaters and other continuous-burning appliances may be installed in compliance with Section 21, paragraph K of this Code.
- K. Appliances of more than 40,000 BTU input capacity, installed in public buildings such as schools and churches, but not limited to, shall be equipped with 100 percent shutoff valves and shall be fastened to the floor and properly vented to the outer air. All appliances installed in the bedroom of hotels, rooming houses, tourist courts, and cabins for the use of transients shall be of the completely enclosed, vented type, equipped with automatic (100 percent type) shutoff valves.
- L. All appliances used for domestic purposes having an input capacity in excess of 50,000 BTU per hour, shall be equipped with a 100 percent safety shutoff valve and shall be connected to an effective flue. The manually controlled range is exempt from this provision.
- M. Every appliance shall be checked and adjusted after installation to insure proper and safe operation, and the customer instructed in its safe operation.
- N. Appliances shall be adequately supported and so connected as not to induce any stress in the connection.

- O. No appliance shall be installed in a room in which the facilities for ventilation do not permit the proper combustion of the gas under normal conditions of use.
- P. A gas valve or shutoff, which constitutes the only means of gas control, shall be easily accessible and within convenient reaching distance when lighting the burner.
- Q. No device or attachment shall be installed on any appliance which will in any way impair the combustion of gas.
- R. All appliances shall be installed as approved without alteration, extensions, or changes of any kind.
- S. Floor furnace pits: Where excavation is necessary to provide proper clearance for the installation of floor furnaces the depth of the excavation shall be such as to provide six (6) inches clearance below the bottom on any combustion air opening or draft hood relief opening and twelve (12) inches horizontal clearance on all sides having a combustion air opening or draft hood relief opening, except the control side which shall have an eighteen (18) inch clearance. The sides of the pit should be sloped at a forty-five (45) degree angle. A trench the entire width of the furnace pit from a point at ground level on the windward side of the house sloping to the bottom of the pit and up to ground level on the leeward side of the house, shall be provided for cross ventilation. Openings in the sides of the house at ground level shall be provided at trench locations of not less than two hundred (200) square inches in area. In cases where it is practical, a drain may be installed in bottom of pit so the gases may be dispelled above ground level outside of building and this will be considered a satisfactory means of ventilation.
- T. Gas shall not be turned on until the appliance and its connections have been tested and found free of leaks.
- U. If a sediment trap is not incorporated as a part of the gas utilization equipment, a sediment trap shall be installed as close to the inlet of the equipment as practical at the time of equipment installation. The sediment trap shall be either a tee fitting with a capped nipple in the bottom outlet or other device recognized as an effective sediment trap. Illuminating appliances, ranges, clothes dryers, and outdoor grills need not be so equipped.

21. VENTING

- A. Every gas appliance for use with liquefied petroleum gas equipped with a vent collar shall be properly vented to the outer air. The following requirements cover proper venting:

- B. Draft Hood: A draft hood which meets the approval requirements of the AGA shall be made a part of the vent connections to the vertical chimney or vent, unless construction of the appliance serves the same purpose.
- C. Damper: A manual damper or similar device shall never be installed in the vent pipe from the appliance. However, this is not to prevent the installation of a listed automatic vent damper device intended for use in the venting system when the appliance is in operation and to automatically open the venting system when the appliance is in operation and to automatically close off the venting system when the appliance is in standby or shutdown condition. The automatic vent damper device may be installed on an approved type appliance listed and equipped with a draft hood provided the installation is performed by qualified personnel in strict accordance with the manufacturers requirements and recommendations. All vent damper devices shall be of an approved type and shall be listed.
- D. Size: All appliances required to be vented shall be vented into a vertical vent, flue, or chimney of a size not less than the area of the vent collar of the appliance and in no case less than seven (7) square inches in area.
- E. Height: The vertical vent, flue, or chimney shall extend at least two (2) feet above the highest elevation of the building within ten (10) feet of the termination of the vertical vent, flue or chimney. This requirement may be altered by the Board when sufficient evidence indicates proper venting may be obtained otherwise.
- F. Venting Material: In case venting material (not a chimney) is used for the vertical vent, the material used shall conform to the local building code. In addition, it shall be installed according to the local building code. In the absence of a local building code, the vent shall consist of approved fireproof material. All masonry chimneys constructed for the purpose of venting a gas appliance shall be lined with terra-cotta or comparable flue lining. Whenever a gas appliance is vented into an existing unlined masonry chimney, the chimney shall be clean. The horizontal vent connection in all cases shall enter the chimney at least one (1) foot above the bottom of the chimney. Means shall be provided for cleaning out the base of the chimney.
- G. Horizontal vent connection: The horizontal vent connection shall be as short as practicable and shall not be longer than seventy-five (75) percent of the height of the vertical vent, flue, or chimney, and shall have an incline of one (1) inch per foot if possible, however in no case shall the incline be less than one-half (1/2) inch per foot of length. The horizontal vent connection, when in contact with the soil

shall be insulated and protected against corrosion. The horizontal vent connection shall not project into the free area of the flue or chimney.

- H. Holes: Both vertical vent and horizontal vent connections shall be clear and free from any stoppage and free from any holes that would restrict draft.
- I. Area: When the appliance is connected to a chimney or vertical vent, flue, or chimney into which other appliances are connected, or when two or more appliances are connected to a single vertical vent, the vertical vent, flue, or chimney shall have a cross-sectional area of the largest vent collar, plus fifty (50) percent of the area of each additional appliance vent collar connected thereto.
- J. Combustion air. Fixed ventilation shall be provided to any confined space which encloses the appliance by means of a duct or grill arranged to supply combustion air unless adequate natural ventilation is provided. The duct or grill shall have a free area of not less than equal to one square inch per 1000 BTU input rating, having a minimum of not less than one hundred (100) square inches.
- K. Where the design or use of a public building or residence renders it impractical to locate an automatically controlled appliance above the ground level, it may be installed in an attic or basement providing:
 - (1) That all piping located inside the enclosure is of heavy duty copper tubing of type "K" or "L", wrought iron or steel (either black or galvanized). The piping should be run in such a manner as to minimize the number of joints or connections.
 - (2) Piping shall be run outside the building to a point nearest the appliance before entering the enclosure.
 - (3) All tubing or piping located inside building is well supported and protected against molesting or disturbance of any kind.
 - (4) There is a hand shut-off valve located outside the building so gas may be completely shut off from appliance and tubing or piping during long periods of non-operations.
 - (5) That adequate ventilation near the appliance has been provided. The Board recommends that where at all practicable, continuous burning, automatically-controlled appliances be installed at, or, above the ground level.

22. DEFINITIONS—{Appliances}

- A. Gas Floor Furnace: A completely self-contained-unit furnace, excluding those having additional or separate returns, suspended from the floor

of the space being heated, taking air for combustion from outside this space, and with means for observing flames and lighting the appliance from the space being heated.

- B. Vent Collar: A means provided to connect the vent pipe to the furnace.
 - C. Draft Hood: A device placed in and made a part of the flue pipe from an appliance, or in the appliance itself, which is designed to (1) insure the ready escape of the products of combustion in the vent of no draft, back draft, or stoppage beyond the draft hood; (2) prevent a back draft from entering the appliance, and (3) neutralize the effect of stack action of the chimney flue upon the operation of the appliance.
 - D. Chimney: A vertical structure constructed of masonry, either lined or unlined, for the purpose of carrying away products of combustion from an appliance burning gas as fuel.
 - E. Vertical Vent: A pipe designed to carry the products of combustion and which rises in a vertical direction from an appliance or horizontal vent connection.
 - F. Horizontal-vent connection: A pipe designed to carry the products of combustion and which runs in a generally horizontal direction from the vent collar of gas furnace to the vertical vent, flue, or chimney.
 - G. Crossover or offset: Any deviation from the vertical rise of the vertical vent, necessitating one or more fittings.
 - H. One-hundred-percent-automatic safety pilot: A device for shutting off, automatically, the gas supply to the main burner and pilot in the event of a pilot or gas failure, and also for preventing the gas from being fumed into the main burner unless the pilot is ignited. (Required for liquefied petroleum gases.)
 - I. Gas-pressure regulator. A device for controlling and maintaining a uniform pressure on a gas supply.
23. In addition to the rules and regulations contained in this code, the Board or any representative thereof may require compliance with any recommendation or standard contained in the latest edition of the National Fire Protection Association Pamphlet No. 58 and/or Pamphlet No. 54 (ANSI 223.1): relative to the installation and operation of any container, system, or appliance in this State.
24. Should any provision or section of the rules and regulations of this Code be held invalid for any reason such holding shall not *affect* the validity of any remaining portion of such section or any other section of the rules and regulations of this Code, it being the intent of the Liquefied Petroleum Gas Board and the Advisory Committee

that the rules and regulations of this Code shall stand notwithstanding the invalidity of any provision or section.

25. All rules and regulations previously adopted to conform to Act 31, Ark Acts of 1965, and any other rules and regulations in conflict here with are hereby repealed.
26. All provisions of Act 31, Ark Acts of 1965: 1977, No. 396; 1981, No. 199; 1987, No. 375; 1991, No. 300; 1995, No. 477,604; 1999, No. 1577; 2001, No. 1219 are hereby declared to be a part of this code.
27. The foregoing rules and regulations were adopted by the Liquefied Petroleum Gas Board and the Advisory Committee on September 15, 2004. Effective: November 1, 2004.

The following tables are very essential in selecting the correct size of pipe or tubing for use in conveying gas in various quantities and distances. These tables have been prepared especially for Liquefied Petroleum Gases and strict adherence to them will result in more efficient LP Gas installations. These capacities are based on gas with a specific gravity of 1.5 under pressure of approximately 6 oz. and a pressure drop of .5 inches of water, and may be used satisfactorily for both Butane and Propane installations.

**TABLE NO. 1
CAPACITY PER HOUR IN B.T.U. THROUGH PIPES OF VARIOUS SIZES AND LENGTHS**

Length of pipe in feet	1/2" BTU Per Hr.	3/4" BTU Per Hr.	1" BTU Per Hr.	1 1/4" BTU Per Hr.	1 1/2" BTU Per Hr.	2" BTU Per Hr.	3" BTU Per Hr.	4" BTU Per Hr.
10	260,000	550,000	1,000,000	2,000,000	3,100,000	6,145,000	17,783,000	35,000,000
15	210,000	432,000	790,000	1,500,000	2,400,000	5,100,000	13,650,000	28,250,000
20	179,000	375,000	710,000	1,400,000	2,150,000	3,900,000	12,500,000	24,700,000
25	157,000	338,000	634,000	1,150,000	1,980,000	3,400,000	11,000,000	22,200,000
30	142,000	300,000	600,000	1,040,000	1,710,000	3,100,000	9,200,000	19,100,000
35	136,000	292,000	556,000	1,000,000	1,680,000	3,000,000	8,800,000	18,020,000
40	129,000	275,000	516,000	980,000	1,580,000	2,963,000	8,200,000	17,300,000
50	113,000	247,000	460,000	948,000	1,400,000	2,400,000	7,600,000	15,600,000
60	106,000	216,000	445,000	780,000	1,220,000	2,000,000	7,200,000	14,250,000
75	92,000	192,000	398,000	690,000	1,080,000	1,920,000	6,050,000	12,750,000
90	86,000	174,000	365,000	635,000	986,000	1,800,000	5,550,000	11,570,000
105	80,000	160,000	330,000	587,000	920,000	1,750,000	5,200,000	10,800,000
120	76,000	151,000	318,000	547,000	865,000	1,620,000	4,940,000	9,900,000
150	70,000	137,000	285,000	491,000	780,000	1,585,000	4,260,000	8,870,000
180	66,000	126,000	254,000	444,000	730,000	1,430,000	3,970,000	8,100,000
210	62,000	116,000	239,000	413,000	650,000	1,335,000	3,650,000	7,600,000
240	58,000	108,000	222,000	388,000	613,000	1,260,000	3,420,000	6,990,000
270	54,000	103,000	206,000	365,000	580,000	1,175,000	3,240,000	6,660,000
300	50,000	96,000	199,000	350,000	546,000	1,125,000	3,100,000	6,350,000
450	42,000	81,000	159,000	284,000	444,000	905,000	2,720,000	5,070,000
600	36,000	68,000	138,000	239,000	380,000	776,000	2,140,000	4,450,000

TABLE NO. 2

CAPACITY PER HOUR IN B.T.U. THROUGH TUBING (TYPE "K") OF VARIOUS SIZES AND LENGTHS

Length of Tubing in Feet	1/4"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"
10	52,000	98,000	196,500	350,000	486,000	986,000	1,600,000	2,500,000	5,400,000
15	47,000	88,000	172,000	292,000	412,000	856,000	1,300,000	2,100,000	4,500,000
20	37,500	72,000	144,000	246,000	348,000	726,000	1,000,000	1,800,000	3,800,000
25	34,000	63,500	128,000	216,000	306,000	648,000	950,000	1,500,000	3,300,000
30	30,000	59,000	116,000	198,000	280,000	580,000	850,000	1,300,000	3,000,000
35	28,500	54,000	112,000	190,000	271,000	568,000	800,000	1,200,000	2,800,000
40	27,000	52,000	106,000	180,000	256,000	530,000	775,000	1,100,000	2,700,000
45	26,000	49,000	98,000	168,000	242,000	492,000	750,000	1,000,000	2,600,000
50	24,000	46,000	92,500	159,500	234,000	462,000	725,000	975,000	2,450,000
55	23,000	45,000	89,000	152,500	215,000	446,500	700,000	950,000	2,300,000
60	22,000	42,500	84,000	148,000	208,000	434,500	675,000	925,000	2,150,000
70	21,000	40,500	75,500	135,500	189,500	388,000	650,000	900,000	2,000,000
80	19,500	36,500	72,000	124,500	172,000	360,000	625,000	850,000	1,900,000
90	19,000	35,000	70,000	118,000	168,000	342,000	600,000	825,000	1,800,000
100	17,000	33,500	64,500	106,000	154,500	320,000	525,000	800,000	1,700,000
120	15,500	31,000	60,000	98,000	142,000	296,000	500,000	775,000	1,500,000
150	14,500	26,000	52,000	92,000	124,000	262,000	450,000	700,000	1,300,000
200	12,000	23,000	46,000	76,000	112,000	225,000	375,000	575,000	1,000,000

TABLE NO. 3
EQUIVALENT LENGTH OF PIPE FOR VARIOUS TYPE VALVES AND FITTINGS

PIPE SIZE	GATE VALVE	GLOBE VALVE	ANGLE VALVE	90 DEG. ELBOW	45 DEG. ELBOW	TEE STRAIGHT THROUGH	TEE SIDE OUTLET
1/2	.5	10	5	1	6	.7	2.5
3/4	.6	15	7	1.5	1	1.1	3.5
1	.8	20	10	2	1.5	1.8	4.5
1 1/4	1	25	12	2.5	1.8	2	5.5
1 1/2	1.2	30	15	3	2	2.5	7
2	1.8	40	20	4	2.5	3	9
2 1/2	2	50	25	5	3	4	11
3	2.5	60	30	6	4	4.5	13.5
3 1/2	2.7	70	35	7	4.5	5	16
4	3	80	40	8	5	6	18
5	3.7	100	50	10	6.5	7.5	23

**TABLE NO. 4
MAXIMUM PERMITTED FILLING DENSITY**

Specific Gravity at 60 °	Aboveground Containers		Under-ground Containers
	0 to 1200* Gallons Total Water Cap.	Over 1200 Gallons Total Water Cap.	All Capacities
.473 - .480	38 percent	41 percent	42 percent
.481 - .488	39 percent	42 percent	43 percent
.489 - .495	40 percent	43 percent	44 percent
.496 - .503	41 percent	44 percent	45 percent
.504 - .510	42 percent	45 percent	46 percent
.511 - .519	43 percent	46 percent	47 percent
.520 - .527	44 percent	47 percent	48 percent
.528 - .536	45 percent	48 percent	49 percent
.537 - .544	46 percent	49 percent	50 percent
.545 - .552	47 percent	50 percent	51 percent
.553 - .560	48 percent	51 percent	52 percent
.561 - .568	49 percent	52 percent	53 percent
.569 - .576	50 percent	53 percent	54 percent
.577 - .584	51 percent	54 percent	55 percent
.585 - .592	52 percent	55 percent	56 percent
.593 - .600	53 percent	56 percent	57 percent
.601 - .608	54 percent	57 percent	58 percent
.609 - .617	55 percent	58 percent	59 percent
.618 - .626	56 percent	59 percent	60 percent
.627 - .634	57 percent	60 percent	61 percent

*Department of Transportation filling densities effective on the date of adoption of this standard.

TABLE NO. 5

**MINIMUM BTU CAPACITIES OF UNDERGROUND
LPG TANKS**

Minimum capacity in BTU per hour, based on tank being one third (1/3) full of twenty (20) percent Propane mixture and a ground temperature of 40° F.

Size of Tank	Capacity in BTU per hour
100	55,000
150	91,000
200	122,000
250	151,000
300	182,000
350	213,000
400	242,000
450	273,000
500	302,000
550	333,000
600	364,000
650	394,000
700	424,000
750	455,000
800	486,000
850	515,000
900	546,000
950	577,000
1000	606,000

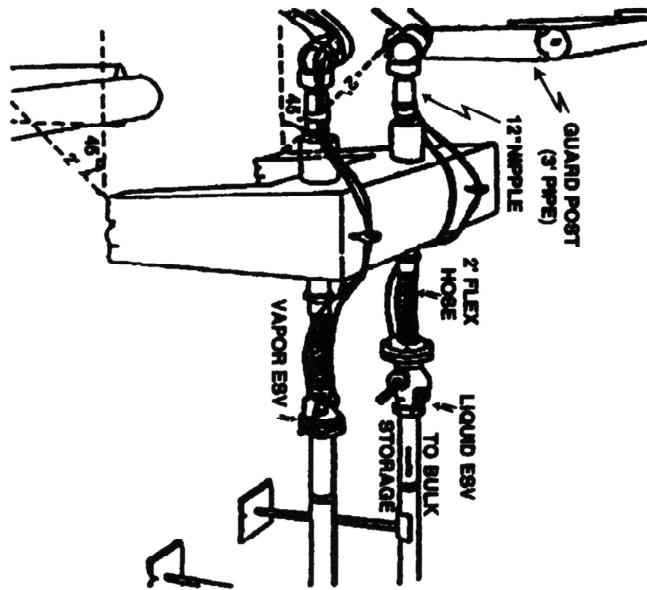
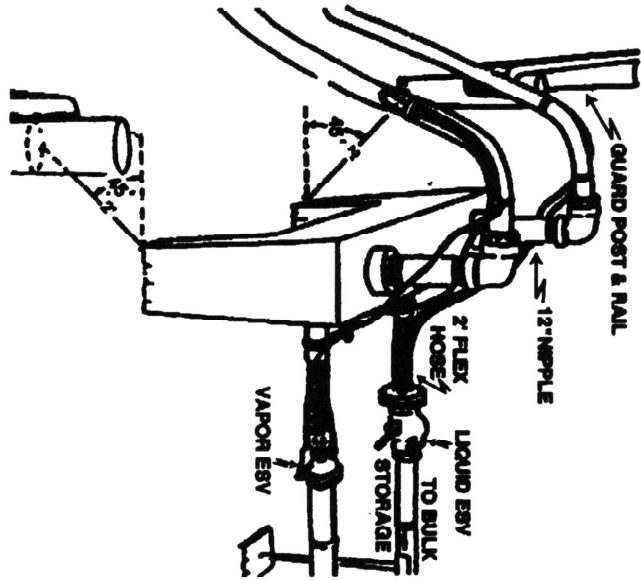
The above capacities are furnished as a guide to be used in determining the SIZE and TYPE of system to satisfactorily handle a given BTU heat load.

The vapor generating capacity of an underground Butane gas system can be determined only in relation to known factors. These factors are: The mixture or percentage of the component gases, the ground heat, and the level of the liquid in the tank. The variation of any of these factors shown in the above chart will proportionately vary in the BTU capacities shown.

These capacities are also based on a CONSTANT OPERATION at the given load.

Liquid Volume Correction Factors

Observed Temperature Degrees Fahrenheit	SPECIFIC GRAVITIES AT 60°F/60°F												
	0.500	Propane 0.5079	0.510	0.520	0.530	0.540	0.550	0.560	n-Duane 0.5631	0.570	0.580	n-Butane 0.5844	0.590
	VOLUME CORRECTION FACTORS												
-50.....	1.160	1.155	1.153	1.146	1.140	1.133	1.127	1.122	1.120	1.116	1.111	1.108	1.106
-45.....	1.153	1.148	1.146	1.140	1.134	1.128	1.122	1.117	1.115	1.111	1.106	1.103	1.101
-40.....	1.147	1.142	1.140	1.134	1.128	1.122	1.117	1.111	1.110	1.106	1.101	1.099	1.097
-35.....	1.140	1.135	1.134	1.128	1.122	1.116	1.112	1.106	1.105	1.101	1.096	1.094	1.092
-30.....	1.134	1.129	1.128	1.122	1.116	1.111	1.106	1.101	1.100	1.096	1.092	1.090	1.088
-25.....	1.127	1.122	1.121	1.115	1.110	1.105	1.100	1.095	1.094	1.091	1.087	1.085	1.083
-20.....	1.120	1.115	1.114	1.109	1.104	1.099	1.095	1.090	1.089	1.086	1.082	1.080	1.079
-15.....	1.112	1.109	1.107	1.102	1.097	1.093	1.089	1.084	1.083	1.080	1.077	1.075	1.074
-10.....	1.105	1.102	1.100	1.095	1.091	1.087	1.083	1.079	1.078	1.075	1.072	1.071	1.069
-5.....	1.098	1.094	1.094	1.089	1.085	1.081	1.077	1.074	1.073	1.070	1.067	1.066	1.065
0.....	1.092	1.088	1.088	1.084	1.080	1.076	1.073	1.069	1.068	1.066	1.063	1.062	1.061
2.....	1.089	1.086	1.085	1.081	1.077	1.074	1.070	1.067	1.066	1.064	1.061	1.060	1.059
4.....	1.086	1.083	1.082	1.079	1.075	1.071	1.068	1.065	1.064	1.062	1.059	1.058	1.057
6.....	1.084	1.080	1.080	1.076	1.072	1.069	1.065	1.062	1.061	1.059	1.057	1.055	1.054
8.....	1.081	1.078	1.077	1.074	1.070	1.066	1.063	1.060	1.059	1.057	1.055	1.053	1.052
10.....	1.078	1.075	1.074	1.071	1.067	1.064	1.061	1.058	1.057	1.055	1.053	1.051	1.050
12.....	1.075	1.072	1.071	1.068	1.064	1.061	1.059	1.056	1.055	1.053	1.051	1.049	1.048
14.....	1.072	1.070	1.069	1.066	1.062	1.059	1.056	1.053	1.053	1.051	1.049	1.047	1.046
16.....	1.070	1.067	1.066	1.063	1.060	1.056	1.054	1.051	1.050	1.048	1.046	1.045	1.044
18.....	1.067	1.065	1.064	1.061	1.057	1.054	1.051	1.049	1.048	1.046	1.044	1.043	1.042
20.....	1.064	1.062	1.061	1.058	1.054	1.051	1.049	1.046	1.046	1.044	1.042	1.041	1.040
22.....	1.061	1.059	1.058	1.055	1.052	1.049	1.046	1.044	1.044	1.042	1.040	1.039	1.038
24.....	1.058	1.056	1.055	1.052	1.049	1.046	1.044	1.042	1.042	1.040	1.038	1.037	1.036
26.....	1.005	1.053	1.052	1.049	1.047	1.044	1.042	1.039	1.039	1.037	1.036	1.036	1.034
28.....	1.052	1.050	1.049	1.047	1.044	1.041	1.039	1.037	1.037	1.035	1.034	1.034	1.032
30.....	1.049	1.047	1.046	1.044	1.041	1.039	1.037	1.035	1.035	1.033	1.032	1.032	1.030
32.....	1.046	1.044	1.043	1.041	1.038	1.036	1.035	1.033	1.033	1.031	1.030	1.030	1.028
34.....	1.043	1.041	1.040	1.038	1.036	1.034	1.032	1.031	1.030	1.029	1.028	1.028	1.026
36.....	1.039	1.038	1.037	1.035	1.033	1.031	1.030	1.028	1.028	1.027	1.025	1.025	1.024
38.....	1.036	1.035	1.034	1.032	1.031	1.029	1.027	1.026	1.025	1.025	1.023	1.023	1.022
40.....	1.033	1.032	1.031	1.029	1.028	1.026	1.025	1.024	1.023	1.023	1.021	1.021	1.020
42.....	1.030	1.029	1.028	1.027	1.025	1.024	1.023	1.022	1.021	1.021	1.019	1.019	1.018
44.....	1.027	1.026	1.025	1.023	1.022	1.021	1.020	1.019	1.019	1.018	1.017	1.017	1.016
46.....	1.023	1.022	1.022	1.021	1.020	1.018	1.018	1.017	1.016	1.016	1.015	1.015	1.014
48.....	1.020	1.019	1.019	1.018	1.017	1.016	1.015	1.014	1.014	1.013	1.013	1.013	1.012
50.....	1.017	1.016	1.016	1.015	1.014	1.013	1.013	1.012	1.012	1.011	1.011	1.011	1.010
52.....	1.014	1.013	1.012	1.012	1.011	1.010	1.010	1.010	1.009	1.009	1.009	1.009	1.008
54.....	1.010	1.010	1.009	1.009	1.008	1.008	1.007	1.007	1.007	1.007	1.006	1.006	1.006
56.....	1.007	1.007	1.006	1.006	1.005	1.005	1.005	1.005	1.005	1.005	1.004	1.004	1.004
58.....	1.003	1.003	1.003	1.003	1.003	1.003	1.002	1.002	1.002	1.002	1.002	1.002	1.002
60.....	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
62.....	0.997	0.997	0.997	0.997	0.997	0.997	0.998	0.998	0.998	0.998	0.998	0.998	0.998
64.....	0.993	0.993	0.994	0.994	0.994	0.994	0.995	0.995	0.995	0.995	0.996	0.996	0.996
66.....	0.990	0.990	0.990	0.990	0.990	0.991	0.992	0.992	0.993	0.993	0.993	0.993	0.993
68.....	0.986	0.986	0.987	0.987	0.988	0.989	0.990	0.990	0.990	0.990	0.991	0.991	0.991
70.....	0.983	0.983	0.984	0.984	0.985	0.986	0.987	0.988	0.988	0.988	0.988	0.989	0.989
72.....	0.979	0.980	0.981	0.981	0.982	0.983	0.984	0.985	0.986	0.986	0.987	0.987	0.987
74.....	0.976	0.976	0.977	0.978	0.980	0.980	0.982	0.983	0.983	0.984	0.985	0.985	0.985
76.....	0.972	0.973	0.974	0.975	0.977	0.978	0.979	0.980	0.981	0.981	0.982	0.982	0.983
78.....	0.969	0.970	0.970	0.972	0.974	0.975	0.977	0.978	0.979	0.979	0.980	0.980	0.981
80.....	0.965	0.967	0.967	0.969	0.971	0.972	0.974	0.975	0.976	0.977	0.978	0.978	0.979
82.....	0.961	0.963	0.963	0.966	0.968	0.969	0.971	0.972	0.973	0.974	0.976	0.976	0.977
84.....	0.957	0.959	0.960	0.962	0.965	0.966	0.968	0.970	0.971	0.972	0.974	0.974	0.975
86.....	0.954	0.956	0.956	0.959	0.961	0.964	0.966	0.967	0.968	0.969	0.971	0.971	0.972
88.....	0.950	0.952	0.953	0.955	0.958	0.961	0.963	0.965	0.966	0.967	0.969	0.969	0.970
90.....	0.946	0.949	0.949	0.952	0.955	0.958	0.960	0.962	0.963	0.964	0.967	0.967	0.968
92.....	0.942	0.945	0.946	0.949	0.952	0.955	0.957	0.959	0.960	0.962	0.964	0.965	0.966
94.....	0.938	0.941	0.942	0.946	0.949	0.952	0.954	0.957	0.958	0.959	0.962	0.962	0.964
96.....	0.935	0.938	0.939	0.942	0.946	0.949	0.952	0.954	0.955	0.957	0.959	0.960	0.961
98.....	0.931	0.934	0.935	0.939	0.943	0.946	0.949	0.952	0.953	0.954	0.957	0.957	0.959
100.....	0.927	0.930	0.932	0.936	0.940	0.943	0.946	0.949	0.950	0.952	0.954	0.955	0.957
105.....	0.917	0.920	0.923	0.927	0.931	0.935	0.939	0.943	0.943	0.946	0.949	0.949	0.951
110.....	0.907	0.911	0.913	0.918	0.923	0.927	0.932	0.936	0.937	0.939	0.943	0.944	0.946
115.....	0.897	0.902	0.904	0.909	0.915	0.920	0.925	0.930	0.930	0.933	0.937	0.938	0.940
120.....	0.887	0.892	0.894	0.900	0.907	0.912	0.918	0.923	0.924	0.927	0.931	0.932	0.934
125.....	0.876	0.881	0.884	0.890	0.898	0.903	0.909	0.916	0.916	0.920	0.925	0.927	0.928
130.....	0.865	0.871	0.873	0.880	0.888	0.895	0.901	0.908	0.909	0.913	0.918	0.921	0.923
135.....	0.854	0.861	0.863	0.871	0.879	0.887	0.894	0.901	0.902	0.907	0.912	0.914	0.916
140.....	0.842	0.850	0.852	0.861	0.870	0.879	0.886	0.893	0.895	0.900	0.905	0.907	0.910



**DOT AND ASME (MOTOR FUEL) CONTAINER
ADDITIONAL HELPFUL INFORMATION**

Relief valves set to discharge Pressure – 375 PSI.

Filling density – 42% of the cylinder water capacity.

Information stamped on DOT cylinders

Mfg. Name	
Working Pressure –	240 PSI
Tare Weight –	T.W.
Water Capacity –	W.C.
Date of MFG.	
MFG. Serial #	
Tare Weight –	Empty weight of cylinder.

All Cylinders must have protection cap or guard.

INSERT INFORMATION

Information stamped on ASME (motor fuel containers)

Mfg. Name
Serial Number
Working Pressure
Water Capacity
Mfg. Date
Length
Diameter
Shell Thickness
Head Thickness

Working Pressure of container mounted on a school bus shall be not less than 312 lbs.

What procedure should be used in filling a container mounted on a school bus, loaded with children?

What action should be taken at a bottle filling station, if, a leak occurs, which, causes a fire to start?

Is it normal for frost to form on the regulator during filling?

How must DOT cylinders be filled? What procedure is to be used?

Bursting pressure of LP Gas approved hose is rated at what pressure?

What is the largest size DOT cylinder approved for filling at approved bottle filling facilities and approved to be transported over the highway?

DOT cylinders should be transported in what position?

What type of liquid level gauges are generally found on ASME (motor fuel) containers?

What distance from a building window or doorway must a DOT cylinder be installed?

When are DOT cylinders required to be requalified by visual inspection after manufacture?

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