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STATE OF CONNECTICUT  
**REGULATION**  
of

NAME OF AGENCY  
DEPARTMENT OF PUBLIC SAFETY  
Concerning  
SUBJECT MATTER OF REGULATIONS  
CONNECTICUT  
GAS EQUIPMENT AND PIPING CODE

**DEPARTMENT OF PUBLIC SAFETY  
CONNECTICUT GAS EQUIPMENT AND PIPING CODE**

**Section 1:** The Regulations of Connecticut State Agencies are amended by adding Sections 29-329-1 to 29-329-4, inclusive, as follows:

(NEW) **Sec. 29-329-1. Connecticut Gas Equipment and Piping Code: Purpose and Applicability.**

- (a) Regulations of the Department of Public Safety, Sections 29-329-1 to 29-329-4, inclusive, shall be known as the Connecticut Gas Equipment and Piping Code. Sections 29-329-1 to 29-329-4, inclusive, shall be referred to as "this code" or "the code" and may be cited as such, and are adopted under authority of Connecticut General Statutes Section 29-329.
- (b) This code shall apply to the installation of fuel gas piping and dispensing systems, fuel gas utilization equipment, and related accessories. Fuel gases include natural gas, manufactured gas, liquefied petroleum gas in the vapor phase only, liquefied petroleum gas-air mixtures, and mixtures of these gases, plus gas-air mixtures within the flammable range with the fuel gas or the flammable component of a mixture being a commercially distributed product.
- (c) This code shall not apply to public service companies, as defined in Section 16-1 of the Connecticut General Statutes.

(NEW) **Sec. 29-329-2. Authority Having Jurisdiction.**

As used in Sections 29-329-1 to 29-329-4, inclusive:

- (a) "The authority having jurisdiction" shall mean the State Fire Marshal. The State Fire Marshal is the authority having jurisdiction regarding the proper administration, application, interpretation, and modification of the requirements contained within this code.

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- (b) The local fire marshal shall make the initial determination concerning compliance with this code except as stated otherwise in the wording of a section.

(NEW)

**Sec. 29-329-3. Adopted Standards.**

- (a) The following standards promulgated by the National Fire Protection Association (NFPA) are hereby adopted as part of this code:

NFPA 52-1992, Standard for Compressed Natural Gas (CNG) Vehicular Systems, except as amended, altered or deleted and by the addition of certain provisions as indicated in Section 29-329-4 of this code;

NFPA 54-1996, National Fuel Gas Code;

NFPA 57-1996, Standard for Liquefied Natural Gas Vehicle Fuel Systems.

- (b) The standards promulgated by the National Fire Protection Association, (NFPA), are available from the National Fire Protection Association, Inc., Batterymarch Park, Quincy, Massachusetts 02269; telephone number, 1-800-344-3555. Copies of this code are available from the Department of Public Safety, Division of Fire, Emergency and Building Services, P.O. Box 2794, Middletown, Connecticut 06457-9294; telephone number, (860) 685-8380.

(NEW)

**Sec. 29-329-4. Connecticut Supplement to NFPA 52-1992.**

The National Fire Protection Association, Inc., NFPA 52-1992, Standard for Compressed Natural Gas (CNG) Vehicular Fuel Systems, is amended to meet the needs of Connecticut as follows:

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## CHAPTER 1 Introduction

(Add) **1-5 Definitions**

**(a) Fleet Vehicle Compressed Natural Gas Automotive Service Stations**

That portion of a commercial, industrial, governmental, or manufacturing property where compressed natural gas used as fuel is stored and dispensed into the fuel tanks of motor vehicles that are used in connection with such businesses, by persons within the employ of such businesses.

**(b) Public Compressed Natural Gas Automotive Service Stations**

Compressed natural gas dispensing facilities open to the general motoring public with at least one attendant on duty while the station is open for business to store and dispense compressed natural gas into the fuel tanks of motor vehicles.

(Amd) **1-6. Qualification of Personnel.**

In the interest of safety, all persons employed in the transfer of compressed natural gas (CNG) at automotive CNG dispensing stations responsible for the operation or maintenance of CNG dispensing systems including containers, shall be trained by the employer in the physical hazards of the CNG; system and equipment operation and maintenance requirements; and emergency procedures, which the employer shall document. Retraining shall be required at least once every two years.

## CHAPTER 3 Engine Fuel Systems

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- (Amd) **3-1.1** This chapter applies to the design, installation, inspection and testing of CNG fuel supply systems for vehicular internal combustion engines and is included for informational purposes only.
- (Amd) **3-12.1** The complete assembly shall be leak tested using natural gas or inert gas (carbon dioxide or nitrogen or a mixture of these). System testing, checks and resets described in this section shall be documented in writing at the location of the system testing for a minimum of two years and include the name of the person and company performing the test, check or reset and be available for inspection.
- (Add) **3-13.4** Prior to performing any repair or maintenance of any kind, including general automotive maintenance of a vehicle using CNG fuel, the manual shutoff valve described in Section 3-6.2 shall be shut off and a sign shall be posted tagging the system as shut down and secure. The tagging shall be in the form of a portable sign stating in 1 inch letters "CNG FUELING SYSTEM SHUT DOWN." The sign shall be posted in a place visible to anyone attempting to operate or drive the vehicle.

#### **CHAPTER 4 CNG Compression, Storage, and Dispensing Systems**

- (Add) **4-4.2.9** Outdoor compression equipment and storage containers that are part of a dispensing system shall be protected to minimize the possibility of physical damage and vandalism with concrete filled steel bollards, a minimum of 6 inches diameter Scheduled 80 steel.
- (Add) **4-5.4** All American Society of Mechanical Engineers (ASME) and Department of Transportation (DOT) cascade container systems at dispensing stations shall be marked "Compressed Natural Gas" and "Flammable Gas" in letters four inches in height with a contrasting background surrounded by a 1/2 inch rectangular border on both sides of the container.

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- (Add) **4-5.5** The owner of ASME containers, installing ASME containers on and after the effective date of these regulations, shall maintain written records of manufacturer's data reports and the information required in Section 2-4.1 at his or her principal place of business during the period of ownership of said container and for a period of one year after transfer, sale or disposal of said container.
- (Add) **4-10.3** System testing, checks and retests described in this section shall be documented in writing by the owner of a dispensing system for a minimum of two years and include the name of the person and company performing the test, check or retest, and be available for inspection.
- (Amd) **4-11.6** An emergency manual shutdown device shall be provided at the dispensing area and also at a location remote from the dispensing area. The remote emergency manual shutdown device shall be clearly identified and easily accessible switch(es) or circuit breaker(s) and shall be provided at a location not less than 20 feet nor more than 100 feet from dispensing device(s), to shut off the power to all dispensing devices in the event of an emergency.
- (Amd) **4-14.9.** Warning signs with the words "NO SMOKING," "NO OPEN FLAMES PERMITTED" AND "FLAMMABLE GAS" in English at least 1 inch in height with a contrasting background shall be posted at all compressor areas.
- (Add) **4-18** **Compressed Natural Gas Automotive Public and Fleet Service Stations.**
- 4-18.1** Compressed natural gas (CNG) automotive service stations shall be classified as fleet vehicle or public service stations.
- 4-18.2** The definition of fleet vehicle or public service station shall include the piping, tubing, fittings, gas compression equipment, storage

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containers and dispensing devices used to dispense CNG into a fuel container to power a motor vehicle.

**4-18.3 Public Compressed Natural Gas (CNG) Automotive Service Stations.**

**4-18.3.1** Public compressed natural gas (CNG) automotive service stations shall have a trained attendant in accordance with Section 1-6 on duty to dispense CNG into the fuel containers used to power a motor vehicle.

**4-18.4 Fleet Vehicle Compressed Natural Gas (CNG) Automotive Service Stations.**

**4-18.4.1** Fleet vehicle automotive service stations do not require an attendant on duty during dispensing of compressed natural gas (CNG) into the fuel tanks of motor vehicles. If an attendant is on duty, the attendant shall be responsible for the proper observation, supervision and control of the dispensing of compressed natural gas into the fuel tanks of motor vehicles.

**4-18.4.2** When an attendant is not on duty, the owner of the fleet vehicle service station shall be responsible for training his or her employees and other persons dispensing motor fuel into their vehicles in accordance with Section 1-6.

**4-18.4.3** A fleet vehicle service station dispensing area shall be suitably illuminated by a reliable light source when in use.

**4-18.5 CNG Automotive Service Stations at Facilities Dispensing Other Motor Fuels.**

**4-18.5.1** CNG dispensing locations, fleet vehicle and public, may be located on the same property where other pressurized gases and

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flammable and combustible liquid motor fuels are dispensed into motor vehicles provided:

- (a) the different motor fuel dispensers are located on a separate island, and there is a minimum of 20-foot separations between the CNG dispenser(s) and the other different fuel dispensers; and
- (b) all dispensers are marked in accordance with the provisions of Section 4-18.8.

**4-18.6 Dispenser Protection from Vehicle Impact.**

**4-18.6.1** Dispensing devices, public and fleet vehicle, remote from and not a part of a storage container or compression equipment unit, shall be installed in accordance with any dispenser vehicle collision requirements of the manufacturer and mounted on and bolted to a concrete island, a minimum of 8 inches adjacent to ground level and protected with concrete filled steel bollards, a minimum of 6 inches diameter scheduled 80 steel, located to protect the dispenser from damage by vehicle impact.

**4-18.6.2** Dispensing devices, attached to or a part of storage container or compression equipment units, shall be protected in accordance with vehicle collision installation requirements of the manufacturer or protected with concrete filled steel bollards, a minimum of 6 inches diameter scheduled 80 steel, located to protect the dispenser from damage by vehicle impact.

**4-18.7 Markings at Dispenser Devices Locations.**

**4-18.7.1** Warning signs with the words "STOP MOTOR," "NO SMOKING," "NO OPEN FLAMES PERMITTED" AND "FLAMMABLE GAS" in English at least 1 inch in height with a contrasting background shall be posted at all dispensing locations.

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**4-18.7.2** The location of warning signs shall be determined by local conditions but shall be visible and legible from the point of transfer into the motor vehicle.

**4-18.8 Marking Of Dispensing Devices When Liquids And Other Gaseous Motor Fuels Are Dispensed.**

Warning signs identifying the type of motor fuel shall be posted at all dispensing devices where both gaseous and liquid motor fuels are dispensed into the fuel tanks of motor vehicles. Liquid motor fuels include gasoline, diesel fuel and kerosene. Gaseous motor fuels include compressed natural gas (CNG), liquefied natural gas (LNG) and liquefied petroleum gas (LPG).

Each warning sign shall be at least 3 feet above adjacent ground level and identify the fuel in English in letters at least 3 1/2 inches in height with a contrasting margin. The name of the fuel shall not be abbreviated. The contrasting margin shall be at least 2 inches from said letters. The warning signs shall be marked as follows:

- (a) "Liquefied Petroleum Gas" or "LIQUEFIED PETROLEUM GAS" or "Propane" or "PROPANE," shall be centered in black letters with a yellow background.
- (b) "Compressed Natural Gas" or "COMPRESSED NATURAL GAS," shall appear in black letters with a yellow background.
- (c) "Liquefied Natural Gas" or "LIQUEFIED NATURAL GAS," shall appear in black letters with a yellow background.
- (d) The common name of a flammable liquid, such as "Gasoline" or "GASOLINE," shall appear in white letters with a red background.

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- (e) The common name of a combustible liquid, such as "Diesel Fuel" or "DIESEL FUEL" or "Kerosene" or "KEROSENE," shall appear in white letters with a green background.

**Section 2:** Sections 29-70a-1 through 29-70a-2, inclusive, are repealed.

**Statement of Purpose:** To update the regulations for gas equipment and piping installations and include requirements for compressed natural gas (CNG) fueling of vehicles of all types due to the development of new technology in that area. These regulations are intended to promote public safety by providing guidelines for the prevention of damage to property and injury to life and protection from hazards incident to the gas equipment and piping installations with particular reference to the design, construction, location and operation of gas equipment and piping, as required by Section 29-329 of the Connecticut General Statutes.