

02 **DEPARTMENT OF PROFESSIONAL AND FINANCIAL REGULATION**
658 **MAINE FUEL BOARD**
Chapter 1 **DEFINITIONS**

Summary: This Chapter defines specialized terms used in the Board’s rules and in statute.

As used in the Board’s rules, unless the context otherwise indicates, the following terms have the following meanings:

- 1.1 **Affidavit.** “Affidavit” means a form provided by the Board to document an applicant’s licensed practical experience and/or required training.
- 1.2 **ASME.** “ASME” means American Society of Mechanical Engineers.
- 1.3 **Board.** “Board” means the Maine Fuel Board, including inspectors and administrative staff acting on behalf of the Board.
- 1.4 **Board-approved training program.** “Board-approved training program” means a training program approved by the Board as qualified to prepare candidates to qualify for the examination.
- 1.5 **Certificate of Supervision.** A form provided by the Board that is signed by a licensee’s supervising master or supervising propane and natural gas technician to affirm responsibility as set forth in Section 1.17 or 1.18.
- 1.6 **CETP.** “CETP” means the National Propane Gas Association’s Certified Employee Training Program.
- 1.7 **Cleaning of oil, solid fuel or gas equipment.** “Cleaning of oil, solid fuel or gas equipment” means the process of: brushing and vacuuming a heating appliance heat exchanger, warm air furnace, boiler (steam or hot water) flue passages and connectors; lubricating motors and bearings; replacing nozzles, belts, filters, and electrodes; performing combustion efficiency testing; testing; safety controls; and performing any other procedure for cleaning and annual maintenance as described in the manufacturer’s instructions.
- 1.8 **Combination unit.** “Combination unit” means a heating appliance that is listed for the use of more than one fuel in the same vessel.
- 1.9 **Combustion efficiency test.** “Combustion efficiency test” means a test conducted to determine efficiency of combustion by measuring the composition and temperature of flue gases as they leave the appliance.
- 1.10 **ENT flexible conduit.** “ENT flexible conduit” means electrical non-metallic tubing.
- 1.11 **Equipment installations.** “Equipment installations” means the installation, alteration or repair of oil, solid fuel, propane or natural gas burning equipment and chimneys, or pellet-fired central heating appliances, including accessory equipment as relating only to the safety of the

9.20 Emergency Temporary Repair of Warm Air Heat Exchangers

Emergency temporary repairs of warm air heat exchangers in solid fuel burning appliances are allowed if the safety limitations of the repairs are explained in writing to the owner at the time of the repair.

9.21 Welding of Non-Residential Warm Air Heat Exchangers

Warm air heat exchangers in solid fuel burning appliances shall not be welded.

STATUTORY AUTHORITY: 32 M.R.S. § 18123(2)

EFFECTIVE DATE: September 16th, 2023

CHAPTER 10 CHIMNEYS

Summary: This Chapter governs the removal of waste gases and the reduction of fire hazards associated with the construction and installation of chimneys, fireplaces, and venting systems for residential, commercial, and industrial applications.

10.1 Nationally-Accredited Testing Laboratory

All heating, chimney and fireplace equipment, as well as any accessory equipment, must be listed and approved by Underwriters' Laboratories or by an independent nationally recognized testing laboratory. Such listing must be in effect at time of installation.

10.2 Chimney Construction Disclosure

All masonry chimney systems must be constructed in accordance with NFPA 211. An installer must complete the State of Maine Chimney or Fireplace Construction/Installation Disclosure on a form provided by the Board prior to connecting an appliance to a newly-constructed masonry chimney.

10.3 Use of Existing Chimneys

10.3.1 Except as provided in Section 10.3.1.1, the required 2" minimum clearance to combustible material for existing interior chimneys and the required 1" minimum clearance to combustible material for existing exterior chimneys is not required when replacing oil- or gas-fired appliances.

10.3.1.1 The 2" clearance to combustible material for existing interior chimneys and the 1" minimum clearance to combustible material for existing exterior chimneys are required when a solid fuel appliance or a wood stove is connected to the chimney flue.

10.3.2 When installing any gas, oil or solid fuel appliance, the chimney must be lined with a clay tile liner or listed lining system compatible with the intended fuel source.

10.4 Emergency Chimney Lining Update - Waiver For Oil Fired Heating Appliances

When an emergency situation arises that does not allow adequate time to replace or repair the chimney liner before installing a new oil-fired heating appliance, the licensee may defer the required replacement or repairs for up to ninety (90) days. It is the licensee's responsibility to ensure that the installation meets all standards adopted by the Board and the manufacturer's instructions. The licensee must either install or have installed the required liner or make the proper repairs within the 90-day time period.

- 10.4.1 For the purposes of this Section, an emergency situation may include, but is not limited to, situations of serious equipment failure, such as a cracked heat exchanger of a warm air furnace or a leaking boiler in cold weather, as well as failure of equipment that generates hot water when a chimney professional is unavailable.
- 10.4.2 Any licensee deferring the required repairs or replacement pursuant to this section must complete and provide a copy of the State of Maine Emergency Chimney Update Waiver on a form provided by the Board to the building owner and to the Board.
- 10.4.3 The waiver permitted by this Section only applies to the installation of oil-fired appliances. A chimney must be lined prior to a new solid fuel or gas-fired appliance being put into service.

10.5 Interconnection

10.5.1 Gas and Liquid Fuel Appliances

Gas utilization appliances and appliances burning liquid fuels may be connected to one chimney in accordance with the applicable sections(s) of NFPA 211 and NFPA 54.

10.5.2 Oil and Solid Fuel-Burning Equipment

The interconnection of oil and solid fuel-burning equipment must meet the requirements of 32 M.R.S. § 18107.

10.5.3 Gas and Solid Fuel Burning Equipment

The interconnection of gas and solid fuel burning equipment is prohibited unless the appliance is a listed combination gas/solid fuel appliance.

STATE OF MAINE
CHIMNEY OR FIREPLACE CONSTRUCTION/INSTALLATION DISCLOSURE

Dear Consumer: As of January 1, 1992, State law, specifically 32 M.R.S. § 18108, requires that chimney or fireplace installers provide you with this "Disclosure" prior to the installation or construction of your chimney or fireplace. The purpose of this Disclosure is to inform you that the National Fire Protection Standard 211 (NFPA 211), as adopted in Chapter 6 in the Maine Fuel Board rules, is the current standard which applies to all new construction of chimneys and fireplaces. Please note that the State of Maine does not require registration or licensure of chimney or fireplace installers. It is important to realize that many fires are caused each year from improperly constructed fireplaces and chimneys. This disclosure form should help you in making an informed decision as to the abilities of the installer and under what requirements the installation must comply.

INSTALLER INFORMATION

Name of Installer:		D/B/A:	
Name of Installer (if incorporated):		D/B/A:	
Legal Address:			
City:	State:	Zip Code:	
County:	Home Telephone: (____) _____		
	Work Telephone: (____) _____		
Years of experience doing fireplace or chimney installations:			

CONSUMER INFORMATION

Name of Consumer:		
Mailing Address:		
City:	State:	Zip Code:
County:	Home Telephone: (____) _____	
	Work Telephone: (____) _____	

Installer, please give a brief description of installation being offered: _____

I hereby attest that the preceding information provided is true to the best of my knowledge. I also understand that if I fail to conform with the standards as outlined in NFPA 211 and as adopted by the Maine Fuel Board that I shall be subject to penalties as outlined in Title 32, M.R.S., Chapter 139 and the Maine Fuel Board Rules.

Signature of Installer: _____ Date: _____

**STATE OF MAINE
EMERGENCY CHIMNEY UPDATE
WAIVER FORM**

Dear Consumer: The State of Maine, Maine Fuel Board adopted the National Fire Protection Association (NFPA) Standard # 31 in Chapter 6 of Board Rules, which requires that before an existing oil-fired appliance is replaced with a new appliance, the chimney to which it is connected must be lined with an approved lining system. This regulation is intended to protect you, the consumer.

When an emergency situation arises that does not allow adequate time to get the chimney lined and/or repaired before installing the new heating appliance, the licensee may grant a waiver of up to 90 days to make required repairs. It is the licensee's responsibility to ensure that the installation meets all standards adopted by the board and the manufacturer's instructions. The licensee must either install or have installed the required liner or make the proper repairs within the 90 day time period. In cold weather an emergency situation may include, but is not limited to, situations of serious equipment failure, such as a cracked heat exchanger of a warm air furnace or a leaking boiler. Emergency situations may also include failure of equipment that generates hot water, and the unavailability of a chimney professional.

A copy of this waiver must be provided to the building owner and the Maine Fuel Board.

INSTALLER INFORMATION

Name of Installer:		License #:
D/B/A		
Mailing Address:		
City:	State:	Zip Code:
County:	Home Telephone: (____) _____	
	Work Telephone: (____) _____	

By my signature, I certify that I will follow-up within 90 days to ascertain if the liner has been installed.

Signature of Installer:

Date: _____

CONSUMER INFORMATION

Name of Consumer:		
Mailing Address:		
City:	State:	Zip Code:
County:	Home Telephone: (____) _____	
	Work Telephone: (____) _____	

By my signature, I certify that I am aware that, if I do not get my chimney lined, I may be in violation of State of Maine Law, 32 M.R.S. Chapter 139 and a Maine Fuel Board Inspector may contact me.

Signature of Consumer:

Date: _____

STATUTORY AUTHORITY: 32 M.R.S. § 18123(2)

EFFECTIVE DATE: September 16th, 2023

**CHAPTER 11 INSTALLATION OF WASTE OIL APPLIANCES AND WASTE OIL
SUPPLY TANKS**

Summary: This Chapter sets forth requirements for the use of waste (used) oil burning equipment and accessory equipment installations in specific applications.

11.1 License and Experience Required

11.1.1 License Authorities

The installation and service of waste oil appliances is covered as a function granted under the 1 & 2 oils up to 15 GPH and the 1 & 2 oils over 15 GPH oil burner technician license authorities.

11.1.2 Experience

Installation and service of waste oil burning units must be performed by licensed individuals experienced in installing and servicing such equipment.

11.2 General Installation and Service Standards

11.2.1 Nationally-Accredited Testing Laboratory

All heating, chimney and fireplace equipment, as well as any accessory equipment, must be listed and approved by Underwriters' Laboratories or by an independent nationally recognized testing laboratory. Such listing must be in effect at time of installation.

11.2.2 Workmanship

All work must be conducted, installed and completed in a neat and professional manner reflecting a minimum level of competent workmanship.

11.2.3 Manufacturer's Instructions

The installation and servicing of waste oil appliances must be made in accordance with the manufacturer's instructions and State and local codes.

11.2.4 Labeling of Waste Oil Tanks

Waste oil tanks must be labeled with the words "Used Oil" in accordance with 40 C.F.R. § 279.22(c)(1-2).

11.3 Repair or Replacement

Repair of any system or replacement of parts may be made in the same manner as it was in the existing system provided that such repair or replacement is not hazardous. All material,

equipment and devices must be constructed and installed in accordance with their specific purposes and listings.

11.4 Maintenance

11.4.1 General

All oil burning equipment and systems, both new and existing, and parts thereof must be maintained in a safe condition.

11.4.2 Notification to Owner of Code Violations

When performing any service on a customer's heating system, the licensee must notify the property owner in writing of any code violations and make recommendations to address them.

11.4.3 Combustion Efficiency Test Required

When performing an annual tune-up on a heating system, a combustion efficiency test must be conducted and a copy of the test must be posted on-site.

11.5 Installations

11.5.1 Code Compliance Required Prior to Firing

Whenever a furnace, direct-fired hot water heater, or boiler is installed, the total installation must be brought into compliance with the requirements of NFPA 31 and all other rules of the Board **BEFORE** the furnace, direct-fired hot water heater, or boiler is fired. Prior to leaving the installation (whether installed inside or outside any structure) unattended, the licensed oil burner technician must observe, inspect, and test the equipment to ensure that the installation is operating safely and properly and meets all applicable rules of the Board.

11.5.2 Wiring Compliance Required Prior to Firing

Whenever a new burner is installed, the wiring must be brought into compliance with the requirements of Board's rules before the unit is fired. The wiring update must include the following:

1. Properly rated fuse or breaker;
2. Properly rated wiring;
3. Properly installed and located emergency switch;
4. Properly installed and located thermal electric switch;
5. Properly installed and located service switch; and
6. Properly installed and located low water cut-off.

11.5.3 **Combustion Efficiency Test Required**

When performing an installation, a combustion efficiency test must be conducted and a copy of the test results must be posted on-site.

11.5.4 **Water Connections to Waste Oil Boilers**

11.5.4.1 **Hot and Cold Water Piping**

A master or journeyman oil burner technician may connect hot and cold water piping from a waste oil boiler to existing piping only in the same room where the installation is taking place. Such connections may not be made beyond any existing branch connection supplying water, in accordance with Title 32, Section 3302.

11.5.4.2 **State Plumbing Rules**

All piping and safety controls on domestic water heaters, domestic water connections to boilers and water heaters as well as condensate disposal from oil fired condensing appliances must be made in accordance with the currently adopted rules of the Plumbers' Examining Board as established by Title 5, Section 12004-A, subsection 32 of the Maine Revised Statutes.

11.6 **Low Water Control for Used Oil Fired Boilers**

11.6.1 **Low-Water Control Required**

All used oil-fired boilers must be provided with a properly installed and operating low-water cut-off.

11.6.2 **Location**

The low water cut-off may be installed in, or attached to, the boiler at the level recommended by the boiler manufacturer, but in no case shall the low water cut-off be installed below the crown sheet. The low water cut-off, when not installed directly in the boiler, may be installed either in the main supply line (vertical riser) as close to the boiler as possible, or in a water column of continuous piping attached directly to the boiler.

11.6.3 **Appropriate Design**

The low water cut-off must be designed and approved for the medium used (steam or water).

11.6.4 **No Obstructions**

No valves or other obstructive devices shall be installed between the boiler and safety controls or devices.

11.7 Piping, Pumps and Valves

11.7.1 Supply Connections

- 11.7.1.1 A listed lever or wheel, thermally-operated oil shut-off valve designed to shut off the oil supply in case of fire, must be installed at the burner and at the oil supply tank.
- 11.7.1.1.1 When outside tanks are used, a thermally operated shut-off valve must be installed where the supply line enters (inside) the building.
- 11.7.1.1.2 When inside tanks are used and the oil supply tank is installed in a separate room, a thermally operated shut-off valve shall be installed where the line enters the room where the appliance is located.
- 11.7.1.2 Whenever the oil supply is taken from the top of an oil tank, whether the oil tanks are outside or inside, a thermally operated wheel or lever type shut-off valve must be installed at the tank and at the burner for control of the fuel. A check valve may be used in the supply line, but no valve or obstruction shall be placed in a return line connected to a burner or pump.

11.7.2 Thermally-Operated Valves

Thermally operated valves over ½ inch that are not currently listed may be installed upon receipt of written approval of a Board inspector. The written approval must be requested and received prior to installation.

11.8 Oil Supply and Return Piping

11.8.1 Underground Supply and Return Lines

Whenever a copper oil supply or return line is installed under cement, sub-floors, or earth surface, it must be continuous from the burner to the tank without any splices.

11.8.2 Conduit Required

All copper oil supply and return lines must be encased in a continuous piece of non-metallic liquid-tight conduit such as PVC, ENT, coated copper tubing, or other approved material and must be secured in order to prevent physical damage. The end of the conduit shall not exceed more than two (2) inches from any fitting, except the connection at the fuel tank and at the fuel pump located at the burner shall not exceed 6 inches.

In order to avoid undetected oil leaks under floors, the conduit must be a minimum of one pipe size larger than the oil supply and return lines. The ends of the conduit must penetrate the cement or earth surface a minimum of two (2) inches above grade.

An oil supply or return line that penetrates a foundation wall must be sealed at the wall to prevent the entry of water, insects or rodents.

11.8.3 OSV Valve or PRV Valve Required: Tanks Higher Than Burner

Coated copper tubing must have an OSV valve or PRV valve installed at the tank when used underground.

11.8.4 OSV Valve or PRV Valve Required: Outlets

Wherever an outlet of an oil supply tank is located more than four (4) feet above the burner, an OSV valve or PRV valve is required.

11.8.5 Non-Concealment of Oil Lines

No oil supply or return line shall be concealed in a wall, ceiling, or partition unless access to the oil supply or return line can be had without cutting through existing walls, ceilings or partitions. This may be accomplished by providing removable panels.

11.8.6 Bracket Required

When an oil filter or other accessory equipment is connected to copper piping smaller than $\frac{3}{4}$ inches and is not located within the vicinity of the oil supply or burner connections, the filter or other devices must be rigidly supported by a wall- or floor-mounted bracket or other means that provides sufficient support and stability for servicing this type of accessory equipment.

11.8.7 Flare Fittings Required

All oil supply and return lines of copper tubing must be connected by flare fittings only. All fittings must be accessible for service or replacement. No compression fittings shall be used on a supply or return oil line unless it is for the introduction of the lines at the top of the tank with a single or double tap bushing.

11.8.8 Flare Frost Fittings Required Outside

All connections of supply or return oil lines located outside shall be made with flare frost fittings.

11.8.9 Disconnected Lines

No oil lines or oil devices which are disconnected from an oil supply tank, burner or unit, shall be left open. Any oil line or oil device which is disconnected or discontinued must be sealed or closed with a plug, cap or other approved fitting.

11.8.10 Removal of Unprotected Supply Lines

Unprotected supply lines that are buried and grouted must be removed from service.

11.8.11 Underground Piping: Tanks Over 660 Gallons

As set forth in the Appendix to Chapter 8 of Board rules, if underground or under-slab piping is connected to a tank of over 660 gallons capacity, or to tanks with an aggregate capacity of over 1320 gallons, the installation of the underground piping must be installed by a certified underground oil tank installer and otherwise meet Maine Department of Environmental Protection requirements.

11.8.12 Reporting of Oil Spills Required

Oil spills, regardless of the amount spilled, must be reported within two (2) hours to the Maine Department of Environmental Protection in accordance with the Appendix to Chapter 8 of Board rules.

11.9 Electrical Equipment, Required Control Switches

11.9.1 Thermal Cut-Off Switch

A thermal cut-off switch must be wired into the burner circuit to shut off the burner in the event of a fire at the unit. The switch must be placed at the highest point directly above the unit to be fired with the thermal element pointed downwards and must be placed on the bottom of the floor joist or stringer at the front of the unit. In no case shall it be lower than the point where the flue connector enters the chimney. The switch must be wired to shut off the burner, circulating fan, forced or induced draft fan and any remote oil pump that is not an integral part of the burner. A thermal electric switch is required for each oil-fired unit in a multi-appliance installation.

11.9.1.1 On multi-unit installations, the emergency and thermal electrical switches must be wired in series through individual unit relays so that, if one switch is opened, all equipment will be rendered inoperable whenever the "EMERGENCY" switch is opened.

11.9.1.2 All remote pump sets must have a thermal cut-out switch installed as follows:

1. Maximum of three (3) feet above pump set;
2. The element must be pointed downwards; and
3. The switch must be supported in accordance with NFPA 70.

11.9.4 Controls Containing Mercury

Thermostats containing mercury must be disposed of in accordance with all federal and state regulations. (Refer to 38 M.R.S. § 1663 and check with your local supplier.)

11.10 Safety and Pressure Relief Valves

11.10.1 Approved Safety or Pressure Relief Valve Required

Steam and hot water boilers must be equipped with listed or approved steam safety or pressure relief valves that conform to ASME requirements. A shut-off valve shall not be placed between the relief valve and the boiler or on discharge pipes between such valves and the atmosphere.

11.10.2 Termination

11.10.2.1 All steam safety or pressure relief valves must terminate in a manner which precludes the possibility of accidental scalding in accordance with ASME.

11.10.2.2 Steam safety relief valves over two (2) inches in diameter must terminate outside of the structure in a safe location.

11.10.2.3 Steam safety or pressure relief valves which terminate in the structure must terminate six (6) inches to twelve (12) inches above the floor.

11.10.3 Installation in Upright Vertical Position Required

Steam safety and pressure relief valves on boilers must be installed with the spindle in the upright vertical position.

11.11 Water and Steam Boiler Pipe Supports

11.11.1 General

Piping must be supported with pipe hooks, metal pipe straps, bands, brackets, or hangers suitable for the size of the piping and must be of adequate strength and quality and located at intervals so as to prevent or damp out excessive vibration.

11.11.2 Spacing

Spacing of supports shall not be greater than shown in Table 11-1.

11.11.3 Allowance for Expansion and Contraction

Supports, hangers, and anchors must be installed so as to not interfere with the free expansion and contraction of the piping between anchors. All parts of the supporting equipment must be designed and installed so that they will not be disengaged by movement of the supporting piping.

**Table 11-1
Support of Piping**

Steel Pipe, Nominal Size of Pipe (Inches)	Spacing of Supports (Feet)	Nominal Size of Tubing (Inch O.D.)	Spacing of Supports (Feet)
1/2	6	1/2	4
3/4 or 1	8	5/8 or 3/4	6
1 1/4 or larger (horizontal)	10	7/8 or 1	8
1 1/4 or larger (vertical)	every floor level		

11.12 PEX Tubing

All PEX tubing and fittings used in heating systems must be listed by the manufacturer for use on heating systems and be manufactured with an oxygen barrier.

11.13 Emergency Temporary Repair of Warm Air Heat Exchangers

Emergency temporary repairs of warm air heat exchangers in waste oil burning appliances are allowed if the safety limitations of the repairs are explained in writing to the owner at the time of the repair.

11.14 Welding of Non-Residential Warm Air Heat Exchangers

11.14.1 General

11.14.1 Welding of non-residential warm air heat exchangers is permissible only as set forth in this Section (11.14).

11.14.2 Welding of residential warm air heat exchangers is not permissible under any circumstances.

11.14.2 Consultation With Manufacturer Required

The manufacturer must be consulted to determine whether the welding of a heat exchanger is sound engineering practice. The manufacturer must provide a written statement as to the feasibility of its heat exchanger being welded. If the heat exchanger is no longer in production, a master licensee must make a written request to the Board and obtain written approval from the Board before the repair is undertaken.

11.14.3 Master Licensee to Oversee Welding Repair

The repair of a heat exchanger by welding must be performed by a welder in a procedure suitable for the material. A master licensee must oversee such repairs. The

master licensee must receive guidance from the welder as to the feasibility and acceptability of performing the welding procedure of the metals prior to the repair of any heat exchanger. After completion of said repairs or welding, the master licensee must obtain a written statement from the welder documenting that the heat exchanger has been welded, tested and is acceptable for use without leakage of after-products.

11.14.4 **Documentation of Repair to be Provided to Owner**

Written documentation of said repairs or welding must be provided to the owner. The original documentation must be kept on file by the master licensee who requested the welding. A copy of all the repair documents containing, at a minimum, the following information must be sent to the Board:

1. The name of the owner and location where the repairs were completed;
2. The name and address of the welder;
3. Specific area(s) or location(s) where the repair(s) or welding was performed;
4. Written approval of the repair from the manufacturer where applicable;
5. Equipment identification information, i.e., name, model number, serial number and gross Btu rating; and
6. The name, address, and license number of the master licensee who requested the repair.

11.14.5 **Limitation**

Welding repair of a heat exchanger may be performed only once. A subsequent welding repair may not be made to a heat exchanger unless a master licensee makes written request to the Board and obtains written approval from the Board before the repair is undertaken.

11.15 **Type of Fuel**

11.15.1 **Permissible Fuels**

Waste oil fuel tank(s) may contain: 1 and 2 fuel oils; crankcase oil up to 50 SAE; automatic transmission fluid; and hydraulic oils; and specified refined waste fuels only.

11.15.2 **Prohibited Fuels**

Other types of liquids such as anti-freeze, cleaners, thinners, solvents, gasoline or additives, and any other types of hazardous materials shall not be introduced into a waste oil supply tank.

11.16 **Used Underground Oil Tanks**

Abandoned underground oil storage tanks shall not be used for aboveground storage of oil unless such use has been approved by:

1. The Maine State Fire Marshal; or

2. A Maine licensed professional engineer, or other person meeting the requirements of the statutes and rules governing professional engineers practicing in Maine, certifies that the tank meets all applicable specifications and requirements of NFPA 31.

11.17 Oil Supply Tank Arrangement

11.17.1 Code Compliance Required

Except as set forth in Section 11.17.2, all tanks serving a waste oil appliance must conform to NFPA 31 and this Chapter.

11.17.2 Exception

A waste oil supply tank of 660 gallons, or two tanks of aggregate capacity, supplying a Waste Oil Appliance must be installed with a receptacle or funnel used specifically for introducing waste oils into a specifically marked waste oil supply tank when the tank and accessories have a 2-inch diameter (nominal inside diameter) iron pipe vent to the outside of the building or structure.

11.17.3 Arrangement of Waste Oil Tank Recovery Receptacle

The arrangement of the waste oil tank recovery receptacle must comply with the following:

- 11.17.3.1 The recovered waste oil must be introduced into the supply tank manually through a valved recovery pan or funnel for waste oils only and must be located at the top of the tank. See Figure 11-2. The receptacle to receive the oils may be installed as follows:
 1. Install a close x 2-inch threaded (NPT) metal nipple in the oil supply tank's 2-inch access opening;
 2. Install the receptacle (funnel, pan, catch basin, etc.) at the top of the valve; and
 3. Install a gauge in the other available access opening of the tank.
- 11.17.3.2 Spillage by individuals pouring recovered waste oil from a pan, catch basin, or other type of recovery container, must be minimized by metal steps, corresponding to the height of the tank, so that an individual does not have to reach beyond his or her shoulder level while transferring the fuel from the recovery container to the oil supply receptacle. Steps provided must be a minimum of three feet (3) wide, with a tread height of not more than eight (8) inches. Ladders are not an acceptable alternative.
- 11.17.3.3 Any spillage must be cleaned up immediately and reported to the Maine Department of Environmental Protection.

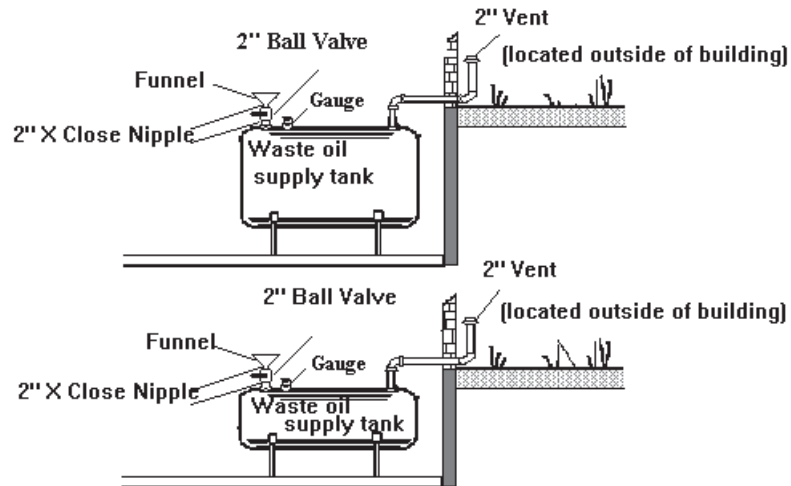


Figure 11-2

Note: The fill pipe can have a tee, a nipple, a manual ball valve and funnel. The funnel shall be constructed and placed so as not to restrict ball valve closure and transfer of oil without spillage. The valve shall not be left open. It is the owner's responsibility to ensure the outsidefill is ready for delivery.

11.17.4 Optional Tank Arrangement

As an option to the tank arrangement in Section 11.17.3 and Figure 11-2, the tank arrangement may be supplied with a funnel and a fill and vent pipe extending to the outside, provided that the fill point is identified by a metal placard attached to the building stating: "Waste oil tank, check for inside valve closure prior to filling." See Figure 11-3.

- 11.18.4.1 The waste oil supply tank in Figure 11-3 must be provided with a combination oil gauge and vent alarm at the vent pipe due to the availability of only three (3) access openings in the tank. Waste oil tanks with four (4) access openings may use a separate gauge and vent alarm.
- 11.18.4.2 Spillage due to pouring recovered waste oil from a pan, catch basin, or other type of recovery container must be minimized by metal steps, corresponding to the height of the tank, so that an individual does not have to reach beyond his or her shoulder level while transferring the fuel from the recovery container to the oil supply receptacle. Steps provided must be a minimum of three (3) feet wide, with a tread height of not more than eight (8) inches. Ladders are not an acceptable alternative.
- 11.18.4.3 Any spillage must be cleaned up immediately and reported to the Maine Department of Environmental Protection.

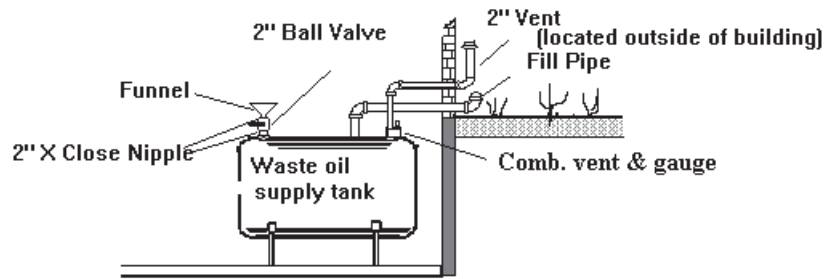


Figure 11-3
Note: Metal placard with 1" letters, must read "Waste Oil Tank, check for inside valve closure prior to filling."

STATUTORY AUTHORITY: 32 M.R.S. § 18123(2)

EFFECTIVE DATE: September 16th, 2023

CHAPTER 12 PERMITS FOR ABOVEGROUND AND UNDERGROUND PROPANE AND NATURAL GAS STORAGE FACILITIES AND ROOFTOP INSTALLATIONS

Summary: This Chapter sets forth requirements for permitting aboveground and underground propane and natural gas storage facilities and rooftop installations in Maine.

12.1 Installation**12.1.1 Aboveground and underground propane storage facilities**

1. Installations of aboveground and underground propane storage facilities utilizing storage containers of over 2,000 gallon individual water capacity, or with aggregate water capacity exceeding 4,000 gallons, must be submitted to the Board for approval and permitting prior to installation.
2. Actuators on internal valves and emergency shut-off valves must not be operated with a flammable gas.
3. All facilities permitted under this section shall be enclosed with a minimum six (6) feet (1.8 m) high industrial type chain-link fence meeting clearance and egress requirements of NFPA 58. All piping, valves and pumps shall be within the enclosure.
4. In addition to the electrical shut-off switch that controls the pump used for liquid transfer, an identified and accessible emergency switch or circuit breaker shall be installed at a location not less than 25 ft or more than 100 ft, from the point of transfer at a bulk plant, to shut off the power in the event of a fire, an accident, or other emergency.
5. The emergency remote electrical shutoff shall be identified as such by a sign incorporating the words "Storage Facility" and "Emergency Electrical Shutoff" in block letters not less than two (2) inches in height on a background of contrasting color to the letters. The sign shall be visible from the point of transfer.

12.1.2 Aboveground and underground compressed natural gas and liquefied natural gas storage facilities.

The standards for installation as set forth in 12.1.1(1)-(5) apply to installations of aboveground and underground compressed natural gas and liquefied natural gas storage facilities utilizing storage containers of over 2,000 gallon individual water capacity, or with aggregate water capacity exceeding 4,000 gallons, and must be submitted to the Board for approval and permitting prior to installation.

12.1.3 Rooftop Propane Installations

Installations of rooftop propane containers must be installed in accordance with NFPA 58 and must be submitted to the Board for approval and permitting prior to installation.

12.1.3 **Rooftop Compressed Natural Gas Installations**

Installations of rooftop compressed natural gas containers must be installed in accordance with NFPA 55 and must be submitted to the Board for approval and permitting prior to installation.

12.1.4 **Rooftop Liquefied Natural Gas Installations**

Installations of rooftop liquefied natural gas containers must be installed in accordance with NFPA 59A and must be submitted to the Board for approval and permitting prior to installation.

12.2 **Application Procedure**

12.2.1 **Generally**

Application for a permit must be made on a form supplied by the Board. The application must be accompanied by detailed plans, including a cross-sectional view, front and side elevations, and plot plans, and the fee set forth in Chapter 10 of the rules of the Office of Professional and Occupational Regulation. A permit must be obtained prior to commencement of the installation or alteration.

12.2.2 **Change in Tank Capacity, Piping or Operation**

Any physical change that would increase the tank capacity or alter the piping or operation of the facility requires that a new application be filed, and a new permit be issued.

12.2.2.1 When any individual tank with a water capacity of 2,000 gallons or more is replaced, the following must be done:

1. If the facility has not been previously permitted, a new permit must be applied for and granted before the tank is replaced.
2. If the facility has been permitted, the Board must be informed in writing at least fifteen (15) days before the tank is replaced.

12.3 **Inspection Required Prior to Placing in Operation**

When the installation or alteration is completed, the person making the installation or alteration must notify the Board prior to placing into operation. A Board inspector shall inspect the installation within a reasonable time so as not to cause undue delay in the progress of the construction contract or installation. The inspector shall determine whether the installation complies with all applicable statutes and rules. If the inspector determines that the installation does not comply, the facility must not be placed into operation and the procedures set forth in 32 M.R.S. § 18110 apply.

STATUTORY AUTHORITY: 32 M.R.S. § 18123(2)

EFFECTIVE DATE: September 16th, 2023

CHAPTER 13 INSTALLATION OF PROPANE AND NATURAL GAS BURNING EQUIPMENT

Summary: This Chapter sets forth requirements for the installation of propane and natural gas burning equipment and describes the necessary safety controls, devices and standards for the reduction of fire hazards associated with propane- and natural gas-fired equipment used in residential, commercial, and industrial applications.

13.1 Workmanship

All work must be conducted, installed, and completed in a neat and professional manner reflecting a minimum level of competent workmanship.

13.2 Repair or Replacement

Repair of any system or replacement of parts may be made in the same manner as it was in the existing system provided that such repair or replacement is not hazardous. All material, equipment and devices must be constructed and installed in accordance with their specific purposes and listings.

13.3 Maintenance**13.3.1 General**

All gas burning equipment and systems, both new and existing, and parts thereof must be maintained in a safe condition.

13.3.2 Notification to Property Owner of Code Violations

When performing any service on a customer's gas system, the licensee must notify the property owner in writing of any code violations and make recommendations to address them.

13.3.3 Combustion Efficiency Test Required

When performing an annual tune-up on a gas-fired central heating system, a combustion efficiency test must be conducted and a copy of the test results must be posted on-site.

13.4 Installations**13.4.1 Code Compliance Required Prior to Firing**

13.4.1.1 Whenever a propane or natural gas appliance and/or system is installed, the total installation must be brought into compliance with the requirements of NFPA 54, NFPA 58 and all other rules of the Board **BEFORE** the furnace, direct-fired water heater, or boiler is

fired. Prior to leaving the installation (whether installed inside or outside any structure) unsupervised, the licensed propane and natural gas technician must observe, inspect, and test the equipment to ensure that the installation is operating safely and properly and meets all applicable rules of the Board.

- 13.4.1.2 Installations of propane and natural gas appliances and/or systems must also comply with all other applicable statutes or rules of the State and all applicable ordinances, orders, rules, and regulations of local municipalities.

13.4.2 Gas Piping Identification

Gas piping systems installed with ½ inch ID or larger pipe, excluding CSST, shall be permanently identified by utilizing one of the following methods:

- 13.4.2.1 With a sticker having a yellow background with black lettering identifying the pipe as containing “flammable gas.” When used, stickers shall be placed at least every eight (8) feet along the length of the piping branch, not less than once per room and must be visible from floor level; or
- 13.4.2.2 A continuous stripe of yellow paint or manufacturer provided yellow covering may be utilized. The paint or covering must be continuous along the entire length of piping and must be visible from floor level.

13.4.3 Water Connections to Boilers and Water Heaters

13.4.3.1 Hot and Cold Water Piping

A propane and natural gas technician with the appliance connection and service authority may connect hot and cold water piping from a boiler or gas fired water heater to existing piping only in the same room where the installation is taking place. Such connections may not be made beyond any existing branch connection supplying water, in accordance with Maine Revised Statutes, Title 32, Section 3302.

13.4.3.2 State Plumbing Rules

All piping and safety controls on domestic water heaters, domestic water connections to boilers and water heaters, and condensate disposal from condensing gas fired appliances must be made in accordance with the rules of the Plumbers’ Examining Board as established by Title 5, section 12004-A, subsection 32 of the Maine Revised Statutes.

13.4.4 Condensate from Fuel Fired Appliances

1. An approved neutralizer shall be installed in the condensate drain system of all fuel fired condensing appliances, so the condensate is rendered innocuous.
2. Condensate from fuel fired appliances shall be drained into an existing open receptor through an air gap that is connected to a sanitary drainage system in accordance with the rules of the Maine Plumbers’ Examining Board as established by Title 5, section 12004-A, subsection 32 of the Maine Revised Statutes.

3. If there is no existing open receptor, connection to a sanitary drainage system must be done by a Maine licensed master or journeyman plumber utilizing a permit in accordance with the rules of the Maine Plumbers' Examining Board, as established by Title 5, section 12004-A, subsection 32 of the Maine Revised Statutes.
4. Condensate shall not be disposed of by routing through a floor and into a perimeter drain system or underneath a slab.
5. When the installation requires a condensate pump, the condensate pump must be installed in accordance with the manufacturer's instructions. The condensate pump discharge shall rise vertically to a point where it is possible to discharge to an open receptor connected to the sanitary drainage system.
6. Where an installation requires a condensate pump, the condensate pump must be interlocked with the appliance to prevent to appliance from operating during a condensate pump failure.
7. Each fuel fired condensing appliance requiring a condensate pump shall be provided with its own individual condensate pump.

13.4.5 **Additional Requirements**

When an appliance other than a furnace, direct-fired water heater, or boiler is installed, the following must be done:

1. The entire gas piping system must be brought into compliance with the requirements of NFPA 54 and all other rules of the Board;
2. All appliances which are designed to be vented, including existing appliances, must be vented in accordance with NFPA 54; and
3. Any existing code violations must be reported to the owner in writing, a copy of which must be retained by the installer such that it may be produced for inspection upon request of a Board inspector.

13.4.6 **Vented Central Heating Appliance - Efficiency Test**

When installing a vented central heating appliance, the installer must conduct a combustion efficiency test, unless prohibited by the manufacturer, and must post a copy of the test results on-site.

13.4.7 **Unvented Heaters in Bedrooms or Bathrooms or HUD-Code Homes**

- 13.4.7.1 The use of unvented heaters in bedrooms and bathrooms is prohibited.
- 13.4.7.2 The use of unvented heaters, in HUD-Code homes (Manufactured Housing) as defined in Maine Revised Statutes, Title 10, Section 9002(7)(A), is prohibited.

13.5 **Low Water Control for Boilers**

13.5.1 **Low Water Control Required**

All gas-fired boilers must be provided with a properly installed and operating low water cut-off.

13.5.2 **Location**

The low water cut-off may be installed in or attached to the boiler at the level recommended by the boiler manufacturer, but in no case shall the low water cut-off be installed below the crown sheet. The low water cut-off, when not installed directly in the boiler, may be installed either in the main supply line (vertical riser) as close to the boiler as possible or in a water column of continuous piping attached directly to the boiler.

13.5.3 **Appropriate Design**

The low water cut-off must be designed and approved for the medium used (steam or water).

13.5.4 **No Obstructions**

No valves or other obstructive devices shall be installed between the boiler and safety controls.

13.5.5 **Acceptable Manufacturer's Alternatives**

13.5.5.1 Installations meeting the low water cut off requirements of NFPA 54 shall be accepted as meeting the provisions of this Section.

13.5.5.2 A pressure switch installed by the manufacturer and specified by the manufacturer as low-water protection shall be accepted as meeting the low water cut off requirements of NFPA 54.

13.6 **Heat Loss Requirement**

13.6.1 **New Installations of Central Heating Systems**

Heat loss system design and system load calculations for all new installations of a central heating system must be performed prior to installation. The licensee must retain a copy of the heat loss system design and system load calculations such that it may be produced for inspection upon request of a Board inspector.

13.6.2 **Replacement of Central Heating Systems**

A heat loss and/or load calculation must be conducted before replacement of a central heating system. The licensee must retain a copy of the heat loss system design or system load calculations, or the stamped plans of an engineered system, such that they may be produced for inspection upon request of a Board inspector.

13.7 Conversion Burners

13.7.1 400,000 btu or less

When converting to propane or natural gas from another fuel source of which the input of the burner is 400,000 btu or less, the following requirements must be met:

1. The conversion burner must be a listed conversion burner.
2. The installer must obtain written verification from the manufacturer of the appliance to be converted or the burner manufacturer that the appliance is capable of being used with gas as a fuel source.
3. The burner selection criteria included in ANSI Z21.8, and the appliance and/or burner manufacturer's combustion setup instructions must be used.
4. If the appliance being converted is designed to operate with a positive chamber pressure, the appliance manufacturer or the conversion burner manufacturer must provide installation and setup instructions specific to the appliance being converted.
5. The installation must conform to NFPA 54 and ANSI Z21.8, as incorporated by reference into NFPA 54.

13.7.2 Greater than 400,000 btu

When converting to propane and natural gas from another fuel source of which the input of the burner is over 400,000 btu, the burner must be listed by Underwriters' Laboratory or by an independent nationally recognized testing laboratory and the following requirements must be met:

1. The installer must obtain written verification from the manufacturer of the appliance to be converted or the burner manufacturer that the appliance is capable of being used with gas as a fuel.
2. The burner must be selected for use in the make and model of appliance in which it is intended to be installed and must meet one of the following conditions:
 - A. The burner manufacturer must provide written documentation that the burner has been approved by the burner manufacturer for use in the appliance intended to be converted;
 - B. The burner has been tested by an independent testing laboratory in the make and model of appliance in which it is intended to be installed and has been certified for use in such appliance by the nationally recognized independent testing laboratory;
 - C. The burner has been tested by the appliance manufacturer in the make and model appliance in which it is intended to be installed and has been approved for use in such appliance by the appliance manufacturer.

Cannot be used before the appliance and/or burner manufacturer provides installation and combustion set-up instructions for the appliance being converted.

3. The installation must conform to the requirements of NFPA 54 and NFPA 211 for the installation of a gas appliance.

13.7.3 Oil Tank Requirements Upon Conversion to an Alternative Fuel

The requirements of this Section must be performed by a master or journeyman oil burner technician.

If an oil burning appliance is replaced with a gas fired appliance, the fuel oil tank and burner supply piping must be removed from the premises in accordance with NFPA 31.

If an oil burning appliance is converted to an alternative fuel, but the tank is left in place so that it can be returned to service at some future date, all of the following requirements must be met before the alternative fuel is used:

- 13.7.3.1 The vent piping must remain intact and open to the outside of the building;
- 13.7.3.2 The fill pipe must be removed completely and the tank must be plugged with a threaded malleable iron plug;
- 13.7.3.3 The burner supply line must be removed and the valves on both the tank and burner must be capped or plugged; and
- 13.7.3.4 If an underground oil supply line is in use and complies with Section 8.9 of Chapter 8 of Board Rules, it may remain in place provided that all of the following conditions are met:
 1. The oil line is emptied of its contents;
 2. The oil line is disconnected from the oil tank and burner; and
 3. The oil line is plugged on both ends in addition to the burner and tank fittings being plugged.

Oil can remain in the tank unless prohibited by the local authority having jurisdiction or the Maine Department of Environment Protection.

13.8 Electrical Wiring and Equipment

13.8.1 Code Compliance; General Requirements

The following requirements must be met with respect to the electrical wiring and equipment used in connection with propane or natural gas burning equipment:

1. The electrical wiring and equipment used must be installed in accordance with NFPA 70;
2. Safety control circuits must be two-wire, one side grounded, having a nominal voltage not exceeding 150 Volts. A safety control or protective device must be connected so as to interrupt the ungrounded conductor; and

3. The control circuit must be connected to a power supply branch circuit fused at not more than the value appropriate for the rating of any control or device included in the circuit.
4. Whenever a furnace, direct-fired hot water heater, or boiler is installed, each unit must have its own dedicated electrical circuit.

13.8.2 **Emergency Switch**

- 13.8.2.1 For central heating equipment and water heating appliances where the interruption of an electrical circuit will arrest the combustion process, an identified emergency shutdown switch must be placed outside of and adjacent to the entrance of the room where the appliance is located.
- 13.8.2.2 An emergency switch shall not be placed outside of any building.
- 13.8.2.3 If the entrance to the boiler room is only accessible from the outside, the emergency switch may be placed at the inside not more than one foot beyond the door opening.
- 13.8.2.4 On multi-unit installations of commercial and industrial equipment, the emergency switch must be installed in accordance with Figure 13-1.
- 13.8.2.5 On multi-unit installations, in other than one- and two-family residences, the emergency shut-off switch must be placed at the outside entrance of the room containing the appliances. The emergency switch must be wired so that, if the emergency switch is opened, all central heating equipment and water heating appliances (within that room) where the interruption of an electrical circuit will arrest the combustion process will be rendered inoperable. Where there are other (new or existing) multi-unit appliance rooms in the same building, those rooms must also be made compliant with this requirement.

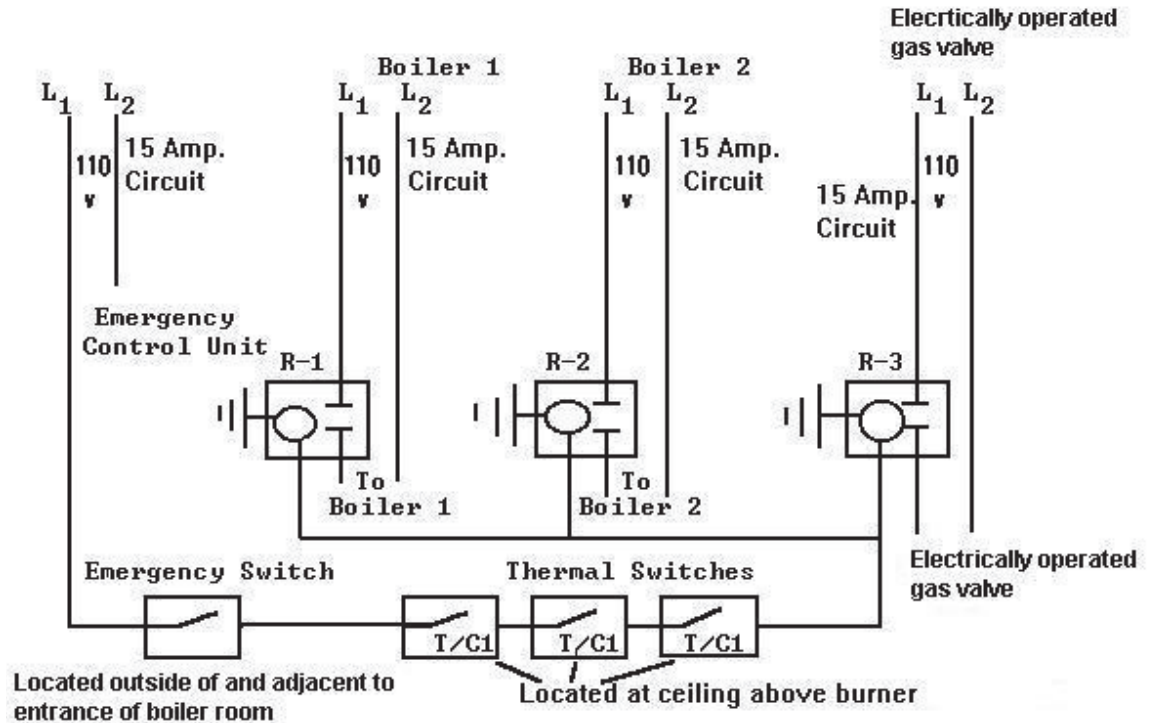


Figure 13-1 For use on commercial and industrial equipment only.
This requirement shall not apply to one and two family residences.

13.8.3 Service Switch

For central heating equipment and water heating appliances where the interruption of an electrical circuit will arrest the combustion process, a service disconnect switch for control of the burner while observing the flame must be placed at the unit, within three (3) feet of the burner.

13.8.4 Thermal Cut-Off Switches

13.8.4.1 For central heating equipment and water heating appliances where the interruption of an electrical circuit will arrest the combustion process, a thermal cut-off switch must be wired into the burner circuit to shut off the burner in the event of a fire at the unit. The switch must be placed at the highest point directly above the unit to be fired with the thermal element pointed downwards, and must be placed on the bottom of the floor joist or stringer at the front of the unit. In no case shall it be lower than the point where the flue connector enters the chimney. The switch must be wired to shut off the burner, circulating fan, forced or induced draft fan and any electrically-operated gas valves. A thermal electric switch is required for each electrically-powered gas-fired unit in a multi-appliance installation.

13.8.4.2 On multi-unit installations other than one- and two-family residences the thermal electrical switches must be wired in series through individual unit relays so that, if one switch is opened, all equipment will be rendered inoperable.

13.8.5 Controls Containing Mercury

Thermostats containing mercury must be disposed of according to all federal and state regulations. (Refer to 38 M.R.S. § 1663 and check with your local supplier.)

13.9 Steam Boilers

Steam boilers must be installed according to manufacturer's instructions.

13.10 Safety and Pressure Relief Valves

13.10.1 Approved Safety or Pressure Relief Valve Required

Steam and hot water boilers must be equipped with listed or approved steam safety or pressure relief valves that conform to ASME requirements. A shut-off valve shall not be placed between the relief valve and the boiler or on discharge pipes between such valves and the atmosphere.

13.10.2 Termination

13.10.2.1 All steam safety or pressure relief valves must terminate in a manner which precludes the possibility of accidental scalding in accordance with ASME.

13.10.2.2 Steam safety relief valves over two (2) inches in diameter must terminate outside of the structure in a safe location.

13.10.2.3 Steam safety or pressure relief valves which terminate in the structure must terminate six (6) inches to twelve (12) inches above the floor.

13.10.3 Installation in Upright Vertical Position

Steam safety and pressure relief valves on boilers must be installed with the spindle in the upright vertical position.

13.11 Water and Steam Boiler Pipe Supports

13.11.1 Generally

Piping must be supported with pipe hooks, metal pipe straps, bands, brackets or hangers suitable for the size of the piping and must be of adequate strength and quality and located at intervals so as to prevent or damp out excessive vibration.

13.11.2 Spacing

Spacing of supports shall not be greater than as shown in Table 13-1.

13.11.3 Allowance for Expansion and Contraction

Supports, hangers, and anchors must be installed so as to not interfere with the free expansion and contraction of the piping between anchors. All parts of the supporting equipment must be designed and installed so that they will not be disengaged by movement of the supporting piping.

**Table 13-1
Support of Piping**

Steel Pipe, Nominal Size of Pipe (Inches)	Spacing of Supports (Feet)		Nominal Size of Tubing (Inch O.D.)	Spacing of Supports (Feet)
1/2"	6'		1/2"	4'
3/4" or 1"	8'		5/8" or 3/4"	6'
1 1/4" or larger (horizontal)	10'		7/8" or 1"	8'
1 1/4" or larger (vertical)	every floor level			

13.12 PEX Tubing

All PEX tubing and fittings used in heating systems must be listed by the manufacturer for use on heating systems and be manufactured with an oxygen barrier.

STATUTORY AUTHORITY: 32 M.R.S. §18123(2)

EFFECTIVE DATE: September 16th, 2023

Chapter 14 PROPANE AND NATURAL GAS CONTAINERS, DISPENSERS, AND PIPING

Summary: This Chapter describes the necessary safety controls, devices and standards for the reduction of fire hazards associated with propane and natural gas storage and transfer equipment (including piping) used in residential, commercial and industrial applications.

14.1 Underground Gas Piping**14.1.1 Electrically Insulating Fitting Required**

When metallic piping is buried underground, an electrically insulating (dielectric) fitting must be installed before the entrance of the piping into the building. In no case shall the fitting be located after the connection of a bond wire for use with corrugated stainless steel tubing (CSST) or other piping material.

14.1.2 Limitation on Use of Flare Fittings

No flare fittings shall be located underground, unless specifically rated for such use and protected from corrosion in accordance with the manufacturer's instructions.

14.1.3 Protection of Metallic Piping from Corrosion

All underground metallic piping must be protected from corrosion. This may be accomplished by sleeving, using a PVC coated pipe material approved for direct burial, or by other corrosion prevention material listed for such use.

14.2 Liquefied Petroleum Gas, Liquefied Natural Gas and Compressed Natural Gas Containers – General Requirements

1. Any ASME container that does not have a data plate or has a plate that is not legible will be considered to be out of compliance and may not be filled.
2. Department of Transportation cylinders and ASME containers must rest on noncombustible materials unless listed for such purpose.
3. Any cylinder that does not have a legible manufacture date or retest date will be considered to be out of compliance and shall not be filled.
4. Portable motor fuel containers which are equipped for volumetric filling and meet the requirements of construction and inspection set forth in NFPA 58 may be filled by volume or weight.
5. For the purpose of container location, exhaust terminations of all residential clothes dryers shall be considered openings into the building and not ignition sources.

6. For the purpose of container location, all electrical meters and disconnects are considered ignition sources.

14.3 Identification of Tank Owner

All liquefied petroleum gas, liquefied natural gas and compressed natural gas containers installed at a consumer site must be identified as follows:

1. The name of the tank owner must be clearly marked in letters which are a minimum of one (1) inch high;
2. The 24-hour emergency contact number of the tank owner must be marked in numbers which are a minimum of one (1) inch high;
3. On tanks which are consumer-owned, the tank must be marked "Consumer Owned" in letters which are a minimum of one (1) inch high; and
4. Aboveground containers must be placed so that the identification information is visible to emergency responders.

14.4 Underground Tanks

- 14.4.1 Underground tanks must have the requirements of Section 14.3, subsections (1)-(3), clearly marked on the inside of the dome cover.
- 14.4.2 Underground containers must be installed such that the top of the attached dome is a minimum of six (6) inches above finished grade.
- 14.4.3 Existing underground tanks installed prior to 2015 must be tested for corrosion protection in accordance with the corrosion protection requirements of NFPA 58 including schedules for continuing testing.

14.5 Container Installation Under Decks or Other Structures

Cylinders and ASME containers of 125 gallons water capacity or less may be located and installed underneath a deck or other structure, provided all of the following conditions are met:

1. The space is completely open to the atmosphere for 50 percent of its perimeter or more;
2. There is a minimum of two (2) feet vertical clearance between the top of the tank and any part of the structure;
3. The maximum aggregate water capacity of such tanks is no more than 250 gallons; and
4. The container is not installed beneath a means of egress, as defined by the local Authority Having Jurisdiction.

14.6 Vehicle Protection Requirements for Tanks, Gas Piping and Associated Accessory Equipment

When vehicle protection at an existing installation has been compromised, it shall be replaced to meet current vehicle protection requirements as set forth in this Section and as summarized in the Appendix to this Chapter.

14.6.1 **Responsibility of Installer**

It is the responsibility of the licensee installing the tank(s)/outside piping to provide vehicle protection to the tank(s), outside piping or accessory equipment at time of installation.

14.6.2 **Responsibility of Delivery Technician**

It is the responsibility of the delivery technician to assure that all gas tanks and associated piping and accessory equipment are protected from vehicular damage prior to the introduction of gas to that system.

14.6.3 **Spacing**

14.5.3.1 There must be a maximum of thirty-six (36) inches of space between pieces or sections of vehicle protection.

14.5.3.2 Vehicle protection must be located a minimum of twenty-four (24) inches from containers.

14.6.4 **Guardrail**

Guardrail posts must be set in a minimum of thirty-six (36) inches below grade and extend a minimum of thirty-six (36) inches above finished grade.

14.6.5 **Bollards**

14.6.5.1 Bollards must be set a minimum of thirty-six (36) inches below grade in cement and must extend a minimum of thirty-six (36) inches above finished grade.

14.6.5.2 Bollards protecting vapor systems must be at least four (4) inches in diameter and filled with concrete.

14.6.5.3 Bollards protecting Bulk Plants, Dispensers, vaporizers and liquid piping must be at least six (6) inches in diameter and filled with concrete.

14.6.6 **Wooden Posts**

Wooden posts must consist of a minimum six (6) inch x six (6) inch pressure-treated material and must be set a minimum of thirty-six (36) inches below grade and extend at least thirty-six (36) inches above finished grade.

14.6.7 **Boulders**

Boulders at least thirty-six (36) inches in diameter (all directions) and meeting the spacing criteria of subsection 14.6.3 above may be used.

14.6.8 **Concrete Barriers and Blocks**

Concrete barriers and blocks at least thirty-six (36) inches high and meeting the spacing criteria of subsection 14.6.3 above may be used.

14.6.9 **Non-Standard Protection Systems**

Non-standard engineered vehicle protection systems must be reviewed and approved by the senior fuel inspector prior to being placed into service.

14.6.9.1 **Initial Review by Senior Fuel Inspector; Appeal to Board**

The senior fuel inspector may grant the application for non-standard vehicle protection in whole or in part or may deny the application. The senior fuel inspector's disposition of the application must be provided to the applicant in writing and must include written notice of the applicant's opportunity to appeal the disposition to the Board in writing within thirty (30) days of the applicant's receipt of the disposition. The appeal must include an explanation of the reason for the appeal and a statement of the relief sought by the applicant. An appeal is deemed to be made on the date of its receipt by the Board. Untimely appeals will not be considered.

14.6.10 **Plastic Barriers**

Plastic "Type K" barriers filled with sand which meet the height and space criteria of this Chapter may be used.

14.7 **Propane or Natural Gas Dispensing Stations**

All installations of dispensing stations must comply with the following requirements:

- 14.7.1 Propane dispensers must be installed in accordance with NFPA 58.
- 14.7.2 Liquefied or compressed natural gas dispensers must be installed in accordance with NFPA 52.
- 14.7.3 Dispenser installations are required to have the electrician get an electrical permit, and the permit approved by an electrical inspector, before the license can be issued.
- 14.7.4 All propane or natural gas dispensing stations must have available to the operator a chart showing permissible filling capacities of containers
- 14.7.5 All propane or natural gas dispensing stations must post signs indicating no smoking allowed within twenty-five (25) feet. Such signs shall be visible from all directions of the dispenser.
- 14.7.6 Dispensing station actuators on internal valves and emergency shut-off valves must not be operated with a flammable gas.
- 14.7.7 All dispensing stations shall be enclosed with a minimum six (6) feet (1.8 m) high industrial type chain-link fence meeting clearance and egress requirements of NFPA 58. All piping, valves and pumps shall be within the enclosure.
- 14.7.8 All Propane dispensing stations must post signs indicating "no smoking allowed within 25'", "Propane" and the "UN1075" hazard placard. Such signs shall be visible from all directions of the dispenser.

- 14.7.9 All Natural Gas dispensing stations must post signs indicating “no smoking allowed within 25 feet”, “Natural Gas” and the “UN 1972” hazard placard. Such signs shall be visible from all directions of the dispenser.
- 14.7.10 When delivering propane to a dispensing station, the delivery technician must verify that the dispensing station has a valid license prior to completing the delivery. If the dispensing station is not licensed, the delivery shall not be completed until such time as the dispenser has been properly licensed.

14.7.11 Dispenser Weather Shelters

Where propane, compressed natural gas or liquefied natural gas dispensers are installed beneath a weather shelter to cover the working space while filling operation is in progress, the following requirements must be met:

- (1) The weather shelter must be designed to prevent accumulation or entrapment of ignitable vapors and shall not be enclosed for more than 50% of its perimeter.
- (2) All electrical equipment installed beneath the weather shelter or enclosure must be suitable for Class I, Division 1 hazardous (classified) locations.
- (3) The weather shelter and supporting structure must be made from noncombustible materials.
- (4) No portion of the container supplying gas to the dispenser may be located beneath the weather shelter.

14.8 Self-Service Dispensing Stations

All installations of self-service dispensers at dispensing stations must comply with the following requirements in addition to the requirements of 14.7:

14.8.1 Operating Instructions

Operating instructions must be conspicuously posted in the dispensing area.

14.8.2 View of Operator

The dispensing area must be in clear view of the operator on duty at all times.

14.8.3 Communications

The operator must be able to communicate with persons in the dispensing area at all times.

14.8.4 Warning Signs

Warning signs incorporating the following or equivalent wording must be conspicuously posted in the dispensing area:

1. “The filling of portable propane and natural gas containers is prohibited;”

2. “No Smoking;”
3. “Stop Motor and Extinguish All Pilots - Extinguish all pilots and gas ignition systems. All appliances must be in the ‘off’ position;” and
4. “Remove All Occupants from Vehicles Containing Propane Appliances.”

14.8.5 **Emergency Breakaway Device**

The dispensing station must have an emergency breakaway device under the dispensing unit that will retain the product on both sides of the breakaway point, or other devices affording equivalent protection.

14.8.6 **Thermally Activated Shut-off**

The dispensing station must have a thermally operated shutoff designed to shut off all transfer operations in case of a fire.

14.8.7 **Listing**

Motor fuel dispensing devices for compressed natural gas, liquefied natural gas, and liquefied petroleum gas must be listed.

14.8.8 **Hose Assemblies**

Listed hose assemblies must be used to dispense fuel. Hose length at automotive service stations must not exceed eighteen (18) feet (5.5 meters).

14.8.9 **Code Compliance Required: LP, LNG, CNG Dispensers**

Dispensing devices for liquefied petroleum gas (LP), liquefied natural gas (LNG) or compressed natural gas (CNG) must meet all requirements of the appropriate Sections of NFPA 58 for LP, and NFPA 52 for LNG and CNG dispensers. When a LP, LNG or CNG dispenser is located at a facility where other fuels are dispensed, it also meet the requirements of NFPA 30A.

14.9 **Cylinder Exchange Systems**

14.9.1 **Vehicle Protection**

Vehicle protection shall be provided in accordance with 14.6 where any type of vehicle traffic is expected at the location of any cylinder exchange system.

14.9.2 **Location**

Cylinder exchange systems shall be located no less than ten (10) feet from any opening into a building.

Appendix

VEHICLE PROTECTION

BARRIERS:

- Stone: Minimum 36 inches high
Maximum 3 feet between stones
- Concrete Blocks: Minimum 36 inches high
Maximum 3 feet between blocks
- Highway Barriers: Minimum 32 inches high
Maximum 3 feet between blocks

GUARD RAIL:

- Standard Steel: Minimum 36 inches high
Minimum post depth 3 feet in ground
Maximum 3 feet breaks between sections for access
- Special Engineered: Must be reviewed and approved by the Maine Fuel Board

STEEL BOLLARDS:

4 inch minimum diameter filled with concrete
BULK PLANTS AND DISPENSERS -6 inch diameter filled with concrete

Minimum 36 inches high
Minimum 3 feet below grade in cement (all sizes)
Maximum 3 feet between bollards

WOODEN POSTS:

Minimum 6 inch X 6 inch pressure treated
Minimum 36 inches high
Minimum 3 feet below grade in cement
Maximum 3 feet between posts

STATUTORY AUTHORITY: 32 M.R.S. § 18123(2)

EFFECTIVE DATE: September 16th, 2023