

4.1: Designing and Installing Exterior Vapor Distribution Systems

4.1 will be available in E-learning & textbook

Release date Q1 2012

- **Covered tasks include:**
 - Determining system BTU load
 - Container vaporization capacity calculations
 - Selecting the proper container
 - Inspecting propane containers in the bulk plant
 - Loading them on a vehicle for transport
 - Installing the propane container
 - Tank-to-tank liquid transfer
 - Emergency procedures for uncontrolled releases
 - Installing corrosion protection
 - Sizing, selecting, and installing exterior gas piping, regulators, and meters
 - Testing exterior gas piping for leakage
 - Customer safety education
- This program will instruct the learner to leave the regulator or vapor meter with a plug in it.
 - Does not cover any interior gas piping connection
 - Does not cover sizing or installing piping or appliances downstream of the regulator or vapor meter.
 - Does not cover testing any gas piping inside the building.
- The program covers items designed & installed under the scope of NFPA 58 with an exception for vapor meters.
- Program provides a brief overview of the various different types of testing methods.
 - Meant to familiarize them with the differences between a pressure test and a leak test.
 - To give them an understanding about regulator and system flow and lockup testing.

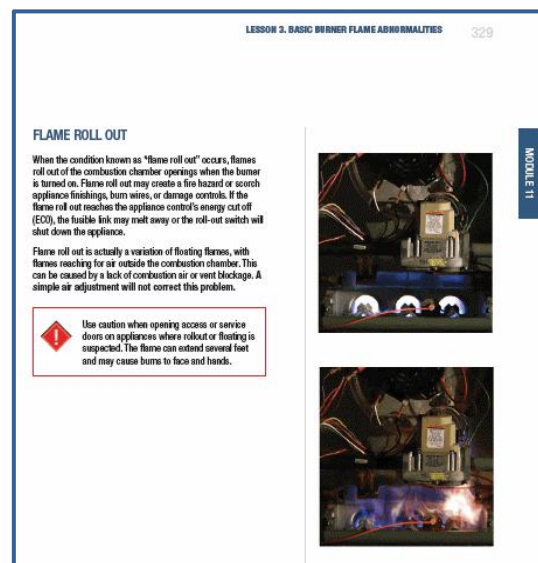


4.2: Placing Vapor Distribution Systems and Appliances into Operation

4.2 will be available in E-learning & textbook

Release date Q1 2012

- **Covered tasks include:**
 - A brief review of the exterior system covered in 4.1
 - This is just an overview awareness level to be sure all is correct before starting up a system.
 - A more in-depth explanation of all the different tests required:
 - Test for leakage
 - Pressure test
 - Leak check
 - Leak test
 - Regulator flow and lockup testing
 - Conducting interior site assessments
 - Making sure appliances are safe to operate
 - Converted to operate on propane
 - Correct application and type
 - Installed in a safe manner
 - Venting systems adequate
 - Reviews all types of systems and how they operate differently
 - Supplied with enough combustion, dilution, and ventilation air
 - Verifying interior piping is safe to connect gas to
 - Connecting regulator and/or vapor meter to interior gas piping
 - Leak check procedures
 - Teaches different methods and code requirements
 - Purging air from gas piping
 - From container to appliances
 - Different methods taught



4.2: Placing Vapor Distribution Systems and Appliances into Operation (cont'd)

- Placing appliances into operation
 - How to light pilots and start up systems with electronic ignition systems
 - Verifying the venting system is operating properly
 - Conducting a spillage test
 - Conducting system flow and lockup testing of all regulators
 - Familiarization with appliance operating controls and safety devices and how to test them
 - Meant to give the learner a better understanding of how these components operate and to recognize a problem when they don't work properly during the startup testing
 - Identifying proper and improper burner operation
 - Recognizing when something doesn't look right and making some simple adjustments to correct
 - If not able to correct, the learner is taught to disable the appliance according to company policy
- Emergency response to uncontrolled releases of propane
- Customer safety education
 - This program is not meant to teach the learner everything they need to know about venting and combustion air. It is meant to teach them how to recognize when something doesn't look right, they would take the next steps to make sure it has been corrected before supplying the appliance with propane.
 - This program does not teach the learner how to size, install, and pressure test interior gas piping, but to make sure the piping used is of the correct material and is installed according to code.
 - This course does not instruct the learner how to install gas appliances. It only instructs them to verify an existing appliance is of the correct type, is set up to operate on propane gas, meets the clearances to combustible material, and will operate safely once supplied with propane.

4.3: Installing Appliances and Interior Vapor Distribution Systems

- **Covered tasks include:**
 - Design considerations for gas appliances
 - How they need to be vented
 - Category I-IV
 - Vented and unvented types
 - Size appliance required
 - Appliance locations
 - Closets, garages, etc.
 - Clearances and accessibility
 - Calculating combustion air
 - In-depth review of various methods to supply needed air for the appliances
 - Sizing and installing natural draft venting systems
 - In-depth review of sizing a single appliance venting system as well as multiple appliance vents
 - Installation of venting system components
 - Review of Direct vent appliance venting design and installation as well as other mechanical vent systems
 - Design and installation of interior gas piping
 - Steel, copper, and CSST pipe and tubing is covered
 - Sizing methods include:
 - Longest length
 - Branch length
 - Hybrid
 - Pressure testing interior piping under the scope of NFPA 54
- This course does not teach the learner to put the system into operation. That is covered in 4.2.
- This program does include everything a learner needs to know about how to select the appropriate appliance based upon system demand and how to install it in a safe manner. The program refers the learner to each specific appliance manufacturer for details on proper installation requirements.

4.3 will be available in textbook only

Release date Q1 2012

