

MATERIALS NEEDED FOR CLASS 3 SERVICE TECHNICIAN / HVAC

- 1. NFPA 54 2021 EDITION**
- 2. NFPA 58 2020 EDITION**
- 3. COPY OF NFPA 35**
- 4. COPY OF MISSISSIPPI LAWS**
- 5. COPY OF MISSISSIPPI REGULATIONS 2011-2**
- 6. MISSISSIPPI DRIVER LICENSE**
- 7. PHOTO HEAD SHOT FOR LC-GAS ID**
- 8. EMPLOYEE INFORMATION SHEET – MUST BE COMPLETED AND SIGNED BY MANAGER**
- 9. CETP NEW ACCOUNT INFORMATION SHEET**
- 10. INSTRUCTIONAL MATERIAL PLUMBER – ON WEBSITE AT BOTTOM OF FORM A SECTION**
- 11. COMPLETED TEST**
- 12. BASIC SKILLS TRAINING RECORD**

NFPA 35

Electrical Code

4.1.4- Engines Located Outdoors

N 4.1.4.1- Engines and, if provided, their weatherproof housings that are installed outdoors shall be located at least 1.5 m (5 ft) from openings in walls and at least 1.5 m (5 ft) from structures having combustible walls except as provided in 4.1.4.1.1 or 4.1.4.1.2.

N 4.4.4.1.1- A clearance less than 1.5 m (5 ft) shall be permitted where all portions of structures that are closer than 1.5 m (5 ft) from the engine enclosure have a fire resistance rating of at least 1 hour.

N 4.1.4.1.2*- A clearance less than 1.5 m (5 ft) shall be permitted where it has been demonstrated through methods acceptable to the authority having jurisdiction that a fire within the enclosure will not ignite combustible structures.

4.2*- Support of Engines. Engines shall be supported in accordance with the manufacturer's instructions.

4.3*- Hazardous Locations.- In hazardous locations, engines that neither compress a flammable gas nor pump a flammable liquid shall meet the following three criteria:

- (1) They shall be installed in an enclosure or room of fire-resistive construction.
- (2) They shall be ventilated from a nonhazardous outside area.
- (3) They shall have a defined emergency egress path(s) acceptable to the authority having jurisdiction.

MISSISSIPPI LAWS

§ 75-57-33. Installing and charging cylinders.

No cylinder installation shall be made unless the cylinders are designed, fabricated, tested and marked in accordance with the regulations of the United States Department of Transportation or the United States Interstate Commerce Commission, and constructed for a designed pressure of not less than two hundred forty (240) pounds per square inch. Cylinders with a water capacity of less than two hundred fifty (250) pounds shall be charged by weight with liquefied petroleum gas only at bulk storage or cylinder filling plants and not from mobile units such as delivery trucks, except cylinders installed as part of a system burning liquefied petroleum gas or compressed natural gas as a motor fuel or for farming purposes such as in flame cultivators or hot air balloon cylinders. Cylinders with a water capacity of two hundred fifty (250) pounds or larger may be charged at the installation from mobile units, provided they are equipped with a fixed liquid level gauging device and a filling valve, which is designed in accordance with the national standards and codes, in addition to other required or acceptable valves and fittings. Cylinders with a water capacity of two hundred fifty (250) pounds or larger, in addition to having all the necessary valves and fittings, must be installed permanently in accordance with the national standard and codes.

§ 75-57-47. Installation of systems, etc.; inspection; correction of installations, etc.; certificates and permits; remedies for violations.

(1) From and after the effective date of this chapter, any installer or other person who shall install, connect, alter, extend, change or repair any liquefied compressed gas or compressed natural gas system, container or appliance whatsoever, or who shall install, connect, change, extend, alter or repair any piping or fitting connected with or attached to any liquefied compressed gas or compressed natural gas container, system or appliance shall, within fifteen (15) days after the completion thereof, give notice to the State Liquefied Compressed Gas Board, in writing, on forms to be provided by the State Liquefied Compressed Gas Board, that such installation, connection, alteration, extension, change or repair has been made, which notice shall give full details with reference thereto, and shall give the name of the person at whose order same was made, and the name of the installer, as provided in this chapter, under whose supervision the installation, alteration, etc., was made and the address of the premises upon which same was made. Any person who shall install, connect, alter, extend, change or repair any liquefied compressed gas or compressed natural gas system, container or appliance, or any piping or fitting connected or attached thereto, without giving notice to the State Liquefied Compressed Gas Board as provided herein shall be subject to the sanctions set out in this chapter.

(2) Upon receiving notice of any installation of a liquefied compressed gas system or natural gas fueling system other than a liquefied petroleum gas carburetion system, it shall be at the discretion of the Commissioner of Insurance to cause same to be inspected, and if he or she approves same after such inspection, he or she shall leave upon such premises a written certificate of approval. Upon receiving notice of any connection, alteration, extension, change or repair to any system required to be inspected at the time of installation under the provisions of this subsection, the Commissioner of Insurance may cause the system to be inspected if he or she believes that sufficient change or repair has been made so as to alter the system from its original installation. If, after such inspection, the inspector finds that the installation or repair has not been properly made, he or she shall report such fact to the distributor or installer making the installation and request that corrections be made within seventy-two (72) hours after the time of such inspection, if the defects are such that can be corrected without the necessity of condemning the entire system. Any distributor or installer who fails or refuses to make the corrections after requested so to do by the inspector, after a hearing before the State Liquefied Compressed Gas Board, may have his authority or certificate of compliance suspended or revoked.

Installers, as defined in this chapter, are hereby authorized to issue temporary certificates of approval for use before inspection by the Commissioner of Insurance, but no certificate issued by an installer shall be valid for a period longer than one hundred twenty (120) days from date of completion or alteration, repair or installation covered by said certificate. The provisions of this paragraph shall not relieve the dealer, or other person, from the liability of having such installation inspected by the Commissioner of Insurance, as provided in this chapter.

All certificates of approval and permits issued by liquefied gas inspectors under the terms of this section shall be executed in duplicate, and the copy thereof shall be filed and preserved in the office of the State Liquefied Compressed Gas Board for not less than three (3) years from the date thereof.

**MISSISSIPPI DEPARTMENT OF INSURANCE
REGULATION 2011-2**

HANDLING OF LIQUEFIED COMPRESSED GAS CONTAINERS

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Section 1. Purpose

The purpose of this Regulation is to set forth minimum standards for the use and handling of ASME liquefied petroleum gas containers by liquefied petroleum/compressed gas dealers;

Section 2. Authority

This Regulation is promulgated by the Liquefied Compressed Gas Board with the approval of the Commissioner of Insurance, pursuant to Miss. Code Ann. §75-57-105 (Rev. 2000), as well as the provision of the Mississippi Department of Insurance Regulation No. 88-101, said Regulation being the Rules of Practice and Procedure before the Mississippi Insurance Department.

Section 3. Scope

This Regulation shall apply to all liquefied petroleum gas dealers, their agents and employees.

Section 4. Requirements

A. In order to promote the public safety by avoiding the contamination of ASME containers and by assuring the proper reconditioning of service valves and containers, all dealers shall be required to mark, label, or otherwise designate liquefied petroleum gas containers in such a manner as to easily identify such containers as being owned by the particular dealer. No dealer shall sell, install, fill, refill, deliver or permit to be delivered, or use in any manner any ASME liquefied petroleum gas container unless such container is owned by such dealer or its use is authorized by the owner of such container.

B. No liquefied petroleum gas dealer, including its agents and employees, may dismantle, disconnect, evacuate, repair, deface, fill, or refill a container belonging to another dealer unless:

- I. Prior written permission shall have been granted by the dealer who owns the container;
2. Prior written permission shall have been granted by the owner or lessee of the premises where the container is located, except the owner or lessee may not grant permission to fill or refill a container;
3. The action is taken at the discretion of the authority having jurisdiction as defined in NFPA Pamphlet 58; or
4. The action is taken under a declared state of emergency.

C. Nothing in this section shall be construed as abrogating the right of the consumer to terminate a rental contract on a container with the dealer/owner, in accordance with the terms and provisions of said rental contract.

D. Containers are to be appropriately marked and easily identified to the inspector.

Section 5. Date of Compliance

All liquefied petroleum gas dealers, their agents and employees shall comply with this Regulation from and after the Effective Date of this regulation, as set forth in Section 8, below.

Section 6. Violations and Penalties

Failure of a liquefied petroleum gas dealer, his agents and employees to comply with the provisions of this regulation shall be considered a violation of Miss. Code Ann. §§75-57-107 and 75-57-109, and may result in a monetary penalty and/or revocation of the dealer's liquefied compressed gas permit.

Section 7. Severability

If any section or portion of a section of this Regulation or the application thereof is held by a court to be invalid, such invalidity shall not affect any other provision of that section or application of the Regulation which can be given effect without the invalid provision or application, and to this end the provisions of the Regulation are declared to be severable.

Section 8. Effective Date

The Effective Date of this Regulation shall be thirty (30) days from the filing for final adoption with the Secretary of State.

Employee Information Sheet

County _____

Date: _____

Employee Name _____

Mississippi Drivers Licenses information

Date issued ___/___/___ Date expires ___/___/___ Date of birth ___/___/___

Class _____ Endorsement _____ Restrictions _____

___ Service Tech Only

___ Office Personnel

___ Transfer From _____

___ No Longer Employed

___ LC-Gas License Number _____

___ Returned Employees LC-Gas Card

Company Name _____

Company Address _____

City _____ State _____ Zip Code _____

Company phone number ___/___/___ Email _____

Manager _____

On a new employee, please include both:

___ Copy of MS Driver License

___ Picture of employee (head shot using a solid wall for back ground in photo)

Check all that apply:

___ I, _____, have provided _____, with

(Instructor)

(Trainee)

training that is consistent with NFPA 58 4.4.1 with the scope of their job activities and that includes proper handling and emergency response procedures.

___ I also understand that their primary duties include transporting LP-Gas, transferring liquid LP-Gas into and out of stationary containers, or making stationary installations; therefore, I have provided training that includes the following components pursuant to NFPA 58 4.4.2:

1. Safe work practices
2. The health and safety hazards of LP-Gas
3. Emergency response procedures
4. Supervised, on-the-job training
5. An assessment of the person's ability to perform the job duties assigned

Trainer information (Instructor):

Name _____
Title _____ years of experience _____
LC Gas Driver / Installer number _____
Last CETP course attended Date _____

Trainee (New Employee):

I, _____, have completed all the training that is listed above and understand it. I also understand that I have to attend the next CETP Class (Basic Principals) provided within the next 120 days and understand that after Basic Principals I will have to take a refresher course every 3 years to stay in compliance with NFPA 58 4.4.3. I also understand that said refresher course must be a course that is approved by the LC-Gas Board and that the completion of initial and subsequent refresher courses must be documented in accordance with NFPA 58 4.4.4.

LC-Gas Inspector

Date



L.C. Gas Division

C.E.T.P. Online Training New Account Information Sheet

Date:

Name:

Company and Branch Location:

Job Role:

LC Gas License Number:

LC Gas Inspector:

Branch Manager Name:

Point of Contact Email:

1. Only a Driver or Installer will need a LC Gas License Number prior to an account being created and approved. CSR's are exempt from having a specific LC Gas License number.
2. All Coursework (Training Modules) will be assigned depending on the Job Role of the User. Course work (Training Modules) can be located under the tab called "My Courses" located at the bottom left side of the PERC Dashboard.
3. Users will have to allow each slide of training to "Time Out" before going to next slide, If a user fast forwards through the training the PERC program **WILL NOT ALLOW YOU TO TAKE THE TEST**, and the user will have to restart the entire module of training.
4. Once an account is created all login information will be sent to the point of contact's e-mail.

If you experience any Technical Issue's or need additional assistance please contact:

Ben Brown DSFM II at Ben.Brown@mid.ms.gov or by phone 228-669-1358.

****** DSFM Ben Brown is a working Inspector and will get to your account as soon as possible******

APPLICATION FOR CLASS 3 SERVICE TECHNICIAN/HVAC CERTIFICATE

**LIQUIFIED COMPRESSED GAS DIVISION
P.O. BOX 79
JACKSON, MS 39205-0079**

DATE _____

<i>APPLICANT</i>			<i>DEALER</i>		
<i>ADDRESS</i>			<i>ADDRESS</i>		
<i>CITY</i>	<i>STATE</i>	<i>ZIP</i>	<i>CITY</i>	<i>STATE</i>	<i>ZIP</i>

LC Gas Inspector Administering Test _____

PASSED _____ FAILED _____ SCORE _____

SERVICE TECHNICIAN / HVAC EXAMINATION

1. MS Regulation 2011-2 – Section 4B (1-4) – No liquefied petroleum gas dealer, including its agents and employees, may dismantle, disconnect, evacuate, repair, deface, fill, or refill a container belonging to another dealer unless:
 1. _____ shall have been granted by the dealer who owns the container;
 2. Prior written permission shall have been granted by the _____ of the premises where the container is located, except the owner or lessee may _____ to fill or refill a container;
 3. The action is taken at the discretion of the _____ as defined in NFPA 58;
 4. The action is taken under a declared state of _____.

2. MS LAW – 75-57-47 (1) – Any installer or other person who shall install, connect, alter, extend, change or repair any liquefied compressed gas or compressed natural gas system, container or appliance whatsoever, or who shall install, connect, change, extend, alter or repair any piping or fitting connected with or attached to any liquefied compressed gas or compressed natural gas container, system or appliance shall, within _____ days after completion thereof, give notice to the State out in this chapter.

3. MS Law – 75-57-47(2) – Installers, as defined in this chapter, are hereby authorized to issue _____ for use before inspection by the Commissioner of Insurance.

4. NFPA 58 – 5.2.8.3* - The markings specified for ASME containers shall be on a _____ attached to the container, located to remain visible after the container is installed.

5. NFPA 58 -6.8.3.1 – Horizontal ASME containers designed for permanent installation in stationary aboveground service shall be placed on _____ or other noncombustible _____ located on _____ or _____ foundations with _____.

6. NFPA 58 - Table 6.4.1.1 – How far from an important building must the following above ground tank be located:
 - 0 – 120 gallons _____ feet
 - 125 – 250 gallons _____ feet
 - 250 – 500 gallons _____ feet
 - 500 – 2000 gallons _____ feet

7. NFPA 58 – Table 6.4.1.1 – Underground tanks less than 125 gallons to 2000 gallons shall be located at least _____ feet away from an important building.

8. NFPA 58 – Table 6.7.2.1(K) – The minimum horizontal separation between LP-Gas containers and aboveground gasoline and diesel fuel tanks is _____ feet.

9. NFPA 58 – 6.8.1.6 – Where necessary to prevent floatation due to possible high flood waters around aboveground or mounded containers, or high water table for those underground and partially underground, containers shall be _____.

10. NFPA 58 6.5.3.13 – An aboveground LP-Gas container and any of its parts shall not be located within _____ feet of a vertical plane beneath overhead electric power lines that are over 600 volts, nominal.

11. NFPA 58 – 6.8.1.2 – LP-Gas containers or systems that are installed within _____ feet of public vehicular thoroughfares shall be provided with a means of _____.

12. NFPA 58 – 6.6.3.3 – Combustible materials shall not accumulate or be stored within _____ feet of a container.

13. NFPA 58 – 6.8.1.4* - Aboveground containers shall be _____.

14. NFPA 58 – 9.6.2.1 – ASME containers of 125 gallons water capacity or more shall contain no more than _____ percent of their water capacity in liquid form during transportation.

15. NFPA 58 – 6.10.2.3 – Single-stage regulators shall not be installed in fixed piping systems after _____, except for installations covered in 6.10.2.4.

16. NFPA 58 – 6.10.1.1(A) – Regulators connected to single container permanent installations shall be installed with one of the following methods:
 1. _____
 2. _____

17. NFPA 58 – 6.10.1.4 – All regulators for outdoor installations shall be designed, installed, or protected so their operation will not be affected by the _____.
18. NFPA 58 – 6.10.1.6 – The point of discharge shall also be located not less than _____ feet in any direction from any source of ignition, openings into direct-vent (sealed combustion system) appliances, or mechanical ventilation air intakes.
19. NFPA 58 – 6.10.1.5 – The point of discharge from the required pressure relief device on regulated equipment installed outside of buildings or occupiable structures in fixed piping systems shall be located not less than _____ feet horizontally away from any building, or occupiable structure opening below the level of discharge, and not beneath or inside any building or occupiable structure unless this space is not enclosed for more than _____ percent of its perimeter.
20. NFPA 58 – 5.10. 1. 13 - Regulators shall be designed to drain condensate from the regulator spring case when the vent is directed vertically _____.
21. NFPA 58 – 6.10.1.10 – Single-stage regulators shall be permitted to be used only on _____ appliances and _____ appliances with input ratings of _____ maximum.
22. NFPA 54 – 5.4.4 – The maximum operating pressure for any piping systems located inside buildings shall not exceed _____ unless one or more of the following conditions are met: (see NFPA 5.5.4 (1 – 7))
23. NFPA 54 – 7.2.1 – Piping installed aboveground shall be securely _____ and located where it will be protected from _____. Where passing through an exterior wall, the piping shall also be protected from corrosion by _____ with an inert material approved for such applications. The piping shall be sealed around its _____ at the point of the exterior penetration to prevent the entry of water, insects, and rodents.
24. NFPA 58 – 5.11.5.3 – Polyamide and polyethylene fusion fittings shall be recommended by the manufacture for use with _____ and shall conform to one of the following:
1. ASTM D2683
 2. ASTM D3261
25. NFPA 58 – 6.11.1.1. (C – 1&2) – Polyethylene piping systems shall be limited to the following:
1. Vapor service not exceeding _____.
 2. Installation _____ and _____.
26. NFPA 54 – 7.1.7.1 - _____ shall be installed outdoors, _____ only.

27. NFPA 54 – 7.1.7.3 – An electrically continuous corrosion resistant _____ shall be buried with the plastic pipe to facilitate locating.
28. NFPA 54 – 7.1.7.3.2 – Where tracer wire is used, access shall be provided from _____ or one end of the tracer wire or tape shall be brought _____ at the building wall or riser.
29. NFPA 54 – 5.5.8 – Plastic pipe, tubing and fittings shall be joined in accordance with the _____.
30. NFPA 54 – 9.1.1.1 – Listed appliances, equipment, and accessories shall be installed in accordance with Chapter 9 and the _____.
31. NFPA 54 – 7.1.2.1 – Underground piping systems shall be installed with a minimum of _____ of cover.
32. NFPA 54 – 7.1.2.1 (A) – The maximum cover shall be increased to _____ if external damage to the pipe or tubing from external forces is likely to result.
33. NFPA 54 – 7.1.2.1 (B) – Where a maximum of 12 inches of cover cannot be provided, the piping shall be installed in _____.
34. NFPA 54 – 7.1.6 – Where gas piping is installed underground beneath buildings, the piping shall be either of the following:
1. _____
 2. _____
35. NFPA 58 – 6.11.3.17 – Underground metallic piping, tubing, or both that convey LP-Gas from a gas storage container shall be provided with _____ installed above _____ and _____ at the building to electricity isolate it from the aboveground portion of the _____ that enters a building.
36. NFPA 54 – 7.2.5* - Gas piping inside any building _____ be installed in or through a clothes chute, chimney or gas vent, dumbwaiter, elevator shaft, or air duct, other than _____.
37. NFPA 54 – 7.3.2 – Fittings installed in concealed locations shall be limited to the following types:
1. _____
 2. _____
 3. _____
 4. _____, *Fuel Gas Piping Systems using Corrugated Steel Tubing, or ANSI LC 4/CSA 6.32, Press-Connect metallic fittings for use in Fuel Gas Distribution Systems.*
38. NFPA 54 – 7.2.7 - CSST piping systems shall be installed in accordance with this code and the _____.

39. NFPA 54 – 7.12.2 – CSST gas piping systems, and gas piping systems containing one or more segments of CSST, shall be _____ to the electrical service grounding electrode system, or where provided, lightning protection grounding electrode system.
40. NFPA 54 – 7.12.3 – Arc-resistant jacketed CSST shall be considered to be _____ when it is connected to appliances that are connected to the appliance grounding conductor of the circuit supplying that appliance.
41. NFPA 54 – 7.2.1 – Piping installed aboveground shall comply with all of the following:
1. Piping shall be securely supported and located where it will be protected from _____.
 2. Where passing through an exterior wall, the piping shall also be protected from corrosion by _____ with an inert material approved for such applications.
 3. The piping shall be sealed around its circumference at the point at the point of the exterior penetration to prevent the entry of _____.
42. NFPA 54 – 7.2.6.1 – Piping shall be _____ with metal hooks, metal pipe straps, metal bands, metal brackets, metal hangers, or building structural components suitable for the size of piping, of adequate strength and quality, and located at intervals so as to prevent or damp out _____.
43. NFPA 54 – 7.12.1 – Each aboveground portion of a gas piping system, other than CSST, that is likely to become energized shall be electrically continuous and _____ to an effective ground-fault current path.
44. NFPA 54 – 9.6.8 – Where a sediment trap is not incorporated as a part of the appliance, a sediment trap shall be installed downstream of the appliance shutoff valve as close to the inlet of the appliance as practical _____.
45. NFPA 54 – 9.6.5.2 – Shutoff valves serving appliances installed in _____ and _____ shall not be required to be locate within 6 feet of the appliance where such valves are readily accessible and _____.
46. NFPA 54 – 7.7.1.3 – Outlets shall be located far enough from floors, walls, patios, slabs, and ceilings to permit the use of _____ without staining, bending, or _____ the piping.
47. NFPA 54 – 7.7.2.1 – Each outlet, including a valve, shall be closed gastight with a threaded plug or cap _____ and shall be left closed until the appliance or equipment is connected thereto.
48. NFPA 54 – 8.1.5.2 – The leakage shall be locate by means of an _____, _____, or other approved leak detection methods. *(Matches, candles, open flames, or other methods that provide a source of ignition shall not be used.)*

49. NFPA 54 – 8.2.3* - Immediately after the gas is turned on into a new system or into a system that has been initially restore after an _____, the piping system shall be _____.
50. NFPA 54 – 9.1.6.2 – Non-direct-vent appliances installed in beauty shops, barber shops or other facilities where chemicals that generate corrosive or flammable products such as aerosol sprays are routinely used shall be located in a _____ separate or partitioned off from other areas with provisions for combustion and dilution air from outdoors.
51. NFPA 54 – 9.1.10.1 – Appliances in residential garages and in adjacent spaces that open to the garage and are not part of the living space of a dwelling unit shall be installed so that all burners and burner ignition devices are located not less than _____ above the floor unless listed as flammable vapor ignition resistant.
52. NFPA 54 – 9.6.1 (3) – A connector for gas appliances listed in accordance with _____ . The connector shall be used in accordance with the _____ and shall be in the same room as the _____. Only _____ shall be used per appliance.
53. MS Rules / Regulations 2.2 – Unvented room heaters may be installed in residential sleeping quarters and bathrooms, provided the aggregate input rating does not exceed _____ of room or space in which it is installed.
54. MS Rules /Regulations 2.1 – Water heaters, which the exception of those having sealed combustion systems may be installed in bathrooms, bedrooms or any occupied rooms are normally kept closed, provided _____ are made for air for proper _____.
55. MS Rules / Regulations 2.3 (1-2) – Vented or Non-vented type circulating room heaters may be installed in stationary mobile homes for use with L-P Gas as follows:
1. The appliance must be listed for use with _____ by the American Gas Association or other nationally recognized _____.
 2. The appliance must be installed in accordance with NFPA 54 provisions for _____.
 3. A clay back heater cannot be used; however a heater with a _____ cabinet may be used.
56. NFPA 54 - 10.21.3 – Room heaters shall not be installed in the following occupancies:
1. _____
 2. _____
57. NFPA 35 – 4.1.4.1 - Engines and, if provided, their waterproof housings that are installed outdoors shall be located at least _____ from openings in walls and at least _____ from structures having combustibile walls except as provided in 4.1.4.1.1 or 4.1.4.1.2.

58. NFPA 54 – 12.7.4.2 The total horizontal distance of a vent plus the horizontal vent connector serving draft hood-equipped appliances shall not be greater than _____ of the vertical height of the vent.
59. NFPA 54 – 12.7.2.(3) – Gas vents installed within masonry chimneys shall be _____ with a _____ installed at the point where the vent enters the chimney .
60. NFPA 54 – 12.7.3 (1)(a) – Gas vents that are _____ inches or less in size and located not less than _____ feet from a vertical wall or similar obstruction shall terminate above the roof in accordance with Figure 12.7 and Table 12.7.3.
61. NFPA 54 – 12.7.3 (2) – A Type B or a Type L gas vent shall terminate at least _____ in vertical height above the highest connected appliance draft hood or flue collar.
62. NFPA 54 – 12.7.3 (3) – A Type B-W gas vent shall terminate at least _____ in vertical height above the bottom of the wall furnace.
63. Which of the following is an important characteristic of LP-Gas? _____
- A. It vaporizes into gases when the container pressure drops
 - B. It boils at 44 degrees Fahrenheit
 - C. It has an odor
 - D. It is lighter than air
64. Propane's volume, pressure and physical state depends on: _____
- A. The atmospheric pressure.
 - B. How it is stored.
 - C. The temperature of the surrounding environment.
 - D. A and C
 - E. B and C
65. If you suspect a gas leak: _____
- A. Leave the area immediately
 - B. Get the system checked by the gas company
 - C. Shut the gas off
 - D. All of the above
66. One way to identify when a gas piping system is not sized properly is to conduct a system flow pressure and lock up test. _____
- A. True
 - B. False
67. When planning the installation of HVAC equipment, you should consider specific distance requirements of propane containers from: _____
- A. Appliance vents.
 - B. Sources of ignition.
 - C. The type of siding on the structure.
 - D. The type of LP Gas Tank.
 - E. A and B
 - F. A and D

68. Type B-vents and Type L-vents must have the following clearance: _____
- A. 6 inches
 - B. 3 Inches
 - C. 1 inch
 - D. 8 inches
69. Install an appliance in a residential garage so that all burners and burner ignition devices are at least how many inches above the floor? _____
- A. 6 inches
 - B. 9 inches
 - C. 18 inches
 - D. 24 inches
70. Check the nameplate on each dedicated propane appliance to be sure it says the appliance is to be used with: _____
- A. Any type of Gas
 - B. Natural Gas or LP Gas
 - C. Propane or Butane
 - D. Propane or LP Gas
71. A dedicated appliance can be used with either propane or natural gas. _____
- A. True
 - B. False
72. To ensure that an appliance has been converted for use with propane, look at the appliance name plate and look for a conversion sticker with the letters "P" "LP" or the word "propane" on the: _____
- A. Back of the nameplate
 - B. Appliance gas control or regulator
 - C. Manufactures' instructions
 - D. Propane tank
73. Some common interior piping materials include: _____
- A. Steel, copper, CSST
 - B. Steel, polyethylene, copper
 - C. CSST, polyethylene, cast-iron
 - D. Steel, copper, cast-iron
74. Piping supports must be _____ to prevent undue strains on connected appliances and equipment, and cannot be supported by other piping. _____
- A. Painted
 - B. Anchored
 - C. Tied
 - D. Protected
75. Automatically operated appliances do not require a sediment trap. _____
- A. True
 - B. False
76. Appliance connectors come in an array of materials and styles, including: _____
- A. CSST
 - B. Semi-rigid metallic tubing and fittings
 - C. Rigid metallic pipes and fittings
 - D. All of the above

77. With a limited number of exceptions, what is the maximum design operating pressure for piping systems located inside buildings? _____
- A. 20 psi
 - B. 10 psi
 - C. 5 psi
 - D. 2 psi
78. What is the main purpose of flexible appliance connectors? _____
- A. To help the flow of gas to the appliance
 - B. To prevent damage to the appliance
 - C. It is more economical for the consumer
 - D. To prevent breakage of the connection from the ridged piping
79. A _____ checks for propane leaks at the exterior portion of the piping. _____
- A. Pressure test
 - B. Regulator test
 - C. Water Manometer test
 - D. Appliance test
80. When conducting a pressure test on a new system, only _____ can be used. _____
- A. Natural Gas
 - B. Inert Gases or Air
 - C. Propane
 - D. Water
81. When is a leak test performed? _____
- A. When a regulator is replaced
 - B. When an appliance is replaced
 - C. Every time gas is delivered to the customer
 - D. B and C
 - E. A and B
82. It is not necessary to remove or purge the air or inert gas from the piping system after performing a pressure test in order to place the appliances in service with propane. _____ .
- A. True
 - B. False
82. There are two basic forms of burner ignition devices or pilots: _____
- A. Manual ignition and performance ignition
 - B. Electronic ignition and manual ignition
 - C. Standing pilot and electronic ignition
 - D. Standing pilot and manual ignition
83. What is connected to the pressure tap on the outlet side of the appliance to check the manifold Pressure? _____
- A. Manometer
 - B. Pressure Gauge
 - C. Regulator
 - D. Sediment Gauge

84. Although a flame that is burning properly is typically blue, some appliances are designed to burn

Yellow flames for decorative purposes. _____

- A. True
- B. False

85. What can be formed by incomplete combustion or flame impingement? _____

- A. Carbon dioxide
- B. Carbon monoxide
- C. Aldehydes
- D. None of the above
- E. A and C
- F. B and C

86. What is the final test before placing an appliance into operation? _____

- A. Pressure test
- B. Leak test.
- C. Spillage test
- D. Manifold test

87. What is the smallest metallic piping that can be used if there is 11" W.C., 65' total run and a 175,000 Btu total load? _____

- A. $\frac{1}{2}$ "
- B. $\frac{3}{4}$ "
- C. 1"
- D. $1\frac{1}{2}$ "

88. What is the smallest CSST that can be used if there is 245' total run, 2 psi and a 425,000 btu load?

- A. $\frac{3}{4}$ " (25 EHD)
- B. $\frac{1}{2}$ ' (18 EHD)
- C. 1" (30 EHD)
- D. 1" (31 EHD)

89. What is the smallest copper tubing that can be used if there is 2 psi, 85' total run and a 510,000 btu load? _____

- A. $\frac{3}{4}$ "
- B. $\frac{1}{2}$ "
- C. $\frac{5}{8}$ "
- D. $\frac{3}{8}$ "

90. How many feet from the appliance must the manual shut off valve be located? _____

- A. 3'
- B. 6'
- C. 9'
- D. 12'

91. Name 3 types of safety devices designed to shut off an appliance if unsafe conditions exist:

1. _____
2. _____
3. _____

**READ THE FOLLOWING
IT IS THE LAW UNDER WHICH YOU OPERATE**

Any person who shall fill any container or system unless the installation, alteration, extension, connection, and repairs are done by a qualified installer or without a current 120-day approval tag or State Inspector approval can be fined a maximum of \$5,000.

Is it fully understood that your LP-Gas certificate can be revoked for any of the following reasons?

Drunkenness, carelessness, filling illegal systems, filling condemned tanks, filling illegal cylinders from trucks, etc.

ALSO

All installations of LP Gas piping, appliances, tanks, etc. must be reported to the L. C. Gas Division within 15 days.

This certificate is valid only while cardholder is employed by company named on card and only while performing work for said company. Termination of employment from this company automatically cancels this certificate. Certificate may be transferred to another company licensed to operate in the State of Mississippi, provided request is made by qualified company.

APPLICANT MUST HAVE VALID COMMERCIAL DRIVER LICENSE WITH APPROPRIATE ENDORSEMENT. A COPY OF CDL MUST BE ATTACHED.

I HAVE READ AND I UNDERSTAND THE ABOVE STATEMENT

APPLICANT'S SIGNATURE _____

BASIC SKILLS TRAINING RECORD

_____ Gas Salesman

_____ Service Technician

Start Date: _____

Completion Date: _____

Company/Branch: _____

Trainer/Manager: _____ LC License Number: _____

Trainee: _____

Trainer's Initials	Trainee's Initials	PHYSICAL PROPERTIES OF PROPANE
		Boiling point of propane
		Temperature/Pressure relationship of propane
		Maximum permitted liquid volume of a container
		Expansion ratio of propane liquid to vapor
		Specific gravity of propane liquid and vapor
TANK & REGULATOR INSTALLATION		
		Tank located at least <u>10 feet</u> away from important building or source of ignition
		Data Plate is readable and temporary tag installed
		Tank was located on some type of masonry foundation
		Metallic piping or tubing has dielectric fitting installed properly
		If tubing is used, it is properly encased where it enters and exits the ground
		Point of regulator discharge vented at least at least <u>5 feet</u> from any source of ignition, openings into direct-vent appliances, or mechanical ventilation air intake
		Point of regulator discharge vented at least at least <u>3 feet</u> from any lower building opening
		The second stage regulator securely supported to protect from physical damage
		A shut-off valve installed properly
SITE INSPECTION		
		Tank inspection, blocks, service line, data plate, regulator
		Proper distancing of tank and regulators from source of ignition
		Inspected all valves on tank
		How to read gauges and understanding the 80% full capacity
		Understanding of how and when to "Red Tag" a system
		Protection, placement and painting tanks
		Leak Check and company policy
		Pressure Check and company policy
		Cathodic protection and inspection test for existing systems

	Purging containers
	Proper appliance, ball valves, and venting/ventilation
	Sediment Traps
	Lighting of appliances
	Requalification of DOT cylinders
	Importance of keeping bystanders away during fill operation
	“No Smoking” distance requirements
	Filling a propane container
	Safety Precautions
	GENERATOR INSTALLATION
	There is adequate room around the generator for service access
	The space open will provide adequate and unobstructed airflow
	Generator is located on stable solid pad
	There is an approved flex line connected to generator per manufacturer specs/requirement
	The generator is on high grounds where water levels will not rise and endanger it. This unit should not operate in, or be subject to, standing water
	Clearance from end and front of generator must be <u>3 feet</u> . This includes shrubs, bushes, and trees
	Clearance from back of the generator must be a minimum of <u>18 inches</u>
	Clearance at the top should be a minimum of <u>five feet</u> from any structure, overhang, or projections from wall
	Do not install unit under wooden decks or structures unless there is <u>at least 5 feet</u> of clearance above the generator
	Install unit where service will not be affected or obstructed, including concealed, underground, or covered services such as electrical, fuel, phone, air conditioning, or irrigation
	Where strong winds prevailing winds blow from one direction, face generator air inlet opening to the prevailing winds
	No operable windows, door, or openings in the wall permitted <u>within five feet</u> of any point of the generator
	TANK PLACEMENT AND CONTAINERS
	Distance requirements
	Protection of installed containers
	Purging
	Required stickers/placards
	Installation
	Know how and when to place cathodic protection and testing

		REGULATORS
		Function, inspection, distance requirements, protection
		Performance and know when to replace
		PIPING
		Materials
		Inspection
		Installing
		Protection
		Pressure testing
		Shutoff valves
		Sediment traps
		Purging
		Special requirements for use of "CSST"
		APPLIANCES
		Central conversion
		Heaters: size selection, location, installation, repair/cleaning
		Stoves: conversions and adjustments
		Water Heaters: installation and venting
		PLACING SYSTEM INTO OPERATION
		Inspection
		Ignition of system
		Venting/ventilation
		Operation
		REQUIREMENTS OF THE LC GAS STATE INSPECTORS
		Installation Reports and proper way to fill them out
		Role of the state inspector
