

# October 2017 Safety Meeting Leak Check

The Alabama LP Gas Board adopted the 2012 edition of NFPA 54 effective August 22, 2016. The Board modified two sections to read:

3.3.64 Leak Check. An operation on a complete gas piping system and connected appliances or equipment prior to placing it into operation following initial installation and pressure testing or interruption of gas supply to verify that the system does not leak.

8.2.3 Leak Check. Immediately after the gas is turned on into a new system or into a system that has been initially restored after an interruption of service, the complete gas piping system and connected appliances or equipment shall be checked for leakage. Where leakage is indicated, the gas supply shall be shut off until the necessary repairs have been made.

The 2012 edition of NFPA 54 lists in Annex C suggested methods for performing a leak check. APGA suggests that companies use and train on Annex C or have a written procedure (standard operating procedures). This annex is not a part of the requirements of this NFPA document but is included for informational purposes only.

## **C.2 Leak Check Using the Gas Meter**

Immediately prior to the leak check, it should be determined that the meter is in operating condition and has not been bypassed.

The leak check can be done by carefully watching the test dial of the meter to determine whether gas is passing through the meter. To assist in observing any movement of the test hand, wet a small piece of paper and paste its edge directly over the centerline of the hand as soon as the gas is turned on. This observation should be made with the test hand on the upstroke. Table C.2 (in the code and handbook) can be used for determining the length of observation time.

In case careful observation of the test hand for a sufficient length of time reveals no movement, the piping should be purged and a small gas burner turned on and lighted and the hand of the test dial again observed. If the dial hand moves (as it should), it shows that the meter is operating properly. If the test hand does not move or register flow of gas through the meter to the small burner, the meter is defective and the gas should be shut off.

## **C.3 Leak Check Not Using a Meter**

This test can be done using one of the following methods:

- (1) *For Gas Systems Using Undiluted LP-Gas System Preparation for Propane.* A leak check performed on an LP-Gas system being placed back in service can be performed by using one of the following methods:
  - (a) By inserting a pressure gauge between the container gas shutoff valve and the first regulator in the system, admitting full container pressure to the system and then closing the container shutoff valve. Enough gas should then be released from the system to lower the pressure gauge reading by 10 psi (69 kPa). The system should

then be allowed to stand for 3 minutes without showing an increase or decrease in the pressure gauge reading.

- (b) For systems serving appliances that receive gas at pressure of ½ psi (3.5kPa) or less, by inserting a water manometer or pressure gauge into the system downstream of the final system regulator, pressurizing the system with fuel gas to a test pressure of 9 in. w.c.  $\pm$  (2.2 kPa  $\pm$  0.1 kPa), and observing the device for a pressure change. If fuel gas is used as a pressure source, it is necessary to pressurize the system to full operating pressure, close the container service valve, and then release enough gas from the system through a range burner valve or other suitable means to drop the system pressure to 9 in. w.c.  $\pm$  (2.2 kPa  $\pm$  0.1 kPa). This ensures that all regulators in the system upstream of the test point are unlocked and that a leak anywhere in the system is communicated to the gauging device. The gauging device should indicate no loss or gain of pressure for a period of 3 minutes.
- (c) By inserting a 30 psi (207 kPa) pressure gauge on the downstream side of the first-stage regulator, admitting normal operating pressure to the system and then closing the container valve. Enough pressure should be released from the system to lower the pressure gauge reading by 5 psi (34.5 kPa). The system should be allowed to stand for 3 minutes without showing an increase or a decrease in pressure gauge reading.

#### Closing

The leak check is a vital operation to ensure the gas system is leak free. We still have unnecessary incidents with disastrous results caused by propane employees failing to do a leak check. **NEVER** omit a leak check.

# October 2017 Test Leak Check

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Instructions: Read and answer each of the following questions. When complete, grade the test and review incorrect answers so each employee is “armed” with the correct answers before they leave the training.**

1. The Alabama LP Gas Board recently adopted the \_\_\_\_\_ edition of NFPA 54?
  - a. 1999
  - b. 2012
  - c. 2015
  - d. 2016
  
2. Leak checks are required when:
  - a. You need to perform a pressure test
  - b. A gas system is restored after an interruption of service
  - c. You fill a cylinder at a commercial filling station
  - d. The regulator is not functioning properly
  
3. When performing a leak check using a gas meter, you should watch the \_\_\_\_\_ of the meter.
  - a. test dial
  - b. block gauge
  - c. water manometer
  - d. pressure gauge
  
4. When leak checking a propane distribution system, if the pressure remains constant for a minimum of \_\_\_\_\_ it is determined to be tight.
  - a. 1 minute
  - b. 2 minutes
  - c. 3 minutes
  - d. 1 hour
  
5. While performing a leak check with a pressure gauge between the container gas shut-off and the regulator in the system, admitting full container pressure to the system and then closing the container shut-off valve, enough gas should be released from the system to lower the pressure gauge reading by \_\_\_\_\_ psi.
  - a. 3
  - b. 5
  - c. 10
  - d. 50

**October 2017**  
**Answers**

1. B
2. B
3. A
4. C
5. C

## MONTHLY SAFETY MEETING MINUTES AND ATTENDANCE RECORD

**Company Name:** \_\_\_\_\_

**City:** \_\_\_\_\_ **State:** \_\_\_\_\_

**Date:** \_\_\_\_\_ **Time Started:** \_\_\_\_\_ **Time Finished:** \_\_\_\_\_

**Instructed By:** \_\_\_\_\_ **Number Attending:** \_\_\_\_\_

**Subject Covered and Comments:**

---



---



---



---



---



---



---

By my signature below, I certify that I attended and participated in this Safety Meeting and I understand the material presented.

Employee Name (Please print)	Employee Signature	*License Expires	**Endorsements	***Physical Exam
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				

\*Driver licenses may be for multiple years and require HazMat testing between license renewal periods. List expiration date.

\*\*Check licenses for proper endorsements and re-testing. (HazMat) List endorsements in this column.

\*\*\*Physical Examinations are good for 2 years from the original date of the exam or sooner by Physician's request. List original exam date in this column.

By my signature below, I hereby certify that the employees listed above have been trained in accordance with the applicable regulations and curriculum for this monthly safety meeting.

**Instructor's Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_