

August 2008 Safety Meeting

Inspecting DOT/ICC Cylinders

Before propane cylinders can be filled with propane, they must be inspected to assure they are in good condition for continued service. Filling a cylinder assures the customer it has been checked and approved for continued service according to U.S. Department of Transportation (DOT) and the National Fire Protection Association (NFPA) 58 regulations.

NFPA 58 defines a cylinder as: A container constructed in accordance with U.S. DOT specifications (Title 49 code of Federal Regulations). DOT cylinders range in size from one-pound disposable cylinders to 420 pound stationary cylinders. All DOT cylinders must be legibly marked with the appropriate DOT/ICC design code.

Visual Check

If any of the following are found the cylinder must not be refilled:

- Crack or leak
- Bulging
- Defective valves
- Defective or leaking relief device
- Evidence of physical abuse, fire or dent damage
- Rusting or corrosion
- Damage to the valve protection or cylinder foot rings
- Serious denting or gouging
- Steel cylinders damaged by fire are required to be re-qualified, re-conditioned or repaired by a DOT approved facility.
- Steel cylinders exposed to fire and not re-qualified, re-conditioned or repaired must be removed from service.
- Aluminum cylinders exposed to fire must be permanently removed from service.
- Valves and accessories should be checked for signs of aging and wear. Valve accessories may become broken or lost, allowing dirt or moisture to enter the valve. Inspect and replace faulty or missing dust caps.
- A blue-green stain on the brass portion of the cylinder may indicate the cylinder valve has been in contact with anhydrous ammonia. Place these cylinders out of service and notify your supervisor, as these may have been used to manufacture illegal drugs.

Re-qualifications

All refillable cylinders must be re-qualified at regular intervals. Re-qualification shall be performed by qualified employees whose work place has been registered with the DOT.

The most recent re-qualification date is stamped on the cylinder.

- A date without a letter indicates the next re-qualification must be within 12 years.
- The letter “S” following the date indicates the cylinder must be re-qualified within seven (7) years of the marked date.
- The letter “E” following the date indicates that re-qualification is required again within five (5) years of the marked date.

Cylinders that are out of qualification must not be refilled.

Cylinder Labeling

NFPA 58, DOT and OSHA require specific labeling for all cylinders. DOT cylinders must be clearly marked with the proper shipping name and hazard class.

A consumer information/warning label must be on all portable refillable cylinders of 100 pounds or less not filled on site. The label must include information concerning the potential hazards of propane. Cylinders used in industrial applications must have additional warning information.

Replace all labels if they are not present or legible.

Overfilling Prevention Device

An overfilling preventive device (OPD) is a special cylinder service valve which stops the flow of gas liquid into the cylinder when the cylinder is about 80% filled. OPD cylinder valves are marked and are equipped with a triangle hand wheel to make identification easier. The OPD marking is molded into the hand wheel and the valve body.

Overfilling prevention devices are intended to be a secondary means to protect against overfilling cylinders. The primary method is still filling by weight on a scale.

Always follow the state requirements and your company’s policy when filling cylinders with or without OPD’s.

Class Discussion

Ask the employees to identify the inspection procedures for visual checking, re-qualifications, labeling and OPD. The employee should also review the company policy on cylinder inspections at this time.

Closing

Properly inspecting cylinders enables you to safely serve the customer and your company. Safely inspecting cylinders is an important job. Do not compromise the safety of yourself, your customer or the public.

August 2008 Test

Inspecting DOT/ICC Cylinders

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. Before a cylinder can be filled or refilled, DOT regulations require a(n) _____ to verify it is fit for continued service.
 - a) Visual check
 - b) Requalification
 - c) AHJ approval
 - d) Purging

2. _____ cylinders subjected to fire must be permanently removed from service.
 - a) Steel
 - b) Aluminum
 - c) Cast Iron
 - d) Any

3. A blue-green stain on the brass portion of the cylinder valve is evidence that it has been in contact with _____.
 - a) Methanol
 - b) Anhydrous ammonia
 - c) Ethyl mercaptan
 - d) Polyethylene

4. The letter “E” following the date on the cylinder indicates that requalification is required again within _____ years of the marked date.
 - a) 5
 - b) 7
 - c) 12
 - d) 18

5. If a cylinder warning label is not legible, _____ before releasing the cylinder to the customer.
 - a) Place a new one on it
 - b) Have the customer sign a waiver
 - c) Orally deliver safety information
 - d) Contact the supervisor

6. NFPA 58 defines _____ as a container constructed in accordance with the U.S. Department of Transportation specifications.
- a) Tank
 - b) Cylinder
 - c) OPD
 - d) All of the above
7. Steel cylinders must be permanently removed from service if they are subjected to _____ and not requalified, reconditioned or repaired.
- a) Frost
 - b) Freezing
 - c) Fire
 - d) Hazardous materials
8. A special cylinder service valve equipped with a device to stop the flow of liquid propane into the cylinder when the cylinder is about 80% filled is referred to as a(n) _____.
- a) iPod
 - b) OPD
 - c) POD
 - d) DOP
9. OPDs are intended to be a _____ to prevent overfilling, and another approved filling method must be used to prevent overfilling.
- a) Primary means
 - b) 1st stage
 - c) Bypass
 - d) Secondary means

August 2008 Answer Sheet

1. A
2. B
3. B
4. A
5. A
6. B
7. C
8. B
9. D