

INSPECTION OF DOT CYLINDERS

PROPANE SAFETY MEETING OUTLINE

Summary

This module covers procedures for inspecting U. S. Department of Transportation (DOT) portable cylinders and forklift cylinders of less than 101 lb LP-gas capacity. These procedures also apply to Interstate Commerce Commission (ICC) cylinders that have been properly maintained and requalified.

Who should attend

- Cylinder delivery truck drivers
- Bobtail drivers
- Cylinder plant employees
- Customer service representatives (front office staff)

NOTE: Employees in these job categories who do not attend this meeting should be trained on this subject as soon as possible.

Additional Material

- Appendix B, "Guide for the Inspection of DOT Cylinders in LP-Gas Service," Railroad Commission of Texas, Texas Propane Training Module 2.1, *Operating a Dispenser To Fill DOT Cylinders and ASME Motor/Mobile Fuel Tanks*
- Appendix D, "DOT Cylinder Visual Inspection/Requalification Report," Railroad Commission of Texas, Texas Propane Training Module 2.1, *Operating a Dispenser To Fill DOT Cylinders and ASME Motor/Mobile Fuel Tanks*

Key codes and standards for this topic

Railroad Commission LP-Gas Safety Rules, April 2007 edition, §9.135, "Unsafe or Unapproved Containers, Cylinders, or Piping"; §9.137, "Inspection of Cylinders At Each Filling"
National Fire Protection Association (NFPA) 58, *LP-Gas Code* (2001 edition), §§2.2.1.5 [DOT cylinders]; 2.2.1.6 [Cylinder in fire]; 2.2.6.4 [Label]

29 Code of Federal Regulations §1910.1200, Hazard Communication

49 Code of Federal Regulations §173.301 [Specification, Inspection]

Company Standard Operating Procedures (SOP)

Note any additional materials used on the attached documentation form, or indicate not applicable.

A company SOP may provide information to cylinder customers regarding proper supervision and training of employees who perform propane activities.

Documentation

Complete the attached documentation form listing the date, time and location of the safety meeting and the printed names and signatures of the attendees, name of persons who should have attended but did not, and copies of any materials distributed, video shown, or visual aids used in the demonstration. These materials should be properly filed in a safe location.



INSPECTION OF DOT CYLINDERS

PROPANE SAFETY MEETING HANDOUT

General rules

This handout covers cylinders with an LP-gas capacity of less than 101 lbs.

- Cylinders must be inspected and/or filled by properly Railroad Commission-certified personnel using proper safety procedures and personal protective equipment.
- Never attempt to inspect or fill a cylinder if you have not been properly trained to do so.
- Follow any and all company procedures relating to performing LP-gas activities.
- Contact your supervisor immediately if you have any safety concerns or questions.

Inspection

The metal wall of a new 4BA-240 (two-piece alloy steel) cylinder is about the same thickness as a U.S. nickel coin. If the wall thickness is reduced or the wall is damaged, the cylinder must be inspected to determine whether it is safe for continued LP-gas service.

1. Use proper lifting techniques when lifting a cylinder.
2. Remove any sleeves or wrapping. A cylinder cannot be inspected properly if sleeves or wrappings are installed.
3. Check for proper marking of the cylinder's DOT specification, such as 4B-240, 4BA-240, 4BW-240, 4E-240.
4. Inspect cylinder for leaks, corrosion, denting, bulging, fire damage, or evidence of rough usage to the extent that the cylinder is likely to be weakened appreciably.
5. Inspect the valves, valve protection (guard) and foot ring.
6. Ensure that applicable propane cylinders between 4.2 lbs. and 40 lbs. LP-gas capacity in vapor service are equipped with an appropriate Overfill Prevention Device (OPD).
7. Inspect the pressure relief valve for damage, corrosion, or foreign material.
8. Be sure to thoroughly inspect the entire cylinder.
9. Look for plastic automotive body filler material, cold-weld compounds, unauthorized welds and other such alterations.
10. Pay particular attention to the entire area inside the foot ring. Ensure that the area inside the foot ring is free of dirt, mud or foreign material.
11. When checking heavy corrosion or pitting, be extremely careful not to jab, punch or take any other action that may penetrate the cylinder and cause a leak or hazardous situation.
12. Check the cylinder's retest date. Each cylinder must be requalified for continued use when 12 years have elapsed from the cylinder's date of manufacture. External visual inspection is required for an additional 5 years requalification period.

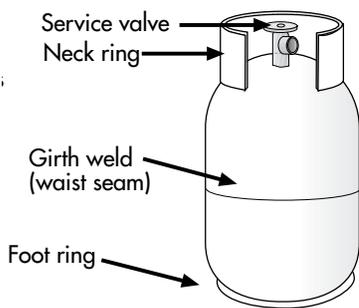
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13. DOT 4E specification (aluminum) cylinders that show any fire damage must be permanently removed from LP-gas service.
14. All cylinders must be properly labeled. Replace any obliterated, unreadable or damaged labels. DOT regulations require that cylinders used to transport LP-gas have a DOT shipping label. NFPA 58 requires consumer labels. Cylinders used by a business, such as a roofing contractor, are required to have an OSHA hazard communication label in lieu of the consumer label.

(See figures 2, 3 & 4 on the following page.)

NOTE: Any person who performs a visual requalification of DOT specification cylinders in commerce is required to have a Requalifier Identification Number (RIN).



**4BA-240
Vapor Service**

Figure 1 Features of Vapor Service DOT Cylinders

15. When inspecting forklift cylinders, be sure to inspect the pressure relief valve and date, the 45° adapter, and the weather cap. A new pressure relief valve must be installed within 12 years of cylinder's date of manufacture and every 10 years thereafter. Pressure relief valves must have an 45° adapter unless the manufacturer installed the opening at 45°. A weather cap is required with or without an adapter.

If a cylinder fails any part of this inspection, DO NOT FILL IT until the cylinder and/or the valve(s) have been properly repaired or replaced.



Figure 2 DOT (Title 49) Cylinder Shipping Label (may be 2 or 2.1)

⚠ WARNING

FOLLOW THESE SAFETY RULES TO REDUCE THE RISK OF SERIOUS AND POTENTIALLY FATAL INJURY, FIRE, OR EXPLOSION.

FLAMMABLE GAS UNDER PRESSURE. FOR OUTDOOR USE ONLY. DO NOT SMOKE OR HAVE ANY IGNITION SOURCES IN THE AREA WHILE HANDLING OR TRANSPORTING CYLINDERS. NEVER PLACE INDOORS OR IN AN ENCLOSED AREA SUCH AS A GARAGE, SHED, OR TENT.

WHAT TO DO IF YOU SMELL PROPANE
Propane has a strong, unpleasant smell like rotten eggs, a skunk's spray, or a dead animal. If you hear or smell leaking propane gas, take the following steps:

- 1. Immediately put out all smoking materials and other open flames.**
- 2. If you are able to, safely turn off the cylinder valve. To close the valve, turn it to the right (clockwise).**
- 3. Immediately leave the area and call 911 or your local fire department.**
- 4. Before you restart the appliance, have a qualified service technician inspect your cylinder and appliance.**

Under rare conditions, the smell of propane can "fade" or diminish in intensity. Also, some people may have difficulty smelling propane due to their age or a medical condition. Consider the installation of a gas detector near the appliance, if the cylinder is connected to an indoor appliance.

STORING PROPANE CYLINDERS

- NEVER store cylinders indoors or in an enclosed area such as a garage, shed, or tent.
- NEVER store cylinders in an area of excessive heat (120 degrees or higher).
- NEVER place a cylinder near a stove, fireplace, or other heat source.
- DO NOT smoke or have any ignition sources such as flames or spark-producing electrical tools in the area while handling or transporting cylinders.

TRANSPORTING PROPANE CYLINDERS

- ALWAYS transport and store a cylinder in a secure and upright position so it will not fall, shift, or roll.
- ALWAYS close the cylinder valve and, if required, seal with a plug, even if the cylinder is empty.
- ALWAYS transport the cylinder in a well-ventilated area of the vehicle.
- ALWAYS proceed directly to your destination.
- NEVER keep a filled cylinder inside a hot vehicle.

CYLINDER TAMPERING/REPAIR AND DISPOSAL

- DO NOT UNDER ANY CIRCUMSTANCES TRY TO MODIFY OR REPAIR VALVES, REGULATORS, OR OTHER CYLINDER OR APPLIANCE PARTS.
- NEVER dispose of your propane cylinder by throwing it in the trash.

CHECKING FOR GAS LEAKS

- Turn off all valves on outdoor appliance. Apply soapy water to the connection(s) marked with an "X" on the diagram at the bottom.
- Slowly open the cylinder valve and watch for bubbles.
- If bubbles appear, close the cylinder valve and call your propane retailer immediately.
- Always call a qualified service technician to check indoor piping and appliances for leaks.

CONNECTING CYLINDER FOR USE

- Use only in compliance with applicable codes.
- Read and follow appliance manufacturers' instructions.
- When appliance is not in use, keep cylinder valve closed.
- Severe freeze burns can result if propane liquid contacts skin.

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Figure 3 Consumer Cylinder Warning Label

PROPANE

NFPA HAZARD RATING

HEALTH HAZARD: 1
FIRE HAZARD: 4
REACTIVITY: 0

4 — Severe
3 — Serious
2 — Moderate
1 — Slight
0 — Minimal

CONSULT CORRESPONDING MSDS FOR FURTHER INFORMATION AND INSTRUCTIONS.

PERSONAL PROTECTION

Goggles Gloves

- Extremely Flammable Gas
- Heavier than Air
- Simple Asphyxiant
- Odorized to Warn of its Presence
- Contact with Liquid will cause Freezing of Tissue
- P.E.L. 1000 PPM
- Store container outside and keep cool (under 130°F.)
- Turn off container valve when not in use

Figure 4 OSHA Hazard Communication Label

PROPANE SAFETY MEETING DOCUMENTATION FORM

Topic:

Name of Company: Location:

City: State: Zip:

Date:

Instructor (Print Name) Instructor (Signature)

If applicable, Instructor's Company/Address/Telephone and Cell Telephone No.:

Materials used at meeting (Attach copies of any printed materials distributed)

NOTES



