

DOT CYLINDERS

Important things you should know about your propane cylinder



Cylinders are manufactured to safe design standards by the U.S. Department of Transportation and are referred to as DOT Cylinders.

TRANSPORTING & STORING DOT CYLINDERS

- ◆ Seek assistance from a licensed propane dealer for repair or replacement of cylinders that may leak. Never transport leaky cylinders.
- ◆ Be sure all valves are tightly closed before transporting. Use “POL” plugs.
- ◆ Provide ventilation when transporting cylinders. Propane cylinders rated at 45 lbs. or more are to be transported upright and secured with a safety strap.
- ◆ Store Propane cylinders in a cool area outside your home or vehicles. Store all cylinders away from extreme heat or any source of ignition.

- ◆ In residential building, or multi-family buildings are limited to two cylinders totaling 2.7 lbs. water capacity each or 5.4 lbs. maximum water capacity.

COMMON TYPES OF DOT CYLINDERS & THEIR USES

- ◆ **Portable Service Cylinders** range in size from 1 lb. to 40 lbs.
- ◆ **Exchange Service Cylinders** range in size from 60 lbs. to 100 lbs. *exchanged* routinely by a propane dealer.
- ◆ **Motor Fuel Service Cylinders** are portable DOT fuel tanks for forklifts, farm tractors, and a variety of maintenance equipment. (*Not the same as permanent ASME tanks installed on cars, trucks, and motor homes*).
- ◆ **Stationary service cylinders** are installed at commercial, industrial and residential applications. They are filled on site by a ‘bobtail’ delivery truck.

PROPANE

- ◆ Propane is a by-product of either crude oil or natural gas refinery process. In the refined state as liquid or gas it is odorless, tasteless and colorless.
- ◆ Manufacturers must add a commercial odorant to propane that produces a “rotten egg” smell. This smell alerts consumers of a possible leak and waste.

- ◆ Most propane is easily stored and transported in pressurized containers as liquid. They can be a small DOT 1 lb. or as large as the ASME (American Standard of Mechanical Engineers) storage containers of 120,000 gallons.

DOT CYLINDER DESIGN

- ◆ **DOT Cylinder** bodies are made from alloyed steel or aluminum designed by three different methods of welding.

Seamless Cylinders: One piece unit.

Two Piece Cylinders: Two piece construction (a middle welded seam).

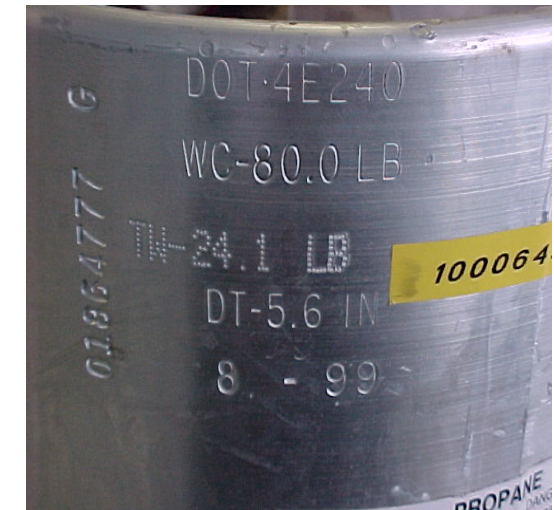
Three Piece Cylinder: Three piece construction (usually one vertical weld on the middle section and two horizontal weld seams around the ends).



- ◆ **Neck Ring:** This protective top ring provides protection for service valves plus a hand hold for moving. *This is also the location of the “Stamp” or the “ID” plate*
- ◆ **Foot Ring:** Bottom of cylinder.
- ◆ **Hand Wheel:** Service valve on top.
- ◆ **Gauges:** The gauge will provide readings as to the amount of LP (liquid propane) in the cylinder.
- ◆ **Pressure Relief Valve:** Located on top of all DOT cylinders and ASME tanks.

A CLOSER LOOK

WHAT THE ID STAMP OR ID PLATE WILL TELL YOU



- ◆ All DOT Cylinders are required to have an ID stamp embedded in the collar or an ID plate attached. This ID information will identify several important features.

CYLINDER TEST DATE

- ◆ Each DOT Cylinder is required to be requalified 12 years from the date of manufacture. This date will be stamped or attached by an ID plate found on either side of the cylinder neck ring on top.

REQUALIFICATION

- ◆ Twelve (12) years from the date of manufacture, all DOT Cylinders require requalification. One of the following tests must be performed before the cylinder can be refilled with propane.

External Hydrostatic Expansion

Test: Requalifies the cylinder for 12 years.

Internal Hydrostatic Test: Requalifies the cylinder for 7 years.

External Visual Inspection Test:

Requalifies the cylinder for 5 years.

OVERFILL PROTECTION DEVICE (OPD)

An Advancement in Propane Safety

Due to a significant number of incidents involving the overfilling of portable DOT Cylinders, the OPD was developed and implemented. This device prevents the overfilling of DOT Cylinders.

- ◆ The National Fire Protection Association now requires an OPD.
- ◆ All 4 lb. to 40 lb. DOT cylinders manufactured after September 30, 1998 are fitted with an OPD.

Exception: Horizontal cylinders used in industrial truck or forklift service or commercial or industrial welding cylinders used with cutting gases.

- ◆ DOT Cylinders that require requalification after September 30, 1998 are required to be fitted with an OPD or be taken out of service.
- ◆ DOT Cylinders that do not require requalification between September 30, 1998 and March 30, 2002 may be refilled. As of April 1, 2002 they must be fitted with an OPD or taken out of service.

IDENTIFYING THE OPD



- ◆ **The new OPD may be identified by:**

An OPD handwheel with a 3-star design **and is not replaceable.**

An OPD forged in brass with the letters OPD stamped into the neck of the brass stem.

HOW THE OPD WORKS

- ◆ During the refilling process the valve automatically closes when the DOT Cylinder has received the correct volume of propane (filling to approximately 80% of the maximum capacity of the cylinder).

LIQUEFIED PETROLEUM GAS and CYLINDER SAFETY

OFFICE OF STATE FIRE MARSHAL

DEPARTMENT OF STATE POLICE



Questions regarding information contained in this brochure may be directed to:

Office of State Fire Marshal
(503) 373-1540 Ext. 278,

or

a licensed propane dealer

LICENSE AND PERMIT SERVICES UNIT

4760 Portland Road NE
Salem Oregon 97305-1760
(503) 373-1540 Ext. 278 or 274
TDD Line: (503) 390-4661
Fax: (503) 373-1825