

Document Type: Regulation  
Number: 6.01e  
Effective: 10-28-13  
Revised:  
Legal References: I.G.S.H.S. 210  
29 C.F.R.  
1910.253,  
1910.101

---

## COMPRESSED GAS

### I. INTRODUCTION

Compressed gases present unique hazards. Depending on the particular gas there is a potential for simultaneous exposure to both mechanical and chemical hazards. Gases may be flammable explosive, corrosive, poisonous, or a combination of hazards. Additionally, the pressure in a compressed gas cylinder can cause the cylinder to become a rocket if the valve stem is damaged.

This regulation applies to City employees who, as a part of their job duties, will handle, use, transport or move gas cylinders.

### II. INSPECTION AND IDENTIFICATION

Any employee handling cylinders shall review the operating and safety protocols for the tasks to be performed with compressed gas and review the Safety Data Sheets (SDS) for the compressed gas(es). For more information on SDSs please refer to the Chemical and Material Hazard Communication regulation.

Prior to use, employees shall inspect compressed gas cylinders to ensure they are in safe condition. If a leaky or damaged cylinder, valve or hose is discovered at any time it should be removed from service and from the work area immediately. Under no circumstances shall an employee attempt to repair a leaky cylinder or valve.

Some cylinders may require integrity testing at regular intervals. If you find a cylinder outside of its use window, notify your supervisor and return the cylinder to the supplier.

All cylinders shall be properly labeled and marked. If the label is illegible or missing, notify your supervisor and return the cylinder to the supplier. Employees shall not rely on stenciling or color of the cylinder to indicate its contents and shall not use a cylinder with unidentified contents.

### III. ATTACHING REGULATORS AND OPENING VALVES

Employees shall only use regulators recommended for use with the cylinder they are using. The pressure, purity, and corrosive properties of the gas will determine the correct regulator. Employees shall never use a cylinder without a regulator or other pressure-reducing device in place.

Before a regulator is connected to a cylinder employees shall open the valve slightly and close it immediately. This action is termed "cracking" and is intended to clear the

valve of dust or dirt that might otherwise enter the regulator. When opening a valve the employee shall position the cylinder with the opening pointing away from them and others nearby. The valve of a fuel gas cylinder shall not be cracked where the gas would reach welding work, sparks, flame or other possible sources of ignition. Toxic gas cylinders shall not be cracked.

When finished using a compressed gas system, the employee shall turn off the main cylinder valve, bleed the regulator and lines, and close the regulator. Employees are not to leave the regulator under pressure by closing down flow from the regulator without shutting off the main cylinder valve.

#### IV. OTHER DO'S AND DON'TS

- A. Cylinders shall not be used as rollers or supports;
- B. No person other than the gas supplier shall attempt to mix gases in a cylinder;
- C. No employee shall use a cylinder's contents for purposes other than those intended by the supplier;
- D. All cylinders used shall meet the Department of Transportation requirements;
- E. All components of compressed gas equipment shall be inspected by the employee prior to use. Defective equipment shall not be used and shall be removed from service;
- F. Torches that have become clogged shall be cleaned in accordance with the manufactures instructions, using wires, drills or other devices that are designed for that purpose; and
- G. All components of compressed gas equipment shall be removed from service if they are damaged or are not in working order.

#### IV. TRANSPORTING OR MOVING GAS CYLINDERS

Always protect the valve during transport by removing the regulator and replacing the valve cover. Larger cylinders shall be transported with a cylinder cart. Rolling or "walking" cylinders is extremely hazardous. When a cylinder cart is not used, cylinders shall be moved by tilting and rolling on the bottom edges.

When transporting cylinders in vehicles they shall be securely fastened in a vertical position with chains or tie-downs and not permitted to roll.

#### V. STORAGE OF COMPRESSED GASES

- A. Each facility using compressed gases shall designate areas for storage of compressed gasses. These areas shall be well-protected, well-ventilated, and dry;
- B. Compressed gas cylinders shall be secured in an upright position at all times. A suitable cylinder cart, chain or other steadying device shall be used to keep cylinders from being knocked over while in use or in storage,
- C. Place an "Empty" tag on cylinders that no longer supply adequate pressure for use;
- D. If a cylinder is not in use, removal of the regulator and replacement of the valve cap is recommended; and
- E. Compressed Fuel Gases

1. Keep cylinders upright. Never lay cylinders containing flammable gases on their sides;
2. Oxygen cylinders in storage shall be separated from fuel-gas cylinders (acetylene) or combustible materials (especially oil and grease) by a minimum distance of 20 feet or other method approved by the Boise Fire Department;
3. Fuel gas cylinders shall never be stored under stairways or adjacent to emergency exit routes or elevators; and
4. Cylinders containing oxygen, acetylene or other fuel gas shall not be taken into a confined space as defined in the Confined Space Regulation.