

	<b>COMPRESSED GAS CYLINDERS</b>	Doc No:	5101 - 5012
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OPR:	Approval:	DEPARTMENT: RISK MANAGEMENT	
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## 1.0 PURPOSE

- 1.1 To prevent injury to Okaloosa County BOCC employees from the failure of compressed gas cylinders and to establish requirements for handling, lifting and storing cylinders safely.

## 2.0 SCOPE

- 2.1 This program applies to all Okaloosa County BOCC employees and contractor employees who, in their normal course of business, transport, receive, or utilize compressed gas cylinders containing oxygen, argon, acetylene, or other gasses.

## 3.0 RESPONSIBILITIES

### 3.1 Directors / Management

- 3.1.1 Shall ensure that all employees are aware of the proper handling, storage and proper use requirements for compressed gas cylinders.
- 3.1.2 Shall ensure that initial training is conducted for all new employees and that retraining is conducted when employee behaviors suggest that retraining is warranted.

### 3.2 Employees

- 3.2.1 Shall follow all requirements regarding the safe handling, storage and use of compressed gas cylinders.

## 4.0 GENERAL

- 4.1 Cylinders shall not be accepted, stored or used if cylinder is dented, bulging, pitting or has neck or valve damage.

### 4.2 If damage is discovered:

- 4.2.1 The cylinder must be immediately taken out of service.
- 4.2.2 The cylinder's owner shall be notified to remove the cylinder from the premises.
- 4.2.3 If owned, the cylinder shall be de-pressurized and inspected as required by this program.

### 4.3 Cylinder Identification

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4.3.1 Cylinder Gas identification shall be stenciled or stamped on the cylinder or a label used. No compressed gas cylinder shall be accepted for use that does not legibly identify its content by name.

#### 4.4 Handling

4.4.1 Cylinder caps must be secured onto each cylinder before moving.

4.4.2 Secure the cylinder in a blanket when being lifted by mechanical means. Slings, ropes or electromagnets are prohibited to be used for lifting compressed gas cylinders.

4.4.3 The preferred means to move compressed gas cylinders is with a cart, carrier or with a helper.

4.4.4 Compressed gas cylinders must properly secured not be allowed to strike each other.

4.4.5 When a cylinder cap cannot be removed the cylinder shall be tagged "Do Not Use" and returned to the designated storage area for return to vendor.

#### 4.5 Storage

4.5.1 All cylinders must be secured upright in a safe, dry, well-ventilated area that limits corrosion and deterioration.

4.5.2 Cylinders must be secured by chains to prevent them from falling over.

4.5.3 When securing the cylinder, the restraints shall not be attached to electrical conduit or process piping.

4.5.4 Filled and unfilled cylinders shall be stored separately.

4.5.5 All stored cylinders shall be capped.

4.5.6 Oxygen cylinders must be stored a minimum of 20 feet from combustible gas cylinders or areas where there may be open flame or arcing.

4.5.7 Cylinders may also be stored where the oxygen is separated from combustible gas cylinders by a 5 foot or higher wall with a fire resistance rating of 30 minutes.

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4.5.8 Storage areas for full and empty cylinders must be designated and signs posted. Cylinders should be stored in assigned places away from elevators, stairs or gangways.

#### 4.6 Use

4.6.1 Cylinders must be equipped with the regulators and back flow preventers. Regulators and cylinder valves should be inspected for grease, oil, dirt and solvents and cleaned if needed.

4.6.2 Only brass / non-spark producing tools should be used when installing caps, regulators, valves, back flow preventers, etc.

4.6.3 Never force or modify connections.

4.6.4 The use of a pressure-reducing regulator is required.

4.6.5 Valves must be closed and pressure bled off the regulator when cylinders are not in use.

4.6.6 Cylinders shall not be used as a roller or support.

4.6.7 Cylinders shall not be placed where they come in contact with electrical circuits.

4.6.8 Cylinders must be protected from sparks, slag or flame from welding, burning or cutting operations.

4.6.9 Empty cylinders shall to tagged “MT” and must be returned to the designated storage areas as soon as possible after use.

#### 4.7 Inspection

4.7.1 Okaloosa County Employees shall determine that compressed gas cylinders under their control are in a safe condition to the extent that this can be determined by visual inspection. Additional inspections shall be conducted as prescribed in the Hazardous Materials Regulations of the Department of Transportation (49 CFR parts 171-179 and 14 CFR part 103). Where those regulations are not applicable, visual and other inspections shall be conducted in accordance with Compressed Gas Association Pamphlets C-6-1968 and C-8-1962.

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- 4.7.2 Hoses and connections should be inspected regularly for damage. Hoses should be stored in cool areas and protected from damage.
- 4.7.3 County owned cylinders shall be visually inspected prior to charging, before each use and at least annually.
- 4.7.4 All inspections and testing must be documented.
- 4.7.5 High Pressure Cylinders are those cylinders marked for service pressures of 900 psi and greater. High pressure cylinders shall be taken out of service and submitted for re-qualification testing when any of the following conditions are identified by visual inspection:
  - 4.7.5.1 Cuts, dings, gouges, bulges, pitting, neck damage or evidence of exposure to fire.
  - 4.7.5.2 The cylinders shall be inspected and retested according to the requirements stated in 49 CFR 180.205 and .209.
  - 4.7.5.3 Re-qualification of non-damaged cylinders shall be conducted per the schedule in 49 CFR 180.209.
- 4.7.6 Low Pressure Cylinders are those cylinders marked for service pressures of less than 900 psi. Low pressure cylinders fall into two categories: those requiring requalification and those that do not require re-qualification.
  - 4.7.6.1 Low pressure cylinders that do not require re-qualification shall be taken out of service and condemned when any of the following conditions are identified during inspection:
    - 4.7.6.1.1 The tare weight of the cylinder is less than 90% of the stamped-on weight of the cylinder.
    - 4.7.6.1.2 Observed pitting, dents, cuts, bulging, gouges or evidence of exposure to fire.
  - 4.7.6.2 Low pressure cylinders subject to re-qualification shall be taken out of service, inspected and retested when visual inspection identifies any of the following conditions: dents, bulges, pitting or neck damage.
    - 4.7.6.2.1 Re-qualification of non-damaged cylinders shall be conducted per the schedule in 49 CFR 180.209.

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#### 4.8 Leaks

4.8.1 Leaking cylinders should be moved promptly to an isolated, well-ventilated area, away from ignition sources. Soapy water should be used to detect leaks. If the leak is at the junction of the cylinder valve and cylinder, do not try to repair it. Contact the supplier for a replacement or to make the necessary repairs.

#### 4.9 Transportation

4.9.1 Cylinders must be transported in a vertical secured position using a cylinder basket or cart and must not be rolled. Regulators should be removed and cylinders capped before being transported. Cylinders shall not be dropped or permitted to strike each other. Protective caps are not to be used to lift cylinders.

#### 4.10 Empty Cylinder Tagging

4.10.1 Cylinders should be tagged and marked as "MT" and dated when empty. Never mix gases in a cylinder and only professionals should refill cylinders. Empty cylinders must be handled as carefully as when filled.

#### 4.11 Controls

4.11.1 Controls such as emergency shutoff switches, gas cabinets and flow restrictors should be used wherever possible to control hazards. Emergency eyewash stations should be present where corrosive gases or materials are used.

### 5.0 TRAINING

5.1 All Okaloosa County employees working in or around areas of the County where there is a possibility of handling Compressed Gas will be trained in the proper use and inspection of these cylinders. Initial training will be at onboarding and each department will also train their employees on proper procedures. Personnel will be retrained on a Tri-Annual basis or as needed to ensure that proper techniques are being followed and implemented.

### 6.0 RECORD KEEPING

6.1 Training records shall be maintained at the department in which the employee is working and a copy of the training certificate will be sent to Human Resources for their permanent file.

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**7.0 ABBREVIATIONS**

ABBREVIATION	DESCRIPTION
BOCC	Board of County Commissioners
CFR	Code of Federal Regulations
MT	Empty

**8.0 DOCUMENT HISTORY**

DATE	TYPE	DESCRIPTION OF CHANGE
19 Jun 2023	Initial	New Document
	Revision 1	

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