

GEORGIA DEPARTMENT OF CORRECTIONS Standard Operating Procedures		
Functional Area: SUPPORT SERVICES/FIRE SERVICES	Reference Number: IVN09-0005	Revises Previous Effective Date: NEW
Subject: MAINTENANCE/SELF-CONTAINED BREATHING APPARATUS		
Authority: WETHERINGTON/HODGE	Effective Date: 4/01/02	Page 1 of 6

I. POLICY:

This standard establishes guidelines for the inspection and maintenance of self-contained breathing apparatus (SCBA). It was promulgated to:

- A. Provide a reasonable degree of assurance that an in-service SCBA will function properly.
- B. Require that any SCBAs that do not function properly be removed from service and repaired.
- C. Comply with the applicable rules, regulations, and standards concerning SCBA equipment.

II. APPLICABILITY:

All Department of Corrections State and County Fire Departments.

III. RELATED DIRECTIVES:

NFPA Standards 1981, and 1500, and 1404

IV. DEFINITIONS:

- A. SCBA - Self-contained breathing apparatus
- B. PSI - Pounds per square inch

V. ATTACHMENTS:

ATTACHMENT #1 Monthly SCBA Inspection Form

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VI. PROCEDURE:

A. (General)

1. All current SCBA equipment shall comply with the provisions of the edition of NFPA 1981, *Standard on Open-circuit Self-Contained Breathing Apparatus for the Fire Service*, that was in effect at the time that the equipment was purchased.
2. SCBA equipment shall also comply with the applicable rules, regulations, and standards promulgated by other appropriate agencies.

B. INSPECTION

SCBA equipment shall be inspected periodically to determine its readiness for use and to discover and repair any damage or excessive wear sustained by the unit. The frequency of inspection is as follows:

1. Before and after each use:
 - a. Before each use, each SCBA assigned to an apparatus should be inspected for the following:
 - 1) **Cylinder pressure:** The minimum pressure should not fall below 90 percent of the full cylinder pressure. Example: A 4,500-psi cylinder should not contain less than 4,050 psi.
 - 2) **Low-air alarm:** This should sound when the cylinder valve is opened.
 - 3) **Facepiece:** This should be clean and free of debris, and it should seal properly to the wearer's face.
 - 4) **Exhalation valve, bypass valve, and operation:** All should function normally.
 - b. After each use, each SCBA shall be inspected for the following:

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- 1) **Low or empty cylinder:** Cylinders should be cleaned, low cylinders should be refilled, and empty cylinders should be replaced with fully charged ones.
- 2) **Components and facepieces:** Shall be cleaned, checked for excessive wear or damage, sanitized, and checked for proper function.
- 3) **Caution:** Anytime an SCBA has been used in a contaminated atmosphere, the unit shall be completely decontaminated prior to being returned to service.

2. Daily Inspection

- a. Each piece of SCBA equipment assigned to an apparatus shall be inspected at the beginning of each day and after every use.
- b. The inspection shall be made to ensure that the SCBA is fully charged, clean, free of damage, and fully operational.
- c. Cleaning, refilling cylinders, or minor repair shall be done by the driver of the apparatus as needed under the supervision of the Station Chief.
- d. Any unit showing damage or that does not function properly shall be removed from service and red-tagged with a description of the defect.

3. Monthly inspection:

The inspection shall consist of those items listed on the Monthly SCBA Inspection Form.

- a. The monthly inspection shall be performed on the first day of each month. Any unit that fails the inspection and that cannot immediately be repaired shall be red-tagged with the description of the defect, and the unit shall be placed out of service.

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b. All spare cylinders and SCBA units shall also be inspected.

4. Semiannual inspection:

All SCBAs shall be inspected and serviced every six months by the Station Chief or by an authorized repair facility.

The inspection and servicing shall include the following:

a. Disassembly and cleaning of the regulator and other major components, such as the low-air alarm, facepiece, etc.

b. Replacement of all worn parts.

c. Reassembly of the SCBA and testing for proper function.

5. Annual inspection:

Internal inspections of SCBA cylinders shall be performed annually to determine any condition that may contribute to the deterioration of a cylinder. Checks shall be made for rust, corrosion, moisture, damage, and evidence of oil or hydrocarbon **contamination.**

C. **BREATHING AIR SUPPLIES**

1. All breathing air produced for use in an SCBA shall comply with the testing and quality requirements of the Compressed Gas Association G-7.1 Commodity Specifications for Air, for Grade D Air. Tests shall be conducted quarterly by an independent testing service to determine whether the air quality meets or exceeds these requirements. The test results shall be filed and posted.

2. The breathing air that is produced by the Station's compressor meets the air quality standards for SCBA equipment.

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3. Any air cylinder suspected of containing contaminated air or air that does not meet the air quality standards should be emptied and purged.
4. Any air cylinder that is not used within a period of three months shall be emptied and refilled.
5. All SCBA cylinders shall be maintained at 90 percent of their rated storage capacity as stamped on the cylinder. Cylinders containing less than 90 percent of their rated capacity shall be segregated from full cylinders until they are refilled.
6. The Station Chief shall ensure that all fire suppression personnel are capable of properly operating all breathing air compressors and cascade systems. Proper operating procedures and precautions shall be posted in a conspicuous location at each fill station.
7. Prior to filling a cylinder, personnel shall visually inspect all cylinders to ensure that none are damaged or defective and that they are within the current hydrostatic test date. Defective or out-of-date cylinders shall not be filled and shall be removed from service. (NFPA 1500, *Standard on Fire Department Occupational safety and Health Program*, 5-3.7.3 requires that cylinders be hydrostatically tested within the applicable periods specified by the manufacturer and the applicable government agency. For example, if a manufacturer required a cylinder to be tested every five years and the last test date on the cylinder was 5/91 and the inspection took place on 9/97, the cylinder would be out of date and would have to be tested prior to being filled.)
8. All cylinders shall be refilled in accordance with the recommendations of the manufacturer.
9. Breathing air compressors shall not be operated in a contaminated atmosphere. Prior to operation, personnel shall ensure that the intake area is free of obvious contaminants. Air shall not be taken

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while any apparatus motor is running near an intake area.

D. RECORDS

1. The Station Chief shall ensure that the following records are kept:
 - a. A complete inventory of all SCBA units, cylinders, cascades, fill stations, special tools, spare parts, and related equipment.
 - b. Individual records for each regulator and harness assembly. The records shall include inventory and serial numbers, date of purchase, vendor, manufacturer, maintenance and repair history, history of parts replacement, upgrades, and performance tests.
 - c. Individual records shall be kept for each cylinder. The records shall include inventory or serial numbers, date of purchase, vendor, manufacturer, hydrostatic test dates, and a history of inspection and repair.
 - d. Individual maintenance and repair records shall be kept for each breathing air compressor, cascade system, fill station, purification system, and any ancillary equipment used to produce or store breathing air.
2. The Station Chiefs shall also keep a permanent file of all quarterly air quality tests.

E. RESPONSIBILITIES

1. The District Chief shall be responsible for the management and oversight of the SCBA inspection and maintenance program, including all cascade systems, breathing air compressors, and the mobile cascade systems carried on the rehab unit. The Station Chief shall ensure the timely repair of any defective piece of SCBA equipment.

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2. Station Chiefs shall be responsible for the care and maintenance of the SCBAs, cascade systems, and breathing air compressors assigned to their command.
3. Every person assigned to fire suppression duty shall be responsible for knowing how to use and care for the SCBAs assigned to his apparatus. In addition, each firefighter shall be issued his own individual SCBA facepiece. The facepiece shall be kept clean and in proper working condition.
4. It is the duty of each individual to promptly report and correct any deficiencies found with any piece of SCBA equipment. If the equipment cannot immediately be repaired, the equipment shall be taken out of service