CHAPTER 6
CORRECTIVE MAINTENANCE

6.1 INTRODUCTION.

6.1.1 Scope. The corrective maintenance information presented in this chapter includes the actions and procedures required to restore the Self-Contained Breathing Apparatus (SCBA) to a fully operable condition. This chapter provides general maintenance information and specific maintenance procedures to assist maintenance personnel in the removal and replacement of inoperative parts or assemblies. The corrective maintenance procedures identify maintenance actions; provide safety precautions; list tools, parts, and materials; and present step-by-step instructions with supporting illustrations. The corrective maintenance procedures in this chapter are provided for qualified maintenance personnel working at the organizational level.

The procedures included in this chapter are prescribed in the interest of safety and optimum service life of the equipment. Components requiring corrective maintenance beyond the limits described in this document must be returned to the depot In Accordance With (IAW) paragraph 1.9 for repair or overhaul.

The information in the remainder of this chapter is arranged in the following sequence:
- General Maintenance Information
- Test Equipment and Tools
- Materials
- General Maintenance Procedures
- SCBA Corrective Maintenance.

6.1.2 Safety Requirements. Before performing corrective maintenance on the SCBA, maintenance personnel shall review and become thoroughly familiar with the general safety notices and precautions listed in the Safety Summary. Replacement procedures, along with the associated warnings and cautions, shall be read in full before beginning corrective maintenance.

6.2 ADJUSTMENTS AND ALIGNMENTS.
There are no adjustments and alignments required.

6.3 GENERAL MAINTENANCE INFORMATION.

WARNING
If in doubt about the serviceability of a part, replace it immediately. Worn or damaged parts shall be replaced with authorized replacement parts only. Component failure during operation may result in serious injury or death.

6.3.1 Maintenance Parts. Only approved replacement parts listed in Chapter 7 shall be used on the SCBA. Ensure all replacement components have been cleaned IAW paragraph 4.7.2.

6.3.2 Related Maintenance. Related corrective maintenance actions may include inspection, removal, and replacement of O-rings, as well as inspection of component parts. O-ring inspection, removal, and replacement procedures are provided in paragraph 4.7.5. Ensure cleanliness of the system is maintained at all times IAW the requirements in paragraphs 4.7.1 and 4.7.2.

6.4 TEST EQUIPMENT AND TOOLS.
No special test equipment is required for corrective maintenance on the SCBA. Table 6-1 lists the tools used in this chapter, along with their corresponding National Stock Number (NSN).
### Table 6-1. Tools Required

<table>
<thead>
<tr>
<th>Tool</th>
<th>NSN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hammer, hand, machinists’s ballpeen, 8 oz.</td>
<td>5120-00-061-8541</td>
</tr>
<tr>
<td>Key Set, Hex Head Screw (Allen Wrench) 3/32 in.</td>
<td>5120-01-428-7869 (set)</td>
</tr>
<tr>
<td>Key Set, Hex Head Screw (Allen Wrench) 7/64 in.</td>
<td>5120-01-428-7869 (set)</td>
</tr>
<tr>
<td>Key Set, Hex Head Screw (Allen Wrench) 1/8 in.</td>
<td>5120-01-428-7869 (set)</td>
</tr>
<tr>
<td>Key Set, Hex Head Screw (Allen Wrench) 5/32 in.</td>
<td>5120-01-428-7869 (set)</td>
</tr>
<tr>
<td>Pliers, needle-nose</td>
<td>5120-01-367-4641</td>
</tr>
<tr>
<td>Pliers, slip joint, soft-jawed</td>
<td>5120-00-624-8065</td>
</tr>
<tr>
<td>Punch Set, Drive Pin, 1/8 in.</td>
<td>5120-01-429-7444 (set)</td>
</tr>
<tr>
<td>Punch Set, Drive Pin, 5/64 in.</td>
<td>5120-01-429-7444 (set)</td>
</tr>
<tr>
<td>Scraper, Plastic</td>
<td>5110-01-515-2845</td>
</tr>
<tr>
<td>Screwdriver, flat-tip, 1/4 in.</td>
<td>5120-00-278-1267</td>
</tr>
<tr>
<td>Screwdriver, flat-tip; 3/8 in.</td>
<td>5120-00-240-8716</td>
</tr>
<tr>
<td>Screwdriver, cross-tip, No. 1</td>
<td>5120-00-234-8913</td>
</tr>
<tr>
<td>Screwdriver, cross-tip, No. 2</td>
<td>5120-00-234-8913</td>
</tr>
<tr>
<td>Wrench, open-end 7/16 in</td>
<td>5120-01-335-1185</td>
</tr>
<tr>
<td>Wrench, open-end 1/2 inch</td>
<td>5120-00-277–8301</td>
</tr>
</tbody>
</table>

#### 6.5 MATERIALS.

The materials necessary for performing corrective maintenance on the SCBA are listed in Table 6-2 below, along with their NSN and the purpose for each material used.

### Table 6-2. Materials Used

<table>
<thead>
<tr>
<th>Material</th>
<th>NSN</th>
<th>Purpose/Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cloth, lint free, cleaning</td>
<td>7920-00-044-9281</td>
<td>Leak check</td>
</tr>
<tr>
<td>Compound, leak detection, MIL-L-25567D, Type I - Hazardous Material</td>
<td>6850-00-621-1820</td>
<td>Leak check</td>
</tr>
<tr>
<td>MIL-D-16791, Type 1 Non-Ionic Detergent (NID)</td>
<td>7930-00-282-9699</td>
<td>Cleaning connections to be opened for maintenance; leak check alternative</td>
</tr>
<tr>
<td>Pressure-sensitive adhesive tape (masking)</td>
<td>7510-00-266-6707</td>
<td>Cover mask-mounted regulator outlet port</td>
</tr>
<tr>
<td>Tags, shipping</td>
<td>8135-00-178-9151</td>
<td>Components shipped to depot</td>
</tr>
</tbody>
</table>
Table 6-2. Materials Used - Continued.

<table>
<thead>
<tr>
<th>Material</th>
<th>NSN</th>
<th>Purpose/Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sealing compound, Threadlocker, Loctite® Grade 222, - Hazardous Material</td>
<td>8030-01-055-6126</td>
<td>Secures installed screw</td>
</tr>
<tr>
<td>Water, fresh</td>
<td>- - -</td>
<td>Leak check, inhalation check valve installation, faceseal installation</td>
</tr>
</tbody>
</table>

6.6 GENERAL MAINTENANCE PROCEDURES.

**WARNING**

Disassembly of SCBA components beyond the procedures described in this manual shall not be performed. Additional disassembly may cause component failure and result in serious personal injury or death.

6.6.1 **Bleed System.**

**CAUTION**

Before performing any maintenance, bleed system of air to ensure internal system air pressure, not including cylinder assembly, is equal to room (ambient) pressure to avoid equipment damage.

a. Close cylinder valve (1, Figure 6-1) by rotating handwheel (2) fully Clockwise (CW).

![Figure 6-1. Cylinder Valve and Handwheel.](image)

b. Open purge valve (2, Figure 6-2) on mask-mounted regulator (3) by turning fully Counterclockwise (CCW).
c. When airflow stops, close purge valve by turning fully CW.

6.6.2 **Leak Check.**

**Tools, Parts, and Materials.**
- Cloth, lint free, cleaning
- Compound, leak detection, MIL-L-25576D, Type I - Hazardous Material
- Water, fresh
- Tags, shipping

a. Ensure minimum 4,000 psig reading on dual-reading pressure indicator (3, Figure 6-1). If below 4,000 psig, replace with fully-charged cylinder IAW paragraph 2.3.2.2.

b. Ensure air saver switch (1, Figure 6-2) is fully depressed and purge valve (2) is rotated fully CW until closed.

c. Rotate handwheel (2, Figure 6-1) fully CCW, then back 1/4 turn, to open cylinder valve (1).

d. Apply leak detection compound to repaired areas.

e. Inspect repaired areas treated with leak detection compound. If bubbles (1, Figure 6-3) are present, ensure proper assembly all repaired components and repeat leak check. If leak persists, tag affected components for repair and remove from service.

f. Remove all traces of leak detection compound with a damp, clean, lint-free cloth.
g. Bleed system IAW paragraph 6.6.1.

6.6.3 **Negative-Pressure Check.**

**Tools, Parts, and Materials.**
- Tags, Shipping

**WARNING**

Failure to successfully perform a negative-pressure check may allow exposure to hazardous substances, resulting in serious personal injury or death.

**NOTE**

Ensure facepiece is completely assembled and all components have been inspected, cleaned, and replaced as necessary before conducting a negative-pressure check.

a. Bleed system IAW paragraph 6.6.1.

**NOTE**

Ensure facepiece is correct size.

b. Don facepiece IAW paragraph 2.3.1.2 steps f through l.

c. Secure mask-mounted regulator to facepiece.

**NOTE**

Do not pressurize SCBA.

d. When facepiece is sealed to face, inhale gently.

e. If leak is detected, ensure corrective maintenance procedure has been properly performed, and repair as required.

f. Repeat steps b through e.

g. If leak persists, remove facepiece from service and tag for repair or replacement.

h. Clean facepiece IAW appropriate Maintenance Requirement Card (MRC).

6.7 **CORRECTIVE MAINTENANCE.**

6.7.1 **AV-2000® Corrective Maintenance.**

6.7.1.1 **Voice Amplifier Removal and Installation.**

**Tools, Parts, and Materials.**
- Screwdriver, cross-tip, No. 1

a. **Removal.**

   (1) Depress locking lever (1, Figure 6-4) and rotate voice amplifier (2) CW to remove.
(2) Using No. 1 cross-tip screwdriver, remove screw (2, Figure 6-5) and alignment bracket (3). Set aside for installation.

(3) Gently separate mounting bracket (1) and remove from over exterior flap (5).

b. **Installation.**
(1) Visually inspect mounting bracket and voice amplifier for damage. If damage is noted, replace as required.
(2) Inspect mounting bracket and voice amplifier for cleanliness. If dirt or other foreign matter is found, clean IAW paragraph 4.7.2.
(3) Spread apart mounting bracket (1, Figure 6-5) and place over exterior flap (5).
(4) Position alignment bracket (3) in groove (4) and align hole in alignment bracket with hole in mounting bracket.
(5) Install screw (2) using No. 1 cross-tip screwdriver. Do not overtighten.
(6) Align voice amplifier with mounting bracket and turn CW until locking lever engages.
WARNING

Failure to successfully perform a negative-pressure check may allow exposure to hazardous substances, resulting in serious personal injury or death.

(7) Perform negative-pressure check IAW paragraph 6.6.3.

6.7.1.2 Head Harness Removal and Installation.

a. Removal.

(1) To replace temple clip assembly (2, Figure 6-6), unsnap clip assembly from lens by positioning finger under detent (1) and lifting snap from receptacle. Proceed to steps b.(2) and b.(3) to remove temple strap from temple clip assembly.

![Figure 6-6. Temple Clip Assembly.](image)

(2) Push down roller bar (3) of temple strap buckle and feed end of temple strap back through portion of temple strap buckle above roller bar.

(3) Push up on roller bar and feed end of temple strap back through portion of temple strap buckle below roller bar.

(4) Repeat steps b.(2) and b.(3) for remaining temple strap and two neck straps.

b. Installation.

(1) Visually inspect head harness and clip assemblies for damage. If damage is noted, replace as required.

(2) Inspect head harness and clip for cleanliness. If dirt or other foreign matter is found, clean IAW paragraph 4.7.2.

NOTE

The words TEMPLE and NECK are molded into the smooth side of the head harness straps, near the end of each strap.

(3) Arrange head harness on work surface so molded labels face up, and are aligned with respective buckles.

(4) With one hand, lift up on roller bar (3, Figure 6-7). With molded label (2) facing up, feed head harness strap (1) under roller bar. Ensure head harness strap has enough slack for threading back through buckle.
Figure 6-7. Thread Head Harness Strap Through Buckle.

(5) Slide roller bar down to meet head harness strap, feed head harness strap back over roller bar through buckle. Serrated surface will now face up.

(6) Pull through to tighten.

(7) Repeat steps c.(4) through (6) for remaining head harness straps.

(8) If temple clip assembly has been removed, install temple clip assembly onto lens by positioning snap over receptacle. Starting on side of snap opposite the detent (1, Figure 6-6) roll thumb toward detent until snap engages.

**WARNING**

Failure to successfully perform a negative-pressure check may allow exposure to hazardous substances, resulting in serious personal injury or death.

(9) Perform negative-pressure check IAW paragraph 6.6.3.

6.7.1.3 Inhalation Check Valve Removal and Installation.

Tools, Parts, and Materials.

- Water, fresh

  a. Removal.

    (1) From inside nosecup assembly (2, Figure 6-8) grasp inhalation check valve (1) with one hand and nosecup assembly with the other, and pull inhalation check valve free.
Figure 6-8. Inhalation Check Valve Removal.

(2) Repeat with remaining inhalation check valve.

b. **Installation.**
   
   (1) Inspect inhalation check valves for cuts, nicks, tears, and other damage. If damage is noted, replace as required.

   (2) Inspect inhalation check valves for cleanliness. If dirt or other foreign matter is found, clean IAW paragraph 4.7.2.

   (3) Moisten inhalation check valve tip (1, Figure 6-9) and stem (2) with fresh water.

   Figure 6-9. Inhalation Check Valve.

   (4) From inside nosecup assembly, insert inhalation check valve tip into center hole of inhalation check valve seat as shown in **Figure 6-10.**
NOTE
When inhalation check valve is properly installed, disc portion of inhalation check valve will lay flat against inhalation check valve seat and stem will be captured in center hole.

(5) From outside nosecup assembly, gently pull inhalation check valve tip until stem is seated.
(6) Trim excess tip as required.
(7) Repeat steps c.(3) through c.(6) for remaining inhalation check valve.

WARNING
Failure to successfully perform a negative-pressure check may allow exposure to hazardous substances, resulting in serious personal injury or death.

(8) Perform negative-pressure check IAW paragraph 6.6.3.

6.7.1.4 Nosecup Assembly Removal and Installation.

a. Removal.

CAUTION
Press on edge of auxiliary exhalation valve assembly when removing to avoid equipment damage.

(1) From outside adapter port (2, Figure 6-11), push auxiliary exhalation valve assembly (1) into facepiece and set aside.