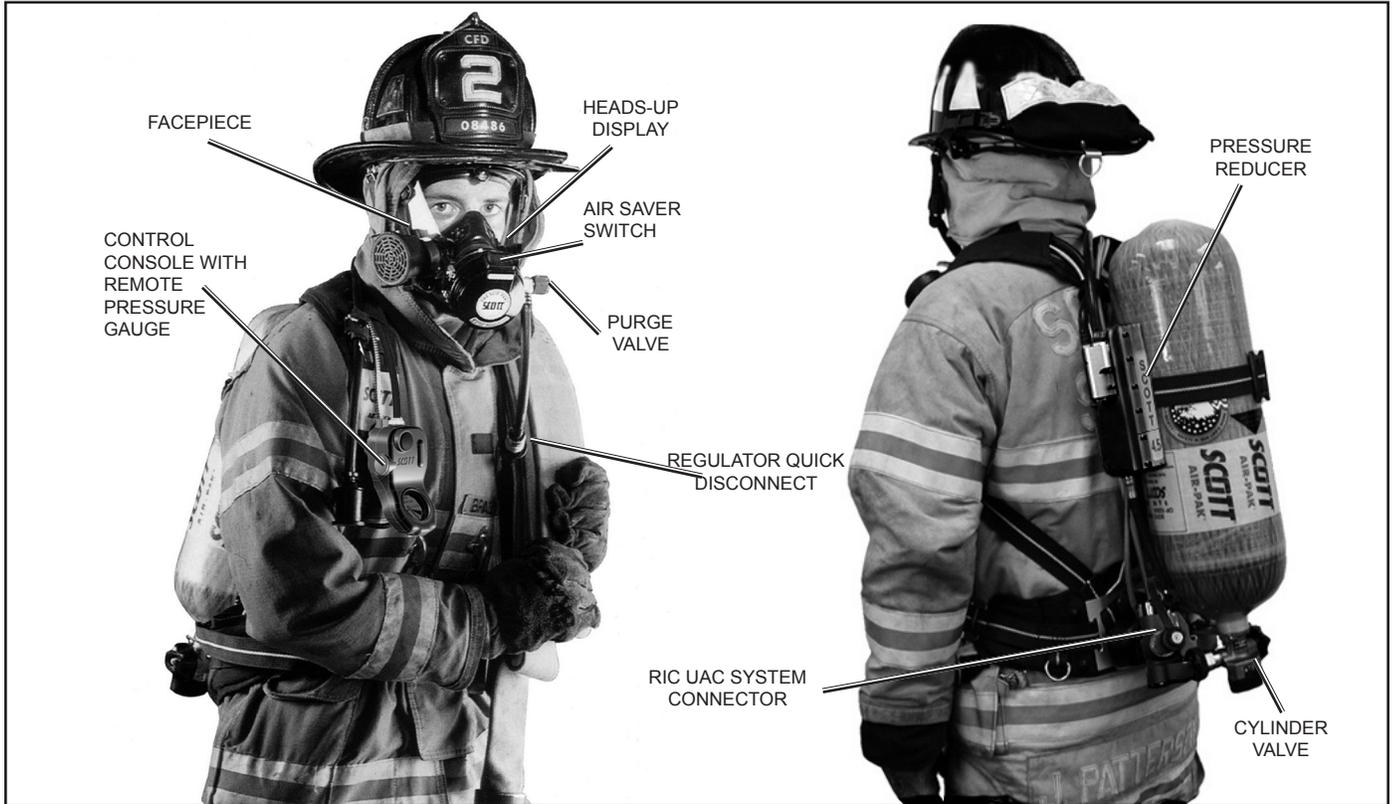


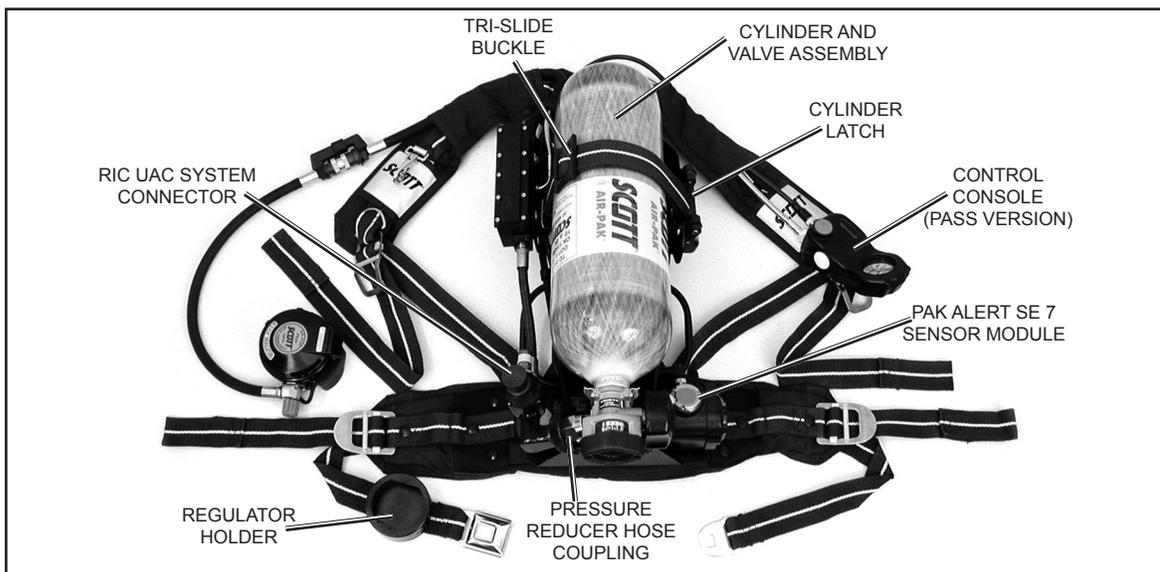
### SCOTT® AIR-PAK® AND AIR-PAK 75 Models 2.2 / 3.0 / 4.5

**Pressure-Demand Self Contained Breathing Apparatus (SCBA)  
NFPA-1981 (2007 Edition) Compliant (Including Upgrades)**



**TYPICAL AIR-PAK 75  
FRONT VIEW**

**TYPICAL AIR-PAK 75  
LEFT SIDE VIEW**



**TYPICAL AIR-PAK 75 WITH OPTIONS AND ACCESSORIES**

Typical configurations of SCOTT AIR-PAK SCBA's shown with various optional and accessory equipment. Appearance of respirators will vary by model. Not all respirators include all features illustrated.

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**SCOTT AIR-PAK AND AIR-PAK 75**  
**Models 2.2 / 3.0 / 4.5 Pressure-Demand**  
**Self Contained Breathing Apparatus (SCBA)**  
**NFPA-1981 (2007 Edition) Compliant (Including Upgrades)**

## **WARNING**

**IMPROPER USE OF THIS RESPIRATOR MAY RESULT IN PERSONAL INJURY OR DEATH. IMPROPER USE INCLUDES, BUT IS NOT LIMITED TO, USE WITHOUT ADEQUATE TRAINING, DISREGARD OF THE WARNINGS AND INSTRUCTIONS CONTAINED HEREIN, AND FAILURE TO INSPECT AND MAINTAIN THIS RESPIRATOR. READ AND UNDERSTAND ALL INSTRUCTIONS BEFORE ATTEMPTING TO OPERATE OR SERVICE THIS EQUIPMENT.**

**THIS RESPIRATOR IS INTENDED TO BE USED ONLY IN CONJUNCTION WITH AN ORGANIZED RESPIRATORY PROTECTION PROGRAM WHICH COMPLIES WITH THE REQUIREMENTS OF "PRACTICES FOR RESPIRATORY PROTECTION," Z88.2 AVAILABLE FROM AMERICAN NATIONAL STANDARDS INSTITUTE INC., 1430 BROADWAY, NEW YORK, N.Y., 10018, OR THE REQUIREMENTS OF OSHA SAFETY AND HEALTH STANDARD 29 CFR 1910 PARAGRAPH 134 AVAILABLE FROM THE U. S. DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, OR OTHER PERTINENT NATIONALLY RECOGNIZED STANDARDS, SUCH AS THOSE PROMULGATED BY THE U. S. COAST GUARD OR THE DEPARTMENT OF DEFENSE.**

### **GENERAL DESCRIPTION**

The SCOTT AIR-PAK self contained breathing apparatus (SCBA) is a respirator intended to provide respiratory protection to an individual when entering into, working in and exiting an objectionable, an oxygen deficient, and/or an unbreathable (toxic) atmosphere.

**TRAINING IS REQUIRED BEFORE USE.** The SCOTT AIR-PAK SCBA is to be used **only** by persons trained in the use of the respirator and **only** in conjunction with an organized respiratory protection program. The SCBA must be used and maintained properly and is not to be used for purposes other than authorized by your respiratory protection program. This respirator must not be used underwater.

The basic SCOTT AIR-PAK SCBA consists of a backframe and harness assembly, a cylinder and valve assembly to store a supply of breathing air under pressure, a dual path pressure reducer mounted on the backframe, a facepiece mounted pressure demand breathing regulator, and a SCOTT full facepiece with a head harness to secure the facepiece to the face. All SCOTT AIR-PAK SCBA's described in this instruction are equipped with at least two independent end of service time indicators, a remote pressure gauge mounted on the shoulder strap, and an air saver switch located on the breathing regulator. All model respirators described by these instructions are equipped with shoulder straps and waist straps made of Kevlar<sup>®1</sup>.

Two backframe configurations are available: the Wireframe backframe and the AIR-PAK 75 Aluminum backframe. Both backframes are available as 2.2 (2216 psig), 3.0 (3000 psig), or 4.5 (4500 psig) models. All features apply to both backframes.

The full facepiece is available in several models and sizes and the head harnesses are available in a variety of materials including Kevlar. The facepiece must be properly fitted to the user before use. The facepiece may be readily detached from the breathing regulator to allow for use of the best fitting and most comfortable size facepiece for each user. Fit testing per OSHA Standard 29 CFR Part 1910.134 Appendix A or ANSI Standard Z88.10 requires testing in the negative pressure mode using equipment such as a Portacount<sup>®</sup> Respirator Fit Tester. For this, SCOTT facepieces require use of SCOTT Fit Test Adapter P/N 804057-01 or equivalent and appropriate negative pressure testing equipment. Mask Seal Kit P/N 805655-01 may also be required to attain a proper fit. Refer to the FACEPIECE FITTING AND FIT TESTING section of this instruction.

<sup>1</sup>Kevlar is a registered trademark of E.I. du Pont de Nemours and Company, Wilmington, DE.

<sup>2</sup>Portacount<sup>®</sup> Plus is a registered trademark of TSI Incorporated

### **WARNING**

**DO NOT OPERATE THIS EQUIPMENT WHILE UNDER THE INFLUENCE OF DRUGS, ALCOHOL, OR ANY MEDICATIONS OR SUBSTANCES WHICH MAY AFFECT VISION, DEXTERITY, OR JUDGMENT. USERS OF THIS EQUIPMENT MUST BE IN GOOD PHYSICAL AND MENTAL HEALTH IN ORDER TO OPERATE SAFELY. DO NOT USE THIS EQUIPMENT WHEN FATIGUE PREVENTS SAFE OPERATION. STAY ALERT WHEN OPERATING THIS EQUIPMENT. INATTENTION OR CARELESSNESS WHILE OPERATING THIS EQUIPMENT MAY RESULT IN SERIOUS INJURY OR DEATH.**

### **WARNING**

**USE OR MISUSE OF THIS RESPIRATOR IN SUCH A MANNER AS TO EXPOSE THE USER TO THE ATMOSPHERE THE RESPIRATOR IS INTENDED TO PROTECT AGAINST MAY RESULT IN SERIOUS INJURY OR DEATH.**

### **WARNING**

**THIS RESPIRATOR, IS INTENDED TO PROTECT THE USER ONLY FROM THE EFFECTS OF AN OXYGEN DEFICIENT ATMOSPHERE AND/OR ATMOSPHERES CONTAINING TOXIC OR HAZARDOUS SUBSTANCES BY PROVIDING A SUPPLY OF RESPIRABLE BREATHING AIR TO A FACEPIECE SEALED TO THE USER'S FACE.**

**SOME TOXIC OR HAZARDOUS ATMOSPHERES CONTAIN SUBSTANCES WHICH CAN POISON BY ABSORPTION THROUGH EXPOSED SKIN. FAILURE TO TAKE ALL NECESSARY PRECAUTIONS WHEN ENTERING A HAZARDOUS ATMOSPHERE MAY RESULT IN SERIOUS INJURY OR DEATH.**

### **WARNING**

**FIT TESTING IN ACCORDANCE WITH OSHA STANDARD 29 CFR PART 1910 IS REQUIRED AS PART OF THE REQUIRED TRAINING BEFORE USE OF THIS RESPIRATOR. FAILURE TO PROPERLY FIT AND TRAIN THE USER IN USE OF THE FACEPIECE AND RESPIRATOR MAY RESULT IN EXPOSURE TO THE HAZARDOUS ATMOSPHERE WHICH COULD LEAD TO SERIOUS INJURY OR DEATH.**

The removable pressure-demand breathing regulator mounts directly to the facepiece and is equipped with an Air Saver/Donning Switch and a red Purge Knob.

All models of the AIR-PAK SCBA respirator are equipped with the VIBRALERT® alarm in the facepiece mounted regulator. The VIBRALERT alarm serves two functions: as an end of service time indicator and to alert the user of a malfunction in the dual path pressure reducer. In normal operation, the VIBRALERT alarm vibrates the breathing regulator and facepiece to warn the user by both sound and feel that approximately 25% of full cylinder pressure remains. In addition, if the primary air path of the pressure reducer becomes blocked or should fail closed, the secondary air path will automatically begin supplying air to the breathing regulator and the VIBRALERT alarm will be actuated to warn the user of the malfunction.

The HEADS-UP DISPLAY is an independent end of service time indicator alarm attached to the facepiece mounted regulator and is standard on respirators required to have two independent redundant alarms. The HEADS-UP DISPLAY provides a visual monitor of the air supply with four lights that appear just below the facepiece field of vision. A separate low battery light warns the user that the batteries must be replaced. The HEADS-UP DISPLAY detects cylinder pressure directly and is totally independent of the VIBRALERT.

AIR-PAK respirators in compliance with NFPA 1981 (2007 edition) are fitted with a Rapid Intervention Crew/Company Universal Air Connection (RIC UAC) System which permits emergency replenishment of an approved SCBA breathing air supply cylinder from an approved air supply source while in use. This is not a Quick Charge attachment and must not be used for routine recharging of the cylinder, for “buddy breathing”, for transferring air from another SCBA cylinder, or any unapproved use. The RIC UAC is for emergency use only when the respirator user is incapacitated within the hazardous atmosphere.

Whenever any end of service indicator alarm or alarms actuate, the user must leave the area requiring respiratory protection immediately.

## UPGRADE VERSIONS

This instruction also applies to SCOTT AIR-PAK *Fifty* and Wireframe backframe SCBA 2.2 (2216 psig), 3.0 (3000 psig), or 4.5 (4500 psig) models that have been **upgraded** to compliance with the NFPA 1981, 2007 edition of that standard. The actual appearance of an upgraded unit will vary slightly from a new unit. Always verify the unit is properly labeled for the appropriate approvals.

## QUESTIONS OR CONCERNS

If you have any questions or concerns regarding use of this equipment, contact your authorized SCOTT distributor, or contact SCOTT at 1-800-247-7257 (or 704-291-8300 outside the continental United States).

For all NFPA compliant versions of this respirator, report any operational malfunctions to the certification agency Safety Equipment Institute (SEI), 1307 Dolley Madison Blvd., Suite 3A, McLean, VA 22101, (703) 442-5732, FAX (703) 442-5756.

## WARNING

RESPIRATORS SHALL NOT BE WORN WHEN CONDITIONS PREVENT A GOOD FACE SEAL. SUCH CONDITIONS MAY INCLUDE, BUT ARE NOT LIMITED TO, FACIAL HAIR SUCH AS GROWTH OF BEARD OR SIDEBURNS, OR LOW HAIRLINE THAT CROSSES OR INTERFERES WITH THE SEALING SURFACE, THICK OR PROTRUDING HAIRSTYLES SUCH AS PONY TAILS OR BUNS THAT INTERFERE WITH THE SMOOTH AND CLOSE FIT OF THE HEAD HARNESS TO THE HEAD, A SKULL CAP THAT PROJECTS UNDER THE FACEPIECE, OR TEMPLE PIECES ON GLASSES. ALSO, THE ABSENCE OF ONE OR BOTH DENTURES CAN SERIOUSLY AFFECT THE FIT OF A FACEPIECE. USE OF AN IMPROPERLY FITTED FACEPIECE MAY LEAD TO EXPOSURE TO THE HAZARDOUS ATMOSPHERE WHICH COULD RESULT IN SERIOUS INJURY OR DEATH.

## WARNING

THE RESPIRATOR USER MUST IMMEDIATELY LEAVE THE AREA REQUIRING RESPIRATORY PROTECTION WHEN AN END OF SERVICE INDICATOR ALARM ACTUATES. ACTUATION OF ANY END OF SERVICE INDICATOR ALARM WARNS THAT APPROXIMATELY 25% OF FULL PRESSURE REMAINS IN THE AIR SUPPLY CYLINDER (THAT IS, APPROXIMATELY 3/4 OF THE TOTAL AIR SUPPLY HAS BEEN USED) OR THAT THERE IS A MALFUNCTION IN THE RESPIRATOR. A DELAY IN LEAVING THE AREA AFTER ALARM ACTUATION MAY RESULT IN INJURY OR DEATH.

## WARNING

FAILURE TO VERIFY THAT THE RESPIRATOR HAS ALL REQUIRED EQUIPMENT INSTALLED AND OPERATING MAY VOID THE NFPA APPROVAL AND MAY DEGRADE THE PERFORMANCE OF THE RESPIRATOR WHICH COULD LEAD TO SERIOUS INJURY OR DEATH.

## WARNING

CERTAIN ENVIRONMENTS MAY REQUIRE THAT PROTECTIVE MATERIAL COVER SOME OR ALL OF THE RESPIRATOR IN ADDITION TO COVERING THE USER. THE USER MUST BE ABLE TO ACCESS THE CONTROLS OF THE RESPIRATOR AT ALL TIMES. INABILITY TO ACCESS CONTROLS OF THE RESPIRATOR WHEN THE RESPIRATOR IS NEEDED FOR ESCAPE MAY RESULT IN SERIOUS INJURY OR DEATH.

## FACEPIECE FITTING AND FIT TESTING

A respirator Quantitative Fit Test must be performed to ensure the correct respirator facepiece size has been selected and assigned to the user. It is the responsibility of the Respiratory Protection Program Manager or Safety Coordinator to assist the user in selecting the correct respirator size relative to the user's facial features and dimensions. Fit Testing must be performed with any approved SCOTT accessories that will be used with the respirator installed, such as a communications device installed on the facepiece.

Refer to NIOSH Procedure No. RB-CET-STP-CBRN-0352, *DETERMINATION OF LABORATORY RESPIRATOR PROTECTION LEVEL (LRPL) QUANTITATIVE, MEDIUM FLOW, DEEP PROBE, CORN OIL, FIT FACTOR PERFORMANCE TEST FOR CHEMICAL, BIOLOGICAL, RADIOLOGICAL and NUCLEAR (CBRN) FULL FACEPIECE RESPIRATORY PROTECTION DEVICES (RPD) STANDARD TESTING PROCEDURE Attachment C, Sizing and Test Panels for LRPL* for details.

The size and style facepiece must be selected based on the user's measured face size. For initial fitting, carefully don the facepiece and conduct a NEGATIVE PRESSURE LEAK TEST. Refer to the DONNING PROCEDURE section of this instruction for the procedure. Follow the DONNING PROCEDURE **CAREFULLY**. If the selected facepiece does not pass the NEGATIVE PRESSURE LEAK TEST or does not fit securely without movement in the chin or chin cup area or the user experiences discomfort in the chin or throat, try the next nearest size, larger or smaller. After passing the NEGATIVE PRESSURE LEAK TEST, the facepiece size selected must be verified by successfully passing a respirator Quantitative Fit Test.

Respirator fit tests are explained fully in the American National Standard Practices for Respiratory Protection, ANSI Z88.10-2001 which is published by the American National Standards Institute (ANSI), 11 West 42nd Street, New York, New York, 10036, and in the Occupational Safety and Health Standards, OSHA 29 CFR 1910.134 Appendix A, which is published by the Occupational Safety and Health Administration (OSHA), 200 Constitution Avenue, NW, Washington DC, 20210.

Quantitative Fit Testing per OSHA Standard 29 CFR Part 1910.134 Appendix A, or ANSI Standard Z88.10-2001 requires testing in the negative pressure mode using equipment such as a Portacount<sup>®</sup>1 Respirator Fit Tester. For Quantitative Fit Testing, SCOTT facepieces require use of the appropriate negative pressure testing equipment such as the Portacount Respirator Fit Tester along with the following:

- SCOTT 40mm facepiece adapter, P/N 200423-01,
- a new SCOTT CBRN CAP-1 Canister, P/N 045135 or SCOTT P100 Cartridge, P/N 052683\*\*,
- SCOTT Probed Fit Test Adapter P/N 805628-01 or equivalent probed facepieces and the full range of sizes and styles
- Mask Seal Kit, P/N 805655-01
- the appropriate SCOTT communications device and mounting bracket properly installed on the facepiece
- the optional SCOTT AV-NBC Shroud:
  - for use with the AV-2000, P/N 805514-01;
  - for use with the AV-3000 SureSeal, P/N 31000558.

Depending on whether the user is fit testing for CBRN SCBA Open Circuit mode of operation (minimum Fit Factor equal to or greater than 500 minimum) or CBRN APR (minimum Fit Factor equal to or greater than 2000 minimum) appropriate negative pressure testing equipment must be used. For example, if you are Fit Testing for CBRN SCBA Open Circuit or CBRN APR, you should use a P100 Filter, SCOTT P/N 052683 and the SCOTT P/N 805628-01 Fit Test Adapter. If you are using a Facepiece that has been specially modified for a Fit Testing Program such as that described in NIOSH Procedure No. RB-CET-STP-CBRN-0352, *DETERMINATION OF LABORATORY RESPIRATOR PROTECTION LEVEL (LRPL) QUANTITATIVE, MEDIUM FLOW, DEEP PROBE, CORN OIL, FIT FACTOR PERFORMANCE TEST FOR CHEMICAL, BIOLOGICAL, RADIOLOGICAL and NUCLEAR (CBRN) FULL FACEPIECE RESPIRATORY PROTECTION DEVICES (RPD) STANDARD TESTING PROCEDURE*, you should install the appropriate filtration element directly into the 40 mm facepiece adapter.

When using a Portacount Respirator Fit Tester for Quantitative Fit Testing, TSI recommends that the level of particles in the ambient air must be between 5000 and 30000 particles/cm<sup>3</sup>. Refer to the Portacount Respirator Fit Tester user instructions for details including available Particle Generators to use with the Portacount Respirator Fit Tester if you have difficulty achieving the minimum level of ambient particle count required.

\*\*Depending on whether the user is fit testing for CBRN SCBA Open Circuit mode of operation (minimum Fit Factor equal to or greater than 500) or CBRN APR (minimum Fit Factor equal to or greater than 2000).

## WARNING

**THE USER MUST BE PROPERLY FITTED USING A RESPIRATOR QUANTITATIVE FIT TEST BEFORE USE AND FOLLOW ALL WARNINGS AND SPECIAL OR CRITICAL USER'S INSTRUCTIONS SPECIFIED DURING USE. FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY OR DEATH.**

## WARNING

**FIT TESTING IN ACCORDANCE WITH OSHA STANDARD 29 CFR PART 1910 IS REQUIRED AS PART OF THE REQUIRED TRAINING BEFORE USE OF THIS RESPIRATOR. FAILURE TO PROPERLY FIT AND TRAIN THE USER IN USE OF THE FACEPIECE AND RESPIRATOR MAY RESULT IN EXPOSURE TO THE HAZARDOUS ATMOSPHERE WHICH COULD LEAD TO SERIOUS INJURY OR DEATH.**

## WARNING

**RESPIRATORS SHALL NOT BE WORN WHEN CONDITIONS PREVENT A GOOD FACE SEAL. SUCH CONDITIONS MAY INCLUDE, BUT ARE NOT LIMITED TO, FACIAL HAIR SUCH AS GROWTH OF BEARD OR SIDEBURNS, OR LOW HAIRLINE THAT CROSSES OR INTERFERES WITH THE SEALING SURFACE, THICK OR PROTRUDING HAIRSTYLES SUCH AS PONY TAILS OR BUNS THAT INTERFERE WITH THE SMOOTH AND CLOSE FIT OF THE HEAD HARNESS TO THE HEAD, A SKULL CAP THAT PROJECTS UNDER THE FACEPIECE, OR TEMPLE PIECES ON GLASSES. ALSO, THE ABSENCE OF ONE OR BOTH DENTURES CAN SERIOUSLY AFFECT THE FIT OF A FACEPIECE. USE OF AN IMPROPERLY FITTED FACEPIECE MAY LEAD TO EXPOSURE TO THE HAZARDOUS ATMOSPHERE WHICH COULD RESULT IN SERIOUS INJURY OR DEATH.**

Test subjects must be in good health at the time of the fit testing. Smoking or eating less than 30 minutes prior to the test is prohibited. Any and all conditions that might interfere with a good face to facepiece seal must be addressed and corrected before performing the fit testing. Refer to the list of conditions in the DONNING PROCEDURES section of this instruction.

To verify the fit factor of the respirator, testing must incorporate an exercise regimen of normal daily activities. SCOTT requires the following set of fit test exercises, which are based on OSHA Standard 29 CFR Part 1910.134 Appendix A, and ANSI Z88.10-2001 with modifications.

Exercises are to be performed each for 60 seconds (except as noted) in a standing position during the test:

- Normal Breathing
- Deep breathing
- Turning head side to side
- Moving head up and down (look up/look down)
- Talking (read the Rainbow Passage)
- Grimace (15 seconds)
- Bending Over (touch toes) / Reach up (toward the ceiling)
- Normal Breathing (repeat)

Fit test exercises must be performed carefully as if the respirator was being used in a hazardous atmosphere. DO NOT bump the facepiece, filter, or adapter into the body through exaggerated motions. DO NOT talk except when directed to by the test administrator.

SCOTT requires that users of this respirator, AV-2000 or AV-3000 SureSeal, must achieve a Fit Factor of at least 500 for CBRN SCBA (Open Circuit) use and a Fit Factor of at least 2000 for CBRN APR use with their assigned facepiece style and size using the fit test procedures and exercise regimen stated above. If a Fit Factor of at least 500 for CBRN SCBA (Open Circuit) use and a Fit Factor of at least 2000 for CBRN APR use cannot be achieved with any facepiece size or style, the user MUST NOT use this respirator.

If the respirator user passes a NEGATIVE PRESSURE LEAK TEST but DOES NOT pass a respirator Quantitative Fit Test, try the next nearest size, larger or smaller and repeat the NEGATIVE PRESSURE LEAK TEST and the Quantitative Fit Test. If leakage is still detected, either per these user instructions or the OSHA fit testing process, the use of Mask Seal Kit P/N 805655-01 may be required to attain a proper fit. Refer to the INSTALLATION AND USE INSTRUCTIONS, SCOTT P/N 89462-01, included with the Mask Seal Kit. After installing the Mask Seal Kit, repeat the fit testing process to confirm a proper fit. If leakage is still detected, do not use the respirator.

Once the proper size is selected and assigned to the user following successful Portacount Respirator Fit Tester testing to achieve minimum Fit Factors required, the respirator user must perform and pass a NEGATIVE PRESSURE LEAK TEST every time the facepiece is donned to ensure proper fit before using the respirator in a hazardous atmosphere.

During NEGATIVE PRESSURE LEAK TESTING, any facepiece leakage that is detected from other than the face to facepiece seal may indicate damaged or defective equipment. Remove the defective equipment from service and tag for repair by authorized personnel. Repeat the testing with equipment known to be operating properly.

**IF A SATISFACTORY NEGATIVE PRESSURE LEAK TEST CANNOT BE PERFORMED, DO NOT USE THE RESPIRATOR OR ENTER THE HAZARDOUS ATMOSPHERE.**

The facepiece alone does not provide any protection against a hazardous atmosphere without the use of the complete respirator.

A respirator Quantitative Fit Test must be routinely carried out as outlined above for each user of this respirator to determine or confirm the amount of protection that the respirator provides.

Periodically repeating the fit testing is required to identify any physical changes of the user (such as those listed in the DONNING PROCEDURES) which could effect the fit of the facepiece.

## SPECIFIC MODEL DESCRIPTIONS

The SCOTT AIR-PAK SCBA is available as:

- Model 2.2 SCBA (2216 psig operating pressure).
- Model 3.0 SCBA (3000 psig operating pressure).
- Model 4.5 SCBA (4500 psig operating pressure).

Each model can be identified by a large yellow label with black printing on the pressure reducer with the word SCOTT printed vertically and the model number (2.2, 3.0, or 4.5) printed at the bottom. In addition, the remote pressure gauge mounted on the shoulder harness is imprinted with the operating pressure on the face of the gauge.

The basic AIR-PAK SCBA models are equipped with a steel wire backframe. All models are available as the AIR-PAK 75 SCBA with an aluminum backframe. All features are available on both backframes.

All of the SCOTT respirator models are certified by the National Institute of Occupational Safety and Health (NIOSH) as pressure-demand self-contained breathing apparatus. See APPROVAL AND CERTIFICATIONS section of this instruction for additional information. Also see the complete NIOSH Approval Label, SCOTT document P/N 89347-01, included with this instruction.

### SCOTT MODEL 2.2 SCBA

- Certified by NIOSH under approval number TC-13F-80 as a 30-minute rated respirator.
- Use only with cylinder and valve assemblies with a full rated service pressure of 2216 psig

### SCOTT MODEL 3.0 SCBA

- Certified by NIOSH under approval number TC-13F-366 as a 30-minute rated respirator
- Use only with cylinder and valve assemblies with a full rated service pressure of 3000 psig

### SCOTT MODEL 4.5 SCBA

- Use only with cylinder and valve assemblies with a full rated service pressure of 4500 psig
- Certified by NIOSH (depending on the cylinder and valve assembly installed) as a
  - 30-minute rated SCBA under approval number TC-13F-76
  - 45-minute rated SCBA under approval number TC-13F-212
  - 60-minute rated SCBA under approval number TC-13-96

The time duration ratings are approval agency classifications and are not intended to indicate the actual duration a user may achieve. Please see the SERVICE LIFE section of this instruction for additional information.

NIOSH approval and NFPA compliance are granted to respiratory protection equipment made up of specific combinations of parts or assemblies that have been successfully tested to the performance standards established by the approval agencies.

To maintain NIOSH approval and NFPA compliance, an AV-3000 facepiece equipped with a SureSeal face seal P/N 31001738 (Small), P/N 31001739 (Medium), or P/N 31001740 (Large) must be used **only** with Grey Nose Cup P/N 31001043 (Small), P/N 31001044 (Medium), or P/N 31001045 (Large).

If you are using an AV-3000 facepiece equipped with a SureSeal face seal and do not have a Grey Nose Cup, contact SCOTT or your authorized SCOTT distributor. Failure to comply with this requirement will void the approvals for your respirator. Use of a non-compliant configuration in a hazardous atmosphere may result in serious injury or death.

## WARNING

**TO MAINTAIN NIOSH APPROVAL AND NFPA COMPLIANCE, AN AV-3000 FACEPIECE EQUIPPED WITH A SURESEAL FACESEAL P/N 31001738 (SMALL), P/N 31001739 (MEDIUM), OR P/N 31001740 (LARGE) MUST BE USED ONLY WITH GREY NOSE CUP P/N 31001043 (SMALL), P/N 31001044 (MEDIUM), OR P/N 31001045 (LARGE). USE OF A NON-COMPLIANT CONFIGURATION IN A HAZARDOUS ATMOSPHERE MAY RESULT IN SERIOUS INJURY OR DEATH.**

## OPTIONS AND ACCESSORIES

The SCOTT AIR-PAK SCBA may be equipped with one or more accessories or options. The user of the respirator must determine which accessories or optional components are installed on the respirator. Become thoroughly familiar with the operation and maintenance of the accessories and options as explained in this instruction and in all other instructions provided with this respirator or the option or accessory. These and other options may be added to a respirator after purchase. Refer to the instructions provided with the accessories or optional components for details of the operation and the required changes to the REGULAR OPERATIONAL INSPECTION.

- Spectacle corrective lens kit.
- Quick Disconnect on the mask mounted breathing regulator.
- PAK-ALERT distress alarm PASS device (Personal Alert Safety System) which monitors the motion of a respirator user and emits an audible signal when the user has not moved for a period of time. When the PASS device is installed, it also powers the Heads-Up Display end of service time indicator.
- Various electronic telemetry and communications devices are also available.
- Duration extending accessory hose to connect to a low pressure air-line supply enabling the respirator user to breathe air from a remote air supply.
- This respirator may be equipped with an alternate optional waist belt. Refer to the inspection and use instructions provided with the waist belt before use. Additional training is required before use of the alternate optional waist belt.

## SERVICE LIFE

Each configuration of self-contained breathing apparatus (SCBA) certified by NIOSH is assigned a "service life" classification for a duration time of each size of air supply cylinder (30 minute, 45 minute, etc.). The service life duration time is determined by NIOSH using a breathing machine designed to simulate an average adult user performing work at a "moderate work rate."

Do not expect to obtain the NIOSH rated service life duration time from this respirator on each use. The work being performed may be more or less strenuous than that used in the NIOSH test. Where work is more strenuous, the duration may be less than one half the NIOSH rated service life and the time remaining after either end of service indicator alarm actuates may be similarly reduced. The end of service indicator alarms actuate when approximately 25% of full cylinder pressure remains in the cylinder and valve assembly. Although all end of service indicator alarms are set to actuate at the set point of approximately 25% of full rated service pressure, they are completely independent of each other and therefore may not actuate at precisely the same moment. The alarms will continue to operate until the cylinder is nearly depleted.

The duration time of the respirator will depend on such factors as:

1. the degree of physical activity of the user;
2. the physical condition of the user;
3. the degree to which the user's breathing is affected by emotional factors;
4. the degree of training or experience which the user has with this or similar equipment;
5. whether or not the cylinder is fully charged at the start of the work period;
6. the possible presence in the compressed air of carbon dioxide concentrations greater than .04% normally found in atmospheric air;
7. the atmospheric pressure; for example, if used in a pressurized tunnel or caisson at 2 atmospheres (15 psi gauge or approximately 30 psi absolute) the duration will be one-half as long as when used at 1 atmosphere; and at 3 atmospheres will be one-third as long;
8. loose or improperly fitting facepiece;
9. the condition of the respirator.

## WARNING

THE USER OF THIS RESPIRATOR MUST RECEIVE TRAINING IN THE OPERATION OF THE RESPIRATOR INCLUDING THE OPERATION OF ALL OPTIONS AND/OR ACCESSORIES INCORPORATED IN THE RESPIRATOR. SEE WARNING AT THE BEGINNING OF PAGE TWO OF THIS INSTRUCTION.

## WARNING

ONLY THOSE OPTIONS AND/OR ACCESSORIES AUTHORIZED BY SCOTT AND APPROVED BY NIOSH (AND WHERE REQUIRED, BY NFPA) MAY BE INSTALLED IN THIS RESPIRATOR. THE USE OF UNAUTHORIZED AND/OR UNAPPROVED OPTIONS OR ACCESSORIES COULD CAUSE PARTIAL OR COMPLETE FAILURE OF THE RESPIRATOR WHICH MAY RESULT IN INJURY OR DEATH.

## WARNING

THE ATTACHMENT OF COMPONENTS, ACCESSORIES, OR DEVICES TO THE SCOTT AIR-PAK SCBA WHICH ARE NOT LISTED ON THE COMPLETE NIOSH LABEL MAY VOID THE NIOSH APPROVAL AND MAY DEGRADE THE PERFORMANCE OF THE RESPIRATOR WHICH COULD LEAD TO SERIOUS INJURY OR DEATH.

## WARNING

THE RESPIRATOR USER MUST IMMEDIATELY LEAVE THE AREA REQUIRING RESPIRATORY PROTECTION WHEN AN END OF SERVICE INDICATOR ALARM ACTUATES. ACTUATION OF ANY END OF SERVICE INDICATOR ALARM WARNS THAT APPROXIMATELY 25% OF FULL PRESSURE REMAINS IN THE AIR SUPPLY CYLINDER (THAT IS, APPROXIMATELY 3/4 OF THE TOTAL AIR SUPPLY HAS BEEN USED) OR THAT THERE IS A MALFUNCTION IN THE RESPIRATOR. A DELAY IN LEAVING THE AREA AFTER ALARM ACTUATION MAY RESULT IN SERIOUS INJURY OR DEATH.

## APPROVALS AND CERTIFICATIONS

All models of the SCOTT AIR-PAK SCBA described in these instructions conform to the requirements of Title 42 Part 84 of the Code of Federal Regulations and are certified by the National Institute of Occupational Safety and Health (NIOSH). Each respirator configuration is approved under the appropriate approval number for the air pressure and time duration. See the complete NIOSH approval label, SCOTT document P/N 89347-01, included with these instructions. Also see the CAUTIONS AND LIMITATIONS SECTION and the SPECIFIC LIMITATIONS section of these instructions for the cautions and limitations which apply to NIOSH certified respirators of this type.

The SCOTT AIR-PAK respirator is a modular design composed of replaceable subassemblies and may include certain SCOTT accessories. Each major subassembly and accessory is labeled with its SCOTT part number. In order to maintain the NIOSH approved status of the respirator, use only those subassemblies and/or accessories listed as applicable to a particular NIOSH approval number.

All models of the SCOTT AIR-PAK SCBA are certified by NIOSH for use in ambient temperatures down to -25° F (-32° C). See LOW TEMPERATURE OPERATION section of this instruction. To maintain NIOSH certification, AIR-PAK SCBA cylinders must be refilled with compressed air which meets the requirements for Grade D or higher compressed air as specified in the Compressed Gas Association publication CGA G-7.1 entitled *Commodity Specification for Air*, available from the Compressed Gas Association, Inc., 1725 Jefferson Davis Hwy., Suite 1004, Arlington, VA 22202. In addition to meeting these requirements, the air must be dry to a dew point of -65° F (-54° C) or less. For fire service use, the preferred air quality shall be as specified in NFPA 1989. See SCOTT *Specialist Level Maintenance Modules* available upon request from SCOTT for additional information on refilling SCOTT SCBA cylinders.

The SCOTT AIR-PAK SCBA also meets the requirements of the National Fire Protection Association (NFPA) 1981 (2007 edition) *Standard on Open-Circuit Self-Contained Breathing Apparatus for the Fire Service* when configured in accordance with the NFPA approval. Due to the difference between the NIOSH approval requirements and the NFPA Standard 1981, not all subassemblies and/or accessories which are approved by NIOSH are certified under the NFPA standard. Included with this instruction is the NFPA Compliant Components Listing, SCOTT document P/N 595124-01, which lists the major subassemblies and/or accessories which may be used to configure a SCOTT respirator as compliant in accordance with the requirements of the NFPA Standard. When compliance with NFPA Standard 1981 is required, use only subassemblies and/or accessories that are listed on SCOTT document P/N 595124-01 as appropriate for use on a "certified model" SCOTT respirator. To maintain NFPA compliance, the SCOTT AIR-PAK SCBA must be used only in accordance with NFPA standard 1500, entitled *Standard on Fire Department Occupational Safety and Health Program*.

*Specific combinations of respirator subassemblies may also qualify for Chemical, Biological, Radiological, and Nuclear (CBRN) Approval Status under the NIOSH standard. A complete list of the approved components is provided on the NIOSH CBRN Approval Label, SCOTT document P/N 89513-01. Before using a respirator for a CBRN application, the user must verify that the respirator is comprised of only CBRN approved components. An approved mask mounted breathing regulator can be identified by its orange background label. An approved backframe assembly can be identified by a CBRN sticker. Other components must be identified by individual part number. Certain facepieces, such as those with silicone faceseals, are not approved for CBRN applications.*

## WARNING

RESPIRATORS SHALL NOT BE WORN WHEN CONDITIONS PREVENT A GOOD FACE SEAL. SUCH CONDITIONS MAY INCLUDE, BUT ARE NOT LIMITED TO, FACIAL HAIR SUCH AS GROWTH OF BEARD OR SIDEBURNS, OR LOW HAIRLINE THAT CROSSES OR INTERFERES WITH THE SEALING SURFACE, THICK OR PROTRUDING HAIRSTYLES SUCH AS PONY TAILS OR BUNS THAT INTERFERE WITH THE SMOOTH AND CLOSE FIT OF THE HEAD HARNESS TO THE HEAD, A SKULL CAP THAT PROJECTS UNDER THE FACEPIECE, OR TEMPLE PIECES ON GLASSES. ALSO, THE ABSENCE OF ONE OR BOTH DENTURES CAN SERIOUSLY AFFECT THE FIT OF A FACEPIECE. USE OF AN IMPROPERLY FITTED FACEPIECE MAY LEAD TO EXPOSURE TO THE HAZARDOUS ATMOSPHERE WHICH COULD RESULT IN SERIOUS INJURY OR DEATH.

## WARNING

ONLY THOSE OPTIONS AND/OR ACCESSORIES AUTHORIZED BY SCOTT AND APPROVED BY NIOSH (AND WHERE REQUIRED, BY NFPA) MAY BE INSTALLED IN THIS RESPIRATOR. THE USE OF UNAUTHORIZED AND/OR UNAPPROVED OPTIONS OR ACCESSORIES COULD CAUSE PARTIAL OR COMPLETE FAILURE OF THE RESPIRATOR WHICH MAY RESULT IN INJURY OR DEATH.

## WARNING

FAILURE TO VERIFY THAT THE RESPIRATOR HAS ALL REQUIRED EQUIPMENT INSTALLED AND OPERATING MAY VOID THE NFPA APPROVAL AND MAY DEGRADE THE PERFORMANCE OF THE RESPIRATOR WHICH COULD LEAD TO SERIOUS INJURY OR DEATH.

## WARNING

ONLY THOSE RESPIRATOR COMPONENTS APPROVED UNDER THE NIOSH CBRN STANDARD MAY BE USED FOR A CBRN APPLICATION. THE USE OF UNAUTHORIZED AND/OR UNAPPROVED COMPONENTS OR ACCESSORIES FOR A CBRN APPLICATION COULD CAUSE PARTIAL OR COMPLETE FAILURE OF THE RESPIRATOR WHICH MAY RESULT IN SERIOUS INJURY OR DEATH.

*Regular Operational Inspection and Use of a CBRN equipped SCOTT AIR-PAK SCBA are essentially the same as for a standard SCOTT AIR-PAK SCBA. There may be differences defined by the user's respiratory protection program or organization procedures for use in CBRN hazardous environments. It is the responsibility of the respirator user's respiratory protection program to properly identify and maintain respirator equipment for CBRN applications.*

- The attachment of components, accessories, or devices to the SCOTT AIR-PAK SCBA which are not listed on the complete NIOSH label may void the NIOSH approval and may degrade the performance of the respirator.
- The attachment of components, accessories or devices not listed on the NFPA listing, even if they are listed on the NIOSH approval label, may void the NFPA certification and may degrade respirator performance with respect to the NFPA certification requirements.
- *The attachment of components, accessories or devices not listed on the CBRN Approval Label, even if they are listed on the NIOSH approval label or NFPA listing, may void the CBRN approval and may degrade respirator performance with respect to the CBRN approval requirements.*

## **INTRINSIC SAFETY / SECURITE INTRINSEQUE**

The SCOTT AIR-PAK SCBA respirator equipped with a Heads-Up Display P/N 200280-SERIES and/or a PASS distress alarm P/N 200451-SERIES is listed by SGS U.S. TESTING COMPANY INC. as intrinsically safe per ANSI/UL Std. UL-913 for use in Class I, Division 1, Groups C and D Hazardous Locations.

To maintain the Intrinsic Safety Listing, the respirator must be inspected regularly per the following Regular Operational Inspection procedures. Do not tamper with or substitute components in any manner. Use only batteries of the type indicated in the Battery Replacement instructions. Open the battery compartments only in an area known to be free of flammable or explosive hazards.

**WARNING** – Substitution of Components May Impair Intrinsic Safety. To reduce the risk of ignition of a flammable atmosphere, batteries must only be changed in an area known to be nonflammable. To reduce the risk of explosion, do not mix old batteries with unused batteries, or mix batteries from different manufacturers.

**AVERTISSEMENT:** La Substitution De composants Peut Compromettre La Sécurité Intrinsèque; Afin De Prévenir L'Inflammation D'Atmospheres Dangereuses, NE Changer Les Batteries Que Dans Des Emplacements Désignés Non Dangereux. Pour réduire le risque d'explosion, ne mélangez pas les vieilles batteries aux batteries inutilisées, ou mélangez les batteries de différents fabricants.

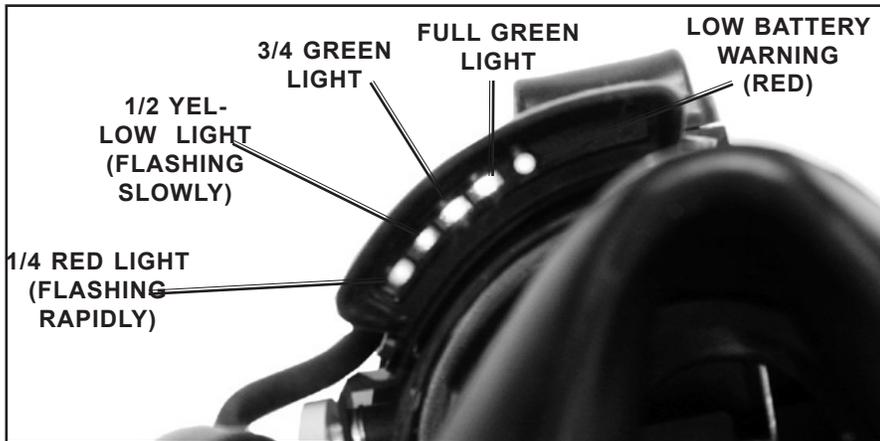
### **WARNING**

**FAILURE TO REGULARLY INSPECT THE RESPIRATOR, INCLUDING ALL ELECTRONIC COMPONENTS, AS DESCRIBED IN THIS INSTRUCTION OR FAILURE TO CORRECT DAMAGE TO THE ELECTRONIC COMPONENTS, MAY IMPAIR THE INTRINSIC SAFETY OF THE UNIT. THE INSTALLATION OF INCORRECT BATTERIES OR SUBSTITUTION OF ANY OTHER COMPONENTS MAY IMPAIR THE INTRINSIC SAFETY OF THE UNIT. IF THE RESPIRATOR IS USED IN AN EXPLOSIVE OR FLAMMABLE ATMOSPHERE, IMPAIRING THE INTRINSIC SAFETY OF THE UNIT MAY LEAD TO A FIRE OR AN EXPLOSION WHICH COULD RESULT IN SERIOUS INJURY OR DEATH.**

## HEADS-UP DISPLAY OPERATION

The HEADS-UP DISPLAY provides a visual monitor of the air supply in the cylinder and valve assembly. The display is fitted to the facepiece mounted regulator and appears across the bottom of the user's field of view through the facepiece. The HEADS-UP DISPLAY consists of four rectangular lights to represent the cylinder pressure at FULL, THREE-QUARTERS, ONE-HALF, and ONE-QUARTER. A fifth round red light indicates LOW BATTERY. The HEADS-UP DISPLAY operates as follows:

1. When respirator use begins, the HEADS-UP DISPLAY will initialize and illuminate all five lights for twenty (20) seconds. Operation of all five lights must be verified every time respirator use is begun and with every REGULAR OPERATIONAL INSPECTION. If the lights do not operate as described here, do not use the respirator. Remove the respirator from service and tag for repair by authorized personnel.



**FIGURE 1**  
**Heads-Up Display**

2. After initialization, the rectangular indicator lights will show the level of the air supply in the cylinder as follows:
  - a) FULL cylinder is indicated by the two green lights glowing near the center of the display.
  - b) THREE-QUARTERS cylinder is indicated by a single green light glowing.
  - c) ONE-HALF cylinder is indicated by the yellow light flashing slowly at once a second.
  - d) ONE-QUARTER cylinder end of service time indicator is indicated by the red light at the far left flashing rapidly at ten times a second. WHEN THIS WARNING LIGHT IS FLASHING RAPIDLY, THE USER MUST LEAVE THE HAZARDOUS ATMOSPHERE IMMEDIATELY.
3. The HEADS-UP DISPLAY has an automatic brightness control that dims the DISPLAY in low light situations and returns the DISPLAY to full brightness in bright light situations.
4. When the batteries require changing, the round LOW BATTERY indicator at the right of the display will light for twenty (20) seconds and then begin to flash slowly at once a second. When the LOW BATTERY indicator is actuated, the batteries still have sufficient life to operate the HEADS-UP DISPLAY longer than the longest duration cylinder installed on the respirator. However, the batteries must be changed immediately upon termination of use of the respirator, or before reentry into a hazardous atmosphere. See the BATTERY REPLACEMENT section of this instruction.

### WARNING

IF THE HEADS-UP DISPLAY LIGHTS DO NOT OPERATE AS DESCRIBED IN THESE INSTRUCTIONS, DO NOT USE THE RESPIRATOR. REMOVE THE RESPIRATOR FROM SERVICE AND TAG FOR REPAIR BY AUTHORIZED PERSONNEL. USE OF A RESPIRATOR WITH A MALFUNCTIONING HEADS-UP DISPLAY MAY RESULT IN SERIOUS INJURY OR DEATH.

### WARNING

IF A RESPIRATOR INCORPORATING THE HEADS-UP DISPLAY IS USED IN AN EXPLOSIVE OR FLAMMABLE ATMOSPHERE, REGULARLY INSPECT THE RESPIRATOR, INCLUDING THE HEADS-UP DISPLAY, AS DESCRIBED IN THIS INSTRUCTION AND CORRECT ANY DAMAGE FOUND. DO NOT SUBSTITUTE ANY PARTS OR COMPONENTS. USE ONLY THE BATTERIES AS SPECIFIED IN THIS INSTRUCTION. THE FAILURE TO CORRECT ANY DAMAGE, THE INSTALLATION OF INCORRECT BATTERIES, OR THE SUBSTITUTION OF ANY OTHER COMPONENTS MAY IMPAIR THE INTRINSIC SAFETY OF THE UNIT AND MAY LEAD TO A FIRE OR AN EXPLOSION WHICH COULD RESULT IN SERIOUS INJURY OR DEATH.

### WARNING

THE RESPIRATOR USER MUST IMMEDIATELY LEAVE THE AREA REQUIRING RESPIRATORY PROTECTION WHEN AN END OF SERVICE INDICATOR ALARM ACTUATES. ACTUATION OF ANY END OF SERVICE INDICATOR ALARM WARNS THAT APPROXIMATELY 25% OF FULL PRESSURE REMAINS IN THE AIR SUPPLY CYLINDER (THAT IS, APPROXIMATELY 3/4 OF THE TOTAL AIR SUPPLY HAS BEEN USED) OR THAT THERE IS A MALFUNCTION IN THE RESPIRATOR. A DELAY IN LEAVING THE AREA AFTER ALARM ACTUATION MAY RESULT IN SERIOUS INJURY OR DEATH.

## REGULAR OPERATIONAL INSPECTION

The following procedure shall be used when you first receive the respirator and for daily or periodic inspection of the respirator. Respirators in regular use must be inspected at the start of each use period and during cleaning after each use. Respirators maintained for emergency use must be inspected as frequently as required to assure the respirator will function properly when required. The US Labor Department (OSHA), pursuant to 29 CFR 1910.134, requires at least monthly inspection of respirators maintained for emergency use. NFPA recommends weekly inspection for emergency use respirators. NIOSH recommends an inspection for cylinder pressure at least weekly. The condition of storage at your location or the regulations which apply to your respiratory protection program may require more frequent periodic inspections.

If the respirator is equipped with a PAK ALERT SE 7 distress alarm PASS device, the following procedures must be modified to include inspection of the PASS device. Details of the REGULAR OPERATIONAL INSPECTION of the PASS device are included in the user instructions for the PAK ALERT SE 7 distress alarm. The part number of the required PAK ALERT SE 7 user instructions appears on the label on the Sensor Module.

IF ANY DISCREPANCY OR MALFUNCTION IS NOTED DURING THE INSPECTION, DO NOT USE THE RESPIRATOR. REMOVE THE RESPIRATOR FROM SERVICE AND TAG IT FOR REPAIR BY AUTHORIZED PERSONNEL.

### INSPECTION OF THE BREATHING AIR CYLINDER

1. Visually inspect breathing air cylinder and valve assembly for physical damage such as dents or gouges in metal or in composite wrapping. Cylinders which show physical damage or exposure to high heat or flame, such as paint turned brown or black, decals charred or missing, pressure gauge lens melted or elastomeric bumper distorted, and cylinders which show evidence of exposure to chemicals such as discoloration, cracks in the cylinder or the composite wrapping, peeling of the outer layers of the composite wrapping and/or bulging of the cylinder wall, shall be removed from service and emptied of compressed air. Publications on compressed gas cylinder inspection procedures are available from Compressed Gas Association Inc., 1725 Jefferson Davis Hwy., Suite 1004, Arlington, VA 22202 (703-412-0900).
2. Check the latest cylinder hydrostatic test date to ensure it is current. The date of manufacture marked on the cylinder is also the date of the first hydrostatic test. All breathing air cylinders used with SCOTT AIR-PAK SCBA's must be visually inspected regularly and hydrostatically tested at the required intervals by a licensed cylinder retester. Intervals for hydrostatic testing are established in the appropriate US Department of Transportation (DOT) specification or applicable DOT exemption, or in the appropriate Transport Canada (TC) Permit of Equivalent Level of Safety. Refer to the current revision of *Safety Precautions for AIR-PAK Cylinders*, SCOTT P/N 89080-01, available on request from SCOTT Health and Safety. Composite fiber overwrapped cylinders must be tested up to their maximum life which, at the time of the publication of this instruction, is 15 years from the date of manufacture. It is the responsibility of your organized respiratory protection program to arrange for visual inspection and hydrostatic testing of cylinders by a licensed retester.
3. Check for damage of the cylinder valve hand wheel and the threads on the cylinder valve outlet.
4. Check the relief valve (burst disc) for damage or dirt.
5. Check the cylinder pressure gauge for "FULL" indication. If cylinder pressure is less than "FULL," replace with a fully charged cylinder.

### WARNING

THE INFORMATION IN THIS INSTRUCTION IS MEANT TO SUPPLEMENT, NOT REPLACE, THE INSTRUCTIONS, TRAINING, SUPERVISION, MAINTENANCE, AND OTHER ELEMENTS OF YOUR ORGANIZED RESPIRATORY PROTECTION PROGRAM. SEE WARNING ON SECOND PAGE OF THIS DOCUMENT. FAILURE TO HEED ANY WARNINGS IN THIS INSTRUCTION MAY RESULT IN SERIOUS INJURY OR DEATH.

### WARNING

FOLLOW THE REGULAR OPERATIONAL INSPECTION PROCEDURE EXACTLY. IF THE END OF SERVICE INDICATOR ALARMS DO NOT ACTUATE AS DESCRIBED IN THIS INSTRUCTION, THE PURGE DOES NOT ACTUATE AS DESCRIBED IN THIS INSTRUCTION OR ANY OTHER OPERATIONAL MALFUNCTION IS NOTED, DO NOT USE THE RESPIRATOR. REMOVE THE RESPIRATOR FROM SERVICE AND TAG IT FOR REPAIR BY AUTHORIZED PERSONNEL. FAILURE TO PROPERLY IDENTIFY MALFUNCTIONS MAY RESULT IN SERIOUS INJURY OR DEATH.

### WARNING

IF THE RESPIRATOR IS EQUIPPED WITH A PAK ALERT SE 7 DISTRESS ALARM AND IT FAILS TO FUNCTION IN ACCORDANCE WITH THE INSTRUCTIONS CONCERNING REGULAR OPERATIONAL INSPECTION SUPPLIED WITH THE DISTRESS ALARM, DO NOT USE THE RESPIRATOR. REMOVE IT FROM SERVICE AND TAG FOR REPAIR BY AUTHORIZED PERSONNEL. FAILURE TO PROPERLY IDENTIFY MALFUNCTIONS MAY RESULT IN SERIOUS INJURY OR DEATH.

### WARNING

DAMAGED CYLINDERS MAY SUDDENLY LEAK OR RUPTURE IF LEFT CHARGED WITH COMPRESSED AIR. FAILURE TO INSPECT FOR DAMAGE AND TO EMPTY THE AIR FROM DAMAGED CYLINDERS MAY RESULT IN SERIOUS INJURY OR DEATH.

**REGULAR OPERATIONAL INSPECTION  
CONTINUED ON NEXT PAGE...**

## **INSPECTION OF THE RESPIRATOR**

If any damage is found in this inspection, remove the respirator from service and tag for repair by authorized personnel.

1. Inspect the complete respirator for worn or damaged components.
  - a) Inspect hoses and rubber parts which exhibit cracking, splitting, or brittleness.
  - b) Inspect harness webbing for cuts, tears, abrasion, fraying, or indication of heat or chemical damage.
  - c) Check all buckles and fasteners for proper operation.
  - d) Check the cylinder retention system for damage and for proper operation.
  - e) Verify that the respirator has been properly cleaned.
2. Remove the breathing regulator from the facepiece by pulling back on the regulator retaining latch and rotating the regulator ¼ turn. Inspect the gasket on the breathing regulator that seals against the facepiece for rips or damage that may break the seal.
3. Examine the facepiece assembly for damaged or worn components. The facepiece must be complete and in serviceable condition with no worn, loose, or damaged components. Inspect the facepiece as follows:
  - a) Inspect the facepiece seal and other rubber components for deformation, wear, damage, or cracks.
  - b) Inspect the lens for cracks, gouges, scratches, or any condition that could impair the operation of the facepiece or the user's vision.
  - c) Inspect the lens frame for damage such as cracks or distortion.
  - d) Check that all lens frame retainers are present and installed correctly.
  - e) Check that all harness anchors are present and operating properly.
  - f) Inspect the head harness for correct installation with all straps oriented correctly.
  - g) Inspect the head harness for damage or worn components.
  - h) Inspect the voicemitters for dents or damage. Verify that the voicemitters are properly installed and secure in the voicemitter ducts.
  - i) Inspect the nose cup for cuts or damage. Also look for any signs of damage to the facepiece port side of the nose cup where the regulator attaches.  
Check that the nose cup is properly seated between the flanges of the voicemitter ducts. See FIGURE 2 and FIGURE 3.

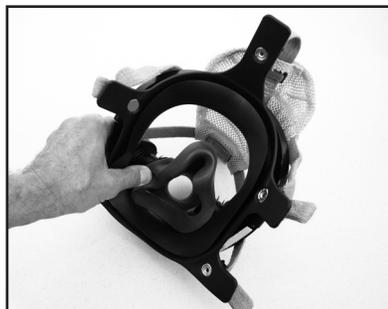
### **WARNING**

**RESPIRATORS MUST BE CLEANED AND INSPECTED BEFORE STORAGE FOR REUSE. RESPIRATORS WITH WORN OR DAMAGED COMPONENTS SHALL NOT BE STORED FOR REUSE. REPLACE WORN OR DAMAGED COMPONENTS DURING INSPECTION OR REMOVE THE RESPIRATOR FROM SERVICE AND TAG IT FOR REPAIR BY AUTHORIZED PERSONNEL. USE OF A RESPIRATOR WITH WORN OR DAMAGED COMPONENTS MAY RESULT IN SERIOUS INJURY OR DEATH.**

### **CHECKING VOICEMITTER DUCTS**



**FIGURE 2  
AV-2000 FACEPIECE**



**FIGURE 3  
AV-3000 FACEPIECE**

- j) All SCOTT facepieces used with this respirator must be fitted with a nose cup. Verify that the Nose Cup is properly installed for the model of facepiece being used. A Nose Cup is standard on the SCOTT AV-2000® and AV-3000® full facepieces.
- 1) SCOTT AV-3000 Facepieces are fitted with a Nose Cup which fits in front of the face seal. The Nose Cup must be fitted IN FRONT OF the Face Seal as shown in FIGURE 4.

**AV-3000 FACEPIECES ONLY**

**FIGURE 4  
NOSE CUP IN FRONT  
OF FACE SEAL**



- 2) The AV-2000 Nose Cup goes BEHIND the face seal. See FIGURE 5.

**AV-2000 FACEPIECES ONLY**

**FIGURE 5  
AV-2000 Nose Cup  
Always BEHIND the Face Seal**



- k) Verify that the facepiece is clean.
- l) Adjust the head straps to the full outward position.
- 4. Inspect the breathing regulator for damaged or missing components.
  - a) Verify that the regulator gasket is not damaged and is in place around the outlet port of the regulator.
  - b) Verify that the purge valve (red knob) is not damaged and turns smoothly one-half turn from stop to stop.
  - c) Inspect the Heads-Up Display for damage. Verify that the rubber guard is in place and is not torn or damaged.
- 5. Refer to the user instructions provided with an approved Voice Amplifier or other communications device for details of operation and maintenance. Always verify that the device has fresh batteries before use.

**CAUTION**

IF THE NOSE CUP IS REMOVED FOR INSPECTION, MAKE CERTAIN IT IS REASSEMBLED CORRECTLY FOR THE MODEL FACEPIECE AND STYLE OF NOSE CUP.

**CAUTION**

DO NOT USE TOOLS TO OPEN OR CLOSE THE PURGE VALVE. OPEN OR CLOSE BY USING FINGER-PRESSURE ONLY. ROTATION OR THE PURGE VALVE IS LIMITED TO 1/2 TURN. USE OF TOOLS TO OPEN OR CLOSE PURGE VALVE MAY RESULT IN DAMAGE TO THE PURGE VALVE.

**WARNING**

IF A RESPIRATOR INCORPORATING THE HEADS-UP DISPLAY IS USED IN AN EXPLOSIVE OR FLAMMABLE ATMOSPHERE, REGULARLY INSPECT THE RESPIRATOR, INCLUDING THE HEADS-UP DISPLAY, AS DESCRIBED IN THIS INSTRUCTION AND CORRECT ANY DAMAGE FOUND. DO NOT SUBSTITUTE ANY PARTS OR COMPONENTS. USE ONLY THE BATTERIES AS SPECIFIED IN THIS INSTRUCTION. THE FAILURE TO CORRECT ANY DAMAGE, THE INSTALLATION OF INCORRECT BATTERIES, OR THE SUBSTITUTION OF ANY OTHER COMPONENTS MAY IMPAIR THE INTRINSIC SAFETY OF THE UNIT AND MAY LEAD TO A FIRE OR AN EXPLOSION WHICH COULD RESULT IN SERIOUS INJURY OR DEATH.

**REGULAR OPERATIONAL INSPECTION  
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## REGULAR OPERATIONAL INSPECTION CONTINUED...

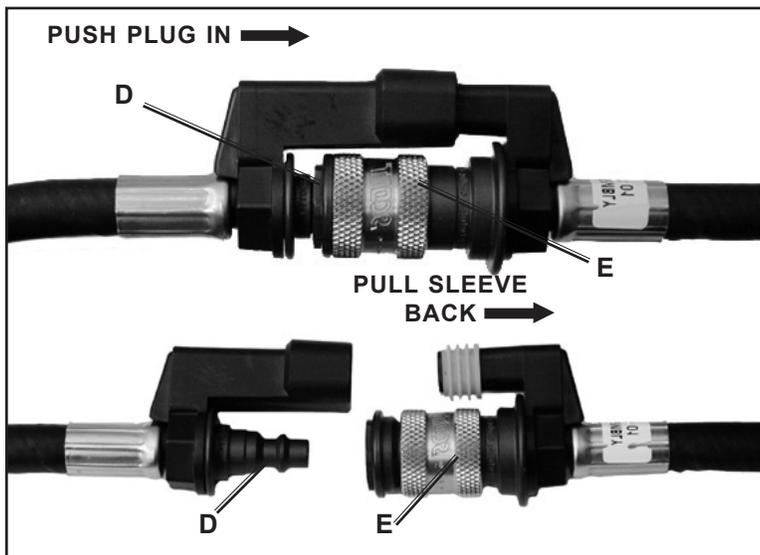
6. If the hose to the breathing regulator is equipped with a quick disconnect, inspect both the male and female quick disconnects. Pay special attention to the following:
  - a) Inspect the operation of the locking sleeve on the female quick disconnect. If any damage is noted, remove it from service and tag for repair.
  - b) Inspect the condition of the male quick disconnect for signs of wear. Particularly look for wear on the locking ridge as shown in FIGURE 6. If the coating is worn through and bare metal is showing, do not use the regulator assembly. Remove it from service and tag for replacement.

**FIGURE 6**  
**Inspecting Male**  
**Quick Disconnect**



**WARNING**  
IF THE COATING IS WORN THROUGH AND BARE METAL IS SHOWING ON THE MALE QUICK DISCONNECT LOCKING RIDGE, REMOVE THE REGULATOR ASSEMBLY FROM SERVICE AND TAG FOR REPLACEMENT. USE OF A WORN QUICK DISCONNECT MAY RESULT IN A MALFUNCTION LEADING TO A LOSS OF BREATHING AIR WHICH COULD RESULT IN SERIOUS INJURY OR DEATH.

7. Verify that the quick disconnect operates properly. Breathing regulators equipped with a quick disconnect use a Pull-back Sleeve Coupling. See FIGURE 7. Refer to the following instructions and illustrations:
  - a) While pushing the plug “D” into the socket, pull the locking sleeve “E” back toward the guard. The plug “D” will separate.



**FIGURE 7**  
**Pull-back Sleeve Quick Disconnect**

**WARNING**  
FAILURE TO CHECK ENGAGEMENT OF THE COUPLING AS DESCRIBED MAY LEAD TO HOSE SEPARATION AND LOSS OF BREATHING AIR RESULTING IN SERIOUS INJURY OR DEATH.

- b) To reconnect, align the HEADS-UP DISPLAY plug with the mating connector and push plug “D” into socket until the locking sleeve “E” pops forward. Test for proper engagement by tugging on the coupling.

8. If the regulator is not attached to the facepiece, proceed as follows:
  - a) Align the two flats of the regulator outlet port with the corresponding flats in the facepiece port (the red purge valve on the regulator will be in the 12 o'clock position). Insert the regulator into the facepiece port.
  - b) Rotate the regulator counterclockwise (as viewed from inside of facepiece) until the red purge valve knob is on the left side of the facepiece. The lock tab on the regulator will lock into the facepiece retainer with a "click." When the lock tab is properly engaged, the regulator will not rotate.
9. If the hose to the breathing regulator is equipped with a quick disconnect, check that the quick disconnect is engaged properly by tugging on the coupling and that the HEADS-UP DISPLAY plug is properly aligned and fitted into the mating socket. See FIGURE 8.



**FIGURE 8**  
**Pull-back Sleeve Quick Disconnect**  
**with Heads-Up Display connection**

10. Verify that a FULL cylinder is properly installed in the backframe and that the reducer hose coupling is hand tightened to the cylinder valve outlet.
- If no damage is found, proceed to the OPERATIONAL TESTING.

**WARNING**

FAILURE TO CHECK ENGAGEMENT OF THE REGULATOR LOCK TAB TO THE FACEPIECE AS DESCRIBED MAY RESULT IN ROTATION OF THE REGULATOR. IF THE REGULATOR ROTATES AND FALLS OUT, THE LOSS OF BREATHING AIR MAY RESULT IN SERIOUS INJURY OR DEATH.

**WARNING**

FAILURE TO CHECK ENGAGEMENT OF THE COUPLING AS DESCRIBED MAY LEAD TO HOSE SEPARATION AND LOSS OF BREATHING AIR RESULTING IN SERIOUS INJURY OR DEATH.

**CAUTION**

WRENCHES SHALL NOT BE USED TO TIGHTEN THE HOSE COUPLING. OVER TIGHTENING THE HOSE COUPLING MAY DAMAGE THE GASKET SEAL.

**REGULAR OPERATIONAL INSPECTION**  
**CONTINUED ON NEXT PAGE...**

## REGULAR OPERATIONAL INSPECTION CONTINUED...

### OPERATIONAL TESTING

1. Check that the breathing regulator purge valve (red knob on regulator) is closed (full clockwise and pointer on knob upward).
2. Fully depress the center of the air saver/donning switch on the top of the regulator and release.
3. Slowly open the cylinder valve by fully rotating the knob counterclockwise.
  - a) VIBRALERT alarm shall actuate and then stop.
  - b) The HEADS-UP DISPLAY will initialize with all five lights on for twenty seconds followed by display of cylinder supply level. If the LOW BATTERY light at the far right of the display remains lit or begins to flash, replace the batteries according to the BATTERY REPLACEMENT section of this instruction before proceeding.
  - c) The respirator is equipped with the PAK ALERT SE 7 distress alarm which will be actuated when the cylinder valve is opened. Refer to Operating and Maintenance instructions of the PAK ALERT SE 7 distress alarm for the regular operational inspection of the PASS device.
4. Check that the remote pressure gauge is operating properly and that it reads within 10% of the value on the cylinder pressure gauge.
5. Don the facepiece or hold the facepiece to the face to affect a good seal. Inhale sharply to automatically start the flow of air. Breathe normally from the facepiece to ensure proper operation.
6. Remove facepiece from face. Air shall freely flow from the facepiece.
7. Fully depress the air saver/donning switch on the top of regulator and release. The flow of air from the facepiece shall stop. Examine the complete respirator for air leaks. There shall be no leakage of air from any part of the respirator.
8. The regulator is equipped with a red purge knob which allows air to flow into the facepiece in an emergency without breathing on the respirator. The purge control is also used to release residual air from the respirator after the cylinder valve is turned off. Check the purge valve as follows:
  - a) Rotate purge valve 1/2 turn counterclockwise (pointer on knob downward). Air shall freely flow from the regulator.
  - b) Rotate purge valve 1/2 turn clockwise to full closed position (pointer on knob upward). Air flow from regulator shall stop.

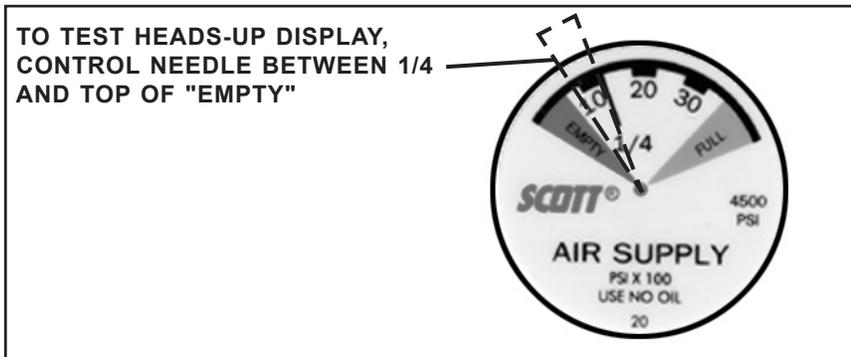
### **WARNING**

**IF THE END OF SERVICE INDICATOR ALARMS DO NOT ACTUATE AS DESCRIBED IN THIS INSTRUCTION, DO NOT USE THE RESPIRATOR. REMOVE THE RESPIRATOR FROM SERVICE AND TAG IT FOR REPAIR BY AUTHORIZED PERSONNEL. USE OF AN IMPROPERLY OPERATING END OF SERVICE INDICATOR MAY RESULT IN SERIOUS INJURY OR DEATH.**

### **WARNING**

**LEAKAGE OF AIR FROM A RESPIRATOR MAY INDICATE A POTENTIALLY SERIOUS DEFECT. AIR LEAKAGE MAY REDUCE THE DURATION OF USE AND/OR THE TIME REMAINING AFTER AN END OF SERVICE ALARM ACTUATES OR MAY PREVENT AN END OF SERVICE ALARM FROM ACTUATING. USE OF A RESPIRATOR EXHIBITING AN AIR LEAK MAY RESULT IN EXPOSING THE RESPIRATOR USER TO THE ATMOSPHERE THE RESPIRATOR IS INTENDED TO PROTECT AGAINST WHICH COULD LEAD TO SERIOUS INJURY OR DEATH.**

9. Push in and rotate the cylinder valve knob clockwise to close. When the cylinder valve is fully closed, open the purge valve slightly to vent residual air pressure from system. As the residual air pressure vents from the system, the remote pressure gauge needle will swing from "FULL" and move towards "EMPTY." Observe the lights of the HEADS-UP DISPLAY and verify that they light properly in descending order. Close the purge valve when the gauge needle crosses the "1/4" mark but before the beginning of the red "EMPTY" band. See FIGURE 9.



**FIGURE 9**

**Remote Gauge (Model 4.5 gauge shown, other models similar)**

- a) The VIBRALERT end of service indicator alarm shall actuate (rapid clicking).
- b) The red light on the far left of the HEADS-UP DISPLAY shall flash rapidly at ten (10) times per second.
10. After verifying that all alarms are functioning, open the purge valve slightly to vent the remaining residual air pressure from the system.
  - a) All alarms shall cease operation when the system pressure drops to zero except the accessory electronic end of service time indicator.
  - b) To terminate the electronic end of service time indicator, press the Manual Reset button on the Control Console twice and then twice again after the flashing green light sequence.
11. When air flow stops completely, return purge valve to the fully closed position (pointer on knob upward).

**WARNING**

**IF THE END OF SERVICE INDICATOR ALARMS DO NOT ACTUATE AS DESCRIBED IN THIS INSTRUCTION, DO NOT USE THE RESPIRATOR. REMOVE THE RESPIRATOR FROM SERVICE AND TAG IT FOR REPAIR BY AUTHORIZED PERSONNEL. USE OF AN IMPROPERLY OPERATING END OF SERVICE INDICATOR MAY RESULT IN SERIOUS INJURY OR DEATH.**

**IF ANY DISCREPANCY OR MALFUNCTION IS NOTED DURING THE INSPECTION, DO NOT USE THE RESPIRATOR. REMOVE THE RESPIRATOR FROM SERVICE AND TAG IT FOR REPAIR BY AUTHORIZED PERSONNEL.**

**REGULAR OPERATIONAL INSPECTION  
CONTINUED ON NEXT PAGE...**

**REGULAR OPERATIONAL INSPECTION CONTINUED...**

**OPERATION OF SENSOR MODULE LIGHTS**

When performing the REGULAR OPERATIONAL INSPECTION on units equipped with a PAK-ALERT SE 7 distress alarm, verify that the Sensor Module lights are operating as described below:

<b>ACTION...</b>	<b>SENSOR MODULE LIGHTS WILL...</b>
Start up PASS (Open Cylinder).....	Bright Light then Flash GREEN
Normal Operation .....	Flash GREEN
Respirator Low air (1/4 cylinder).....	Flash ORANGE (alternately)
Low Battery while ON .....	Flash ORANGE once every two (2) seconds
Shut down .....	Lights OFF
Press RESET w/unit OFF (BATTERY TEST) .....	Bright Light then: Flash GREEN if Good/Flash RED if Low
Press MANUAL ALARM with unit OFF .....	Flash GREEN then Full Alarm Flash RED
Press RESET from manual alarm .....	Returns to Flash GREEN
PASS Pre-Alarm .....	Flash RED (alternately)
PASS Full alarm .....	Flash RED (simultaneously)

**NOTE**

THE ORANGE LIGHT IS A COMBINATION OF THE RED, GREEN, AND WHITE LIGHTS THAT APPEARS ORANGE FROM A DISTANCE. AT CLOSE RANGE THE INDIVIDUAL LIGHTS MAY BE VISIBLE.

**HEADS-UP DISPLAY QUICK GUIDE**

<b>INDICATOR LIGHTS</b>	<b>WHAT THEY MEAN</b>	<b>WHAT YOU SHOULD DO</b>
<b>TWO LIGHTS GLOWING</b>	<b>FULL CYLINDER</b>	<b>CONTINUE USING RESPIRATOR</b>
<b>ONE LIGHT GLOWING</b>	<b>3/4 CYLINDER</b>	
<b>ONE LIGHT FLASHING SLOWLY</b>	<b>1/2 CYLINDER</b>	
<b>ONE LIGHT FLASHING <u>RAPIDLY</u></b>	<b>1/4 CYLINDER</b>	<b>LEAVE HAZARDOUS AREA IMMEDIATELY</b>

## **BATTERY TEST**

On respirators equipped with a PAK-ALERT SE 7 distress alarm, the battery condition can be tested manually as follows:

1. Make sure the PAK-ALERT SE 7 distress alarm is in the off condition (cylinder valve closed with no flashing green lights)
2. Press and hold the RESET button on the console. Observe the FINAL light color in the sequence to determine the status.

### **NOTE**

THE BACKFRAME LIGHTS WILL DISPLAY A BRIGHT LIGHT FOLLOWED BY THE FINAL STATUS COLOR.

- a) GREEN lights illuminated on the control console and backframe lights indicate sufficient battery power remaining
- b) RED lights on the control console and backframe lights indicate that the batteries are **low** must be replaced before the respirator is to be used again. See BATTERY REPLACEMENT section of these instructions.

If a **low** battery message occurs, SCOTT recommends that ALL batteries be changed before the respirator is used. See the BATTERY REPLACEMENT section of this instruction for details.

## USE OF THE RESPIRATOR

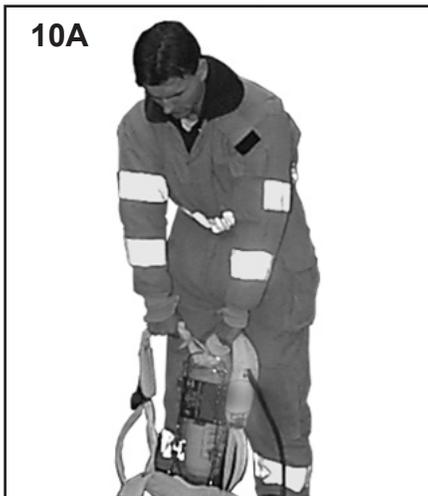
The following information provides the basic steps for use of the AIR-PAK SCBA. Training and practice with the equipment are required before use to assure that the user is completely familiar with the operation of the respirator.

The AIR-PAK SCBA must be worn over protective garments such as fire fighting turnout gear, but may be worn under encapsulating protective garments such as hazardous material (haz-mat) suits. Determine what other protective gear will be used and don the SCBA and the facepiece accordingly. *PREPARATION FOR USE*

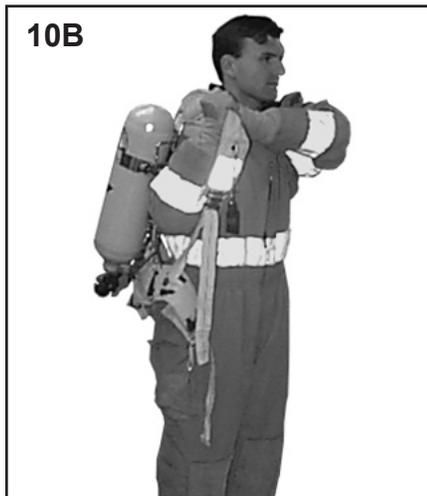
If respirator use is expected at temperatures near or below freezing, or if respirator is to be used after being kept at temperatures near or below freezing, refer to *LOW TEMPERATURE OPERATION* Section for additional information and supplemental procedures.

### **DONNING AND PREPARATION FOR USE**

1. Always check the cylinder gauge for a "FULL" indication. If the cylinder is not full, replace the cylinder before use. A gauge indication of other than full may indicate an air leak in the cylinder and valve assembly or a malfunction of the gauge assembly.
2. Always verify that the cylinder is held securely by the cylinder retention assembly.
3. If a wall storage bracket is used, follow the instructions of the bracket manufacturer for placing arms through shoulder straps and freeing the respirator from the bracket.
4. If the respirator is stored in a hard or soft storage case, place the case on the ground or level surface and open the case. Secure the regulator in the regulator holder. Proceed as shown in FIGURES\* 10A thru 10F.
  - a) Spread shoulder straps and fold open waist pad. Stand the respirator on the cylinder valve with cylinder toward you and the shoulder straps away from you.
  - b) Pick up the respirator and swing it around behind you as if you were donning a coat.



**Spread shoulder straps and fold open waist pad. Stand the respirator on the cylinder valve with cylinder toward you and the shoulder straps away from you.**



**Pick up the respirator and swing it around behind you as if you were donning a coat.**

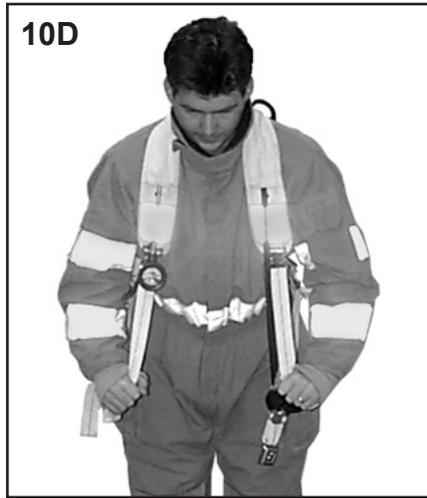
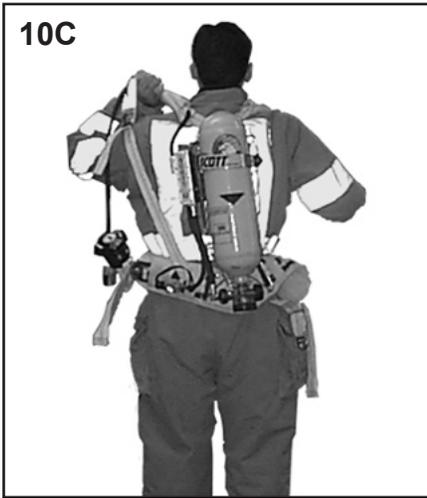
- c) While leaning slightly forward, slide unit down back and pull on shoulder adjusting straps. Ensure that the shoulder pads fall into place on the shoulders.

## WARNING

**THE INFORMATION IN THIS INSTRUCTION IS MEANT TO SUPPLEMENT, NOT REPLACE, THE INSTRUCTIONS, TRAINING, SUPERVISION, MAINTENANCE, AND OTHER ELEMENTS OF YOUR ORGANIZED RESPIRATORY PROTECTION PROGRAM. SEE WARNING ON SECOND PAGE OF THIS DOCUMENT. FAILURE TO HEED ANY WARNINGS IN THIS INSTRUCTION MAY RESULT IN SERIOUS INJURY OR DEATH.**

\* Illustrations chosen for clarity. Actual color and appearance of SCBA may vary from illustrations.

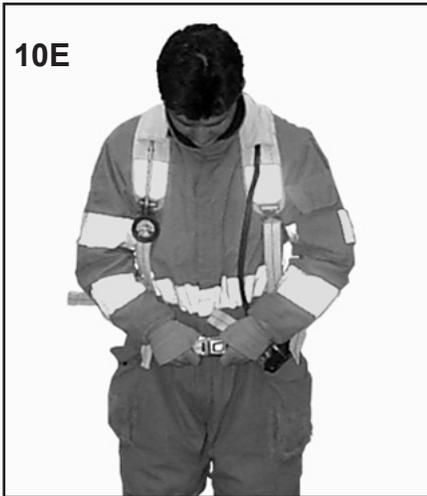
- d) Pull down on shoulder straps to settle the unit in position on the back.



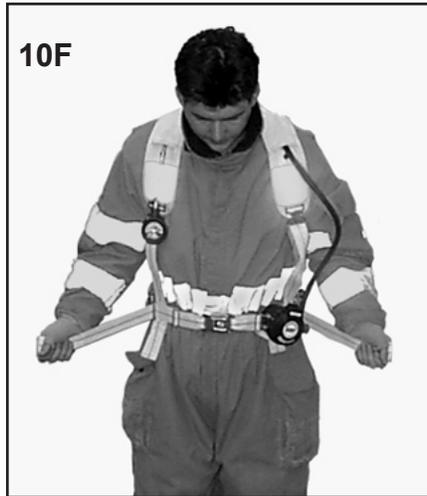
**While leaning slightly forward, slide unit down back and pull on shoulder adjusting straps.**

**Pull down on shoulder straps to settle the unit in position on the back.**

- e) While still leaning slightly forward, connect the waist belt buckle and adjust the belt by pulling forward on the two (2) side-mounted belt ends. Pull on belt ends to adjust waist belt for firm fit on hips. Tuck the belt ends into the waistband.



**Grasp waist belt buckles. Extend waist belt and connect.**



**Pull on belt ends to adjust waist belt for firm fit on hips. Loosen shoulder straps slightly to carry weight on hips.**

- f) Stand up straight and readjust the shoulder straps as needed to ensure the weight of the backframe is carried on the hips. Tuck in the ends of the shoulder straps.

### **WARNING**

**USE OF THE RESPIRATOR WITHOUT FASTENING AND ADJUSTING THE SHOULDER STRAPS AND THE WAIST BELT AND SECURING LOOSE ENDS OF BELT AS DESCRIBED IN THIS INSTRUCTION MAY RESULT IN SHIFTING OF THE RESPIRATOR ON THE USER'S BODY, SNAGGING THE BELT, OR IN SEPARATION OF THE RESPIRATOR FROM THE USER'S BODY WHICH COULD DISTURB THE FACE TO FACEPIECE SEAL AND WHICH MAY RESULT IN EXPOSURE OF THE USER TO THE ATMOSPHERE THE RESPIRATOR IS INTENDED TO PROTECT AGAINST RESULTING IN SERIOUS INJURY OR DEATH.**

**USE OF RESPIRATOR  
CONTINUED ON NEXT PAGE...**

## USE OF RESPIRATOR CONTINUED... FACEPIECE DONNING PROCEDURES

The user must be familiar with and practice the prescribed donning and termination of use procedures prior to respirator use. Follow the donning instructions for the model facepiece you have. The AV-2000 facepiece has a FOUR strap head harness and the AV-3000 SureSeal facepiece has a FIVE strap head harness.

The respirator **MUST NOT** be worn when conditions prevent a good face to facepiece seal. Such conditions include but are not limited to:

- long hair at the forehead or the side of the face that interferes with the sealing surface or gets caught in the head harness buckles,
- facial hair such as growth of beard or sideburns, or low hairline that crosses or interferes with the sealing surface,
- thick or protruding hairstyles such as pony tails or buns that interfere with the smooth and close fit of the head harness to the head,
- temple pieces on corrective glasses,
- a skull cap that projects under the facepiece,
- excessive use of cosmetics including moisturizers, make-up, or after shave,
- excessive perspiration,
- the absence of one or both dentures,
- weight loss or weight gain since last fit testing,
- facial scarring,
- anything else which interferes with the face to facepiece seal or the fit of the head harness to the head.

Periodically repeating the fit testing is required to identify any physical changes of the user (such as those listed above) which could effect the fit of the facepiece.

### NOTE

REFER TO THE APPROPRIATE STEPS IN THE FACEPIECE FITTING SECTION OF THIS INSTRUCTION. DURING TRAINING, THE USER MUST DETERMINE THE LEVEL OF TIGHTNESS OF THE HEAD HARNESS REQUIRED TO PROVIDE THE BEST SEAL AND MOST SECURE FIT.

If the facepiece is to be used with a hood or other head gear that will cover the facepiece head harness, don the facepiece first, then don the hood or head gear. Attach the regulator after all other head gear is in place.

## INSPECT THE FACEPIECE

1. Examine the facepiece to verify that it is complete and in serviceable condition. Refer to the REGULAR OPERATIONAL INSPECTION section of this instruction on Page 11 for details.
  - a) Verify that the inhalation valves in the nose cup or voicemitter ducts are properly installed.
  - b) Verify that the nose cup is properly seated between the flanges of the voicemitter ducts. Refer to the images in the REGULAR OPERATIONAL INSPECTION section of this instruction for proper configuration verification of nose cup.
  - c) Verify that the nose cup is properly positioned for the style of facepiece being used. Refer to the images in the REGULAR OPERATIONAL INSPECTION section of this instruction for proper configuration verification of nose cup. See FIGURE 11.



**FIGURE 11**  
**INSPECT THE FACEPIECE**

### WARNING

RESPIRATORS SHALL NOT BE WORN WHEN CONDITIONS PREVENT A GOOD FACE SEAL. SUCH CONDITIONS MAY INCLUDE, BUT ARE NOT LIMITED TO, FACIAL HAIR SUCH AS GROWTH OF BEARD OR SIDEBURNS, OR LOW HAIRLINE THAT CROSSES OR INTERFERES WITH THE SEALING SURFACE, THICK OR PROTRUDING HAIRSTYLES SUCH AS PONY TAILS OR BUNS THAT INTERFERE WITH THE SMOOTH AND CLOSE FIT OF THE HEAD HARNESS TO THE HEAD, A SKULL CAP THAT PROJECTS UNDER THE FACEPIECE, OR TEMPLE PIECES ON GLASSES. ALSO, THE ABSENCE OF ONE OR BOTH DENTURES CAN SERIOUSLY AFFECT THE FIT OF A FACEPIECE. USE OF AN IMPROPERLY FITTED FACEPIECE MAY LEAD TO EXPOSURE TO THE HAZARDOUS ATMOSPHERE WHICH COULD RESULT IN SERIOUS INJURY OR DEATH.

### WARNING

FAILURE TO DON THE FACEPIECE AND/OR FAILURE TO ADJUST THE HEAD HARNESS AS DESCRIBED IN THIS INSTRUCTION MAY RESULT IN A POOR FACE TO FACEPIECE SEAL OR MAY RESULT IN THE FAILURE OF THE FACE TO FACEPIECE SEAL DURING USE. A POOR OR FAILED FACE TO FACEPIECE SEAL MAY REDUCE THE DURATION OF USE OF THE RESPIRATOR AND/OR EXPOSE THE USER TO THE ATMOSPHERE THE RESPIRATOR IS INTENDED TO PROTECT AGAINST RESULTING IN SERIOUS INJURY OR DEATH.

### WARNING

WHEN DONNING A FACEPIECE EQUIPPED WITH A PROTECTIVE HOOD, VERIFY THAT THE FACEPIECE IS PROPERLY DONNED ACCORDING TO THE DONNING PROCEDURES SECTION OF THIS INSTRUCTION AND THAT THE PROTECTIVE HOOD DOES NOT INTERFERE IN ANY WAY WITH THE DONNING OR THE FACE TO FACEPIECE SEAL. FAILURE TO VERIFY THAT THE FACEPIECE IS SEALED TIGHTLY AGAINST THE FACE MAY RESULT IN LITTLE OR NO RESPIRATORY PROTECTION AND MAY EXPOSE THE WEARER TO SUBSTANCES THAT CAN CAUSE SERIOUS INJURY OR DEATH.

## **DONNING THE AV-2000 and AV-3000 FACEPIECE**

To don the AV-2000 or AV-3000 facepiece and begin use of respirator, proceed as follows:

1. Adjust the head straps to their full outward position.
2. Hold the facepiece in one hand and hold the head harness by the strap at the base of the head net.
3. Place the facepiece on the face with chin properly located in the chin pocket while pulling the head harness over the top of the head. Verify that no hair or clothing is interfering with the face to facepiece seal. See FIGURE 12A.
4. Tighten the neck straps by pulling the two lower strap ends toward the rear of the head. See FIGURE 12B.



### **NOTE**

ENSURE THAT THE CHIN IS PROPERLY LOCATED IN THE CHIN POCKET OF THE FACEPIECE THROUGHOUT THE DONNING PROCESS.

5. Stroke the head harness net down the back of the head using one or both hands. Verify that the head harness is lying flat against the back of the head. Retighten the neck straps. See FIGURE 12C.



### **NOTE**

VERIFY THAT THE TOP CENTER PORTION OF THE HEAD HARNESS IS POSITIONED OVER THE CROWN OF THE HEAD.

6. Tighten the two temple straps. Adjust the temple straps by pulling the two temple strap ends toward the back of the head. Overtightening may cause discomfort. See FIGURE 12D.
7. Retighten the neck straps if required.
8. Refer to the **DONNING PROBLEMS** section of this instruction before proceeding to the **NEGATIVE PRESSURE LEAK TEST**.

**USE OF RESPIRATOR  
CONTINUED ON NEXT PAGE...**

## USE OF RESPIRATOR CONTINUED...

### **DONNING THE AV-3000 SureSeal FACEPIECE**

1. Adjust the head straps to the full outward position. See FIGURE 13A.



**FIGURE 13A  
ADJUST HEAD STRAPS OUT**

2. Hold the facepiece in one hand while holding the head harness up and out of the way with other hand. Use the Head Harness Pull Tab on the bottom rear of the head harness. See FIGURE 13B.



**FIGURE 13B  
HARNESS OUT OF WAY**

3. Place the facepiece centered on the face with the chin properly positioned in the chin cup. Verify that no hair or clothing is interfering with the face to facepiece seal. Hold the facepiece in place with the chin properly located in the chin cup throughout the donning process. See FIGURE 13C.



**FIGURE 13C  
CHIN IN CHIN POCKET**

4. Stroke the head harness over the head and ensure that straps are lying smooth and flat against the head and neck with no twists. Use the Head Harness Pull Tab to verify the head harness is centered and properly located at the back and base of the head. Maintain the head harness in this position. See FIGURE 13D.



**FIGURE 13D  
HEAD HARNESS POSITION**

#### **NOTE**

ENSURE THAT THE CHIN IS PROPERLY LOCATED IN THE CHIN POCKET OF THE FACEPIECE THROUGHOUT THE DONNING PROCESS.

#### **NOTE**

VERIFY THAT THE TOP CENTER PORTION OF THE HEAD HARNESS IS POSITIONED OVER THE CROWN OF THE HEAD.

5. While holding the facepiece in place with one hand, tighten the neck straps evenly one at a time by pulling each neck strap end toward the rear of the head. Alternate hands to maintain the facepiece position on the face. See FIGURE 13E.



**FIGURE 13E  
HOLD AND TIGHTEN**

6. Verify the proper location of the face in the facepiece and the chin in the chin cup. While still holding the facepiece in place with one hand, tighten the temple straps evenly one at a time by pulling each temple strap end toward the rear of the head. Alternate hands to maintain the facepiece position on the face. See FIGURE 13F.



**FIGURE 13F  
HOLD AND TIGHTEN**

7. Verify the proper location of the face in the facepiece and the chin in the chin cup. Tighten the forehead strap last by pulling the forehead strap toward the back of the head. Do not overtighten the forehead strap. See FIGURE 13G.



**FIGURE 13G  
TIGHTEN FOREHEAD STRAP**

8. Verify that the head harness is centered on the crown of the head and lying flat against the back of the head. Verify the proper location of the face in the facepiece and the chin in the chin cup and retighten all straps as needed. See FIGURE 13H.



**FIGURE 13H  
HEAD HARNESS MUST BE FLAT**

**NOTE**  
ENSURE THAT THE CHIN IS PROPERLY LOCATED IN THE CHIN POCKET OF THE FACEPIECE THROUGHOUT THE DONNING PROCESS.

**USE OF RESPIRATOR  
CONTINUED ON NEXT PAGE...**

## USE OF RESPIRATOR CONTINUED...

- Stroke the head harness down the back of the head and make sure the net is centered on your head. If necessary, adjust the head harness net to the center of the crown of the head. See FIGURE 13I.



**FIGURE 13I**  
**ADJUST HEAD HARNESS**

- Verify the proper location of the face in the facepiece and the chin in the chin cup. Retighten the straps if required. All straps must be snug and the facepiece should feel secure. See FIGURE 13J.



**FIGURE 13J**  
**RETIGHTEN IF REQUIRED**

- Refer to the **DONNING PROBLEMS** section of this instruction before proceeding to the **NEGATIVE PRESSURE LEAK TEST**.

### **NOTE**

VERIFY THAT THE TOP CENTER PORTION OF THE HEAD HARNESS IS POSITIONED OVER THE CROWN OF THE HEAD.

## DONNING PROBLEMS

1. Perform a personal check of the Facepiece and Head Harness and address any donning problems. OSHA standard 29 CFR 1910.134 requires teams of at least two people for situations where this type of equipment is used. Have your partner help you verify the facepiece is donned properly.

Possible problems include:

- a) Head Harness Strap twisted,
- b) Head Harness off-center or not flat against the head,
- c) Head Harness too high on the head,
- d) Hair or clothing in the face seal,
- e) Faceseal rolled over inside the facepiece rather than flat against the face
- f) Facepiece is sitting too low on the face as evidenced by pressure on the forehead or the facepiece making contact with the throat area permitting a break in the seal.

The illustrations below depict the AV-3000 SureSeal, but similar conditions can occur with the AV-2000 or AV-3000 facepiece as well.

### WARNING

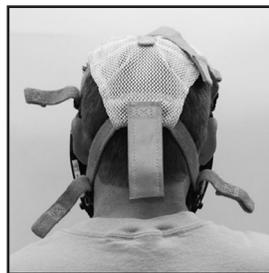
IF ANY DONNING PROBLEMS ARE FOUND, REMOVE THE FACEPIECE AND RE-DON IT CORRECTLY. USE OF AN IMPROPERLY DONNED FACEPIECE MAY LEAD TO EXPOSURE TO THE HAZARDOUS ATMOSPHERE WHICH COULD RESULT IN SERIOUS INJURY OR DEATH.



**HARNES STRAP  
TWISTED**



**HEAD HARNES  
OFF CENTER**



**HEAD HARNES  
TOO HIGH**



**FACE SEAL  
ROLLED OVER**



**FACEPIECE  
TOO LOW**

**FIGURE 14  
DONNING PROBLEMS**

If any donning problems are found, remove the facepiece and re-don the facepiece correctly.

2. Perform a **NEGATIVE PRESSURE LEAK TEST** as instructed below.

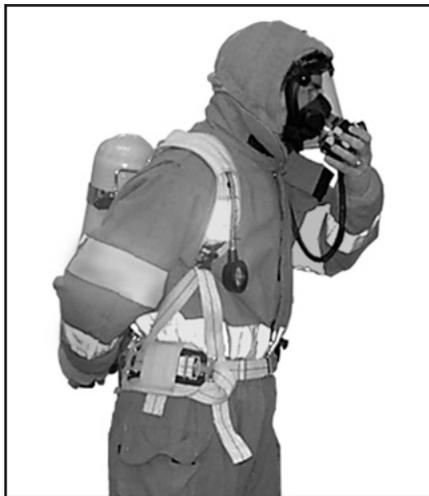
**USE OF RESPIRATOR  
CONTINUED ON NEXT PAGE...**

## USE OF RESPIRATOR CONTINUED...

### **BEGIN USE OF THE RESPIRATOR**

1. Fully depress the center of the air saver/donning switch on top of regulator and release. The breathing regulator is equipped with an air saver/donning switch to prevent the rapid loss of air supply when the cylinder valve is open and the facepiece is removed from the face or the regulator is removed from the facepiece.
2. If the regulator is not attached to the facepiece, proceed as follows:
  - a) Verify that the regulator gasket is not damaged and is in place around the outlet port of the regulator.
  - b) Align the two flats of the regulator outlet port with the corresponding flats in the facepiece port (the red purge valve on the regulator will be in the 12 o'clock position). Insert the regulator into the facepiece port.
  - c) Rotate the regulator counterclockwise (as viewed from inside of facepiece) until the red purge valve knob is on the left side of the facepiece. The lock tab on the regulator will lock into the facepiece retainer with a "click." When the lock tab is properly engaged, the regulator will not rotate.

**Install regulator on facepiece. Fully open the cylinder valve knob by turning counterclockwise (approximately 2½ turns). VIBRALERT alarm on regulator will sound momentarily, then shut off. The Heads-Up Display will initialize.**



**FIGURE 15**

3. Slowly open cylinder valve fully by turning the valve knob counterclockwise until it stops (approximately 2 1/2 full turns of the knob).
  4. Observe the operation of the alarms:
    - a) The VIBRALERT end of service indicator alarm will actuate and then stop.
    - b) The HEADS-UP DISPLAY shall initialize for twenty (20) seconds and then display the cylinder level.
    - c) The PAK ALERT SE 7 distress alarm will actuate when the cylinder valve is opened and will sound three quick audible chirps accompanied by a green flashing on the PAK ALERT SE 7 control console. Refer to the Operating and Maintenance instructions for the installed PAK ALERT SE 7 distress alarm. The part number for the required instructions appears on the PAK ALERT SE 7 Sensor Module.
- If the air saver/donning switch has not been depressed prior to opening the cylinder valve, the VIBRALERT Alarm will not actuate due to the air flowing freely on the facepiece.
5. With facepiece sealed to face, inhale sharply to actuate respirator. Air will then be supplied during inhalation.

#### **NOTE**

IF AIR IS NOT SUPPLIED ON FIRST INHALATION, CHECK THAT THE CYLINDER VALVE IS FULLY OPEN, THE REMOTE GAUGE INDICATES PRESSURE IN THE CYLINDER, AND THE FACEPIECE IS SEALED TO THE FACE.

#### **WARNING**

THE CYLINDER VALVE MUST BE FULLY OPENED FOR PROPER OPERATION OF THE RESPIRATOR. USE OF A RESPIRATOR WITH THE CYLINDER VALVE PARTIALLY OPENED MAY CAUSE A REDUCTION OF THE AIR SUPPLIED TO THE USER AND/OR A SUDDEN AND COMPLETE LOSS OF AIR SUPPLIED TO THE USER. A REDUCTION OR LOSS OF AIR TO THE USER MAY RESULT IN EXPOSING THE USER TO THE ATMOSPHERE THE RESPIRATOR IS INTENDED TO PROTECT AGAINST.

#### **WARNING**

IF THE END OF SERVICE INDICATOR ALARMS DO NOT ACTUATE AS DESCRIBED IN THIS INSTRUCTION, DO NOT USE THE RESPIRATOR. REMOVE THE RESPIRATOR FROM SERVICE AND TAG IT FOR REPAIR BY AUTHORIZED PERSONNEL.

#### **WARNING**

IF THE RESPIRATOR IS EQUIPPED WITH A PAK ALERT SE 7 DISTRESS ALARM AND THE PAK ALERT SE 7 DISTRESS ALARM FAILS TO FUNCTION IN ACCORDANCE WITH THE INSTRUCTIONS SUPPLIED WITH THE DISTRESS ALARM, DO NOT USE THE RESPIRATOR. REMOVE IT FROM SERVICE AND TAG FOR REPAIR BY AUTHORIZED PERSONNEL.

6. Always check the facepiece seal, the system seal, and the operation of the end of service alarms using the following procedure:
  - a) Completely close the cylinder valve by pushing in on the cylinder valve and rotating it clockwise.
  - b) Breathe on respirator. As the air pressure falls in the respirator, one or more of the end of service indicator alarms will actuate.
  - c) Immediately on actuation of any end of service indicator alarm, hold breath momentarily and make certain that the VIBRALERT and HEADS-UP DISPLAY both actuate (rapid clicking of the VIBRALERT Alarm, rapid flashing of the HEADS-UP DISPLAY red light).
  - d) Resume breathing on the respirator until all air stops flowing from the breathing regulator.
  - e) **NEGATIVE PRESSURE LEAK TEST:** Inhale slowly and hold breath momentarily. No leakage of air shall be detected into the facepiece and the facepiece shall be drawn slightly to the face.
  - e) Open cylinder valve and breathe normally. If installed, the electronic end of service time indicator will continue briefly then stop.
  - f). If the environment is suitably quiet, leakage from the facepiece can also be detected by listening for a flow of air while holding your breath. Inhale and hold your breath momentarily. Do not depress air saver/donning switch. Air should not be heard flowing into the facepiece from the regulator and no flow of air shall be detected outward from the facepiece.
  - g) If any air leakage is detected during any of the above tests, depress the air saver/donning switch on the top of the regulator, remove the facepiece and repeat the facepiece donning steps.
  - h) If a user seal check is unsatisfactory either per the user instructions above or the OSHA fit testing process, the use of Mask Seal Kit P/N 805655-01 is required. The Mask Seal Kit is provided with the full facepiece. Refer to the INSTALLATION AND USE INSTRUCTIONS, SCOTT P/N 89462-01, included with the Mask Seal Kit. This is a NIOSH approved component to enhance the fit of the facepiece. If leakage persists, do not use the respirator.
9. Put on any other required protective head gear or protective clothing. Be sure that any head gear, helmet or protective clothing does not interfere with the use of the respirator. The head must move freely without dislodging the facepiece or disturbing the face to facepiece seal.

See ANSI Standard Z88.2 entitled *Practices for Respiratory Protection* for additional information. When the respirator is used in conjunction with fire fighting, see NFPA Standard 1500, entitled *Standard on Fire Department Occupational Safety and Health Program* for additional information.

**NOTE**

DO NOT ATTACH ANYTHING TO, OR CARRY ANYTHING ON, THE AIR-PAK NXG7 SCBA SHOULDER STRAP BUCKLES AS THIS COULD CAUSE THE SHOULDER STRAPS TO LOOSEN DURING USE OF THE RESPIRATOR.

**WARNING**

FAILURE TO CHECK THE FACE TO FACEPIECE SEAL BEFORE USE MAY RESULT IN USE OF THE RESPIRATOR WITH A POOR FACE TO FACEPIECE SEAL. A POOR FACE TO FACEPIECE SEAL MAY RESULT IN LOSS OF AIR WHICH MAY CAUSE REDUCED DURATION OF USE AND/OR EXPOSURE OF THE USER TO THE HAZARDOUS ATMOSPHERE WHICH COULD RESULT IN SERIOUS INJURY OR DEATH.

**WARNING**

IF LEAKAGE OF AIR INTO THE FACEPIECE IS DETECTED DURING CHECK OF THE FACE TO FACEPIECE SEAL, DO NOT USE THE RESPIRATOR. REMOVE FACEPIECE AND REPEAT THE DONNING PROCEDURE. IF FACEPIECE CANNOT BE ADJUSTED TO SEAL TO FACE, A FACEPIECE FIT TEST AND/OR A DIFFERENT SIZE FACEPIECE MAY BE REQUIRED BEFORE USE OF THE RESPIRATOR. USE OF AN IMPROPERLY FITTING FACEPIECE MAY CAUSE REDUCED DURATION OF USE AND/OR EXPOSURE OF THE USER TO THE HAZARDOUS ATMOSPHERE WHICH COULD RESULT IN SERIOUS INJURY OR DEATH.

**WARNING**

WHEN DONNING A FACEPIECE EQUIPPED WITH A PROTECTIVE HOOD, VERIFY THAT THE FACEPIECE IS PROPERLY DONNED ACCORDING TO THE DONNING PROCEDURES SECTION OF THIS INSTRUCTION AND THAT THE PROTECTIVE HOOD DOES NOT INTERFERE IN ANY WAY WITH THE DONNING OR THE FACE TO FACEPIECE SEAL. FAILURE TO VERIFY THAT THE FACEPIECE IS SEALED TIGHTLY AGAINST THE FACE MAY RESULT IN LITTLE OR NO RESPIRATORY PROTECTION AND MAY EXPOSE THE WEARER TO SUBSTANCES THAT CAN CAUSE SERIOUS INJURY OR DEATH.

**WARNING**

CERTAIN ENVIRONMENTS MAY REQUIRE THAT PROTECTIVE MATERIAL COVER SOME OR ALL OF THE RESPIRATOR IN ADDITION TO COVERING THE USER. THE USER MUST BE ABLE TO ACCESS THE CONTROLS OF THE RESPIRATOR AT ALL TIMES. INABILITY TO ACCESS CONTROLS OF THE RESPIRATOR MAY RESULT IN A SITUATION WHICH COULD LEAD TO SERIOUS INJURY OR DEATH.

**USE OF RESPIRATOR  
CONTINUED ON NEXT PAGE...**

## USE OF RESPIRATOR CONTINUED...

### USING THE RESPIRATOR

1. Proceed with use of respirator in accordance with your respiratory protection program.
  - a) PLAN EVERY ENTRY INTO A CONTAMINATED OR UNKNOWN ATMOSPHERE TO ENSURE THAT THERE IS SUFFICIENT AIR SUPPLY TO ENTER, PERFORM THE REQUIRED TASKS, AND RETURN TO A SAFE BREATHING AREA.
  - b) THE USER MUST PERIODICALLY CHECK THE REMOTE PRESSURE GAUGE ON THE SHOULDER STRAP TO MONITOR THE RATE OF AIR CONSUMPTION AND THE REMAINING AIR SUPPLY.

Periodically check remote pressure gauge to monitor the rate of air use.



FIGURE 16

- c) THE USER MUST ALWAYS ALLOW SUFFICIENT AIR FOR EGRESS FROM THE CONTAMINATED AREA.
    - d) IF RE-ENTRY IS ATTEMPTED AFTER THE AIR HAS BEEN PARTIALLY CONSUMED (CYLINDER LESS THAN FULL), THE USER MUST BE CERTAIN THAT THE REMAINING AIR WILL BE SUFFICIENT TO PERFORM THE REQUIRED TASKS AND RETURN TO SAFETY.
2. If any end of service indicator alarm actuates, (the VIBRALERT alarm, the HEADS-UP DISPLAY rapidly flashing red light), either individually or in together, LEAVE THE AREA REQUIRING RESPIRATORY PROTECTION IMMEDIATELY.
  - a) When you are in a safe area where you are certain that respiratory protection is not required, terminate the use of the respirator, (see TERMINATION OF USE section of this instruction).
  - b) Determine the cause of the alarm.
  - c) If the end of service time alarm is actuated by a depleted air supply cylinder, replace the cylinder in accordance with the CYLINDER REPLACEMENT PROCEDURE section of this instruction. Use of the respirator may be resumed with a fully charged breathing air cylinder installed.
  - d) If the end of service indicator alarm has actuated for an unknown reason, DO NOT RESUME USE OF THE RESPIRATOR. Remove the respirator from service and tag it for repair by authorized personnel.

#### NOTE

THE HEADS-UP DISPLAY HAS AN AUTOMATIC BRIGHTNESS CONTROL THAT DIMS THE DISPLAY IN LOW LIGHT SITUATIONS AND RETURNS THE DISPLAY TO FULL BRIGHTNESS IN BRIGHT LIGHT SITUATIONS. THE LIGHT SENSOR IS LOCATED IN THE FRONT OF REMOTE GAUGE HOUSING. KEEP THE FRONT OF THE REMOTE GAUGE HOUSING CLEAN.

#### WARNING

ALWAYS START WITH A FULL CYLINDER. PARTIALLY FILLED CYLINDERS SHOULD ONLY BE USED IN EMERGENCY CONDITIONS IF FULL CYLINDERS ARE NOT AVAILABLE. THE USER MUST DETERMINE THAT THE CYLINDER CONTAINS SUFFICIENT AIR TO ALLOW TIME FOR COMPLETION OF THE TASKS INVOLVED AND RETURN TO A SAFE ATMOSPHERE WITH AN ADEQUATE MARGIN FOR SAFETY. ENTERING A HAZARDOUS ATMOSPHERE WITH INSUFFICIENT AIR OR AFTER THE END OF SERVICE TIME INDICATOR HAS ACTUATED MAY RESULT IN SERIOUS INJURY OR DEATH.

#### WARNING

THE RESPIRATOR USER MUST IMMEDIATELY LEAVE THE AREA REQUIRING RESPIRATORY PROTECTION WHEN AN END OF SERVICE INDICATOR ALARM ACTUATES. ACTUATION OF ANY END OF SERVICE INDICATOR ALARM WARNS THE USER THAT APPROXIMATELY 25% OF FULL PRESSURE REMAINS IN THE AIR SUPPLY CYLINDER (THAT IS, APPROXIMATELY 3/4 OF THE TOTAL AIR SUPPLY HAS BEEN USED) OR THAT THERE IS A MALFUNCTION IN THE RESPIRATOR. A DELAY IN LEAVING THE AREA AFTER ALARM ACTUATION MAY RESULT IN SERIOUS INJURY OR DEATH.

## **TERMINATION OF USE**

To remove the facepiece (doff the facepiece) and terminate respiratory protection, proceed as follows:

1. Leave contaminated area or be certain that respiratory protection is no longer required.
2. Loosen the temple straps slightly by lifting the upper facepiece buckles away from the head. The facepiece buckles have "U-shaped" release lever extensions.
3. Loosen the neck straps by lifting the lower facepiece buckles away from the head while lifting the facepiece away from face.
4. Remove the facepiece by pulling it up and over the head.
5. To stop the flow of air from the facepiece, fully depress the air saver/donning switch on top of the regulator and release.

### **NOTE**

THE AIR SAVER/DONNING SWITCH IS INTENDED TO PREVENT A FREE FLOW OF AIR AND THE DEPLETION OF THE AIR SUPPLY WHEN THE FACEPIECE IS REMOVED AND THE CYLINDER VALVE IS STILL OPEN. THE PURGE VALVE AND VIBRALERT WILL FUNCTION NORMALLY WITH THE AIR SAVER/DONNING SWITCH ACTIVATED. IF THE PURGE VALVE IS OPEN OR IF THE VIBRALERT IS IN OPERATION, THE AIR WILL CONTINUE TO BE DEPLETED FROM THE RESPIRATOR UNTIL THE CYLINDER VALVE IS CLOSED.

6. Close the cylinder valve if you are not going to resume use of the respirator.

### **NOTE**

LEAVING THE AIR SAVER/DONNING SWITCH ACTIVATED AND THE CYLINDER VALVE OPEN FOR AN EXTENDED PERIOD OF TIME MAY RESULT IN INTERMITTENT ACTIVATION OF THE VIBRALERT EVEN WHEN MORE THAN 25% OF THE AIR SUPPLY REMAINS.

### **NOTE**

IF THE RESPIRATOR IS EQUIPPED WITH A PAK ALERT SE 7 DISTRESS ALARM, SEE THE INSTRUCTIONS PROVIDED WITH THE DISTRESS ALARM FOR DETAILS OF HOW TO TURN OFF THE UNIT.

7. Slightly loosen shoulder straps by lifting ends of shoulder strap slide buckles up, release waist belt by pressing release button in center of waist belt buckle, and remove the unit from your back.
8. Proceed in accordance with the requirements of your respiratory protection program for service of the respirator, including the following:
  - a) Replace the cylinder with a fully charged cylinder (see the CYLINDER REPLACEMENT Section of this instruction)
  - b) Clean the respirator according to the CLEANING AND STORAGE section of this instruction. Inspect the respirator according to the REGULAR OPERATIONAL INSPECTIONS section of this instruction.

### **CAUTION**

**FAILURE TO RELEASE TENSION ON NECK STRAPS BEFORE REMOVING FACEPIECE MAY CAUSE PREMATURE WEAR OR DAMAGE TO STRAPS AND/OR FACEPIECE ASSEMBLY.**

### **WARNING**

**IF AIRFLOW FROM THE REGULATOR CANNOT BE STOPPED BY DEPRESSING THE AIR SAVER SWITCH, IMMEDIATELY CLOSE THE CYLINDER VALVE TO PREVENT DEPLETION OF THE AIR REMAINING IN THE CYLINDER. REMOVE THE RESPIRATOR FROM SERVICE AND TAG FOR REPAIR BY AUTHORIZED PERSONNEL.**

### **CAUTION**

**AN IMPACT TO THE REGULATOR WHILE THE CYLINDER VALVE IS OPEN AND THE AIR SAVER SWITCH IS ACTIVATED MAY CAUSE AIR TO FLOW FROM THE REGULATOR AND DEplete THE AIR REMAINING IN THE CYLINDER.**

### **CAUTION**

**DO NOT LEAVE CYLINDER VALVE OPEN WHEN RESPIRATOR IS NOT IN USE.**

### **CAUTION**

**FAILURE TO RELEASE TENSION ON SHOULDER STRAPS BEFORE REMOVING RESPIRATOR MAY CAUSE PREMATURE WEAR OR DAMAGE TO STRAPS AND/OR RESPIRATOR ASSEMBLY.**

### **WARNING**

**DO NOT ALLOW RESPIRATOR TO DROP WHEN HANDLING. DROPPING OF RESPIRATOR MAY CAUSE DAMAGE TO RESPIRATOR THAT MAY RESULT IN INJURY OR DEATH.**

**USE OF RESPIRATOR  
CONTINUED ON NEXT PAGE...**

## **USE OF RESPIRATOR CONTINUED...**

### **TO RESUME USE OF THE RESPIRATOR**

If you must resume use of the respirator, proceed as follows:

1. NEVER resume use of a respirator where an end of service indicator alarm was activated without first determining and correcting the reason for the end of service indicator alarm.
2. Make sure that the remaining air supply in the cylinder is sufficient to accomplish the purpose for which respirator use has been resumed. As a general rule, replace partially depleted cylinders with full cylinders before respirator use is resumed.
3. To resume use of the respirator, repeat the respirator and facepiece donning procedures as defined in the USE OF RESPIRATOR section of this instruction.
4. When operations using the respirator are complete, leave contaminated area or be certain that respiratory protection is no longer required and proceed with the TERMINATION OF USE steps described above.

### **WARNING**

**IF RESPIRATOR USE IS RESUMED AFTER THE AIR HAS BEEN PARTIALLY CONSUMED (CYLINDER LESS THAN FULL), YOU MUST BE CERTAIN THAT THE REMAINING AIR WILL BE SUFFICIENT FOR YOUR SAFETY. REFER TO THE USING THE RESPIRATOR SECTION OF THIS INSTRUCTION.**

### **USE IN STANDBY**

The respirator may be donned and worn in "Standby," so that it is ready for use. This means the respirator is in place on the user's body with the shoulder straps properly adjusted and the waist belt buckled, but the facepiece is not donned (sealed to the face) and the respirator is not being used.

1. Leave the cylinder valve fully open and verify that the air saver/donning switch is depressed.
2. Remove the facepiece but leave the regulator attached to the facepiece.
3. Keep the facepiece ready for use either of two ways:
  - a) Hang the facepiece from the snap clip on the left shoulder pad,
  - b) Hang the facepiece from the optional neck strap.

#### **NOTE**

DO NOT LET THE FACEPIECE HANG LOOSE WITHOUT SECURING IT AS NOTED ABOVE.

4. The regulator can be detached from the facepiece until needed. To detach the regulator from the facepiece:
  - a) Place your right hand over the cover with your thumb on the lock tab.
  - b) Pull the lock tab toward the cover and rotate the regulator 1/4 turn clockwise (viewed from inside of facepiece).
  - c) When the red purge valve is in the 12 o'clock position remove regulator from the facepiece.
  - d) The regulator can be stored in the optional regulator holder on the waist belt.

## **LOW BATTERY**

As the batteries begin to approach the end of their useful life, the low battery condition will be signified by the following:

1. The round LOW BATTERY indicator at the far right of the HEADS-UP display will light for twenty (20) seconds and then begin to flash slowly at once a second.
2. If the respirator is equipped with a PAK-ALERT SE 7 distress alarm, the green lights on the control module and backframe will go out.

While in low battery condition, the HEADS-UP display and the PAK-ALERT SE 7 distress alarm will continue to operate for a period of time greater than the longest duration cylinder available for the respirator. However, the batteries must be replaced before the respirator is used again. See BATTERY REPLACEMENT section of these instructions.

## **WARNING**

**FAILURE TO REPLACE THE BATTERIES AND/OR CONTINUING WITH MULTIPLE USES OF THE RESPIRATOR AFTER THE LOW BATTERY CONDITION HAS BEEN INDICATED BY THE PAK-ALERT SE 7 DISTRESS ALARM MAY RESULT IN FAILURE OF THE PAK-ALERT SE 7 DISTRESS ALARM DURING USE AND POSSIBLE INJURY OR DEATH OF THE USER.**

## RIC UAC EMERGENCY USE

AIR-PAK respirators in compliance with NFPA 1981 (2007 edition) are fitted with a Rapid Intervention Crew/Company Universal Air Connection (RIC UAC) System which permits emergency replenishment of an approved SCBA breathing air supply cylinder on a user's respirator from an approved air supply source while in use. This is not a Quick Charge attachment and must not be used for routine recharging of the cylinder, for "buddy breathing", for transferring air from another SCBA, or any unapproved use. The RIC UAC is for **emergency use only** when the respirator user is incapacitated within the hazardous atmosphere. The RIC UAC manifold is equipped with a relief valve which will open if the supply pressure of the emergency air supply exceeds the maximum pressure rating of the complete respirator. See FIGURE 17. However, the supply pressure of the emergency air supply to be connected to the RIC UAC must not exceed 4500 psig.

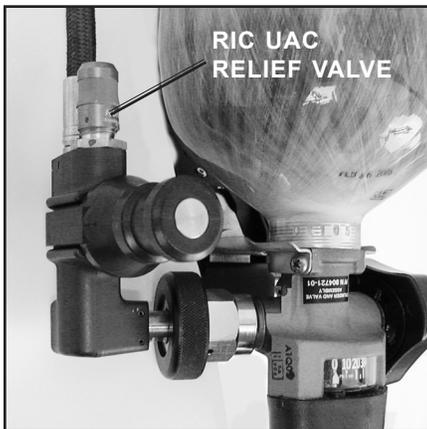


FIGURE 17



FIGURE 18

To use the RIC UAC system proceed as follows:

1. A member of the Rapid Intervention Crew/Company must visually inspect the respirator user's cylinder and cylinder valve for dents or gouges in the metal or fiber wrapping. If the cylinder and valve assembly shows damage or evidence of exposure to high heat or flame, such as paint turned brown or black, decals charred or missing, gauge lens melted or elastomeric bumper distorted, the decision must be made whether the cylinder is suitable for recharging by this method. If there is any suspicion that the cylinder is not safe, find another method of supplying air to the respirator user.
2. Be certain that the cylinder which you are charging is compatible with the complete respirator it is installed on, (i.e.: there must be a 2216 psig cylinder installed on a Model 2.2 respirator; there must be a 4500 psig cylinder installed on a Model 4.5 respirator, etc.). Verify by inspecting the cylinder and reducer labels to ensure that they are rated at the same pressure. NEVER ATTEMPT TO CHARGE A CYLINDER TO MORE THAN THE RATED PRESSURE MARKED ON THE CYLINDER.
3. The RIC UAC filling hose assembly must be regulated to a **maximum** supply pressure of 4500 psig.
4. Verify that the cylinder valve on the user's respirator is fully open by turning the cylinder valve knob fully counterclockwise (approximately 2 1/2 full turns).
5. Remove the dust cap from the RIC UAC coupling on the respirator and from the matching coupling on the RIC UAC filling hose assembly. Visually inspect both couplings for dirt or damage. Remove any dirt or contamination from the couplings.
  - a) If the RIC UAC filling hose assembly coupling appears damaged, do not attempt to connect the RIC UAC filling hose assembly to the respirator. Find an alternate RIC UAC filling hose assembly.
  - b) If the RIC UAC coupling on the respirator appears damaged, do not attempt to connect the RIC UAC filling hose assembly to the respirator. Find an alternate method of supplying air to the respirator user.

## WARNING

THE RIC UAC SYSTEM IS FOR EMERGENCY USE ONLY. IMPROPER USE OF THIS SYSTEM MAY LEAD TO A MALFUNCTION OF THE EQUIPMENT WHICH COULD CAUSE SERIOUS INJURY OR DEATH. DO NOT USE THE SCOTT RIC UAC ASSEMBLY TO CHARGE AN SCBA AIR CYLINDER WHILE THE SCBA IS BEING WORN UNLESS THERE IS A COMPELLING REASON TO ASSUME THE RISK OF INJURY IF THERE IS A COMPONENT FAILURE DURING THE FILL PROCESS. A COMPONENT FAILURE DURING OR AFTER THE FILL PROCESS MAY RESULT IN SERIOUS INJURY OR DEATH.

## WARNING

DO NOT USE THE SCOTT QUICK CHARGE ASSEMBLY TO CHARGE AN SCBA AIR CYLINDER WHILE THE SCBA IS BEING WORN IN A HAZARDOUS OR AN IDLH ATMOSPHERE UNLESS THERE IS A COMPELLING REASON TO ASSUME THE RISK OF INJURY IF THERE ARE ANY IRREGULARITIES IN THE FILL PROCESS WHICH MAY RESULT IN A NEED TO REMOVE THE RESPIRATOR. REMOVAL OF THE RESPIRATOR IN A HAZARDOUS OR AN IDLH ATMOSPHERE MAY RESULT IN SERIOUS INJURY OR DEATH.

## WARNING

IF THE SCBA OR THE CYLINDER TO BE CHARGED IS KNOWN OR SUSPECTED OF HAVING BEEN DROPPED, EXPOSED TO DIRECT FLAME IMPINGEMENT OR DAMAGED IN ANY WAY, DO NOT USE THE RIC UAC SYSTEM. FIND ANOTHER METHOD OF SUPPLYING BREATHING AIR TO THE RESPIRATOR USER. ATTEMPTING TO FILL A CYLINDER WHICH IS KNOWN OR SUSPECTED OF DAMAGE IN ANY WAY MAY RESULT IN CYLINDER FAILURE WHICH COULD CAUSE SERIOUS INJURY OR DEATH.

## WARNING

NEVER CHARGE A CYLINDER TO MORE THAN THE RATED PRESSURE MARKED ON THE CYLINDER. OVERCHARGING A CYLINDER MAY CAUSE A FAILURE RESULTING IN RAPID RELEASE OF HIGH PRESSURE AIR WHICH COULD CAUSE SERIOUS INJURY OR DEATH.

6. Connect the RIC UAC filling hose assembly by pushing the quick disconnect coupling on the RIC UAC filling hose assembly on to the coupling on the respirator until the quick disconnect sleeve "clicks" into place. See FIGURE 18.
7. Slowly open the RIC UAC filling hose assembly valve to pressurize the supply line and begin air flow to the cylinder.

**NOTE**

WHEN THE REGULATED FILLING PRESSURE IS HELD CONSTANT AT THE CYLINDER RATED PRESSURE THROUGHOUT THE CHARGING CYCLE THE FLOW MUST BE MONITORED TO NOT EXCEED 1500 PSIG/ MINUTE FOR MOST CYLINDER AND VALVE ASSEMBLIES.

**NOTE**

IF AT ANY TIME DURING THE FILLING PROCESS A LEAK IS DETECTED, IMMEDIATELY DISCONTINUE THE FILLING PROCEDURE AND LEAVE THE IDLH ATMOSPHERE.

8. Continually monitor the pressure gauge on the respirator user's cylinder while filling. When the pressure gauge on the user's cylinder reads "FULL," immediately terminate filling and disconnect the air supply source. A check valve in the RIC UAC coupling on the respirator will prevent air from flowing out of the respirator user's cylinder.
  - a) If the respirator user's cylinder is being filled from a portable air supply cylinder (such as a SCOTT RIT-PAK™ portable air supply), the air from the supply cylinder will stop flowing when the pressure in the respirator user's cylinder equals the remaining pressure in the portable air supply (pressures will balance). Disconnect the RIC UAC filling hose assembly.
  - b) If the respirator user's cylinder is being filled from a supply hose connected to a high pressure air supply source, extra care is required to prevent over filling the respirator user's cylinder. If the supply pressure exceeds the pressure rating for the complete respirator, the RIC UAC relief valve will open when the respirator user's cylinder is full and will reset after the high pressure air supply is disconnected. The cylinder pressure gauge should indicate "full" at this time. Disconnect the RIC UAC filling hose assembly.

**NOTE**

THE RIC UAC MANIFOLD IS FITTED WITH A RELIEF VALVE TO VENT AIR IF THE RATED PRESSURE OF THE RESPIRATOR IS EXCEEDED. IF THIS OCCURS, SHUT OFF THE AIR FROM THE RIC UAC FILLING HOSE ASSEMBLY AND DISCONNECT THE AIR SUPPLY. THE RELIEF VALVE WILL RESET AFTER EXCESS PRESSURE IS RELEASED.

**NOTE**

THE RIC UAC ASSEMBLY IS DESIGNED WITH INTEGRAL PROTECTION DEVICES. DO NOT DISASSEMBLE OR MODIFY ANY PART OF THIS ASSEMBLY.

9. When charging is complete, disconnect the RIC UAC filling hose assembly from the RIC UAC coupling on the respirator. To disconnect RIC UAC filling hose assembly, pull the coupling sleeve away from the respirator until the coupling disengages. Install the dust caps on the RIC UAC coupling and on the RIC UAC filling hose assembly coupling.
10. Charging the cylinder will increase the temperature of the air within the cylinder. When charging is complete and the cylinder cools to ambient temperature, the pressure within the cylinder will fall slightly. If practical in the situation, top off the cylinder to ensure optimum service time.

**NOTE**

IF CHARGING IN COLD AMBIENT CONDITIONS WHERE THE TEMPERATURES ARE BELOW FREEZING, SEE THE **USE OF THE RIC UAC IN LOW TEMPERATURE** SECTION OF THIS INSTRUCTION.

11. After charging is complete, monitor the cylinder pressure on the respirator and repeat the above procedure as needed until the respirator user can be removed from the hazardous atmosphere.

**WARNING**

IF AT ANY TIME DURING THE FILLING PROCESS A LEAK IS DETECTED, IMMEDIATELY DISCONTINUE THE FILLING PROCEDURE AND LEAVE THE IDLH ATMOSPHERE. CONTINUING TO FILL A RESPIRATOR THAT HAS EXHIBITED A LEAK MAY CAUSE A FAILURE OF THE EQUIPMENT WHICH MAY RESULT IN SERIOUS INJURY OR DEATH.

## LOW TEMPERATURE OPERATION

Respirators intended for routine use and respirators not routinely used but kept for emergency use shall be located in areas where the temperature is maintained above freezing (32° F / 0° C).

If a respirator may be unavoidably kept at a temperature below freezing before the next use, special care **MUST** be exercised to be certain that all components of the respirator are **THOROUGHLY DRIED** after cleaning and before storage.

If a respirator has been unavoidably kept at a temperature below freezing and it is not possible to bring it to room temperature before use, do not exhale into the facepiece until the facepiece is completely donned and the nose cup is properly in place against the face. This will prevent fogging of the cold facepiece.

If, after using the respirator, the facepiece is doffed in a safe breathing area which is at temperatures near or below freezing, place the facepiece with regulator connected under outerwear to keep it warm next to the body in case respirator reuse is required.

Whenever the respirator is in place but not in use ("STANDBY" CONDITION) in areas at or below freezing, the facepiece and regulator **MUST** be protected against exposure to water.

## USE OF THE RIC UAC IN LOW TEMPERATURE

Use the protective cap to keep the high pressure air inlet of the RIC UAC coupling covered and dry at all times. Water on the inlet may freeze preventing connection to the RIC UAC filling hose assembly or preventing removal of the RIC UAC filling hose assembly once connected.

If the RIC UAC filling hose assembly is used to fill a respirator cylinder in temperatures less than 32° F / 0° C and the full respirator is then moved indoors to warmer temperatures, the pressure in the cylinder **MUST BE CHECKED FOR EXCESS PRESSURE** within two hours after the respirator is moved indoors. If the pressure gauge on the cylinder is reading above "full", excess pressure must be removed from the cylinders by releasing air from the respirator until the pointer of the gauge is reading "full".

## WARNING

**USE OF THIS RESPIRATOR AT TEMPERATURES AT OR BELOW FREEZING (32°F / 0° C) WITHOUT FOLLOWING THE LOW TEMPERATURE OPERATION INSTRUCTIONS MAY RESULT IN OBSCURED VISION AND/OR PARTIAL OR COMPLETE BLOCKAGE OF THE AIRFLOW WHICH COULD LEAD TO SERIOUS INJURY OR DEATH.**

## WARNING

**A PROPERLY INSTALLED NOSE CUP ASSEMBLY IS REQUIRED FOR USE OF THIS RESPIRATOR IN TEMPERATURES AT OR BELOW FREEZING (32° F / 0° C). FAILURE TO USE THE NOSE CUP MAY CAUSE OBSCURED VISION AND/OR PARTIAL OR COMPLETE BLOCKAGE OF THE AIRFLOW WHICH COULD RESULT IN SERIOUS INJURY OR DEATH.**

## WARNING

**RESPIRATORS MUST BE THOROUGHLY DRY BEFORE AND DURING STORAGE. MOISTURE ON A RESPIRATOR IN BELOW FREEZING TEMPERATURES MAY CAUSE A MALFUNCTION OF THE RESPIRATOR WHICH COULD RESULT IN SERIOUS INJURY OR DEATH.**

## WARNING

**IF A RESPIRATOR CYLINDER IS FILLED IN TEMPERATURES LESS THAN 32° F / 0° C AND THE FULL RESPIRATOR IS THEN MOVED INDOORS TO WARMER TEMPERATURES, THE PRESSURE IN THE CYLINDER MUST BE CHECKED FOR EXCESS PRESSURE WITHIN TWO HOURS AFTER THE RESPIRATOR IS MOVED INDOORS. FAILURE TO VERIFY THAT CYLINDER PRESSURE DOES NOT EXCEED THE RECOMMENDED MAXIMUM FOR THE CYLINDER MAY RESULT IN A SUDDEN RELEASE OF HIGH PRESSURE AIR WHICH COULD CAUSE SERIOUS INJURY OR DEATH.**

## EMERGENCY OPERATION

The respirator is automatic in function. It requires only the opening of the cylinder valve and the proper donning of the facepiece to begin use, and the closing of the cylinder valve to end use. If there is a malfunction or a suspected malfunction, use one of the emergency procedures listed below:

1. If any end of service time indicator alarm actuates during use, (the VIBRALERT or the HEADS-UP DISPLAY rapidly flashing red light), even if the air supply has not been depleted to approximately 25% of full rated capacity, LEAVE THE CONTAMINATED AREA AT ONCE.

### NOTE

IF THE VIBRALERT ACTUATES BEFORE THE AIR SUPPLY IS DEPLETED TO APPROXIMATELY 25% OF FULL RATED CAPACITY, IT MAY INDICATE A FAILURE OF THE PRIMARY REDUCER PATH IN THE PRESSURE REDUCER, A MALFUNCTIONING REMOTE AIR SUPPLY GAUGE, OR A FAILURE OF THE END OF SERVICE INDICATOR ALARM. LEAVE THE AREA REQUIRING RESPIRATORY PROTECTION IMMEDIATELY WHEN EITHER ALARM IS ACTUATED.

2. If the air supply is partially or completely cut off during use, fully open the red purge valve on the regulator by turning it counterclockwise (pointer on knob downward) and check to be sure the cylinder valve is fully opened (turned fully counterclockwise). LEAVE THE CONTAMINATED AREA AT ONCE AFTER OPENING THE PURGE VALVE.
3. If the air supply begins to flow freely into the facepiece during use, fully open the red purge valve knob on the regulator by turning it counterclockwise (pointer on knob downward). Partially close the cylinder valve by pushing in and rotating clockwise to regulate the flow of air to satisfy the requirements of the user. Do not close the cylinder valve completely. LEAVE THE CONTAMINATED AREA AT ONCE AFTER PARTIALLY CLOSING CYLINDER VALVE.
4. If there is a blockage of air flow or sudden and complete loss of the system air supply so that there is total loss of respiratory protection, LEAVE THE CONTAMINATED AREA AT ONCE. USE ALL NECESSARY PRECAUTIONS AND FOLLOW EMERGENCY PROCEDURES PRESCRIBED BY YOUR ESTABLISHED RESPIRATORY PROTECTION PROGRAM.

If any of the above procedures are used, REMOVE THE RESPIRATOR FROM SERVICE AND TAG FOR REPAIR BY AUTHORIZED PERSONNEL.

## DATA LOGGING FEATURE

The PASS device includes on-board electronics which maintain a running log of event data including start-up, shut-down, and PASS activation. The SCOTT DATA LOGGER Computer Interface is required to access the information. Instructions for downloading the data log are SCOTT P/N 595123-01 and are included with the computer interface.

## WARNING

THESE EMERGENCY OPERATION PROCEDURES ARE FOR EMERGENCY USE ONLY AND ARE MEANT TO SUPPLEMENT, NOT REPLACE, THE EMERGENCY PROCEDURES PRESCRIBED BY YOUR RESPIRATORY PROTECTION PROGRAM. IF THEIR USE IS REQUIRED, LEAVE THE HAZARDOUS AREA AT ONCE. USE OF THESE EMERGENCY PROCEDURES WILL INCREASE THE RATE OF CONSUMPTION OF THE AIR SUPPLY AND MAY CAUSE THE END OF SERVICE INDICATOR ALARMS TO DIMINISH IN INTENSITY OR STOP COMPLETELY. FAILURE TO LEAVE THE HAZARDOUS AREA IMMEDIATELY MAY RESULT IN SERIOUS INJURY OR DEATH.

## WARNING

THE AIRFLOW THROUGH THE RESPIRATOR WHEN THE PURGE VALVE IS IN USE CAN EXCEED 200 LITERS PER MINUTE. TO REDUCE AIR CONSUMPTION, THE AIRFLOW MAY BE REDUCED BY PARTIALLY CLOSING THE PURGE VALVE. FAILURE TO LEAVE THE HAZARDOUS AREA WHEN THE PURGE VALVE IS IN USE MAY RESULT IN A SUDDEN TERMINATION OF BREATHING AIR WHICH COULD CAUSE SERIOUS INJURY OR DEATH.

## WARNING

EMERGENCY PROCEDURE #3 IS THE ONLY TIME THE RESPIRATOR MAY BE OPERATED WITH THE CYLINDER VALVE LESS THAN FULLY OPENED.

## CYLINDER REPLACEMENT PROCEDURE

Depleted or partially depleted SCBA cylinders must be replaced with full cylinders as soon as possible. In normal practice, the user removes the respirator assembly and places it on solid support to change the cylinder. Cylinder replacement may also be performed while the user is wearing the respirator assembly with the assistance of a second individual.

Use only cylinders of the correct rated pressure for the respirator.

- Model 2.2 SCBA's must use only cylinder and valve assemblies marked for 2216 psig service (30 minute rated only)
- Model 3.0 SCBA's must use only cylinder and valve assemblies marked for 3000 psig service (30 minute rated only)
- Model 4.5 SCBA's must use only cylinder and valve assemblies marked for 4500 psig service (30 minute, 45 minute, or one hour rated)

Always inspect the cylinder valve assembly and the threads on the cylinder valve assembly before connecting the pressure reducer hose coupling. Never use a cylinder with a damaged cylinder valve assembly or a cylinder valve assembly with damaged threads.

### NOTE

ALL SCOTT AIR-PAK RESPIRATORS DESCRIBED IN THIS INSTRUCTION USE A SIMILAR SPRING LOADED CYLINDER LOCKING TAB LOCATED AT THE BOTTOM OF THE BACKFRAME. THE LOCKING TAB ENGAGES A HANGER TAB WHICH IS PART OF THE VALVE ASSEMBLY ON ALL SCOTT CYLINDER AND VALVE ASSEMBLIES. SEE FIGURE 19A AND 19B.



FIGURE 19A

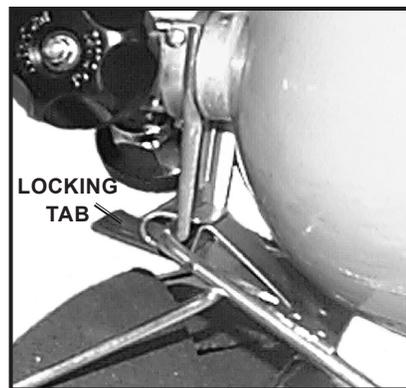


FIGURE 19B

Locking tab mechanisms

### NOTE

TO SECURE THE MIDDLE OF THE CYLINDER TO THE BACKFRAME, THE CYLINDER RETENTION SYSTEM USED ON THE AIR-PAK 75 SCBA IS DIFFERENT FROM THE CYLINDER RETENTION SYSTEM USED ON THE AIR-PAK WIREFRAME AND AIR-PAK *FIFTY* SCBA. COMPARE THE RESPIRATOR BEING SERVICED TO FIGURES 17 AND 18 OF THIS INSTRUCTION. CONTINUE THE CYLINDER REPLACEMENT PROCEDURE USING THE STEPS ASSOCIATED WITH THE FIGURE DEPICTING THE RETENTION SYSTEM INSTALLED ON THE RESPIRATOR BEING SERVICED.

## WARNING

THE USE OF ANY AIR CYLINDER OTHER THAN A CYLINDER AND VALVE ASSEMBLY APPROVED FOR USE WITH THE SPECIFIC SCOTT AIR-PAK RESPIRATOR MODEL BEING SERVICED MAY RESULT IN LOSS OF AIR FROM THE CYLINDER OR IMPROPER OPERATION OF THE RESPIRATOR.

SEE THE COMPLETE NIOSH APPROVAL LABEL (SCOTT DOCUMENT 89347-01) SUPPLIED WITH THESE INSTRUCTIONS FOR CYLINDER AND VALVE ASSEMBLIES APPROVED FOR USE WITH SPECIFIC SCOTT AIR-PAK MODELS.

WHEN THE COMPLIANCE WITH NFPA STANDARD 1981 IS REQUIRED, SEE THE NFPA COMPLIANT COMPONENTS LISTING (SCOTT DOCUMENT 595124-01) SUPPLIED WITH THESE INSTRUCTIONS FOR A LIST OF NFPA COMPLIANT CYLINDER AND VALVE ASSEMBLIES FOR USE WITH SPECIFIC AIR-PAK RESPIRATOR MODELS.

## WARNING

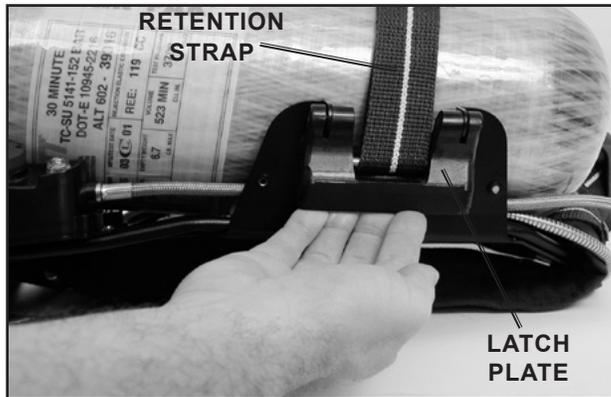
NEVER USE A CYLINDER WITH A DAMAGED CYLINDER VALVE ASSEMBLY OR A CYLINDER VALVE ASSEMBLY WITH DAMAGED THREADS. LEAKAGE MAY OCCUR WHICH COULD CAUSE A LOSS OF BREATHING AIR OR A SUDDEN RELEASE OF HIGH PRESSURE AIR RESULTING IN SERIOUS INJURY OR DEATH.

## CAUTION

DO NOT LEAVE THE CYLINDER VALVE OPEN WHEN THE RESPIRATOR IS NOT IN USE.

## **Procedure A – AIR-PAK 75 SCBA Backframe**

6. Disengage the cylinder retention strap by gripping the latch plate as shown in FIGURE 20 and lifting on the end of the latch.



**FIGURE 20  
CYLINDER RETENTION**

7. Grasp the cylinder below the retention strap, push the locking tab below the valve, then lift the cylinder free from the bottom hook and remove. See FIGURE 16.
8. Replace with a fully charged cylinder and valve assembly of the same pressure rating. Slide the top of the cylinder upward under the strap.
9. Engage the cylinder hanger in the hook at the bottom of the backframe.

### **NOTE**

FOR 4500 PSI RESPIRATORS: IF A DIFFERENT DURATION OR DIAMETER CYLINDER IS USED, USE THE TRI-SLIDE BUCKLE TO ADJUST THE RETENTION STRAP SO THAT IT PRESSES TIGHTLY AGAINST THE CYLINDER WHEN THE LATCH ASSEMBLY IS FULLY ENGAGED. THE USER SHOULD NOT BE ABLE TO MOVE RETENTION STRAP UP AND DOWN ON THE CYLINDER WITH THEIR FINGERS WHEN THE LATCH ASSEMBLY IS FULLY CLOSED.

10. Secure the cylinder in place by pushing the latch toward the backframe to lock the cylinder latch and fully engage the cylinder latch assembly.

### **NOTE**

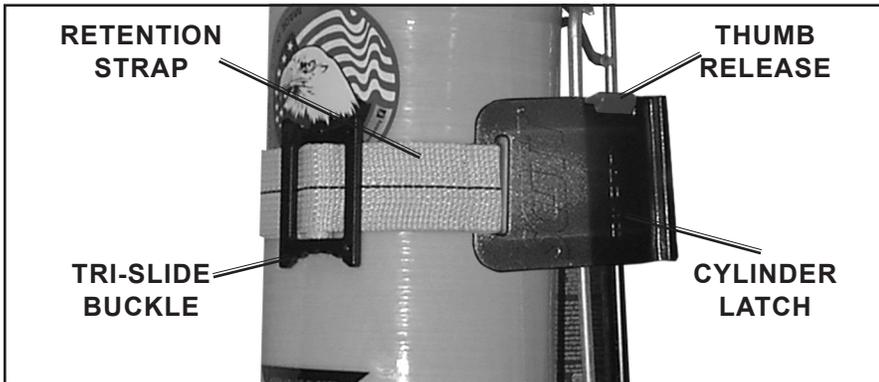
ENSURE THAT THE CYLINDER IS SECURELY HELD IN PLACE ON THE BACKFRAME BY THE CYLINDER RETENTION ASSEMBLY. DO NOT USE EXCESSIVE FORCE TO LOCK THE LATCH MECHANISM. IF THE RETENTION STRAP IS TOO TIGHT OR TOO LOOSE, USE THE TRI-SLIDE BUCKLE TO ADJUST THE RETENTION STRAP ENGAGEMENT LENGTH, THEN RE-ATTEMPT TO ENGAGE THE LATCH ASSEMBLY.

**Continue with Step 11 below.**

**CYLINDER REPLACEMENT  
CONTINUED ON NEXT PAGE...**

**Procedure B – WIREFRAME SCBA BACKFRAME  
and AIR-PAK Fifty SCBA Backframe**

6. Disengage the cylinder latch by pressing on the thumb release while lifting on the end of the latch. See FIGURE 21.



**FIGURE 21**

**Cylinder retention used on Wireframes and AIR-PAK Fifty SCBA**

7. Grasp the cylinder below the band, push the locking tab below the valve, lift the cylinder free from the bottom hook and remove. See FIGURE 19.
8. Replace with a fully charged cylinder and valve assembly of the same pressure rating. Slide the top of the cylinder upward under the band.
9. Engage the cylinder hanger in the hook at the bottom of the backframe.

**NOTE**

FOR 4500 PSI RESPIRATORS: IF A DIFFERENT DURATION OR DIAMETER CYLINDER IS USED, USE THE TRI-SLIDE BUCKLE TO ADJUST THE RETENTION STRAP SO THAT IT PRESSES TIGHTLY AGAINST THE CYLINDER WHEN THE LATCH ASSEMBLY IS FULLY ENGAGED. THE USER SHOULD NOT BE ABLE TO MOVE RETENTION STRAP UP AND DOWN ON THE CYLINDER WITH THEIR FINGERS WHEN THE LATCH ASSEMBLY IS FULLY CLOSED.

10. Secure the cylinder in place by pushing the latch toward the backframe to lock the cylinder latch and fully engage the cylinder latch assembly.

**NOTE**

ENSURE THAT THE CYLINDER IS SECURELY HELD IN PLACE ON THE BACKFRAME BY THE CYLINDER RETENTION ASSEMBLY. DO NOT USE EXCESSIVE FORCE TO LOCK THE LATCH MECHANISM. IF THE RETENTION STRAP IS TOO TIGHT OR TOO LOOSE, USE THE TRI-SLIDE BUCKLE TO ADJUST THE RETENTION STRAP ENGAGEMENT LENGTH, THEN RE-ATTEMPT TO ENGAGE THE LATCH ASSEMBLY.

**Continue with Step 11 below.**

## CYLINDER REPLACEMENT CONTINUED...

11. Inspect the high pressure coupling and verify that the gasket seal is present and undamaged. See FIGURE 22. If the gasket is present and undamaged, align the high pressure coupling with the outlet of the cylinder valve and tighten the hose coupling to the cylinder valve



**FIGURE 22**  
High pressure gasket seal

- by hand.
12. The respirator is ready for continued use. See the PREPARATION FOR USE section of this instruction and USE OF THE RESPIRATOR section of this instruction. If respirator use is not continued, the respirator must be cleaned and inspected. See the CLEANING AND STORAGE section and the REGULAR OPERATIONAL INSPECTION section of this instruction.
  13. The removed cylinder shall be inspected and refilled by authorized personnel. See SCOTT Specialist Level Maintenance Modules, available on request from SCOTT Health and Safety, for further information.

## USE OF ALTERNATE CYLINDERS

If SCOTT cylinder and valve assemblies of different pressures are used inadvertently or in emergency situations, the following conditions will be observed:

- A fully charged 2216 psig rated cylinder or 3000 psig rated cylinder installed on an AIR-PAK model 4.5 SCBA will cause the remote pressure gauge to indicate less than "FULL" and the end of service indicator alarms will activate well before approximately three quarters of the air has been consumed.
- A fully charged 2216 psig rated cylinder installed on an AIR-PAK model 3.0 SCBA will cause the remote gauge to indicate less than full and the end of service indicator alarms will activate before approximately three quarters of the air supply has been consumed.
- A fully charged 3000 psig rated cylinder installed in an AIR-PAK model 2.2 SCBA will cause the remote gauge to indicate more than "FULL" and the end of service indicator alarms will not activate until MORE than approximately three quarters of the air supply has been consumed.
- A 4500 psig rated cylinder cannot be installed on an AIR-PAK model 2.2 or 3.0 SCBA. The high pressure coupling between the respirator and the cylinder will not seal when the coupling is threaded to the cylinder and a large, high volume air leak will occur at the cylinder connection when the cylinder is opened. This is intended to prevent the lower pressure respirator components from being pressurized to 4500 psig accidentally.

## WARNING

USE OF A RESPIRATOR WITH A MISSING OR DAMAGED COUPLING GASKET MAY RESULT IN AIR LEAKAGE WHICH MAY REDUCE THE DURATION OF USE AND/OR THE TIME REMAINING AFTER AN END OF SERVICE ALARM ACTUATES OR MAY PREVENT AN END OF SERVICE ALARM FROM ACTUATING. THE USE OF A RESPIRATOR WITH SUCH AN AIR LEAK MAY RESULT IN EXPOSURE OF THE USER TO THE ATMOSPHERE THE RESPIRATOR IS INTENDED TO PROTECT AGAINST WHICH MAY LEAD TO SERIOUS INJURY OR DEATH.

## CAUTION

WRENCHES SHALL NOT BE USED TO TIGHTEN THE HOSE COUPLING. OVER TIGHTENING THE HOSE COUPLING MAY DAMAGE THE GASKET SEAL.

## CAUTION

ALWAYS CLOSE THE CYLINDER VALVE ON "EMPTY" CYLINDERS. AN OPEN VALVE MAY ALLOW MOISTURE OR OTHER CONTAMINANTS TO ENTER THE CYLINDER.

## WARNING

BREATHING AIR CYLINDERS ARE TO BE INSPECTED AND REFILLED ONLY BY TRAINED AND AUTHORIZED PERSONNEL. IMPROPER FILLING OF BREATHING AIR CYLINDERS MAY CAUSE SERIOUS INJURY OR DEATH.

## WARNING

THE USE OF ANY AIR CYLINDER OTHER THAN A CYLINDER AND VALVE ASSEMBLY APPROVED FOR USE WITH THE SPECIFIC SCOTT AIR-PAK RESPIRATOR MODEL BEING SERVICED MAY RESULT IN LOSS OF AIR FROM THE CYLINDER OR IMPROPER OPERATION OF THE RESPIRATOR.

SEE THE COMPLETE NIOSH APPROVAL LABEL (SCOTT DOCUMENT 89347-01) SUPPLIED WITH THESE INSTRUCTIONS FOR CYLINDER AND VALVE ASSEMBLIES APPROVED FOR USE WITH SPECIFIC SCOTT AIR-PAK MODELS.

WHEN THE COMPLIANCE WITH NFPA STANDARD 1981 IS REQUIRED, SEE THE NFPA COMPLIANT COMPONENTS LISTING (SCOTT DOCUMENT 595124-01) SUPPLIED WITH THESE INSTRUCTIONS FOR A LIST OF NFPA COMPLIANT CYLINDER AND VALVE ASSEMBLIES FOR USE WITH SPECIFIC AIR-PAK RESPIRATOR MODELS.

## **CLEANING AND STORAGE**

Do not attempt any repair or alteration of this respirator beyond the scope of this instruction without proper training.

### **NOTE**

IF DURING USE, THE RESPIRATOR IS SUSPECTED OF BEING CONTAMINATED BY HAZARDOUS SUBSTANCE, THE CONTAMINANT MUST BE IDENTIFIED AND PROPERLY REMOVED OR THE CONTAMINATED COMPONENT(S) MUST BE REPLACED BEFORE NEXT USE. DISPOSE OF THE CONTAMINANTS OR THE CONTAMINATED COMPONENT(S) IN ACCORDANCE WITH APPLICABLE REGULATORY REQUIREMENTS.

After each use of the respirator, clean according to these instructions and perform a REGULAR OPERATIONAL INSPECTION. If any damage is found, remove the respirator from service and tag for repair by authorized personnel.

### **CLEANING THE RESPIRATOR**

1. Damp sponge dirt accumulations from the exterior of the respirator.

### **NOTE**

THE LIGHT SENSOR FOR THE HEADS-UP DISPLAY BRIGHTNESS CONTROL IS LOCATED IN THE FRONT OF REMOTE GAUGE HOUSING. BE SURE TO CLEAN THE FRONT OF THE REMOTE GAUGE HOUSING.

2. If respirator has been exposed to potentially hazardous materials, decontaminate in accordance with established procedures.
3. Clean the facepiece and mask mounted regulator as described below.

### **CLEANING THE FACEPIECE**

Supplies needed:

- SCOTT recommended sanitizing or disinfecting cleaner such as Wescodyne Plus. This is a dilute iodine solution.
- Drinking (potable) water - running or in a spray bottle
- Air supply of lubricant free, dry breathing air, maximum 30 psig, for drying

### **NOTE**

FOLLOW ALL THE INSTRUCTIONS AND THE MSDS (MATERIAL SAFETY DATA SHEET) PROVIDED WITH THE SANITIZING OR DISINFECTING CLEANER.

1. With the regulator removed, carefully wash the facepiece assembly with SCOTT recommended cleaner according to the instructions provided with the cleaner and thoroughly rinse in clean water. If the facepiece is heavily soiled, it may be necessary to first wash the facepiece with a solution of mild soap or detergent in warm water (110° F / 44° C maximum).

### **NOTE**

A NOSE CUP IS DESIGNED TO BE AN INTEGRAL PART OF THE FACEPIECE AND DOES NOT NEED TO BE DISASSEMBLED FOR CLEANING.

2. To sanitize or disinfect the facepiece, use the SCOTT recommended sanitizing or disinfecting cleaner according to the instructions provided with the cleaner. Sanitizing or disinfecting may require a specific contact time of the cleaner prior to rinsing.

### **NOTE**

THE KEVLAR HEAD HARNESSSES ARE MADE OF POROUS MATERIAL. SCOTT RECOMMENDED CLEANER MAY NOT BE EFFECTIVE ON POROUS MATERIAL.

3. Rinse with drinking water using a spray bottle or running water.
4. Shake excess water off of facepiece and then dry with a clean, lint free cloth or gently blow dry with clean, dry breathing air of 30 psig or less pressure. Do not use shop air or any other air containing lubricants or moisture.

## **WARNING**

**DO NOT ATTEMPT ANY REPAIR OR ALTERATION OF THIS RESPIRATOR BEYOND THE SCOPE OF THIS INSTRUCTION. TRAINING IS REQUIRED FOR FURTHER SERVICE OR REPAIR OF THIS RESPIRATOR. THIS RESPIRATOR MAY SUPPORT LIFE IN HAZARDOUS ATMOSPHERES. FAILURE TO PROPERLY SERVICE THIS RESPIRATOR MAY RESULT IN SERIOUS INJURY OR DEATH.**

## **CAUTION**

**CERTAIN CLEANING AND DISINFECTING AGENTS SUCH AS QUATERNARY AMMONIUM COMPOUNDS (AMMONIUM CHLORIDES) MAY CAUSE DAMAGE, DETERIORATION OR ACCELERATED AGING TO PARTS OF THE RESPIRATOR. USE ONLY THE RECOMMENDED CLEANING AND DISINFECTING AGENTS.**

## **WARNING**

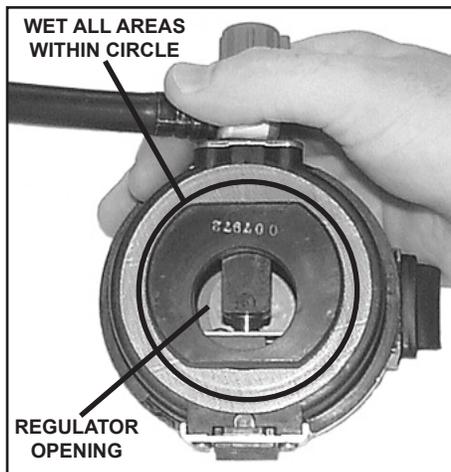
**KEEP ALL SANITIZING OR DISINFECTING CLEANERS OUT OF REACH OF CHILDREN. USE THE CLEANER ONLY IN A MANNER CONSISTENT WITH THE PRODUCT LABELING AND USE INSTRUCTIONS. IMPROPER USE OR HANDLING OF THIS PRODUCT MAY RESULT IN SERIOUS INJURY OR DEATH.**

## **CLEANING THE MASK MOUNTED REGULATOR**

### **NOTE**

AFTER CLEANING THE REGULATOR, VERIFY THAT ALL MOISTURE HAS BEEN REMOVED FROM THE REGULATOR AS DESCRIBED IN THE **REGULATOR CHECK** SECTION OF THIS INSTRUCTION.

1. Remove the breathing regulator from the facepiece by pulling back on the locking clip and rotating the regulator 1/4 turn clockwise.
2. Remove any obvious dirt from the external surfaces of the regulator using SCOTT recommended sanitizing or disinfecting cleaner with a sponge or soft cloth.
3. Inspect the inside of the regulator assembly through the regulator opening. See FIGURE 23. If excessive dirt or soil is present, forward regulator assembly to SCOTT trained authorized personnel for thorough cleaning.
4. Depress the donning/air saver switch, close the purge knob by turning fully clockwise. Use the SCOTT recommended sanitizing or disinfecting cleaner in the regulator opening and the immediate area around the opening. See FIGURE 23. Be sure to cover internal components completely.
5. Follow the user instructions for the SCOTT recommended cleaner. A specific contact time may be required for sanitizing or disinfecting before rinsing.
6. Rinse the regulator with drinking water using a spray bottle or gently running tap water.
7. Shake excess water out of regulator. Completely air dry the regulator before use.



**FIGURE 23**

### **NOTE**

TO SPEED DRYING OF THE REGULATOR, GENTLY BLOW DRY WITH CLEAN, DRY BREATHING AIR OF 30 PSIG MAXIMUM. **DO NOT USE SHOP AIR OR ANY OTHER AIR CONTAINING LUBRICANTS OR MOISTURE.**

8. If regulator was disconnected from air supply for cleaning, reconnect and open purge valve to remove any moisture from regulator spray bar. Close purge valve.
9. Perform **REGULATOR CHECK** as described below.

## **REGULATOR CHECK**

### **NOTE**

THIS REGULATOR CHECK IS NOT INTENDED TO BE A COMPLETE FUNCTIONAL CHECK OF THE RESPIRATOR. **BEFORE NEXT USE, PERFORM A REGULAR OPERATIONAL INSPECTION AS DESCRIBED IN THESE INSTRUCTIONS.**

1. Check to make sure the respirator cylinder is at least 1/4 full.
2. Verify that the donning/air saver switch is fully depressed.
3. Close the purge knob.
4. Reattach the regulator to the respirator, (if removed for cleaning).
5. Slowly open the cylinder valve at least one (1) full turn.
6. If air flow from the regulator is heard, close the cylinder valve, repeat steps 1, 2 and 3. If air flow is still heard, close the cylinder valve fully, tag unit for repair and remove from service.
7. Open the purge valve and observe the air flow from the regulator spray bar. Droplets of water indicate the regulator is not dry. Dry the regulator according to Step 8 of **PROCEDURE FOR CLEANING THE MASK MOUNTED REGULATOR** section and repeat the **REGULATOR CHECK**.

### **WARNING**

**FOLLOW THE REGULAR OPERATIONAL INSPECTION PROCEDURE EXACTLY. IF THE RESPIRATOR DOES NOT OPERATE AS DESCRIBED OR ANY OTHER OPERATIONAL MALFUNCTION IS NOTED, DO NOT USE THE RESPIRATOR. REMOVE IT FROM SERVICE AND TAG FOR REPAIR BY AUTHORIZED PERSONNEL. FAILURE TO PROPERLY INSPECT THE RESPIRATOR MAY RESULT IN SERIOUS INJURY OR DEATH.**

**CLEANING AND STORAGE  
CONTINUED NEXT PAGE...**

## CLEANING AND STORAGE CONTINUED...

### **STORAGE OF THE RESPIRATOR**

1. Check to ensure gasket is present between facepiece and mask-mounted regulator and is not damaged.
2. Connect the regulator to the facepiece. With the red purge valve in the 12 o'clock position, align the two flats of the outlet port with corresponding flats in the facepiece port and insert. Rotate the regulator counterclockwise (viewed from inside of facepiece) so that the red purge valve knob is situated on the left side of the facepiece. The lock tab on the mask-mounted regulator will lock into the facepiece retainer with a "click." If properly engaged, the regulator will not rotate.
3. To reattach a breathing regulator equipped with a quick disconnect to the respirator, see FIGURE 7.
4. Verify that the respirator is thoroughly dry before placing in storage.
5. Place the clean and dry facepiece in a sealable enclosure to protect until next use. Store in a manner that will not distort the face seals.
6. Place the respirator in the carrying case, protective container, or in a suitable storage location.
7. If any damage or deterioration is noted, remove the respirator from service and tag for repair.
8. Where an SCBA, its spare components or related equipment are stored or carried within a vehicle, such items shall be secured by either a positive mechanical means designed to hold the item in its stowed position, in a compartment with a positive latching door, or in a closed container suitable to transport and contain the SCBA and/or its spare components and associated equipment. The mechanical means of holding the SCBA, its spare components and associated equipment in place, the compartment or the closed container shall be designed to contain the SCBA, its spare components and associated equipment and thereby minimize the possibility of injury to persons in or near the vehicle during movement of the vehicle, especially during rapid deceleration or rapid acceleration of the vehicle, sharp turns or an accident.

Except for the replacement of batteries, no attempt shall be made to do maintenance or to make adjustments or repairs beyond the scope of this instruction manual without proper training.

### **WARNING**

**PLACING RESPIRATORS IN STORAGE WITHOUT THOROUGHLY DRYING THEM MAY RESULT IN CORROSION OR OTHER DAMAGE WHICH COULD CAUSE A MALFUNCTION OF THE RESPIRATOR. SUCH A MALFUNCTION MAY RESULT IN SERIOUS INJURY OR DEATH.**

### **WARNING**

**PLACING RESPIRATORS IN STORAGE WITHOUT THOROUGHLY DRYING THEM MAY RESULT IN RESIDUAL MOISTURE WHICH MAY FREEZE IN COLD TEMPERATURES AND CAUSE A MALFUNCTION OF THE RESPIRATOR. SUCH A MALFUNCTION MAY RESULT IN SERIOUS INJURY OR DEATH.**

## RESPIRATOR MARKINGS

Do not alter or permanently cover over any labels on the SCOTT AIR-PAK SCBA or SCOTT AIR-PAK SCBA cylinder and valve assembly. If user applied identification markings are added to the SCOTT AIR-PAK SCBA or SCBA cylinder and valve assembly, do not obscure any labels supplied on the AIR-PAK SCBA or AIR-PAK SCBA cylinder and valve assembly. Any user applied markings must be applied in such a way as will not weaken or damage the AIR-PAK SCBA or AIR-PAK SCBA cylinder and valve assembly, will not interfere with the proper function of these assemblies and will not add flammable materials to these assemblies.

## SPECIALIST LEVEL MAINTENANCE

The respiratory protection program under which this equipment is used may elect to train an individual to perform maintenance beyond the routine cleaning and REGULAR OPERATIONAL INSPECTION of the respirator. For this purpose, the *SCOTT Specialist Level Maintenance Training Manual* is available on request from SCOTT Health Safety. This manual contains additional maintenance information that can be performed someone with good mechanical ability using standard hand tools. Contact your SCOTT distributor for details. The information in this manual is not as detailed or advanced as that which is available to a SCOTT Authorized Service Center.

## PERIODIC TESTING

SCOTT recommends that this respirator be inspected and tested by a SCOTT Authorized Service Center using SCOTT Authorized Test Equipment at least once a year. Heavy use and/or severe service conditions may require more frequent inspection and testing. This recommendation is in addition to all other cleaning and maintenance procedures.

In addition, all air cylinders used with SCOTT respirators must be periodically visually inspected and hydrostatically tested by a licensed cylinder retester. The cylinder inspection and test must be done in accordance with the appropriate US Department of Transportation (DOT) specification or the applicable DOT exemption. See step 2 of the REGULAR OPERATIONAL INSPECTION section of this instruction.

Because this respirator may be used to support human life in a hazardous atmosphere, do not attempt maintenance beyond that described in this instruction or in the *SCOTT Specialist Level Maintenance Training Manual*. If disassembly or adjustment other than described in this instruction or the *SCOTT Specialist Level Maintenance Training Manual* is found to be required, the respirator must be serviced by a SCOTT Authorized Service Center in accordance with the appropriate SCOTT Technician Service Manuals. Service by a SCOTT Authorized Service Center can be arranged through your authorized SCOTT distributor or by contacting SCOTT Health and Safety.

## RETIREMENT CRITERIA AND CONSIDERATIONS

Retirement criteria and considerations to be determined by SCOTT trained and Certified Overhaul Technicians.

## EXPORT AND IMPORT

The international transport of the SCOTT SEMS II Accountability System and portions thereof is regulated under United States export regulations and may be regulated by the import regulations of other countries.

If you have any questions or concerns regarding these regulations, contact SCOTT at 1-800-247-7257 (or 704-291-8300 outside the continental United States).

## WARNING

APPLYING ANY MARKINGS OR LABELS THAT DAMAGE OR OBSCURE THE EXISTING LABELING MAY VOID THE APPROVAL OF THE CERTIFYING AGENCY BY INTERFERING WITH PROPER IDENTIFICATION OF ASSEMBLIES. IMPROPER IDENTIFICATION OF ASSEMBLIES MAY RESULT IN ERRORS IN MAINTENANCE CAUSING FAILURE OF THE RESPIRATOR WHICH MAY RESULT IN SERIOUS INJURY OR DEATH.

## WARNING

DO NOT APPLY ANY MARKINGS OR LABELS THAT DAMAGE OR INTERFERE WITH THE OPERATION OF THE RESPIRATOR. ANY USER APPLIED MARKINGS THAT INTERFERE WITH THE OPERATION OF THE RESPIRATOR MAY CAUSE A FAILURE OF THE RESPIRATOR AND MAY RESULT IN SERIOUS INJURY OR DEATH.

## WARNING

MAINTAIN ONLY WITH APPROVED PARTS AND IN ACCORDANCE WITH APPROVED METHODS. THE USE OF NON-SCOTT AUTHORIZED COMPONENTS DURING MAINTENANCE, OR ATTEMPTING MAINTENANCE BEYOND THE SCOPE OF THIS INSTRUCTION WITHOUT THE PROPER TRAINING, EQUIPMENT, AND AUTHORIZATION MAY RESULT IN A FAILURE OF THE RESPIRATOR LEADING TO SERIOUS INJURY OR DEATH.

## WARNING

FAILURE TO REGULARLY INSPECT AND MAINTAIN THIS RESPIRATOR AS INSTRUCTED HEREIN MAY RESULT IN A FAILURE OF THE RESPIRATOR LEADING TO SERIOUS INJURY OR DEATH.

## BATTERY REPLACEMENT

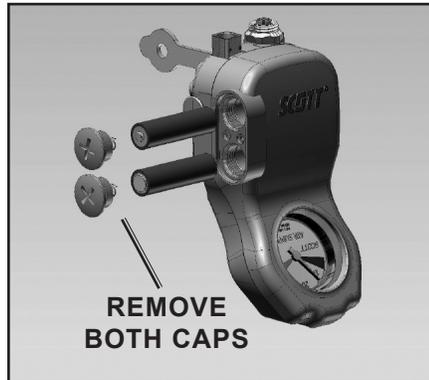
Certain accessories and features require batteries for operation. Instructions for battery replacement on AIR-PAK respirator features are contained in this instruction. Refer to the user instructions provided with any approved communications device for details of operation and maintenance. Always verify that the communications device has fresh batteries before use. Refer to the Operation and Maintenance instructions provided with any other accessories for details of battery replacement.

### **RESPIRATORS WITH HEADS-UP DISPLAY ONLY**

AIR-PAK respirators equipped with a Heads-Up Display but **NO** PASS device, require two (2) AA batteries in the remote gauge console for operation. The batteries should be replaced only by a trained maintenance technician in a clean area known to be nonflammable.

Replace batteries as follows:

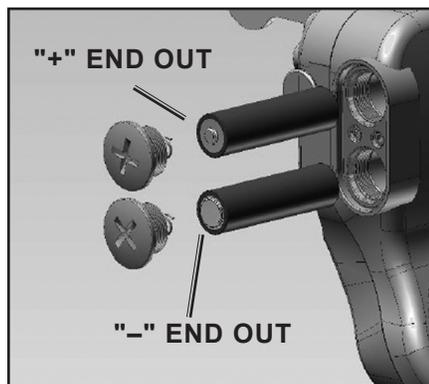
1. Locate the remote gauge console.
2. Using a Phillips driver, remove both battery caps holding the battery cover. See FIGURE 24.



**FIGURE 24**

3. Slide the two batteries out of the battery compartment.
4. To maintain Intrinsic Safety, replace batteries only with a pair of the following 1.5 volt AA batteries:
  - Eveready<sup>3</sup> Energizer Alkaline EN91
  - Eveready Energizer Alkaline E91.
  - Duracell<sup>4</sup> Alkaline MN1500
  - Duracell Alkaline MX1500
  - Duracell Alkaline PC1500

Be sure batteries are properly oriented in battery compartment with the "+" end and the "-" end of each as shown in FIGURE 25.



**FIGURE 25**

5. The battery cover must be installed so that it is water tight after replacement. Clean the inside edge of the battery compartment and seal around the outside of the cover by wiping with a clean damp cloth to remove any dirt or foreign matter which might prevent a proper seal. Check cover gasket for tears or cuts. If damage is found, remove respirator from service and tag for repair by authorized personnel.
6. When cover is placed in position and the batteries are properly installed, all lights in the HEADS-UP DISPLAY will light for approximately twenty (20) seconds to verify operation.
7. Thread the battery cover screw in until the edge of the battery cover is touching the face of the battery compartment. Tighten the screw **HAND TIGHT** only. **DO NOT OVERTIGHTEN**. Perform the **REGULAR OPERATIONAL INSPECTION** to verify proper operation of the HEADS-UP DISPLAY.

### **WARNING**

**IF A RESPIRATOR INCORPORATING THE HEADS-UP DISPLAY IS USED IN AN EXPLOSIVE OR FLAMMABLE ATMOSPHERE, REGULARLY INSPECT THE RESPIRATOR, INCLUDING THE HEADS-UP DISPLAY, AS DESCRIBED IN THIS INSTRUCTION AND CORRECT ANY DAMAGE FOUND. DO NOT SUBSTITUTE ANY PARTS OR COMPONENTS. USE ONLY THE BATTERIES AS SPECIFIED IN THIS INSTRUCTION. THE FAILURE TO CORRECT ANY DAMAGE, THE INSTALLATION OF INCORRECT BATTERIES, OR THE SUBSTITUTION OF ANY OTHER COMPONENTS MAY IMPAIR THE INTRINSIC SAFETY OF THE UNIT AND MAY LEAD TO A FIRE OR AN EXPLOSION WHICH COULD RESULT IN SERIOUS INJURY OR DEATH.**

### **WARNING**

**BATTERIES MUST ONLY BE CHANGED IN AN AREA KNOWN TO BE NONFLAMMABLE. CHANGING THE BATTERIES IN A FLAMMABLE ATMOSPHERE MAY CAUSE AN IGNITION WHICH COULD RESULT IN SERIOUS INJURY OR DEATH.**

### **WARNING**

**TO REDUCE THE RISK OF EXPLOSION USE BATTERIES ONLY FROM THE LIST PROVIDED, DO NOT MIX OLD BATTERIES WITH UNUSED BATTERIES, AND DO NOT MIX BATTERIES FROM DIFFERENT MANUFACTURERS. UNAUTHORIZED SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY AND CAUSE AN EXPLOSION WHICH COULD LEAD TO SERIOUS INJURY OR DEATH.**

<sup>3</sup> Energizer is a registered trademark of Eveready Battery Company, Inc., St Louis, MO.

<sup>4</sup> Duracell is a registered trademark of The Gillette Company, Boston, MA.

## **RESPIRATORS WITH PAK ALERT SE 7 DISTRESS ALARM**

AIR-PAK respirators equipped with a Heads-Up Display AND a PAK ALERT SE 7 distress alarm, require six (6) “AA” cell batteries for operation. The six (6) batteries power both the Heads-Up Display AND the PASS device, so separate batteries in the Gauge Console are not required. The batteries should be replaced only by a trained maintenance technician in a clean area known to be nonflammable. Replace batteries as follows:

1. Close respirator cylinder valve, open regulator purge valve letting out all the trapped air, close regulator purge valve, press the reset button twice. A fifteen second beep sequence occurs as the residual air bleeds off. Unit will sound a two tone chirp and green light will go out.

### **NOTE**

ALWAYS BE SURE THAT CYLINDER VALVE IS OFF AND THE PASS DEVICE IS COMPLETELY INACTIVE BEFORE CHANGING BATTERIES. NEVER REMOVE OR REPLACE BATTERIES WITH SYSTEM PRESSURIZED OR DAMAGE MAY OCCUR TO ELECTRONIC COMPONENTS.

2. When replacing batteries on respirators, remove the cylinder and place the respirator in a clean, non-hazardous area.
3. Use a Phillips driver to remove the Battery Housing Cover as shown in FIGURE 26. Carefully remove the cover and set aside.
4. Remove used batteries from battery compartment by sliding them out of the battery compartment.



**FIGURE 26**

5. Install six (6) fresh new “AA” batteries of the same type. **Always replace all batteries at the same time.** The battery holder is marked with the style and orientation of the batteries required. See FIGURE 27. To maintain Intrinsic Safety, use six (6) each of one of the following 1.5 volt AA batteries:
  - Duracell Alkaline MN1500
  - Duracell Alkaline MX1500
  - Duracell Alkaline PC1500
  - Eveready Energizer Alkaline EN91
  - Eveready Energizer Alkaline E91.

**Do not mix batteries.** Verify correct orientation of batteries as shown on label inside the battery holder.

6. The battery cover must be installed so that it is water tight after replacement. Clean the sealing rib around battery compartment and sealing face of the cover, shown in FIGURE 27, by wiping with a clean damp to remove any dirt or foreign matter which might prevent a proper seal. Check cover gasket for tears or cuts. If damage is found, remove respirator from service and tag for repair by authorized personnel.



**FIGURE 27**

7. Install battery cover and tighten the cover screw until snug. **AFTER REPLACEMENT OF BATTERIES, PERFORM A REGULAR OPERATIONAL INSPECTION BEFORE RETURNING RESPIRATOR TO SERVICE.**

### **CAUTION**

**SYSTEM MUST NOT BE PRESSURIZED WHEN BATTERIES ARE INSTALLED. DAMAGE TO THE ELECTRONIC COMPONENTS MAY RESULT IF BATTERIES ARE INSTALLED WITH SYSTEM PRESSURIZED.**

### **WARNING**

**THE PAK-ALERT SE 7 DISTRESS ALARM IS INTENDED TO ASSIST IN LOCATING A PERSON WHO MAY BE IN A LIFE THREATENING SITUATION. FAILURE TO FOLLOW THE INSTRUCTIONS FOR OPENING, CHANGING THE BATTERIES AND RE-CLOSING THE BATTERY COMPARTMENT MAY RESULT IN DAMAGE WHICH COULD CAUSE FAILURE OF THE PASS DURING A LIFE THREATENING EMERGENCY OR COULD CAUSE A FIRE OR EXPLOSION IN A FLAMMABLE OR EXPLOSIVE ATMOSPHERE POSSIBLY RESULTING IN INJURY OR DEATH.**

### **WARNING**

**BATTERIES MUST ONLY BE CHANGED IN AN AREA KNOWN TO BE NONFLAMMABLE. CHANGING THE BATTERIES IN A FLAMMABLE ATMOSPHERE MAY CAUSE AN IGNITION WHICH COULD RESULT IN SERIOUS INJURY OR DEATH.**

### **WARNING**

**TO REDUCE THE RISK OF EXPLOSION USE BATTERIES ONLY FROM THE LIST PROVIDED, DO NOT MIX OLD BATTERIES WITH UNUSED BATTERIES, AND DO NOT MIX BATTERIES FROM DIFFERENT MANUFACTURERS. UNAUTHORIZED SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY AND CAUSE AN EXPLOSION WHICH COULD LEAD TO SERIOUS INJURY OR DEATH.**

### **CHECK YOUR WORK!**

**BEFORE ASSEMBLY OF BATTERY COVER, CHECK TO SEE BOTH BATTERIES ARE FRESH, NEW BATTERIES OF THE TYPE INDICATED ABOVE AND THAT THEY HAVE BEEN INSTALLED PROPERLY.**

## WARNING

**IMPROPER USE OF A RESPIRATOR MAY RESULT IN PERSONAL INJURY OR DEATH. IMPROPER USE INCLUDES, BUT IS NOT LIMITED TO, USE WITHOUT TRAINING, DISREGARD OF THE WARNINGS AND INSTRUCTIONS SUPPLIED WITH THE RESPIRATOR AND ITS ACCESSORIES AND FAILURE TO INSPECT AND MAINTAIN THE RESPIRATOR. READ AND UNDERSTAND THE INSTRUCTION MANUAL AND ANY APPLICABLE ACCESSORY INSTRUCTIONS AND WARNINGS BEFORE ATTEMPTING TO USE A RESPIRATOR**

### CAUTIONS AND LIMITATIONS

- D – AIRLINE RESPIRATORS CAN BE USED ONLY WHEN THE RESPIRATORS ARE SUPPLIED WITH RESPIRABLE AIR MEETING THE REQUIREMENTS OF CGA G-7.1 GRADE D OR HIGHER QUALITY.
- E – USE ONLY THE PRESSURE RANGES AND HOSE LENGTHS SPECIFIED IN THE USER'S INSTRUCTIONS.
- I – CONTAINS ELECTRICAL PARTS WHICH HAVE NOT BEEN EVALUATED AS AN IGNITION SOURCE IN FLAMMABLE OR EXPLOSIVE ATMOSPHERES BY MSHA/NIOSH.
- J – FAILURE TO PROPERLY USE AND MAINTAIN THIS PRODUCT COULD RESULT IN INJURY OR DEATH.
- M – ALL APPROVED RESPIRATORS SHALL BE SELECTED FITTED, USED AND MAINTAINED IN ACCORDANCE WITH MSHA, OSHA AND OTHER APPLICABLE REGULATIONS.
- N – NEVER SUBSTITUTE, MODIFY, ADD OR OMIT PARTS. USE ONLY EXACT REPLACEMENT PARTS IN THE CONFIGURATION AS SPECIFIED BY THE MANUFACTURER.
- O – REFER TO USER'S INSTRUCTIONS AND/OR MAINTENANCE MANUALS FOR INFORMATION ON USE AND MAINTENANCE OF THESE RESPIRATORS.
- S – SPECIAL OR CRITICAL USER'S INSTRUCTIONS AND/OR SPECIFIC USE LIMITATIONS APPLY. REFER TO INSTRUCTION MANUAL BEFORE DONNING.

### CAUTIONS AND LIMITATIONS OF USE FOR CBRN SCBA

- Q – USE IN CONJUNCTION WITH PERSONAL PROTECTIVE ENSEMBLES THAT PROVIDE APPROPRIATE LEVELS OF PROTECTION AGAINST DERMAL HAZARDS.
- R – SOME CBRN AGENTS MAY NOT PRESENT IMMEDIATE EFFECTS FROM EXPOSURE, BUT CAN RESULT IN DELAYED IMPAIRMENT, ILLNESS, OR DEATH.
- T – DIRECT CONTACT WITH CBRN AGENTS REQUIRES PROPER HANDLING OF THE SCBA AFTER EACH USE AND BETWEEN MULTIPLE ENTRIES DURING THE SAME USE. DECONTAMINATION AND DISPOSAL PROCEDURES MUST BE FOLLOWED. IF CONTAMINATED WITH LIQUID CHEMICAL WARFARE AGENTS, DISPOSE OF THE SCBA AFTER DECONTAMINATION.
- U – THE RESPIRATOR SHOULD NOT BE USED BEYOND 6 HOURS AFTER INITIAL EXPOSURE TO CHEMICAL WARFARE AGENTS TO AVOID POSSIBILITY OF AGENT PERMEATION.

### S—SPECIAL OR CRITICAL USER'S INSTRUCTIONS

ALL MODELS ARE APPROVED ONLY WHEN COMPRESSED AIR CYLINDER IS FULLY CHARGED WITH AIR MEETING THE REQUIREMENTS OF THE COMPRESSED GAS ASSOCIATION SPECIFICATION G-7.1, GRADE D AIR OR EQUIVALENT SPECIFICATIONS, OR MEETING CE EUROPEAN STANDARD EN 132. THE CONTAINER SHALL MEET APPLICABLE DOT SPECIFICATIONS.

AIRLINE RESPIRATORS CAN BE USED ONLY WHEN THE RESPIRATORS ARE SUPPLIED WITH RESPIRABLE AIR MEETING THE REQUIREMENTS OF CGA G-7.1, GRADE D OR HIGHER QUALITY, OR MEETING CE EUROPEAN STANDARD EN 132.

EXCEPT AS NOTED HEREIN, ALL MODELS OF THE SCOTT 2.2 OR 3.0 OR 4.5 ARE APPROVED FOR RESPIRATORY PROTECTION DURING ENTRY INTO OR ESCAPE FROM OXYGEN DEFICIENT ATMOSPHERES, GASES AND VAPORS, AT TEMPERATURES ABOVE -25° F / -32° C.

MASK SEAL KIT P/N 805655-01 IS REQUIRED IF A USER SEAL CHECK IS UNSATISFACTORY EITHER PER THE USER INSTRUCTIONS OR THE OSHA FIT TESTING PROCESS. THE MASK SEAL KIT IS PROVIDED WITH THE FULL FACEPIECE. THIS IS A NIOSH APPROVED COMPONENT TO ENHANCE THE FIT OF THE FACEPIECE.

WHEN USING FACEPIECE 803921-01, 803921-02, OR 803921-03 AT TEMPERATURES BELOW 32° F / 0° C ADD OPTIONAL NOSE CUP ASSEMBLY 802819-01.

WHEN THE PASS DEVICE ACCESSORY IS USED, CYLINDER AND VALVE ASSEMBLY 802827-01 OR 804107-01 (ONE HOUR FIBERGLASS WRAPPED CYLINDER) SHOULD NOT BE USED AS THE WEIGHT OF THE RESPIRATOR MAY EXCEED THE NIOSH LIMIT OF 35 LBS.

THE SCOTT COMMUNICATIONS DEVICES CAN ONLY BE USED WITH SCOTT FACEPIECES FITTED WITH DUAL VOICEMITTERS SUCH AS THE AV-2000.

TO USE THE DURATION EXTENDING ACCESSORIES, THE SUIT VENTILATION ACCESSORY (HOSE 803801-01 AND STRAP 804082-01) OR THE APPLIANCE ACCESSORY (HOSE 803801-02) THE RESPIRATOR MUST BE EQUIPPED WITH DUAL OUTLET REDUCER.

WHEN USING THE ACCESSORY HOSE ASSEMBLY TO EXTEND DURATION OF USE, REFER TO SCOTT OPERATING INSTRUCTIONS PART NUMBER 89167-01 FOR LENGTH OF HOSE AND AIR PRESSURE REQUIRED FOR OPERATION.

THE SUIT VENTILATION HOSE AND THE APPLIANCE HOSE MUST BE DISCONNECTED WHEN NOT UTILIZING THE DURATION EXTENDING SUPPLY HOSE, EXCEPT WHEN THE RESPIRATOR INCLUDES A ONE HOUR RATED CYLINDER (PART NUMBER 803624-01, 804106-01 OR 804255-01). WHEN A ONE HOUR RATED CYLINDER IS USED WITH NO DURATION EXTENDING AIR LINE TO SUPPLY A SUIT VENTILATION ACCESSORY, THE RESPIRATOR IS RATED FOR 30 MINUTES DURATION.

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