Donning Procedure

All personnel should practice donning the Self-Contained Breathing Apparatus (SCBA) while sitting in an apparatus and standing outside the apparatus. The following donning sequence is for outside the apparatus using the over the head method. This is the designated method for annual and performance testing. Prior to donning the harness, connect your issued mask regulator to the low-pressure air hose. Ensure all valves and switches are closed.

— Observe the cylinder gauge and give the reading out loud. The bottle should not be used unless it reads “FULL”.

— Turn the cylinder valve on by turning it counter-clockwise a minimum of three full turns. The Vibralert and Pak-Alert distress audible alarm momentarily sound as the system pressurizes.

DO NOT PLACE THE SCBA IN SERVICE IF THE ALARMS DO NOT OPERATE!

— Listen for the Pak-Alert distress audible alarm. Verbally acknowledge the PASS has activated.

— Spread the shoulder straps and open the winged waist support straps. Grasp the support members at the sides of the back-frame. Swing the unit up and over your head, making sure that elbows extend through the loop formed by shoulder straps. While leaning slightly forward, slide the unit down your back and pull on shoulder adjusting straps. Adjust the straps until the unit is snug.

— Grasp the waist straps and connect buckles. Next, grasp waist strap ends and adjust both sides until belt is firm on hips. Scott SCBA’s are designed to carry the weight of the harness at the hips. Readjustment of shoulder straps may be needed.

— Don the face piece using the following procedure.

— Hold the head harness out of the way with one hand while placing the facepiece on the face with the other hand. (Ensure that the chin is properly located in the chin-pocket of the facepiece).

— Pull the head harness over the head and ensure that straps are lying flat against the head and neck with no twists.

— Tighten the neck straps by pulling the two lower strap ends toward the rear of the head.

— Stroke the head harness net down the back of the head using one or both hands. Re-tighten the neck straps.
— Adjust the temple straps by pulling the two upper strap ends toward the rear of the head. Over tightening may cause discomfort. (This step may not be required if these straps have been preset by the wearer)

— Adjust the crown strap so that it is snug. Over tightening the crown strap will result in pulling the head harness up, resulting in an improper fit.

— Conduct a negative fit check by placing a hand over the regulator attachment area creating a seal over the opening. Inhale gently, and hold the breath for several seconds, so that the face piece collapses slightly. If the face piece remains slightly collapsed and no air leaks are detected, the tightness of the face piece is probably satisfactory. If a leak is present, the mask will return to its original position.

— Re-adjust straps until the face piece fits your face snugly with no leaks.

**Note:** All seal checks must be conducted before donning the hood and helmet. A negative fit check is **MANDATORY** and must be conducted every time a mask is applied.

— Grasp the hood and pull it over the head harness until it surrounds the mask without any gaps or skin showing. All harness straps should be inside the hood.

— Don your helmet and secure the chinstrap.

— Attach the regulator to the face piece by inserting the regulator with the purge valve in the 12 o’clock position and rotating the valve 90 degrees counter-clockwise until the regulator “clicks” into place. Next, take a breath to activate the system.

**Changing Air Cylinders**

Air cylinders can be changed both on the ground (one-person operation) and while wearing the SCBA (two-person operation). When changing air cylinders, firefighters should adhere to the following procedures:

— Push in and rotate cylinder valve clockwise to close.

— Bleed air from the regulator assembly using the Purge Knob.

— Disengage the cylinder retention strap by gripping the latch plate and lifting on the end of the latch. Pull both SNAP-CHANGE locks horizontally away from the pressure reducer to release the cylinder connector. Grasp the cylinder below the retention strap and lift the cylinder free from the back frame and remove.

— Inspect the High Pressure Seal in the high pressure inlet. If high pressure seal is damaged or missing, remove the respirator from service and tag for repair by authorized personnel.
Replace with a fully charged cylinder and valve assembly of the appropriate pressure rating. Verify that the replacement cylinder has protective cap installed on the CGA Fill fitting on the valve and that the cylinder connector is clean and free of dirt and debris.

Engage the cylinder SNAP-CHANGE by pushing the cylinder connector into the pressure reducer firmly until both SNAP-CHANGE locks click and lock. PUSH DIRECTLY ON THE CYLINDER VALVE TO ENGAGE.

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

**Doffing Procedure**

To doff the SCBA, first depress the donning switch and remove the mask regulator. Next, loosen lower mask straps on the face piece. To remove the harness, uncouple the waist belt and then loosen the shoulder straps. After the shoulder straps have been loosened, grasp them and remove one arm at a time. Turn the cylinder valve off and bleed off the system pressure by rotating the purge valve. Deactivate the PASS device. Remember the Pak-Alert distress alarm PASS device cannot turn off if there is pressure in the respirator. Please follow the maintenance, Section 703.00 - Component Inspection and Cleaning procedures before returning the SCBA back into service.

**Emergency Operation**

The following operations are to be used in emergencies only. If a component failure occurs, leave the contaminated area immediately! Emergency operations will reduce the duration of the air supply and may cause the intensity of the Vibralert to diminish and/or stop completely.

The pressure reducer does not have any manual controls; rather, a back-up system is automatically actuated if the primary reducer fails. When the back-up system is in operation, the Vibralert and HUD low air indicator are activated to warn the user. If the Vibralert and HUD low air indicator are activated and the cylinder pressure is greater than 1,800 psi, the primary reducer has failed. Leave the contaminated area immediately!

If the air supply is partially or completely cut off during use, or if you are unable to start the flow of air automatically, fully open the purge valve (red knob on regulator) by turning it counterclockwise. Opening the purge valve will deliver up to 225 liters per minute to the mask regulator. If the regulator should begin to flow freely into the face piece, fully open the purge knob and partially close the cylinder valve to regulate the flow of air to satisfy the requirements of the user. Again, if you have a failure with the SCBA, leave the contaminated area immediately!
The emergencies created by the malfunction of protective breathing equipment can have catastrophic consequences. The conservation of air and immediate withdrawal from the hazardous atmosphere are the keys to a successful self-rescue. The following is a list of suggestions that can make the difference in an emergency situation:

— Do not panic! Conserve air.

— Stop and think. How did you get to where you are? Upstairs, downstairs? Residential or commercial building?

— Listen - for other personnel and equipment.

— Find a way out:
  • Crawl in a straight line
  • Once in contact with a wall, crawl in one direction (all left-hand or right-hand turns)
  • Follow a hose line out if possible (male coupling is closest to exit, female is closest to the fire)

— Break a window

— Call out to others

— Activate your PASS device

— Depress the emergency button on the portable radio

Once the incident commander is aware of a lost, trapped or injured firefighter, the RIC system will be activated. Specific information on RIC can be found in the Emergency Operations Manual and are not included in this training chapter.

Firefighters should be aware that “buddy breathing” is not endorsed by NIOSH. Passing the SCBA face piece back and forth between two users is considered unsafe because highly toxic air contaminants can enter the face piece. Due to this inherent risk, all Department SCBA’s are equipped with a Dual EBSS manifold.
Rapid Intervention Crew (RIC)

Any emergency encountered on the fire ground can have fatal consequences. Upon any emergency, firefighter should activate the Rapid Intervention Crew (RIC) to assist in firefighter rescue. Specific information on RIC operations can be found in the Emergency Operations Manual and are not included in this training chapter. Escondido RIC personnel will have a RIC bag that contains a 75-minute bottle with a Dual EBSS manifold and RIC/UAC connection.

OPERATION AND USE OF EBSS

All of the Department SCBAs are equipped with a dual manifold Emergency Breathing Support System (EBSS). The EBSS includes an accessory hose with both male and female quick disconnects which may be used to either supply or receive air. Operation of the SCBA while giving or receiving EBSS requires specific training. How well the user handles an emergency situation will be directly related to the experience and training of that individual. The following steps should be used to establish EBSS operations:

1. The person requiring support must have either a quick connect mask regulator hose or a dual EBSS manifold. The person giving support must have a dual EBSS manifold on their harness or a RIC bag with a dual EBSS manifold.

2. When offering EBSS, at least ½ the full rated capacity of air must remain in the cylinder. Exit immediately, the SCBA air supply will last for what would equal to about 25% of the cylinder capacity.

3. Unclip and extend the dual EBSS manifold and accessory hose on both harnesses.

4. Remove the rubber protective cap from the dual EBSS manifold.

5. There are two methods of connection possible as follows:
   a. If the person requiring support does have a dual EBSS manifold, the two manifolds may be joined together either male-to-female or female-to-male. Once connected, air will immediately flow to both face pieces.
   
   b. If the person requiring support does not have a dual EBSS manifold, the firefighter must hold his breath and disconnect his mask regulator from his
low-pressure hose and connect it to the female side of the duel EBSS manifold on the support SCBA. While holding the female coupling behind the guard, insert the male portion of the low-pressure regulator hose into
the socket until engaged. Once engaged, there will be a sharp “click” which will indicate a proper connection.

6. Test the connection by lightly tugging on the couplings.

7. To disconnect hoses, push the low-pressure regulator hose into the socket, while pulling the locking sleeve back. The low pressure hose will now separate. **Warning:** When the dual EBSS manifold connects two firefighters, both firefighters will consume the lowest air cylinder first. When the air cylinder pressure drops to 1,800 psi, the low air alarm systems on both harnesses will activate. **The low air alarms will stop ringing to provide maximum air to the firefighter.** The air will continue to be supplied to both firefighters until the first air cylinder is depleted. **The air system will then transfer to the second air cylinder.** When the second cylinder has been sufficiently depleted, both low air alarm systems will again be activated. Under certain conditions, as in heavy respirations in unison, the Vibralert may be intermittent activating one or both face pieces.