



COMMAK FIRE DEPARTMENT TRAINING DIVISION



Commack Fire Department

CFD Probationary Firefighter Basic Lesson Plan Outline

Topic: Self Contained Breathing Apparatus SCBA 1

- **Location**
 - Station 2 Training Center
- **Level of Instruction**
 - Probationary FF
- **Equipment Needed**
 - Full PPE
 - SCBA
- **Instructors needed**
 - Minimum of 3 or more depending on class size. 1 IIC and 2 assistants
- **Resources Needed**
 - CFD Probationary FF manual
 - IFSTA FF1 manual
- **Terminal Objective**
 - Probationary firefighters given both lecture and hands on instruction will learn the nomenclature and workings of the SCBA and how to use it
- **Enabling Objectives**
 - Probationary firefighters will learn
 - The nomenclature of the parts on the SCBA harness
 - The nomenclature of the parts of the cylinder
 - The nomenclature of the parts of the facepiece
 - How all three aspects, harness, cylinder and facepiece work together
 - Air pressures/air flow
 - Alarms on the SCBA
 - How to don the SCBA
 - How to do emergency procedures
 - Reduced profile
 - Low profile

- Quick release
 - Swim maneuver
- **Lesson Outline:**
 - **Discussion**
 - Begin with cylinder and frame apart
 - Explain cost and care of the SCBA
 - Explain SCBA is “Self Contained Breathing Apparatus”
 - Give nomenclature (name) of all parts in this order
 - 5500 psi Cylinder
 - Metal Frame
 - Plastic housing
 - Straps - shoulder/waist/drag/ Cylinder
 - High pressure hose and coupling
 - PRA (pressure reducing assembly)
 - Pressure relief valve
 - UAC (Universal Air Connection) or RIC (Rapid Intervention Connection) – Same thing
 - Sensor Modules - Our term “Tail Lights”
 - Braided High Pressure Hose from PRA to remote pressure gauge
 - Electronics Cable going to remote pressure gauge from brain
 - Remote gauge
 - Low pressure hose from PRA to EZ-Flow 3 facepiece regulator
 - Quick Disconnect
 - EZ-Flow Facepiece Regulator
 - Facepiece
 - Thoroughly explain all the parts in same order how they work, what they do, how to use them
 - Cylinder
 - Pressure 5500 psi
 - What it’s made of - Carbon wrapped steel
 - Cylinder valve
 - Pressure gauge
 - Rubber protective bumper
 - Threads
 - Turn on – turn knob away from you about 3 full turns or 6 ½ turns
 - Turn off – Push in and turn so it cant get accidentally shut off
 - Cylinder clip – explain how it clips into frame

- Explain all the parts of the SCBA harness and frame and how they work
 - Metal Frame
 - Plastic Housing contains the brain for the pack, the batteries and the motion sensor for the PASS alarm
 - Shoulder straps – how to loosen/tighten
 - Waist straps – how to loosen/tighten
 - Drag Strap – what it can be used for
 - Cylinder strap

 - High Pressure hose & coupling
 - Show High pressure hose comes out of the PRA (pressure reducing assembly)
 - Show o-ring inside coupling that can get nicked causing a leak
 - Don't over tighten coupling to cylinder – hand tight only. No tools
 - PRA (pressure reducing assembly)
 - Reduces the pressure from 5500 psi coming in to it to roughly 100 psi coming out of it
 - Two stage assembly - explain
 - Can only fail in open position
 - If primary stage fails, sends more pressure to facepiece regulator causing vibralert – if you look at your remote pressure gauge and it says your cylinder is full and vibralert goes off get out
 - If both stages fail – vibralert goes off and air comes out of pressure relief valve. Get out
 - Pressure Relief Valve – lets out over pressure if system is over pressurized. Can be an over pressurized cylinder or failure of both stages of the PRA that cause this
 - UAC or RIC connection – universal air connection to trans fill a cylinder in an emergency
 - Sensor modules – “Tail lights” flash in different colors to let officer/partner know roughly how much air you have (explain colors of lights and what they mean when explaining HUD lights and pressures) This is also where the PASS alarm sound comes out from
 - Braided High Pressure Hose from PRA to remote pressure gauge takes air pressure reading from cylinder and shows it to you on the gauge +/- 200 psi

- Electronics Cable going to remote pressure gauge from brain brings power for lights in remote pressure gauge
- The Remote Pressure Gauge assembly always monitors your air supply so that you can see what you have in your cylinder. There are also multiple visual effects and buttons for emergencies on it as well
 - Parts
 - Gauge itself
 - Multi-colored light to illuminate gauge (explain colors of light when explaining HUD pressures and lights)
 - Battery sensor light
 - Signal Lights work in tandem with HUD lights and sensor module lights (explain colors of light when explaining HUD pressures and lights)
 - Red Manual Alarm Button manually activates the pass device (demonstrate)
 - Yellow Reset Button resets the pass device whether it went off because a FF went down or whether it was manually activated (demonstrate)
 - Gray Withdraw Button other side is for an accountability system we don't use it and it does nothing, causes no harm if you hit it for some reason
- The Low Pressure hose comes out of the PRA bringing approximately 100 psi to the EZ-Flow facepiece regulator
- The Quick Disconnect is used in emergencies for low/no air situations or facepiece regulator problems (demonstrate how to disconnect and reconnect)
- EZ-Flow Facepiece Regulator, referred to as just the Facepiece Regulator clips into your facepiece and completes the air assembly to your mask. Explain the demand valve which initially opens up to let air through it when you inhale and stays open until the donning button is depressed
 - Facepiece Regulator Parts
 - The Donning Button turns off air coming out of the facepiece regulator
 - The Purge Valve can increase air flowing out of the regulator into the mask to defog or give you more air into the facepiece should you be breathing to

heavy. Fully open air comes at roughly 35 psi. It is also used to drain the system of air when the cylinder is closed after use or empty after use.

- The Locking Clip secures the facepiece from rotating in either direction. Spring loaded slide clips inn automatically, needs to be pulled back to rotate the regulator from the facepiece
- The HUD or Heads Up Display is a series of lights that you will see from inside the facepiece telling you approximately how much air you have left in your cylinder
- The tan colored gasket seals the facepiece to the regulator so no air passes between the two
- The Facepiece is an AV3000 HT facepiece.
 - Parts:
 - Head Harness with straps to tighten goes over the back of your head
 - Lens Frame – holds the lens to the rubber gasket
 - Lens - made from polycarbonate and resists heat up to 400°F
 - Nose Cup is inside the facepiece and keeps the lens from fogging inside
 - Inhalation Valves are on top of the nose cup which allows the air to enter the nose cup
 - Voicemitter allows sound/voice to exit the facepiece
 - Install the cylinder on the frame
 - Turn SCBA on and explain how the air flows from the bottle to the facepiece and include the pressures
 - Explain the HUD lights and what they mean and how they correlate with the sensor lights on the remote gauge, the pressures on the remote gauge and the lights on the Tail Lights on the back of the frame.
 - Explain the PASS device how/why it activates, time to pre-alarm, time to full alarm. How to set off manually and how to reset it.
 - Explain the vibralert. When it goes off and why. Demonstrate the sound it makes

- **Hands On SCBA Assembly and Activation**
 - Break group up into smaller groups and separate them a good distance for noise reduction
 - Assemble the SCBA step by step explaining what you are doing and have the firefighters do each step at the same time as you
 - Return to one larger group again
- **Hands On Donning the SCBA**
 - Don the SCBA at regular speed including facepiece hood and helmet with no instruction. Note: don facepiece using one of the 3 methods the method you use regularly
 - Don the SCBA at a slow speed including facepiece hood and helmet explaining each step as you do it
 - Explain the 3 different methods of donning facepiece
 1. Arm through the chinstrap of the helmet and folding hairnet over lens. Don facepiece and hood and pull helmet over assembly onto your head
 2. Keeping hairnet in place and just pulling over head
 3. Preset straps in the rig. Keeping hair net in place pulling over head and tightening all straps down until facepiece is seated properly then loosening one of the lower straps and taking it off until you are ready to don before entry
 - Break firefighters up into groups with instructors again (same groups, same instructors)
 - Have firefighters don SCBA explaining each step to instructor in their group
 - Have firefighters actually go on air and let them get used to it for a while
 - Have firefighters practice multiple times until instructor feels confident in the level of comfort of the firefighter.
- **Hands On Emergency Maneuvers**
 - **Swim Maneuver**
 - Explain what situations could arise that they might need to do this
 - Perform the swim maneuver at regular speed with no narration
 - Perform the swim maneuver at slow speed explaining each step as you go
 - Have the firefighters do each step with you as you are explaining it until you feel confident the firefighter is comfortable with the maneuver
 - Have each firefighter perform the maneuver on their own

- **Quick Release**
 - Explain what situations could arise that they might need to do this
 - Perform the quick release at regular speed with no narration
 - Perform the quick release at slow speed explaining each step as you go
 - Have the firefighters do each step with you as you are explaining it until you feel confident the firefighter is comfortable with the maneuver
 - Have each firefighter perform the maneuver on their own
 - **Reduced Profile**
 - Explain what situations could arise that they might need to do this
 - Perform the reduced profile at regular speed with no narration
 - Perform reduced profile at slow speed explaining each step as you go
 - Have the firefighters do each step with you as you are explaining it until you feel confident the firefighter is comfortable with the maneuver
 - Have each firefighter perform the maneuver on their own
 - **Low Profile**
 - Explain what situations could arise that they might need to do this
 - Perform the low profile at regular speed with no narration
 - Perform the low profile at slow speed explaining each step as you go
 - Have the firefighters do each step with you as you are explaining it until you feel confident the firefighter is comfortable with the maneuver
 - Have each firefighter perform the maneuver on their own
- **Hands On Old Maze**
 - **Lights ON**
 - Pair one firefighter with one instructor
 - Instructor will lead student through maze with lights on in the building
 - Instructor will not have facepiece on, firefighter will
 - Follow hose explain “smooth bump bump” couplings
 - Instructor will be sure to monitor firefighters’ anxiety and breathing levels, talking to the ff regularly throughout the maze
 - Instructor queries firefighter throughout the maze on:
 - HUD lights/air supply,

- How many couplings have we passed,
 - How far in are we
 - Instructor works firefighters through the emergency maneuvers as needed
 - Instructor goes over everything when you are both out
- **Lights OFF**
 - Pair one firefighter with one instructor
 - Firefighter will now lead Instructor through maze with lights off in the building
 - Instructor will have facepiece on, firefighter will also
 - Follow hose, have FF explain “smooth bump bump” at the couplings
 - Instructor will be sure to monitor firefighters’ anxiety and breathing levels, talking to the ff regularly throughout the maze
 - Instructor queries firefighter throughout the maze on:
 - HUD lights/air supply,
 - How many couplings have we passed,
 - How far in are we
 - Instructor works firefighters through the emergency maneuvers as needed
 - Instructor goes over everything when you are both out
- **Discussion**
 - Go over everything they just learned and did. Ask about how they felt in the facepiece. Ask if they had any problems in the maze with anything. You must breed confidence in them wearing the SCBA. This is a “crawl before you walk, walk before you run” class. Do not overwork them to where they are getting worked up in the facepiece. If they need to rest in the maze, make sure you allow them too. Ruining somebody on a SCBA can be irreversible, they may never recover from it. Take your time and let them take their time. You must be cognizant at all times of their breathing levels, air consumption and anxiety levels. Teach them how to bring their breathing rate down naturally before it gets too high so it’s not too late.
Remember, do not force someone to do what they are not yet comfortable doing. Instead, build them up with confidence by making them comfortable slowly and methodically. Crawl before you walk, walk before you run.



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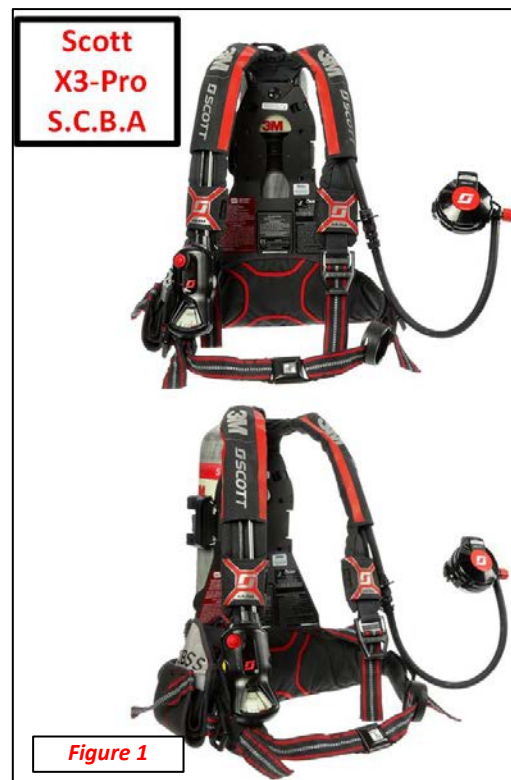


SCBA Self Contained Breathing Apparatus – 1

Introduction

SCBA class 1 is an introduction to the parts and the inner workings of the SCBA, learning how to don it and learning basic emergency maneuvers. There will be some hands on training and some discussion. The SCBA is the piece of equipment that finalizes the encapsulation of protection in a fire. This is what gives you the ability to breathe in a fire. This means that the care and knowledge of this piece of equipment should be of the highest priority at the highest level of training in your time as a firefighter. The SCBA is the only thing that stands between your lungs and the smoke and heat of a fire. There are many redundant systems built into it to help protect you which means you must have complete and total knowledge of how it works and what it does to get you through an IDLH environment. By not being proficient with the SCBA you are putting not only your life at risk, but the lives of every other firefighter on the fireground every time you wear it. This means it must be trained with on a regular basis. This is a very expensive piece of equipment and should be treated with extra care, because your life depends on it, literally.

- The Scott X3 Pro SCBA (Fig.1) is what we use in the Commack Fire Department. In the past we have moved away from Scott SCBA's and went to another brand. It was extremely unreliable so we came back to Scott, and likely will never leave, sometimes you get what you pay for. In the first segment we will go over all the parts of the SCBA and what they do to work in conjunction with each other to deliver air to the facepiece and eventually your lungs



- **The Cylinder**

- Description - the cylinder we use is a 45 minute carbon wrapped steel cylinder. The air inside is compressed to 5500 psi.

- Parts

- Cylinder – the bottle that holds the compressed air (Fig.2) (Fig.3)
- The Valve – gets screwed into the bottle with a torque wrench, has an on/off knob that gets turned to operate. To turn the cylinder on, you just turn the knob three full turns or 6 half turns. It is spring loaded so to turn it off, you need to push the knob in and then turn it. If you do not push in and turn, it will not rotate. This helps keep the valve from accidentally getting turned off while working
- The Cylinder Clip – or hanger bracket is a clip that is around the neck of the cylinder that attaches it to the frame of the SCBA working in conjunction with the cylinder strap on the frame
- The Burst Disc is a pressure relief valve to keep the cylinder from being over pressurized when filling
- Pressure Gauge – gives you the current pressure in the cylinder
- Bumper Guard - protects the gauge
- Threaded Nozzle - is where the high pressure coupling from the pressure reducing assembly attaches giving the air to the SCBA assembly



Figure 2

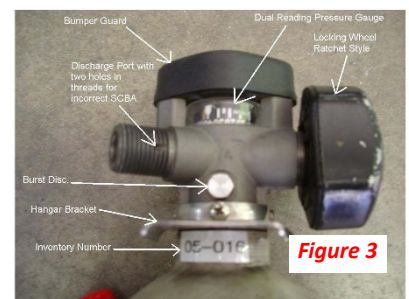


Figure 3

- **The SCBA Frame and Assembly (Fig.4)**

- The SCBA Frame is the backbone of the assembly. It's made of steel and it is what everything gets mounted too.

- The Frame holds the following parts from top to bottom

- Shoulder Straps which go over your shoulders and tighten by pulling down on the tail ends
- The Remote Pressure Gauge assembly always monitors your air supply so that you can see what you have in your cylinder. It is located on the right shoulder strap. There are also multiple visual effects and buttons for emergencies on it as well (Fig.5)

- Remote Gauge Parts

- Gauge itself
- Multi-colored light to illuminate gauge, it will be green when cylinder is ¾ to full, yellow at a half, red at a 1/3 of a cylinder
- Battery sensor light
- Signal Lights work in tandem with HUD lights and sensor module lights.

- Red Manual Alarm Button manually activates the PASS device
 - Yellow Reset Button resets the PASS device whether it went off because a FF went down or whether it was manually activated
 - Gray Withdraw Button other side is for an accountability system we don't use it and it does nothing, causes no harm if you hit it for some reason
- EZ-Flow Facepiece Regulator (Fig.6) referred to as just the Facepiece Regulator clips into your facepiece and completes the air assembly to your mask. It is located on the left shoulder strap. It contains a demand valve inside which initially opens up to let air through it when you inhale and stays open until the donning button is depressed to close it
 - Facepiece Regulator Parts
 - The Donning Button turns off air coming out of the facepiece regulator
 - The Purge Valve can increase air flowing out of the regulator into the mask to defog or give you more air into the facepiece should you be breathing to heavy. Fully open, air comes out of a spray bar inside the regulator at roughly 35 psi. It is also used to drain the system of air when the cylinder is closed after use or empty after use.
 - The Locking Clip secures the facepiece from rotating in either direction. A spring loaded slide tab automatically clips in to the slot for it on the facepiece when you rotate the regulator to install and needs to be pulled back to rotate the regulator out of the facepiece to remove
 - The Gasket around the regulator is tan in color and seals the facepiece to the regulator
 - The HUD or Heads Up Display (Fig.8) is a series of lights that you will see from inside the facepiece telling you approximately how much air you have left in your cylinder.
 - 1 red light is a low battery on the HUD
 - 2 green lights is between $\frac{3}{4}$ and full
 - 1 green light is between $\frac{1}{2}$ and $\frac{3}{4}$

- 1 slowly flashing yellow between a 1/3 and 1/2 of a cylinder
 - 1 red light flashing rapidly less than a 1/3 of a cylinder (Fig.8)
 - Vibralert activates at 1/3 of a cylinder left
- Drag Strap is located at the top of the frame and can be used in dragging a down firefighter (Fig.4)
- The Plastic Housing contains the brain for the pack, the batteries and the motion sensor for the PASS device
- PASS Device senses the motion of the firefighter and it goes into pre-alert when it senses no motion for 20 seconds. At that time, the PASS device will signal a pre-alert alarm. When a pre-alert occurs, the green flashing light on the remote gauge changes to red and is accompanied by an audible alarm. If the user is not in need of assistance, movement of the SCBA normally resets the pre-alert. When reset, the red light returns to green, and the audible alert goes silent. If the user is incapacitated or in need of assistance and cannot move, the PASS device will go into full alarm 8-10 seconds after the pre-alert starts. A loud universal alarm will sound, accompanied by the flashing of the red signal lights on the control console, HUD and harness indicating full alarm. The full alarm condition can only be cleared by manually pressing the yellow reset button located on the side of the control console *twice*. This will silence the alarm and the red light will return to green flashing once per second. The unit has now returned to an automatic mode. The red button the remote gauge can also activate the PASS alarm to full immediately and can be reset by depressing the yellow reset button twice. (Fig.5)
- Cylinder Strap. The cylinder strap secures the cylinder to the frame. The cylinder slides under it and is clipped down (Fig.4)
- Sensor Modules – “Tail lights” flash in different colors to let officer/partner know roughly how much air you have and coincide with the HUD light colors. This is also where the PASS alarm sound comes out from (8-A)
- Waist Strap is around the bottom of the frame, it gets buckled in the center of your body and tightened down by pulling on the tails inward toward the center buckle
- Pressure Reducing Assembly (PRA) (Fig.7) is situated on the frame of the SCBA at the bottom. The cylinder gets attached to it by its high pressure hose coupling. When the cylinder is connected and the knob turned on, it takes the cylinder pressure from 5500 psi and reduces it to roughly around 100 psi coming out of the facepiece regulator. There are two

stages inside the PRA, a primary and a secondary. The PRA can only fail in open position, so even if it fails you will always have air. If primary stage fails, it will automatically direct air into the secondary system. The operating pressure reduces to 150 psi sending more pressure to facepiece regulator causing it to go into vibralert – if you look at your remote pressure gauge and it says your cylinder is full and vibralert goes off, leave the IDLH immediately. If both stages fail, vibralert goes off and air all pressures above 185 psi comes out of pressure relief valve, leave the IDLH immediately.

- Parts of The PRA

- High Pressure Hose and coupling come out of the right side but connect on the left side. This coupling is what connects to the threaded connection on the cylinder.
- The Pressure Relief Valve is connected to the PRA on the left side. It lets out over pressurized air if the system is over pressurized. The system can become over pressurized either by the cylinder or failure of both stages of the PRA.
- The UAC or RIC Connection – Universal Air Connection is also located on the left side of the PRA. It is used to trans fill a cylinder in an emergency from RIT pack.
- The Low Pressure Hose comes out of the to left side of the PRA and goes up through the right shoulder strap to the facepiece regulator. It has a quick disconnect about 2/3 of the up that can be used in an emergency to do a facepiece regulator swap.
- The Braided High Pressure Hose comes out from the right side of the PRA and goes up the through the right shoulder strap to remote pressure gauge. It Shows you the air pressure reading from cylinder on the gauge within +/- 200 psi
- The Electronics Cable comes out of the plastic housing from the brain to the Remote Pressure Gauge and runs inside the right shoulder strap as well
- Cylinder Clip is where the attaches to the frame of the SCBA

- The Facepiece is an AV3000 HT facepiece. (FP-1)

- Parts:

- Head Harness with straps to tighten goes over the back of your head

- Lens Frame – holds the lens to the rubber gasket
- Lens - made from polycarbonate and resists heat up to 400°F
- Nose Cup is inside the facepiece and keeps the lens from fogging inside

- Inhalation Valves are on top of the nose cup which allows the air to enter the nose cup
- Voicemitter allows sound/voice to exit the facepiece

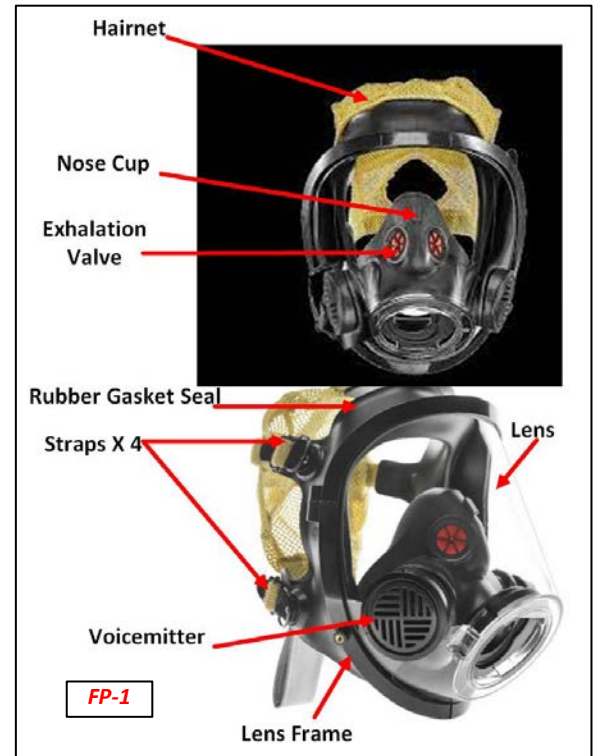


Figure 4





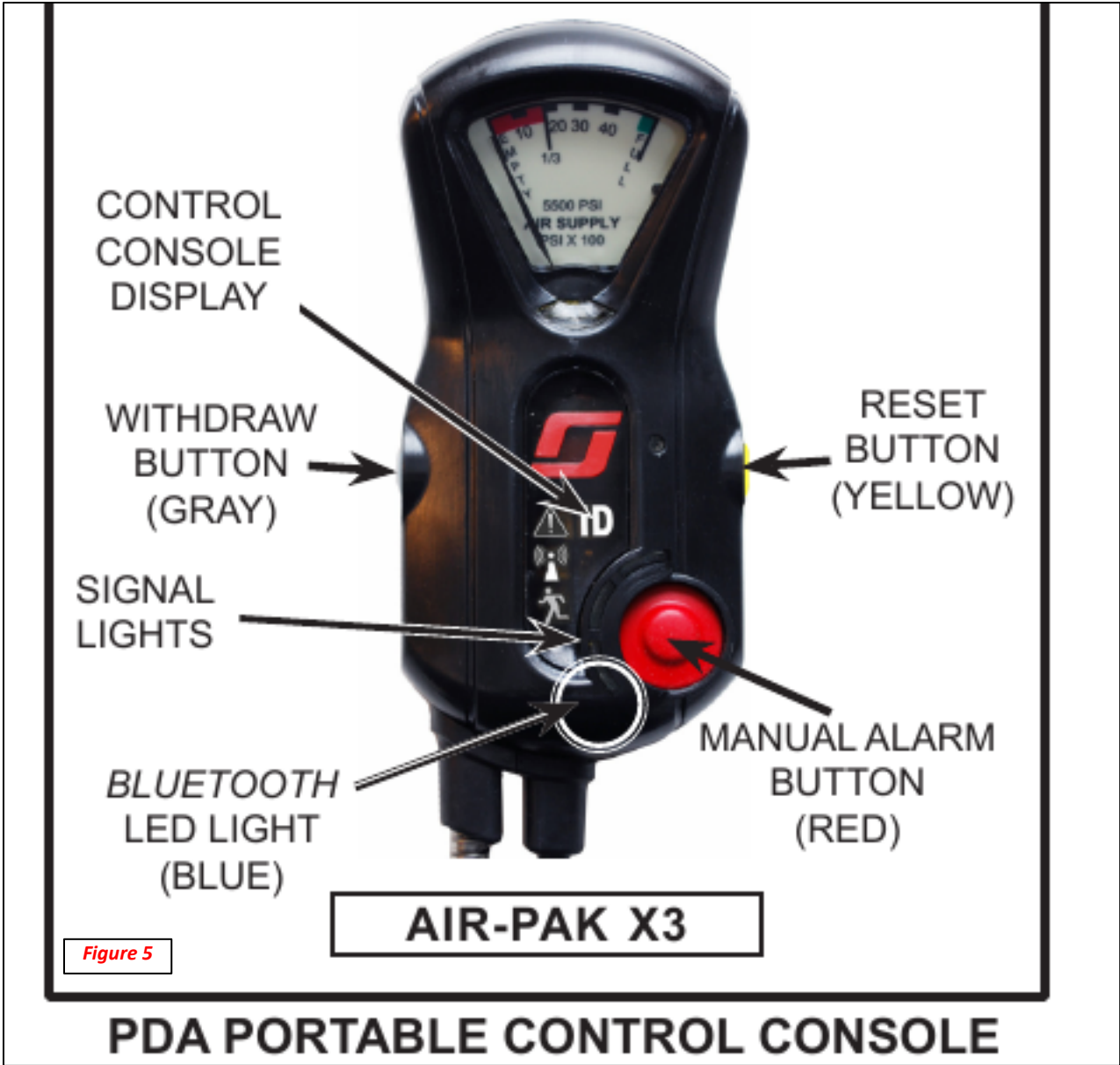
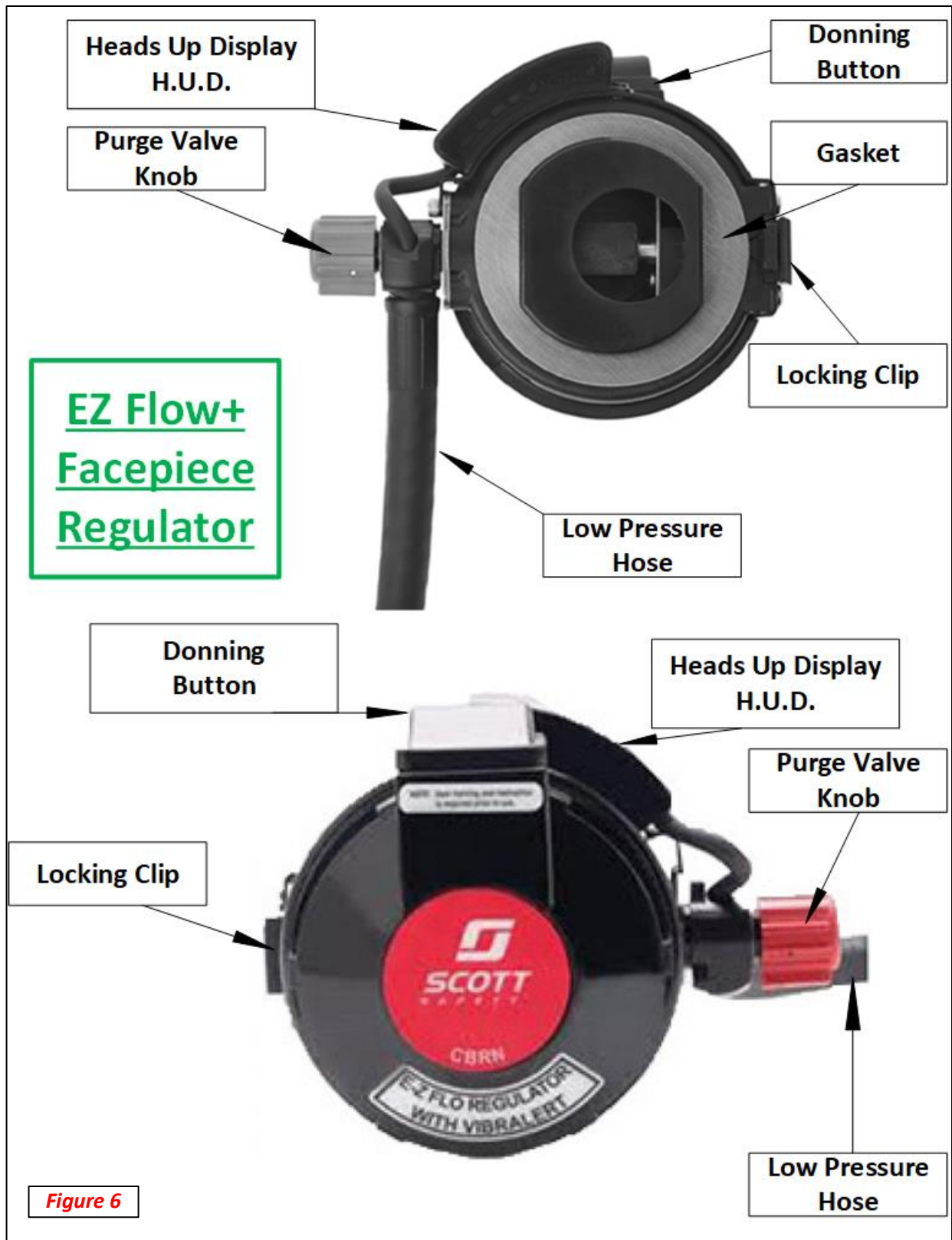


Figure 5







Pressure Reducing Assembly

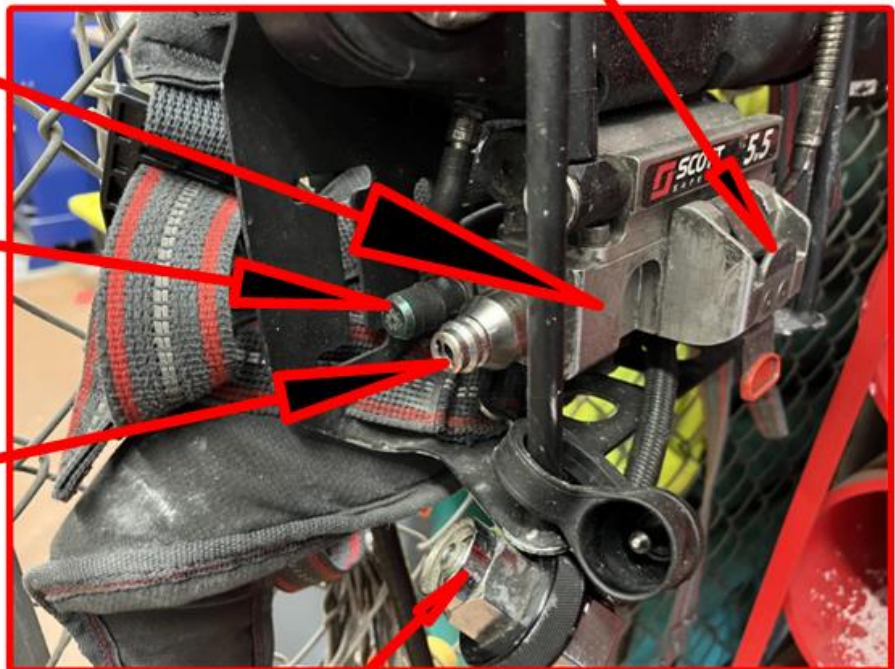


Cylinder Clip

PRA

Relief Valve

UAC
RIC



High Pressure Hose Coupling

Figure 7



Figure 8

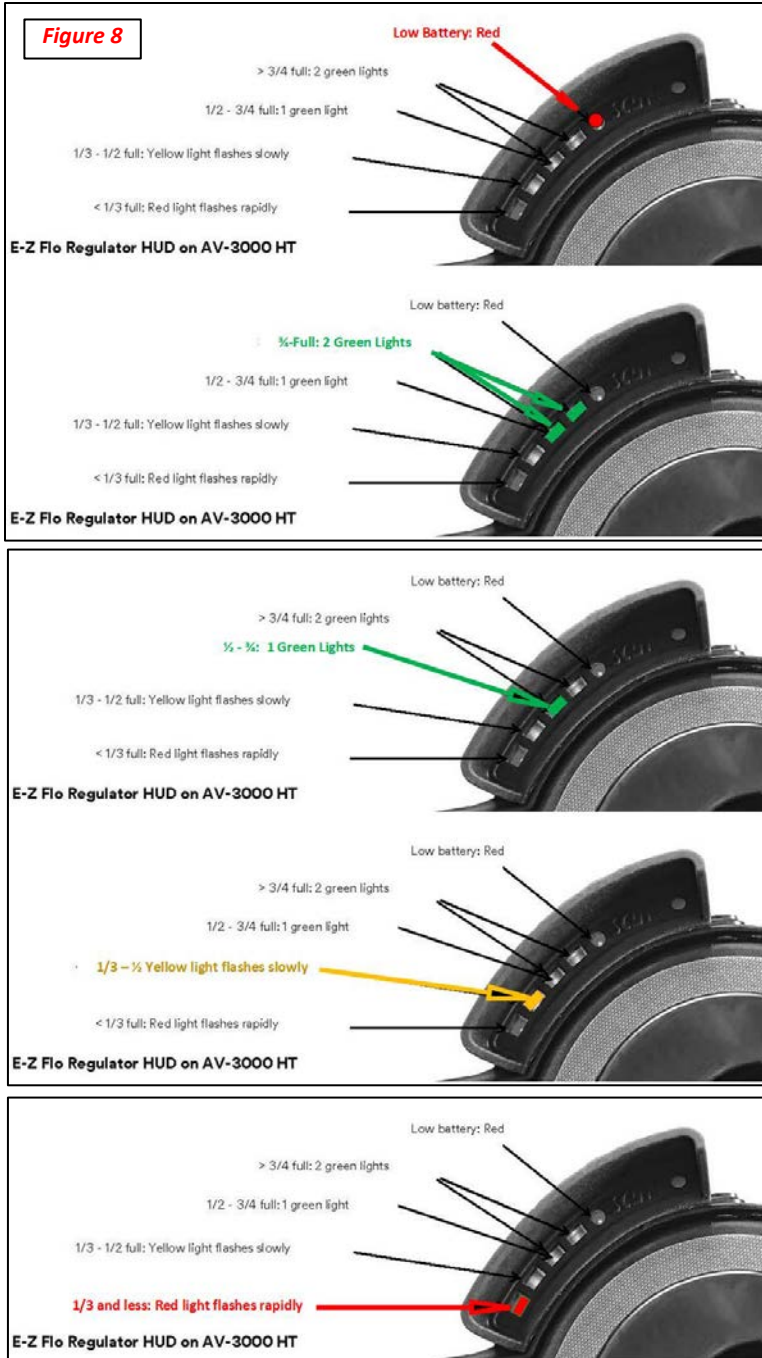


Table 1-2: Operation of Sensor Module Lights

ACTION OR SITUATION	BEHAVIOR OF LIGHTS	8-A
Start Air-Pak SCBA (i.e., open cylinder valve)	Bright light, then flashing green light	
Normal operation	Flashing green light	
Air cylinder between 1/2 and 1/3 full	Flashing yellow light (2 quick flashes) every second	
Air cylinder less than 1/3 full (low air)	Flashing yellow light (alternately)	
Low battery while unit is on	Flashing yellow light once every 2 seconds	
Shut down	Off	
Press reset button on control console with unit off (battery test)	Good battery: Bright light, then flashing green light Low battery: Bright light, then flashing red light	
Press manual alarm button on control console with unit off	Flashing red light (simultaneously)	
Press reset button on control console during full alarm	Flashing green light	
PASS pre-alarm	Flashing red light (alternately)	
PASS full alarm	Flashing red light (simultaneously)	



- **Assembling the SCBA**

- Begin placing the SCBA frame on the ground with the PRA side facing you
- Attach the cylinder by sliding the top of the cylinder up ward through the cylinder strap with the clip on the cylinder facing down and the threaded nipple to the left. (A-1)
- Align the cylinder clip on the on the cylinder with the cylinder receptacle clip on the frame/PRA and push down. The cylinder will snap into place.
- Attach the high pressure hose coupling onto the threaded nipple of the cylinder hand tight.
- Snap the cylinder strap clip down to tighten the cylinder to the frame
- Ensure that the donning button is depressed and that the purge valve knob is closed
- Rotate the cylinder knob clockwise away from you 3 full turns or 6 half turns to fully open the valve
 1. Your SCBA is now filled with air and the electronics have come on, the vibralert in the facepiece regulator will have activated briefly and you will hear three beeps from the PASS device to let you know everything is working properly and is ready to don. Should you hear anything other than the 3 beeps such as a steady chirp, something isn't right, the chirps will be a low battery.
- Using your left hand, place the facepiece regulator into the facepiece by aligning the male slot on the regulator with the female slot on the facepiece and inserting it in the hole. When you are aligning the facepiece regulator with the facepiece, when you keep the purge knob facing up, this aligns the slots and the regulator goes right into the facepiece. Turn the regulator counterclockwise until the locking clip automatically clips in, you will hear this happen when it reaches that point. (A-2)



- **Donning the SCBA**

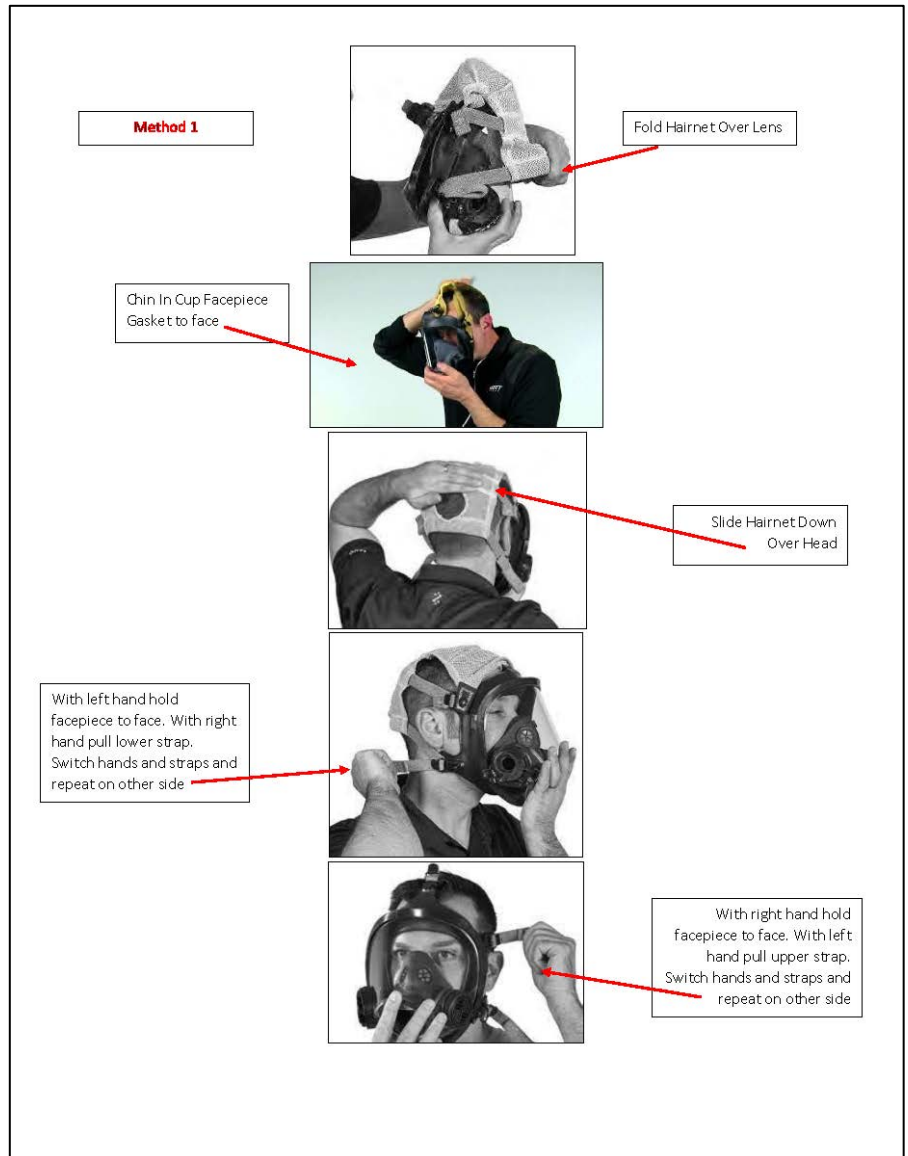
- Steps – Standing Position

1. Lay the entire SCBA on the ground with the cylinder down and back of the back frame facing up. The orientation should be the top of the cylinder and shoulder straps nearer to your feet.
2. Ensure that the shoulder straps, waist straps and low pressure hose with regulator are free of entanglement
3. Bend down and grasp the shoulder straps with both hands with the left strap in the left hand and right strap in the right hand.
4. Stand back up straight. The SCBA cylinder top should be somewhere around crotch height
5. Look around you to make sure no one is near so that when you swing the SCBA on you don't hit anyone with it
6. With your hands on the shoulder straps, swing the entire SCBA over your left shoulder keeping your left hand on the strap and allowing your right hand to let go and slip inside the right shoulder strap as the SCBA goes around your back
 1. Imagine yourself putting on a jacket. It is the same thing
7. Now that the SCBA is on your back, bend slightly at the waist and snug up the shoulder straps by pulling down on the tag ends
8. Stand straight again, buckle the waist strap and tighten them down fully by pulling the tag ends in towards the buckle
9. Slightly loosen the shoulder straps so that the majority of the weight of the SCBA is now sitting on your hips

- **Donning the Facepiece**

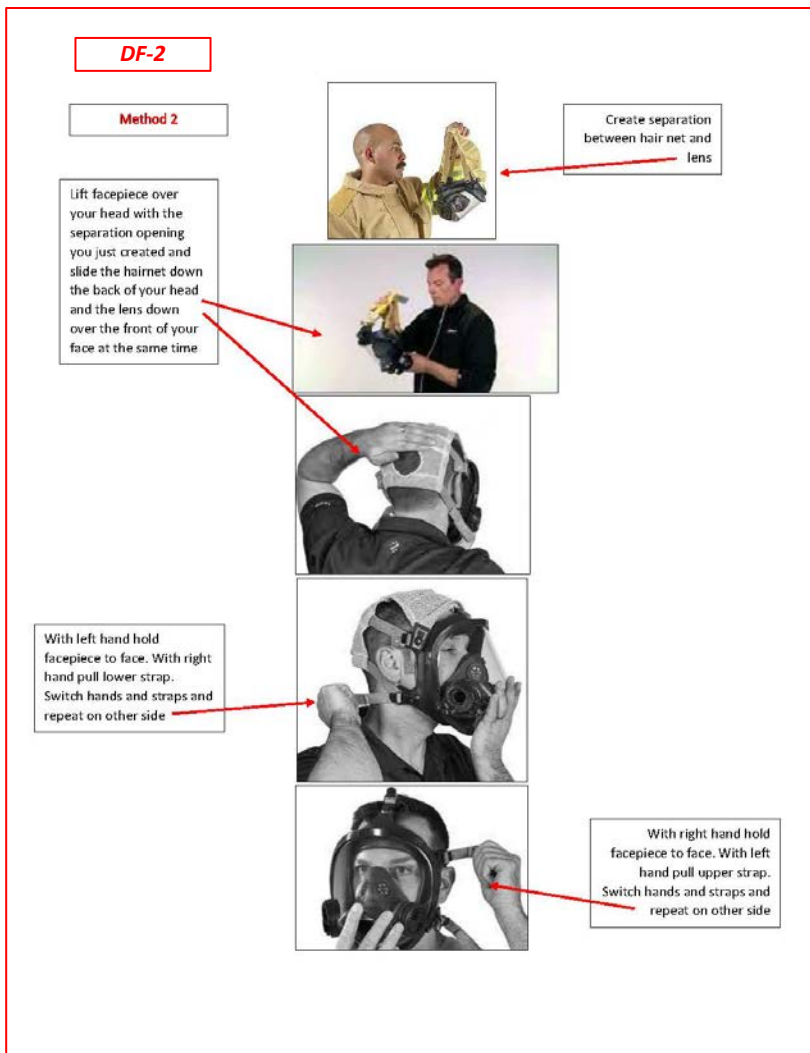
- Steps Method 1 (DF-1)

1. Fold hair net over the front of the lens
2. Place chin inside chin cup of facepiece and press entire facepiece over your face
3. Pull the the hairnet over your head and slide down over the back of your head keeping it centered
4. With left hand hold facepiece to face. With right hand pull lower strap until snug. Switch hands and straps and repeat on other side
5. With right hand hold facepiece to face. With left hand pull upper strap until snug. Switch hands and straps and repeat on other side
6. With both hands fully tighten bottom straps at the same time
7. With both hands fully tighten top straps at the same time
8. Fully cover facepiece regulator opening and inhale to check for a good seal



○ Steps Method 2(DF-2)

1. Holding the lens portion in your non dominant hand and the hairnet in your dominant hand, create separation between the two
2. Lift facepiece over your head with the separation opening you just created and slide the hairnet down the back of your head and the lens down over the front of your face at the same time
3. With left hand hold facepiece to face. With right hand pull lower strap until snug. Switch hands and straps and repeat on other side
4. With right hand hold facepiece to face. With left hand pull upper strap until snug. Switch hands and straps and repeat on other side
5. With both hands fully tighten bottom straps at the same time
6. With both hands fully tighten top straps at the same time
7. Fully cover facepiece regulator opening and inhale to check for a good seal



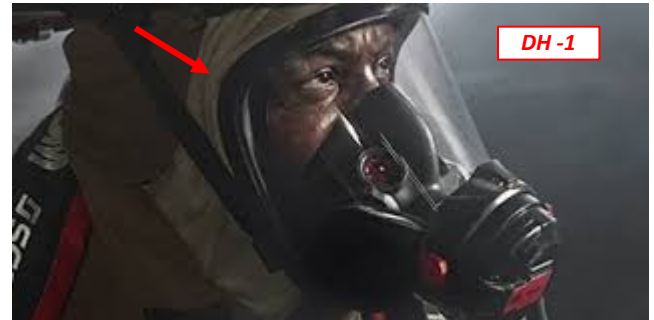
○ Steps Method 3 (DF-3)

1. Don facepiece using either method 1 or 2 in the rig enroute to the call
2. When complete, fully loosen your dominate hand lower strap and remove facepiece
3. When re-donning at the scene, pull the entire mask over your head and pull the one strap you loosened, tight

- **Donning Your Helmet and Hood**

- Method 1

1. With your helmet chinstrap buckled, slide your left hand in between the helmet and chinstrap from the front of the helmet and let it hang on your arm in the crook of your elbow
2. Don the facepiece using one of the 3 methods previously described
3. With your left hand insert the facepiece regulator into the facepiece as previously described.
4. Pull your hood over your facepiece with the elastic portion in the gap between the rubber gasket and lens frame all the way around the facepiece (DH-1)
5. Slide your helmet off your arm, up along the low pressure hose and on to your hand
6. Tighten down still buckled chinstrap
7. Insert facepiece regulator



- Method 2

1. Take a knee and place your helmet between your legs on the ground with its chinstrap unbuckled
2. Don the facepiece using one of the 3 methods
3. Don the hood over the facepiece as previously described
4. Place helmet on top of head
5. Buckle and tighten down chinstrap
6. Insert regulator into facepiece

- **Emergency Maneuvers**

- In the following section, we will explain the 4 emergency maneuvers that all firefighters must know for survival in emergency situations.

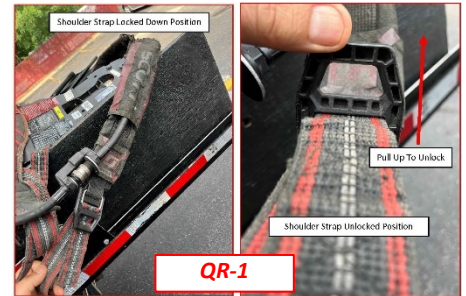
1. The Quick Release
2. The Reduced Profile
3. The Low Profile
4. The Swim Maneuver

- The Quick Release (QR-2)

- This technique is used for times when you get entangled in wires or anything that may be holding you up that is hooked onto your SCBA. The idea is to remove your SCBA from your body while still holding onto it and clear whatever is entangled in your SCBA

- Steps

- 1) Backs up to see if entanglement falls off



- 2) Try to remove it with right then left hands

- 3) Fully loosens both waist straps

- 4) Unclip waist strap buckle (QR-1)

- 5) Loosen your right shoulder strap completely by pulling up on the strap tabs

- 6) Remove your right arm from right shoulder strap

- 7) Place your left hand high on the left shoulder strap

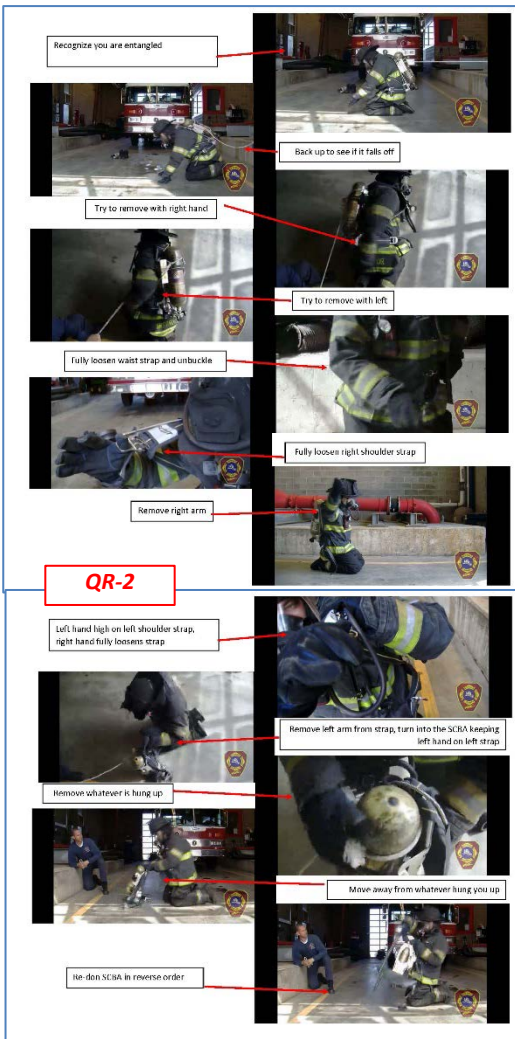
- 8) Use your right hand to fully loosen left shoulder strap

- 9) Turn into the SCBA turning your body, not the SCBA as you remove your left arm from the strap until it is in front of you. Never take your left hand off the left shoulder strap

- 10) Get yourself free of entanglement

- 11) Back up away from the entanglement

- 12) Re-don the SCBA in reverse order

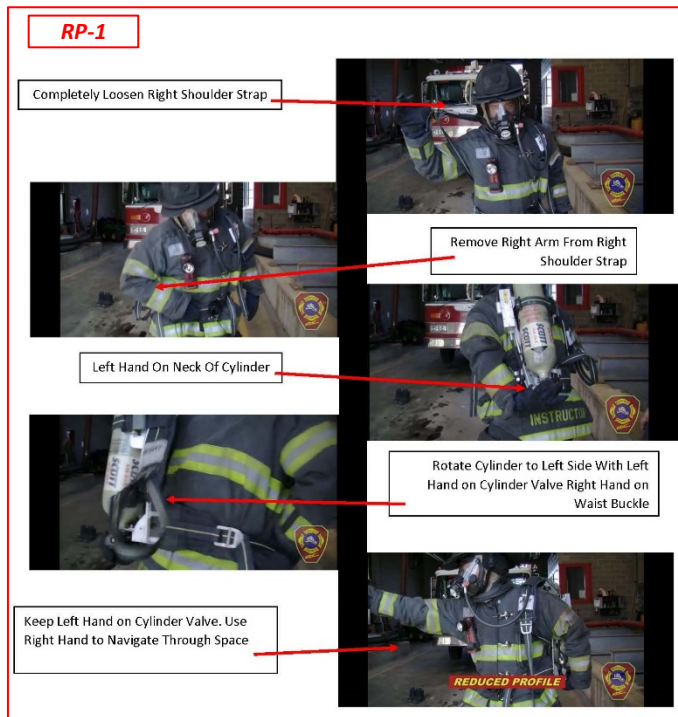


○ The Reduced Profile (RP-1)

- The reduced profile is a technique we use for times when we need to do exactly what the name implies, reduce our profile. If we need to slip through a tight vertical opening such as through wall studs or anything where the path we have to travel is too skinny for us to go through with our shoulders squared up.

- Steps

- 1) Loosen right shoulder strap completely and remove your right arm
- 2) Place right hand on waist strap buckle and your left hand behind you goes to the neck of the cylinder
- 3) Pulling your waist strap with your right hand and the cylinder neck with your left, you're



- going to rotate the SCBA to your left side, almost under your armpit
- 4) Trying to keep your left hand on the cylinder to adjust its position if needed, go through whatever obstacle or space it is that you have to reduce through
- 5) Once through the obstacle, reverse the order and directions
- 6) Pull your waist strap with your right hand and push the cylinder neck with your left, you're going to rotate the SCBA back to your right into its regular position
- 7) Put your right arm back through the strap
- 8) Tighten right shoulder strap back down

o The Low Profile (LP-1)

▪ This maneuver is done when we need to get through a small horizontal opening such as a ceiling or roof collapse. In this move, the SCBA comes off of our bodies completely with the exception of the facepiece and we push the SCBA out in front of us while crawling on our bellies.

▪ Steps

- 1) Loosen both waist straps completely
- 2) Unbuckle the waist straps
- 3) Loosen the right shoulder strap completely
- 4) Remove your right arm
- 5) Place your left hand as high up as you can on the left shoulder strap and loosen the left shoulder strap completely with your right hand.
- 6) Take the SCBA and place it on the floor in front of you, cylinder down. Do not let go of the left shoulder strap with your left hand.
- 7) Lay on your stomach pushing the SCBA out ahead of you on the floor. Should the SCBA or you get tangled up in anything, make sure you keep your left hand on the left shoulder strap at all times using only your right hand to free yourself or the SCBA from any obstructions
- 8) Once you clear the hazard, redon the SCBA in reverse order
- 9) From a kneeling position, swing the SCBA over your shoulders in a jacket fashion bending at the waist at the same time so that all the straps have a better chance of falling into place for re-donning.
- 10) Pull down the right shoulder strap to tighten
- 11) Pull down the left shoulder strap to tighten
- 12) Clip the waist strap buckle
- 13) Tighten the waist straps



- The Swim Technique

- This technique is the fastest way to go through a tight opening such as in the event that you have to breach a studded sheetrock wall. Once you have the opening in the wall big enough, you want to follow these steps
- Steps
 1. From your knees, sound the floor on the other side of the wall with your hand or tool
 2. Reach through the opening with your right hand and stick your head through at the same time
 3. Reach over your head and through the opening with your left hand and arm. As your left armpit makes it through, rotate your body back to straight. Doing so will rotate the top of your cylinder into and through the opening as well
 4. Use your arms and legs to pull yourself through and crawl through the opening

- **Summary**

Your SCBA is your lifeline in a fire. It is the only piece of equipment that protects your lungs in a fire. As durable as it is, it can also be delicate and should be treated the way you would treat anything that you need to survive in a fire. Knowing what every single part of it is called keeps everyone on the same page should an emergency occur and you have to communicate with your partner on what piece of your SCBA is hung up on something. Using phrases like "I'm stuck on the little valve thing" is probably not going to work when the chips are down.

Knowing how the SCBA works is just as important in the event you or your partner has a problem. If you don't know how it works, there is absolutely no way you will be able to diagnose what the problem is and fix it.

Donning the SCBA, the facepiece and hood and helmet is something that takes little or no effort to practice. You should practice often and eventually move up to doing it with your gloves on. Being able to don the facepiece with gloves on will save you time at the front door but will also help you out when you go to do any of the emergency maneuvers.

If there comes a time that you have to use an emergency maneuver, you will not be able to take your gloves off to do so, unless you want to lose your hands to burn injury which will render them useless even with your gloves off. Practicing with gloves on is a must when it comes to the emergency moves.

You must be adept, and you must practice all the emergency maneuvers on a regular basis. The more you do the better you'll be and the more time you spend practicing is

equal to less time you spend doing it in an emergency. Once again these moves are perishable skills, the problem is if you let them perish, it could cause you to perish. Inspect the SCBA's in your rigs often, not just when you have a rig check, the more you do, the better off you'll be in the long run decreasing your odds of having a problem with one breaking down on a fire scene. Anything mechanical can and will break eventually but you would much rather catch it on the rig than in a burning building. Take care not to drop them or throw them around, yes they're tough but again, anything can break.

Finally, the SCBA is without question the most important piece of equipment we carry. Practice with it, care for it and use it like your life depends on it...Because it does.



COMMAK FIRE DEPARTMENT TRAINING DIVISION



Practical Skills Checklist – SCBA 1

Name:	Badge:	Date:
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Task: Donning PPE & SCBA	Satisfactory	Unsatisfactory
Don's turnout gear		
Checks / prepares SCBA		
Dons SCBA in approved manner		
Dons & secures face piece		
Dons hood in proper manner		
Dons helmet and chin strap & gloves		
Completes task in two minutes or less		

Comments

Task: Perform the Quick Release	Satisfactory	Unsatisfactory
Properly transmits a MayDay		
Backs up and tries to remove entanglement		
Fully loosens both waist straps		
Unclips waist strap buckle		
Fully loosens right shoulder strap		
Removes right arm from right shoulder strap		
Places left hand high on left shoulder strap		
Uses right hand to fully loosen left shoulder strap		
Turns into the SCBA		
Removes entanglement		
Backs up away from hazard		
Re-dons SCBA in reverse order		

Comments

Task: Perform Reduced Profile	Satisfactory	Unsatisfactory
Properly transmits a MayDay		
Fully extend and remove right shoulder strap		
Place right hand on buckle and left hand on neck of the cylinder		
Shift the SCBA to the left side		
Uses right hand as a guide and left maintains cylinder contact		
Drops right shoulder and re-dons SCBA		
Comments		

Task: Perform the Low Profile	Satisfactory	Unsatisfactory
Properly transmits a MayDay		
Fully extend and release waist strap		
Fully extend and remove right shoulder strap		
Grabs High with the left hand on left strap		
Fully extend left shoulder strap with right hand		
Swings SCBA towards the front with cylinder in on the ground		
Takes a prone position and navigates obstacle		
Maintains contact with left hand on left strap		
Re- Dons SCBA in reverse order		

Comments

Task: Perform the Swim Maneuver	Satisfactory	Unsatisfactory
Properly transmits a MayDay		
Sounds floor on other side of opening		
From knees places right hand on floor on other side of opening		
Head through the opening		
Left hand/arm up over and through the opening		
Rotates body and cylinder through the opening		
Crawls through		

Comments

Evaluator:	Date:
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Overall Performance	Satisfactory	Unsatisfactory
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SCBA Class 1

Written: 9/2022

Version #1

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