MAX AIR® CAPR® TRAINING PROGRAM
CUFF SYSTEM
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WARNINGS

- **MAXAIR® Systems** are not intended for use in atmospheres immediately dangerous to life or health (IDLH), including explosive atmospheres where intrinsic safety is required for safe operation of electronic equipment.
- **MAXAIR sensor LEDs** indicate when it is no longer able to maintain adequate protection for the user. When so indicated, failure to exit immediately to a safe area may be hazardous to the user’s health.
- The use of **MAXAIR Systems** in an alarm condition is only for immediate exit to a safe environment.
- Do not use **MAXAIR Systems** near flame or other heat sources.
- **MAXAIR Systems filters** are not for use against oily particulates (paint mist, oil mist, detergents).
- Damaged and worn Filters must be replaced immediately.
- Never attempt to repair a damaged Hood, Cuff, Shroud, Filter Cartridge, or Filter Cover/Cap.
- Never use compressed air to clean **MAXAIR Systems** or Filters.
- All **MAXAIR Systems Filter/Helmet configurations** must be configured as described herein to maintain compatibility with NIOSH approval.
CAUTIONS

• The purchaser/user is responsible for determining the appropriateness of their MAXAIR Systems for each/any of their particular applications and environments.

• All filters used with MAXAIR Systems have a finite useful life which is affected by:
  – The amount of contaminants in the air.
  – The type of contaminant in the air.
  – The amount of time the filter is exposed to the atmosphere.

• Used properly, MAXAIR Systems protect against airborne particulates at the level specified per the NIOSH label on the Filter/Filter Cartridge chosen for use.
GENERAL USER PRECAUTIONS

- MAXAIR Systems are NOT intended for use in atmospheres IMMEDIATELY DANGEROUS TO LIFE OR HEALTH (IDLH)
- MAXAIR Systems are not intended for use in explosive atmospheres where intrinsic safety is required for safe operation of electronic equipment
- MAXAIR Systems are NOT for use in atmospheres containing less than 19.5% or greater than 25% oxygen (MAXAIR CAPR does NOT produce oxygen)
- Do not use if airflow is less than 6 cfm (cubic feet of air per minute)
- NOT for use against oily particulate (paint mist, oil mist, detergents)
- Replace damaged or worn filters immediately
- NEVER repair a damaged filter cartridge or face/head cover
- NEVER use compressed air to clean filter cartridges
- Do not use near flame or other heat source
CAPR INTRODUCTION

- MAXAIR® CAPR® System
  - CAPR – Controlled Air Purifying Respirator
  - Advanced design respirator provides respiratory protection against aerosolized and airborne droplet (particulate) contaminants
  - Highly differentiated from conventional PAPRs
    - Comfortable convenience
    - Affordability
    - Performance
    - Reliability
- NIOSH 42 CFR Part 84, Certification requirements for respiratory protective devices (1995)
CAPR INTRODUCTION

- CAPR System References
  - For more details regarding your system refer to the CAPR System User’s Instructions, P/N 03521015, and the package insert Instructions For Use (IFU) included with each system component.
  - Visit our website www.maxair-systems.net for downloadable IFUs and UIMs, as well as additional training materials such as videos, competency tests, and FAQs.
SYSTEM CONFIGURATION BASICS

4 Main Components

1. Helmet fully assembled with Cage, Liner, and Power Cord
   A. Cage
   B. Liner
   C. Power Cord
2. Battery
3. Belt
4. Charger
HELMET PREPARATION FOR CUFF SYSTEM

STEP 1: Remove SnapOn Cage by unsnapping the 3 Snap Tabs
HELMET PREPARATION FOR CUFF SYSTEM

STEP 2: Install Filter Cartridge of choice by attaching the 3 snap tabs

NOTE: Handle Filter Cartridge by the retainer ring to avoid rough contact with filter media.

2A: Align Filter Cartridge with Helmet rear upper snap

2B: Snap and secure rear tab over rear snap using fingers on either side

2C: Press filter cartridge retainer ring down to align side tabs over side snaps

2D: Snap and secure the side tabs over both the left and right sides
HELMET PREPARATION FOR CUFF SYSTEM

STEP 3: Install Filter Cover Cap

3A: Align and insert front adapter with indentation on inside of Filter Cover Cap

3B: Ensuring all 3 adapters are aligned and the front adapter is fully inserted into the indentation, press the Helmet into the Filter Cover Cap

3C: Pull Filter Cover Cap fully down on the helmet by squeezing in a downward motion, aligning the T-Tab hole (A) with the helmet rear bottom snap (B)

3D: Ensure the T-Tab is securely snapped on the helmet rear bottom snap, use thumb if necessary
HELMET PREPARATION FOR CUFF SYSTEM

STEP 4: Ensure Helmet Liner is Installed

NOTE: The Helmet Liner comes preassembled on the helmet; this instruction is solely if the liner requires reassembly.

4A: Place liner inside helmet
4B: Secure the two top snaps
4C: Secure the two bottom snaps
4D: Ensure bottom lip of liner is flush with the helmet, all the way around the entirety of the helmet
DISPOSABLE LENS CUFF – SIZE CHOICE

Generally, medium to large faces use ML; very small faces use SM. To select appropriate size, ensure Conditions 1 & 2 are both met while wearing the fully assembled system.

For proper fit, conditions 1 and 2 must be met. If they are not, switch to the other size of DLC.

**Condition 1**
DLC Flappers are away from Lens, positioned perpendicular to temples, and in front of the Side Tabs.

**Condition 2**
Slight tension can be felt continuously while sliding index finger between cuff and face from upper cheekbone, around chin, to the other cheekbone.
DISPOSABLE LENS CUFF ASSEMBLY

Once the helmet is fully prepared and correct size is selected (see Slides 9-13), the Disposable Lens Cuff (DLC) can be assembled to the helmet.

1. Align DLC front alignment hole over front helmet TurnClip; position TurnClip to vertical position to lock DLC in place

2. Align and snap one DLC side attachment hole over side attachment post

3. Align and snap the other DLC side attachment hole over side attachment post

4. Pull DLC Peel Tab up, over and to the left to remove the Lens Protective Cover off the Lens
1: Obtain a charged battery, the charger light will illuminate green when the battery is fully charged.

2: Clip battery to belt by moving the belt fully under and up to the top of the clip, so the clip detent rests on the clip base and **NOT** on the belt.

3: Place belt comfortably around waist with the battery near the right rear side.
DONNING CUFF SYSTEM – CHECKING INDICATOR LIGHTS

Connect helmet power cord to the battery and push until the secure connection audibly clicks.

Upon initial connection all 5 indicator lights will illuminate.

After 5-10 seconds the 3 green lights should illuminate, we recommend donning the helmet with no less than 2 green indicator lights illuminated.

**Indicator Light Meanings**

<table>
<thead>
<tr>
<th>Color</th>
<th>Battery Charge</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellow</td>
<td>Low airflow: potential cause is a loaded filter.  Doff system as soon as is safe and replace filter if necessary.</td>
<td></td>
</tr>
<tr>
<td>3 Green</td>
<td>Battery Charge: ~75%-100%</td>
<td></td>
</tr>
<tr>
<td>2 Green</td>
<td>Battery Charge: ~50%-75%</td>
<td></td>
</tr>
<tr>
<td>1 Green</td>
<td>Battery Charge: ~25%-50%</td>
<td></td>
</tr>
<tr>
<td>Red</td>
<td>Battery Charge: 0%-25%,  Doff system as soon as is safe, exchange discharged battery for charged battery.</td>
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</table>
DONNING CUFF SYSTEM – HELMET AIRFLOW SWITCH

The helmet airflow switch is located at the rear of the helmet, next to the helmet power cord receptacle. Select your desired airflow based on your exertion level for your application. The recommended position for typical activities is Low, but can be adjusted based on preference or activity.

1: Low
~190 liters/minute
~6.7 cubic ft/min

2: Medium
~215 liters/minute
~7.6 cubic ft/min

3: High
~240 liters/minute
~8.5 cubic ft/min
DONNING CUFF SYSTEM

After checking the indicator lights (Slide 16), the Cuff System can now be donned.

1. Loosen ratchet adjustment knob counter-clockwise to ensure helmet will easily fit over head

2. Hold helmet by rear headband in one hand, pull front top edge of cuff down and place chin into the cuff, followed by pulling helmet over and down onto head

3. Slide fingers between cuff and face from each temple down and under the chin to properly position cuff and ensure slight tension between sides of face and under chin
4. Ensure the DLC Flappers are away from the Lens, positioned perpendicular to the temples, and in front of the side tabs.

5. Position helmet so front headband is within ½ inch of the eyebrows so the indicator lights can clearly be seen in upper peripheral vision.

6. Ensure rear headband is resting under occipital bone, above neck vertebrae, then tighten adjustment knob clockwise until the fit is secure, but do not over tighten to cause discomfort.
DONNING CUFF SYSTEM

CAUTION:
If the Helmet is not secure and comfortable on the head, it may be necessary to change the Height Adjustment. The Height Adjustment raises and lowers the rear headband and the angle of the helmet with respect to the head, and properly positions the DLC Lens from the chin. This optimizes a secure and comfortable fit in conjunction with the Adjustment Knob for optimizing the circumference of the Headband. It also aids in proper positioning for easy visualization of the LED Safety Status Indicators. If necessary, unsnap the Height Adjustment tabs on each side of the Helmet Liner and reposition upward or downward, until the optimum fit for comfort and security is determined, ensuring that the same height adjustment hole is selected on both sides.
DOFFING CUFF SYSTEM: OPTION A

1. Turn front TurnClip to horizontal position

2. Grasp each side by the flappers and pull outwards to release DLC from side adapters

3. Continue pulling outward and forward to release DLC from front TurnClip; dispose per institutional protocol
4. Loosen headband adjustment knob by turning it counter clockwise and remove helmet from head

5. Disconnect helmet power cord from the battery by depressing the secure connector and pulling the power cord out

6. Remove battery belt from waist by unfastening the buckle

7. Depending on your charging schedule, connect the charger to the battery to prepare for next use
DOFFING CUFF SYSTEM: OPTION B

1. Loosen headband adjustment knob by turning it counter clockwise
2. Pull the DLC Cuff away from chin and lift helmet up, forward, and off the head

NOTE: This option leaves the DLC attached for next use; choose the appropriate doffing option per your institution’s protocol and application.
3. Disconnect helmet power cord from the battery by depressing the secure connector and pulling the power cord out.

4. Remove battery belt from waist by unfastening the buckle.

5. Depending on your charging schedule, connect the charger to the battery to prepare for next use.
GENERAL SYSTEM DECONTAMINATION

Once the system is doffed, follow your institution’s protocol for decontamination. These are recommended methods.

**Supplies:**
- Decontaminating wipe
- Decontaminating agent such as: alcohol, bleach, or quaternary ammonia

**Frequency:**
Wipe between uses and between different users wearing the system

**Accomplishes:**
- Reduces cross contamination
- Extends useful life
- Improves hygiene

**Procedure:**
1. Inspect system and perform any assembly/disassembly instructions necessary for disposable items and for all components that have become worn or damaged.
2. Apply a suitable wipe with a decontaminating agent over all outside reachable surfaces, and then over all inside surfaces.
3. Let air dry and re-assemble or place in storage.

**CAUTION:** Do not immerse the battery, helmet and fan module into water or other liquid. This will cause irreparable damage to the helmet.
1. To remove damaged or soiled Front Comfort Strip, pull it away and off of the Velcro on the headband
2. To attach new Front Comfort Strip, align it with the center of the headband and attach with the loop side facing the Headband and press it on

1. To remove damaged or soiled Rear Comfort Strip, pull it away and off of the Velcro on the headband
2. To attach new Rear Comfort Strip, attach the Velcro side to the rear headband.

NOTE: The Rear Comfort Strip is closed cell foam and may be easily cleaned with a decon wipe and reused until worn or otherwise unsuitable for use.
FILTER CARTRIDGE REPLACEMENT – REMOVING FILTER COVER CAP

1. With one hand, hold the Helmet and FCC with the thumb against the FCC and the fingers on the inside of the Helmet. With the other hand, pull up on the T-Tab and unlatch it from the Rear Bottom Snap.

2. Continue pulling up on the T-Tab with one hand. Using a sliding motion with the thumb moving up and pushing the FCC up and off the Helmet, pull the Helmet down with the fingers (opposite the thumb and FCC) until the FCC is up and off the helmet.
FILTER CARTRIDGE REPLACEMENT – REMOVING FILTER CARTRIDGE

We recommend changing the filter cartridge if the yellow indicator light is consistently illuminated (See Slide 16), if the filter has visual signs of damage, or if the filter comes in contact with blood or bodily fluid. Consult your industrial hygienist for application specific recommendations regarding filter cartridge change schedules.

1. Remove the filter cartridge by first unsnapping the left and right filter cartridge snap tabs

2. Using the front of the plastic retainer ring, lift up on the filter cartridge and pull it off the front of the helmet

3. Continue up and towards the rear to unsnap the rear tab of the filter cartridge, completing the removal of the cartridge from the helmet
FILTER CARTRIDGE REPLACEMENT – INSTALLING NEW CARTRIDGE

NOTE: Handle Filter Cartridge by the retainer ring to avoid rough contact with filter media.

1: Align Filter Cartridge with Helmet rear upper snap

2: Snap and secure rear tab over rear snap using fingers on either side

3: Press filter cartridge retainer ring down to align side tabs over side snaps

4: Snap and secure the side tabs over both the left and right sides
BATTERY CHARGING

Charging Instructions

1. Connect charger to an appropriate 100v-240v mains source/outlet – the indicator light will turn green.
2. Connect charger to batter – If battery requires charging the light will turn red; if green light stays illuminated the battery is sufficiently charged for use.
3. When charging is complete, the green light will come on and the battery is ready for use.

Always remove the battery from the charger when fully charged and when the LED is Green. Never leave the battery on the charger past its maximum charge time.

NOTE: To optimize the usable life of lithium ion batteries, plan charging schedules according to the charging time specifications table for your particular battery.

<table>
<thead>
<tr>
<th>Battery</th>
<th>2600-01 Charger</th>
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<tbody>
<tr>
<td></td>
<td>Typical</td>
</tr>
<tr>
<td>2500-30TSC (Large)</td>
<td>5 hours</td>
</tr>
<tr>
<td>2500-37TSC (Medium)</td>
<td>3.8 hours</td>
</tr>
<tr>
<td>2500-36TSC (Small)</td>
<td>2.5 hours</td>
</tr>
</tbody>
</table>
If the Lithium-Ion Battery (LIB) is not used regularly, it is recommended to store it at a 50% charge, the initial charge of the battery out of the box is 50%, this ensures 4-5 hours of emergency use prior to being fully charged.

Store in closed containers and packaging that prevent short circuits and damage during storage or transportation. In case of mixed storage of goods and articles, organize separate storage areas for LIBs, for example, by maintaining a distance of 2.5 meters between the LIB storage area and other goods.

Store in limited quantities and in isolated area with frequent surveillance.

Keep in a dry, cool and well-ventilated place, within the recommended storage temperature range of 0°C-35°C (32°F-95°F). Cooler and dryer environments of storage are safer and extend useful life. The temperature range of 19°C-25°C (66°F-77°F) at 30%-50% full charge will optimize battery useful life.

For additional battery storage information, reference the user manual P/N 03521015
For any additional inquiries or resources, please reference our website www.maxair-systems.net, or reach out to our Product Training Specialist: Samantha Montenegro at maxairsamantha@gmail.com