

## Operator's Manual

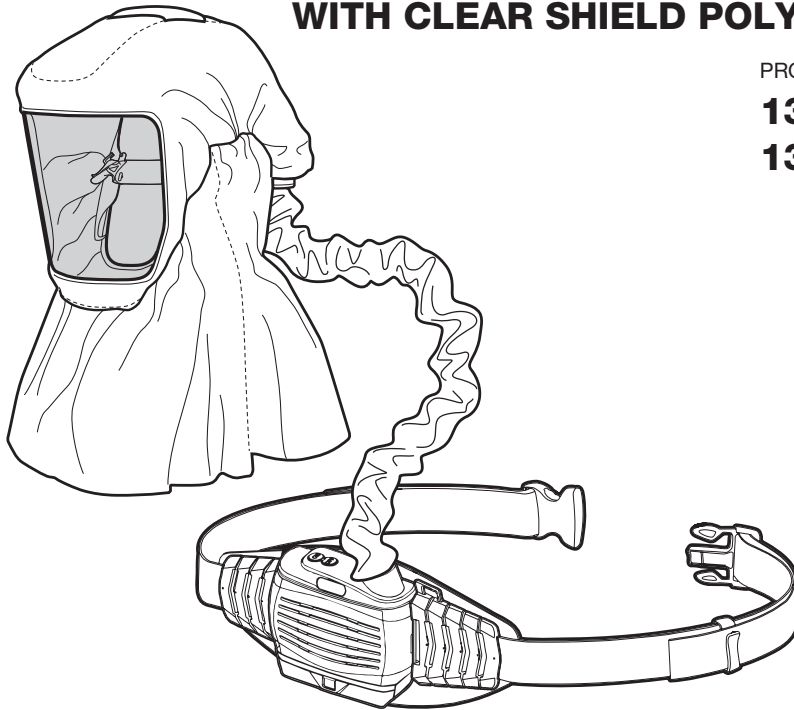
# PAPR CLEAR SHIELD POLYAMIDE HOOD

## POWERED AIR-PURIFYING RESPIRATOR (PAPR) WITH CLEAR SHIELD POLYAMIDE HOOD

PRODUCT NUMBER:

**13086**

**13087**



**Register your machine:**

[www.lincolnelectric.com/register](http://www.lincolnelectric.com/register)

**Authorized Service and Distributor Locator:**

[www.lincolnelectric.com/locator](http://www.lincolnelectric.com/locator)

**Save for future reference**

Date Purchased

K#: (ex: K4886-1)

Serial: (ex: U1060512345)

**WARNING:** Users must read and understand the user instructions prior to use. Use of this respirator by untrained or unqualified people, or use that is not in accordance with these user instructions, **may adversely affect respirator performance and may be dangerous to your health.** Keep this operator's manual for future reference.

**⚠ WARNING**

Properly selected, used, and maintained respirators help protect against certain airborne contaminants by reducing concentrations in the wear's breathing zone below the Occupational Exposure Limit (OEL). It is essential to follow all instructions and government regulations on the use of this product, including wearing the complete respirator system during all times of exposure, in order for the product to help protect the wearer. **Misuse of respirators may result in overexposure to contaminants and lead to sickness or death.** For proper use, see supervisor, refer to the product *Operator's Manual* or contact the Lincoln Electric Customer Service at 1 (888) 610-9206.

**List of Warnings within the *Operator's Manual*****⚠ WARNING**

1. This product is part of a system that helps protect against certain airborne contaminants. **Misuse may result in sickness or death.** For proper use, see supervisor, *Operator's Manual* or call the Lincoln Electric Customer Service at 1 (888) 610-9206.
2. The Lincoln Electric Powered Air Purifying Respirator Clear Shield Polyamide Hood Assembly is not intrinsically safe. **Do not use in flammable or explosive atmospheres. Doing so may result in serious injury or death.**
3. Always correctly use and maintain the filter assembly. **Failure to do so may reduce respirator performance, overexpose you to contaminants, and may result in sickness or death.**
  - a. Inspect filter and bottom gasket(s) before first installation or reinstallation of a filter, replace if damaged.
  - b. Always properly install the filter into the blower unit.
  - c. Keep bottom sealing gasket(s) clean.
  - d. Never attempt to clean filter by knocking or blowing out accumulated material. Doing so will damage the filter media.
4. **Failure to follow the *Operator's Manual* may reduce respirator performance, overexpose you to contaminants, and may result in injury, sickness, or death.**
  - a. Do not use with parts or accessories other than those manufactured by Lincoln Electric as described in the *Operator's Manual* or on the NIOSH approval label for this respirator.
  - b. The Lincoln Electric Powered Air Purifying Respirator Clear Shield Polyamide Hood Assembly is one component of an approved respiratory protection system. Always read and follow the *Operator's Manual* supplied with your Lincoln Electric Clear Shield Polyamide Hood and other system components in order to ensure correct system operation.

**⚠ WARNING**

5. Always correctly use and maintain the lithium ion battery packs. **Failure to do so may cause fire or explosion or could adversely affect respirator performance and result in injury, sickness, or death.**
  - a. Do not charge batteries with unapproved chargers, in enclosed cabinets without ventilation, in hazardous locations, or near sources of high heat.
  - b. Charge in an area free of combustible material and readily monitored.
  - c. Do not immerse.
  - d. Do not use, charge, or store batteries outside the recommended temperature limits.
6. Dispose of lithium ion battery packs according to local environmental regulations. Do not crush, disassemble, dispose of in standard waste bins, in a fire or send for incineration. **Failure to properly dispose of battery packs may lead to environmental contamination, fire or explosion.**
7. To reduce exposure to hazardous voltage:
  - a. Do not attempt to service the chargers. There are no user-serviceable parts inside.
  - b. Do not substitute, modify or add parts to the chargers.
  - c. Inspect the chargers and power cords before use. Replace if any parts are damaged.
  - d. Do not use the chargers outdoors or in wet environments.

## Limitations of Use

Do not wear this respirator system to enter areas where:

- Atmospheres are oxygen deficient;
- Contaminant concentrations are unknown;
- Contaminant concentrations are Immediately Dangerous to Life or Health (IDLH);
- Contaminant concentrations exceed the maximum use concentration (MUC) determined using the Assigned Protection Factor (APF) for the specific respirator system or the APF mandated by specific government standards, whichever is lower.

**Immediately exit the contaminated area if any of the low battery or low airflow alarms activate.**

Refer to the *Operator's Manual* provided with the applicable headgear and the additional cautions and limitations under the NIOSH Cautions and Limitations in the *Operator's Manual*.

## Respirator Program Management

Occupational use of respirators must be in compliance with applicable health and safety standards. By United States regulation employers must establish a written respirator protection program meeting the requirements of the Occupational Safety and Health Administration (OSHA) Respiratory Protection standard 29 CFR 1910.134 and any applicable OSHA substance specific standards. For additional information on this standard contact OSHA at [www.OSHA.gov](http://www.OSHA.gov). In Canada, CSA standard Z94.4 requirements must be met and/or requirements of the applicable jurisdiction as appropriate. The major sections of 29 CFR 1910.134 are listed here for reference. Consult an industrial hygienist or call Lincoln Electric Customer Service with questions concerning applicability of these products to your job requirements.

### Major Sections of OSHA 29 CFR 1910.134

Section	Description
A	Permissible Practice
B	Definitions
C	Respiratory Protection Program
D	Selection of Respirators
E	Medical Evaluation
F	Fit Testing
G	Use of Respirators
H	Maintenance and Care of Respirators
I	Breathing Air Quality and Use
J	Identification of Cartridges, Filters, and Canisters
K	Training and Information
L	Program Evaluation
M	Recordkeeping

## NIOSH – Approval, Cautions & Limitations

### NIOSH Approval

The Lincoln Electric Powered Air Purifying Respirator Clear Shield Polyamide Hood Assembly is one component of a NIOSH approved respiratory system. Refer to the *Operator's Manual* and/or the NIOSH approval label provided with the PAPR blower for a listing of components that can be used to assemble a complete NIOSH approved respirator system or contact Lincoln Electric Customer Service.

### NIOSH Cautions and Limitations

- A - Not for use in atmospheres containing less than 19.5 percent oxygen.
- B - Not for use in atmospheres immediately dangerous to life or health.
- C - Do not exceed maximum use concentrations established by regulatory standards.
- F - Do not use powered air-purifying respirators if airflow is less than four cfm (115 lpm) for tight fitting facepieces or six cfm (170 lpm) for hoods and/or helmets.
- H - Follow established cartridge and canister change schedules or observe ESLI to ensure that cartridge and canisters are replaced before breakthrough occurs.
- I - Contains electrical parts that may cause an ignition in flammable or explosive atmospheres.
- J - Failure to properly use and maintain this product could result in injury or death.
- L - Follow the manufacturer's User's Instructions for changing cartridges, canister and/or filters.

- 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.
- P - NIOSH does not evaluate respirators for use as surgical masks.

## **THANK YOU FOR SELECTING A QUALITY PRODUCT BY LINCOLN ELECTRIC.**

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### **PLEASE EXAMINE CARTON AND EQUIPMENT FOR DAMAGE IMMEDIATELY**

When this equipment is shipped, title passes to the purchaser upon receipt by the carrier. Consequently, claims for material damaged in shipment must be made by the purchaser against the transportation company at the time the shipment is received.

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### **SAFETY DEPENDS ON YOU**

Lincoln arc welding and cutting equipment is designed and built with safety in mind. However, your overall safety can be increased by proper installation ... and thoughtful operation on your part.

**DO NOT INSTALL, OPERATE OR REPAIR THIS EQUIPMENT  
WITHOUT READING THIS MANUAL AND THE SAFETY  
PRECAUTIONS CONTAINED THROUGHOUT.** And, most importantly,  
think before you act and be careful.

### **WARNING**

This statement appears where the information must be followed exactly to avoid serious personal injury or loss of life.

### **CAUTION**

This statement appears where the information must be followed to avoid minor personal injury or damage to this equipment.

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## POWERED AIR-PURIFYING RESPIRATOR SECTION

### RESPIRATOR SPECIFICATIONS

Size of Blower Assembly	8" W x 7.5" T x 3" D (203 x 191 x 76 mm)
Weight of Blower (including battery, belt, and filters)	47 oz. (1338 g)
Weight of Hood Assembly	5.3 oz. (150 g)
Air Flow	Low Speed: 170+ lpm (6+ cfm) High Speed: 210+ lpm (7.4+ cfm)
Operating Temperature	23°F to 131°F (-5°C to 55°C)
Storage Temperature	23°F to 131°F (-5°C to 55°C)
Battery Type	Lithium Ion (Rechargeable)
Battery Charge Time	About three hours
Battery Life	Approximately 500 charges
Belt Size	29 to 50 in. (736 to 1270 mm)
Respirator Approval <sup>(1)</sup>	NIOSH 42 cfr 84 Approved Powered Air-Purifying Respirator (PAPR)
Assigned Protection Factor <sup>(2)</sup>	25

(1) Refer to NIOSH respirator approval label for system configuration.

(2) APF=25 for loose fitting Powered Air-Purifying Respirator according to OSHA 3352-02 2009, when the employer implements a continuing, effective respirator program in compliance with the Respiratory Protection Standard (29 CFR 1910.134).

## BATTERY OPERATION

### WARNING

#### Battery Safety

- Keep battery away from fire or heat as this may cause the battery to explode and may result in serious injury or death.
- Battery should be charged with supplied Li-ion charger only. Charge in an open, well-ventilated location.
- The charger is designed only for use indoors.
- Do not allow the battery to get wet.
- Do not attempt to disassemble or repair the battery. There is no maintenance on Li-ion batteries.
- Battery disposal – battery must be disposed of properly or recycled.

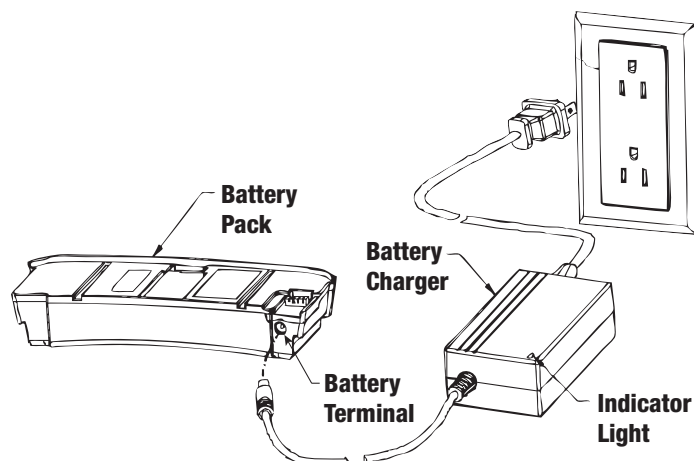
#### Charging of battery pack

- Charge battery before first use or if battery has not been used for one week. Always recharge the battery before it becomes fully discharged.
- Batteries not in use should be charged at least once a year.

Remove battery pack from blower assembly. Connect charger cord to battery terminal. Plug charger into 120/240 VAC receptacle. The battery pack does not need to be discharged before it is charged.

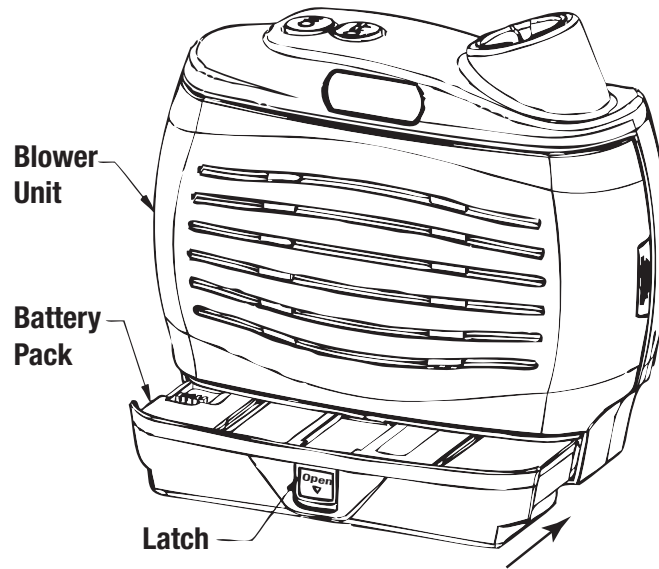
The charger indicator light will turn red in color when battery pack is being charged. When battery pack is finished charging, the indicator light will turn green letting the user know that the battery is fully charged (normal charge time approximately 3 hours). Although it is okay to leave the battery pack connected to the charger, it is recommended that once the battery pack is fully charged to disconnect battery pack from charger.

FIGURE 1



## INSTALLING BATTERY PACK

FIGURE 2



Slide battery pack into blower unit just below filter cover until battery pack latch snaps into position. It is very important that the battery pack snaps into position. This makes sure the battery pack is locked in place and will not slide out causing possible nuisance shutoffs while in use.

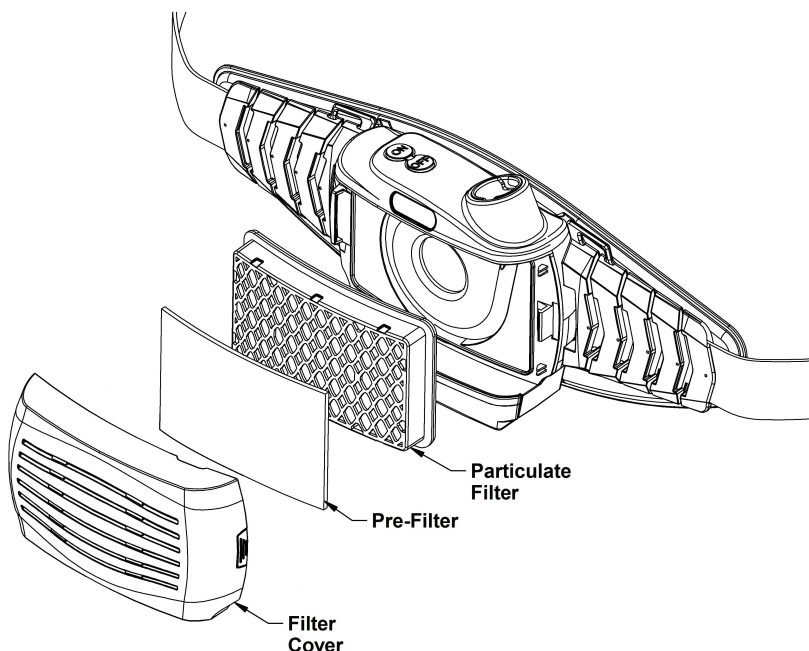
To remove battery pack, simply push down on latch to release and slide battery pack out from blower unit.

## FILTER INSTALLATION

**WARNING****Filter Safety**

- Do not use the respirator without the spark screen, pre-filter, and the HE particulate filter (HEPA) installed. The NIOSH approval of this PAPR is with the spark screen, pre-filter and HE particulate filter installed using respirator without any of these items is not in accordance with NIOSH approval and may be dangerous to your health.
- Replace air filters when damaged or clogged. **DO NOT** wash, clean with compressed air or reuse dirty air filters.
- Use specific replacement filters specified in this manual. Use of other filters is in violation of the NIOSH approval of the respirator system. Refer to NIOSH respirator approval label for system configuration.

FIGURE 3



Install the pre-filter, and particulate filter in filter cover exactly as shown.

Install the filter cover assembly to the blower unit by engaging tabs on filter cover into bracket on blower unit and rotate assembly to close. Push filter cover assembly down until latch clicks into position securing filter cover assembly. Make sure the filter cover assembly is secure to the blower unit body. Inspect both latching side of cover and opposite side to see that the filter cover is properly secured.

To replace filter, push latch into release filter cover and replace filter as shown in figure 3. Refer to NIOSH respirator approval label and/or parts page at the back of this operator's manual for proper filters to be used with this respirator.

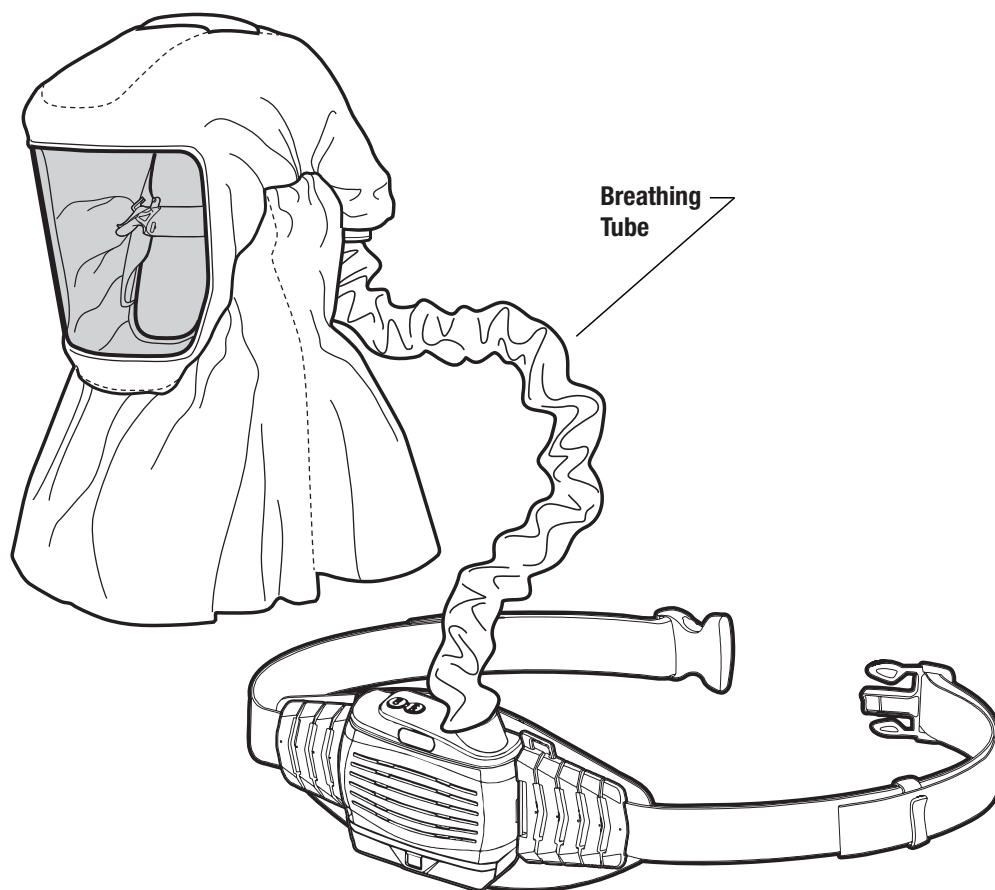
## BREATHING TUBE INSTALLATION

### WARNING

#### Breathing tube safety

- Be sure breathing tube is properly installed or non-filtered air may enter the hood.
- Be sure o-ring is properly installed on tube connector and there are no visible signs of cuts or tears on o-ring. Replace o-ring if damaged.
- Do not use respirator if o-ring is missing.

FIGURE 4



#### Connecting breathing tube to blower

Align pins of tube connector with channels in blower unit receptacle. Insert connector as far as it will go into blower unit and the turn connector 1/8 of a turn clockwise to secure this end of breathing tube.

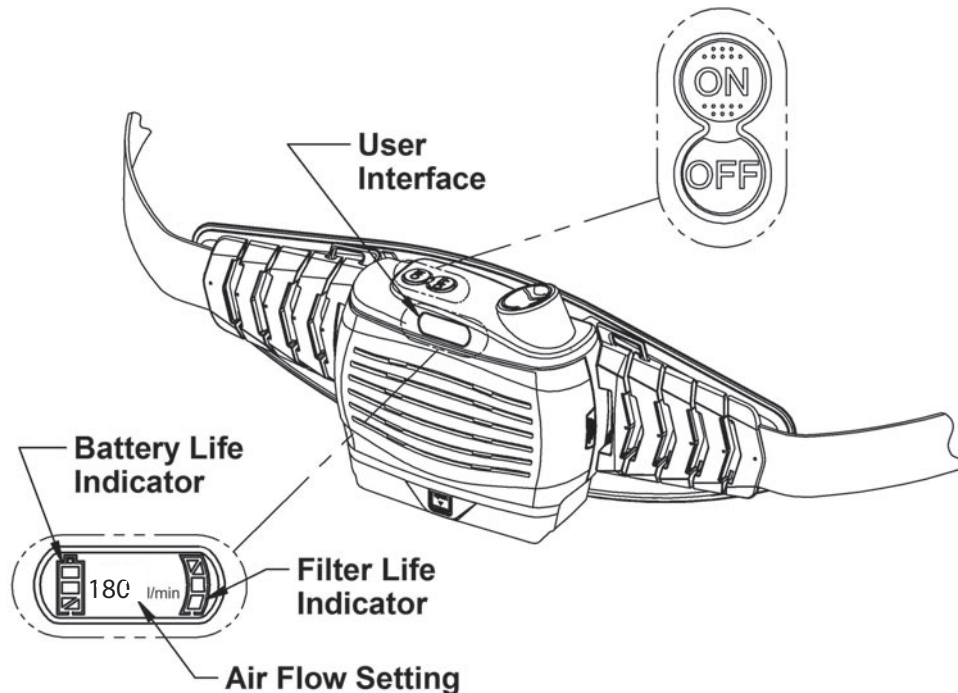
#### Connecting breathing tube to hood

Align pins of tube connector with channels in the hood receptacle. Insert connector as far as it will go into the hood receptacle and the turn connector 1/8 of a turn clockwise to secure this end of breathing tube. If tube is twisted, disconnect one end of breathing tube. Untwist tube and re-attach.

To remove breathing tube turn connector 1/8 of a turn counter clockwise and pull connector out to release from the hood or blower unit.

## RESPIRATOR CONTROLS

FIGURE 6

**WARNING****Respirator Use**

If an alarm sounds or the blower vibrates, leave the work area immediately. Do not remove the respirator until you are in a safe area.

**Starting the Respirator**

Press ON button for 1 to 2 seconds until the blower is activated. An audible sound will be heard and the user interface will light up. The blower will always start at the low air flow setting (180 lpm). Pressing the ON button again will switch to the high air flow setting (210 lpm). The user interface will show the air flow setting chosen.

**Stopping the Respirator**

Press OFF button for 2 seconds until blower stops. When pressing OFF button, an audible beeping sound indicates the OFF button has been depressed. Beeping sound will stop and the user interface will darken when blower unit is off.

**Battery Level Indicator**

This indicator gives the user an estimate of the battery life remaining. When three full bars show up in the display, the battery is fully charged.

**Filter Life Indicator**

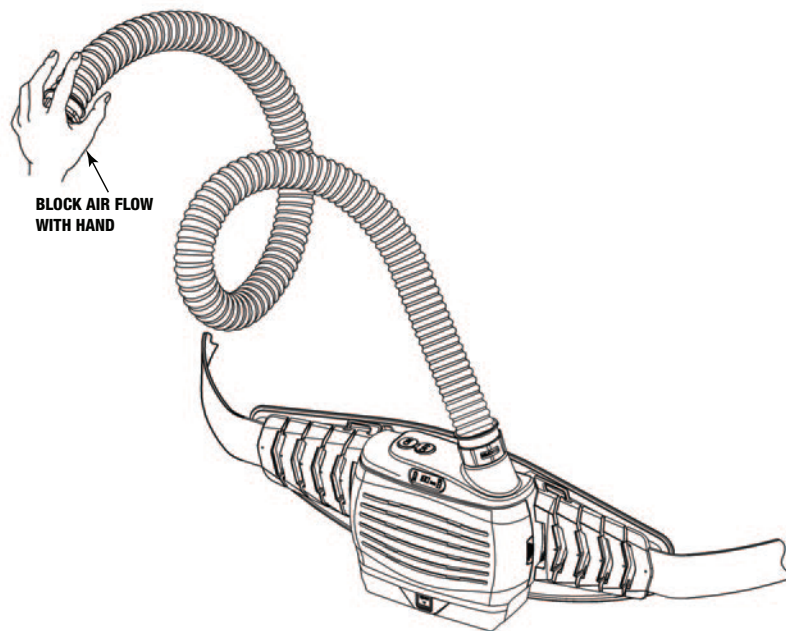
This indicator gives the user an estimate of the filter life remaining. When three full bars show up in the display, the filter is in need of changing. When zero bars show up in the display, the particulate filter is clean. As the bars appear, the filter is becoming clogged and a reduction in battery life is expected. Operating respirator with filter indicator showing a clogged filter will significantly reduce the battery life/run time.

## AIR FLOW ALARM OPERATION

### Air Flow Alarm

- The control system of the blower unit maintains the air flow rates consistently throughout the operating time. If the air flow alarm is activated, the filter may need to be replaced and/or breathing tube has become blocked.

FIGURE 7



- Always test air flow alarm prior to using respirator.
- If an alarm sounds or the blower vibrates, leave work area immediately. Do not remove the respirator until you are in a safe area.

### Testing of Air Flow Alarm

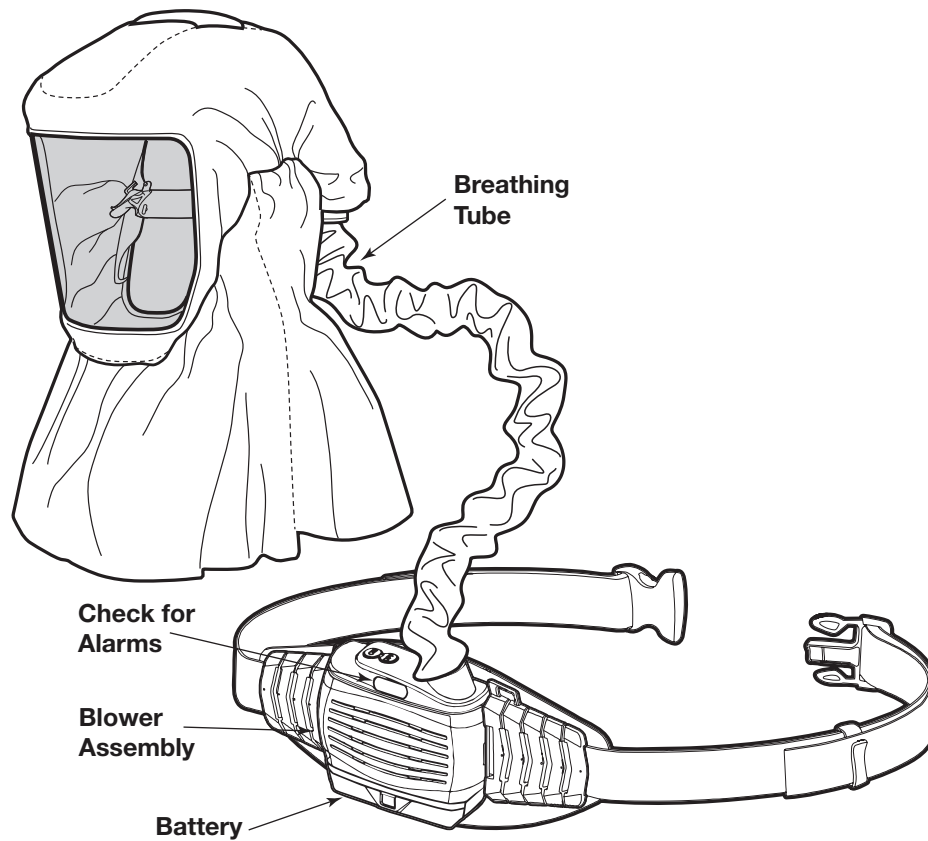
Testing of air flow alarm must always be done in a safe environment.

Disconnect breathing tube from hood. Start blower unit and block air flow by placing your hand over the end of the breathing tube as shown. Hold your hand over end of tube as shown until alarm sounds and blower vibrates (approximately 15 to 30 seconds).

If the alarm does not activate return unit for repair and do not use.

## PREPARING FOR USE

FIGURE 9



### Before using Respirator – Check the Following Items

1. Blower Assembly
  - Verify the air filter is proper for application and is NIOSH approved for use with this respirator. Verify the spark screen, pre-filter and particulate filter are properly installed and securely latched.
2. Breathing Tube
  - Make sure tube is not damaged and connected properly to the blower unit and hood.
3. Battery
  - Verify connection to blower unit is secure and that battery is fully charged.
4. Air Flow/Air Flow Alarms
  - Start blower unit and verify air flow rate is being maintained by checking for air flow alarm activation. Test to verify air flow alarm is working (see page 15 for procedure).
5. Hood
  - Inspect hood for damage and replace if necessary. If air from blower is not being supplied to hood, see troubleshooting guide (page 15).

## DONNING PROCEDURE FOR RESPIRATOR

### WARNING

#### Respirator Safety

- Do not enter a hazardous area until you are sure the respirator equipment is functioning correctly and properly worn.
- Leave the contaminated area immediately if the alarm sounds or the blower vibrates. Do not remove equipment until you are in a safe area.
- It is recommended that the user practice the donning and wearing of the respirator before attempting to use the respirator for respiratory protection.
- Do not use the powered air-purifying respirator without all filter components or with blower turned off or hazardous levels of oxygen and carbon dioxide may accumulate in the hood.

#### Donning respirator

**NOTE: Make sure all procedures within preparing for use have been completed, prior to donning.**

1. Put the blower assembly on against your lower back with hose extending upwards.
2. Start the blower unit by pressing the ON button. Adjust air flow rate.
3. Connect the hose to the hood assembly. Put on hood and adjust so hood fits snug on head. Tighten drawing string of face covering to establish a seal around head.

#### Respirator removal

**NOTE: Leave contaminated area before removing the helmet and blower unit.**

1. Take off helmet and disconnect hose from hood.
2. Turn off blower unit by pressing OFF button.
3. Release belt, remove straps from shoulders and remove blower unit off of your lower back.

After use, the respirator components must be cleaned, inspected and prepared for reuse (battery charged).

### WARNING

#### Respirator Maintenance And Storage

- Replace damaged or dirty air filters. Filters cannot be washed or cleaned with compressed air. Never reuse a dirty air filter.
- Never use solvents or abrasive cleaning solutions to clean the respirator. Keep water and other fluids out of blower assembly.

Maintain accurate records of filter replacement and respirator maintenance.

The respirator components should be cleaned after each use. Use of a soft cloth dampened with a mild soap and water solution to wipe all external surfaces of blower unit clean. Allow to dry.

Factors including product usage and workplace contamination levels affect the life of the filters. Replace filters if air flow is reduced because of dirty filter and according to the filter change schedule established by your Safety Director and an Industrial Hygienist.

Inspection of blower assembly and breathing tube after each use is good practice. Replace breathing tube if damaged or if inside of tube is dirty.

Storage of respirator should be in a clean, dry, cool place with the filter and battery removed for blower assembly if respirator will not be used for an extended period of time.

TROUBLE SHOOTING GUIDE FOR RESPIRATOR

PROBLEMS (SYMPTOMS)	POSSIBLE CAUSE	RECOMMENDED COURSE OF ACTION
No air flow to hood from blower.	<ol style="list-style-type: none"> <li>1. Blower not ON.</li> <li>2. Battery not charged.</li> <li>3. Battery connection not being made.</li> <li>4. Breathing tube blocked.</li> </ol>	<ol style="list-style-type: none"> <li>1. Press ON button.</li> <li>2. Charge battery.</li> <li>3. Verify battery pack is securely latched into blower unit.</li> <li>4. Clear obstruction from blower outlet and/or hose.</li> </ol>
Blower supplies insufficient air to hood.	<ol style="list-style-type: none"> <li>1. Breathing tube connections not properly connected.</li> <li>2. Clogged filter.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check breathing tube connections to blower and hood.</li> <li>2. Replace filter.</li> </ol>
Low airflow alarm (audible & vibratory).	<ol style="list-style-type: none"> <li>1. Breathing tube is blocked.</li> <li>2. Filter inlet is covered.</li> <li>3. Clogged filter.</li> </ol>	<ol style="list-style-type: none"> <li>1. Clear obstruction from blower outlet and/or hose</li> <li>2. Make sure inlet to filter not restricted.</li> <li>3. Replace filter.</li> </ol>
Battery alarm (audible & vibratory).	<ol style="list-style-type: none"> <li>1. Low battery.</li> </ol>	<ol style="list-style-type: none"> <li>1. Charge battery or replace battery as required.</li> </ol>
User detects odor or taste of contaminants or feels eye or throat irritation.	<ol style="list-style-type: none"> <li>1. Incorrect respirator for application.</li> <li>2. Hose connections loose allowing air to enter downstream of blower.</li> <li>3. Filter</li> </ol>	<ol style="list-style-type: none"> <li>1. Consult onsite Industrial Hygienist or safety director for proper equipment for work environment.</li> <li>2. Check hose connections to blower and hood.</li> <li>3. Leave area wearing respirator. Check filter and replace if necessary.</li> </ol>
Battery run time is too short.	<ol style="list-style-type: none"> <li>1. Inadequate charging.</li> <li>2. Clogged filter.</li> <li>3. Battery faulty.</li> </ol>	<ol style="list-style-type: none"> <li>1. Fully charge battery.</li> <li>2. Replace filter.</li> <li>3. Replace battery with new one.</li> </ol>
The motor runs "faster than normal" (increased sound level).	<ol style="list-style-type: none"> <li>1. Filter is getting clogged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace filter and pre-filter as required.</li> </ol>

## **CLEAR SHIELD HOOD SECTION**

### **HOOD INFORMATION**

This hood with clear face shield is designed to provide respiratory protection against contaminants. The hood can be used for laboratory, food processing, battery manufacturing, semiconductor manufacturing, electronics manufacturing, and surface treatment environments.

**SPECIFICATIONS**

Product Weight	5.29 Oz. (150 g)
Material	Polyurethane Coated Knitted Polyamide
Applications	Laboratory, Food Processing, Battery Manufacturing, Semiconductor Manufacturing, Electronics Manufacturing, and Surface Treatment
Operating Temperature	14°F ~ 131°F (-10°C ~ 55°C)
Storage Temperature	-22°F ~ 140°F (-30°C ~ 60°C) Humidity not to exceed 90%
Compliance	NIOSH 42 CFR 84

## OPERATING INSTRUCTIONS

### Demonstration of proper wear (See Figure 10)

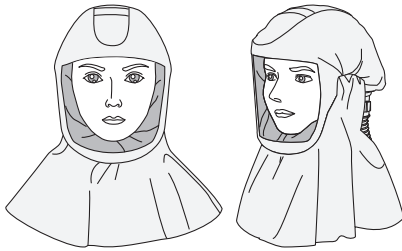


Figure 10

### Headgear adjustment

Based on the size of the wearer's head, press on the slider at the back of the headgear and move left and right into the suitable position (See Figure 11).

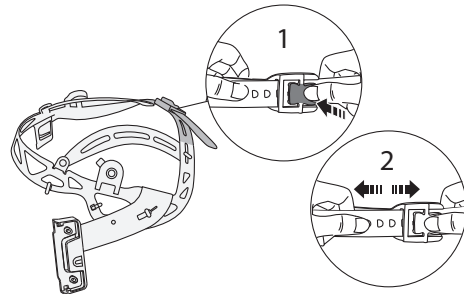
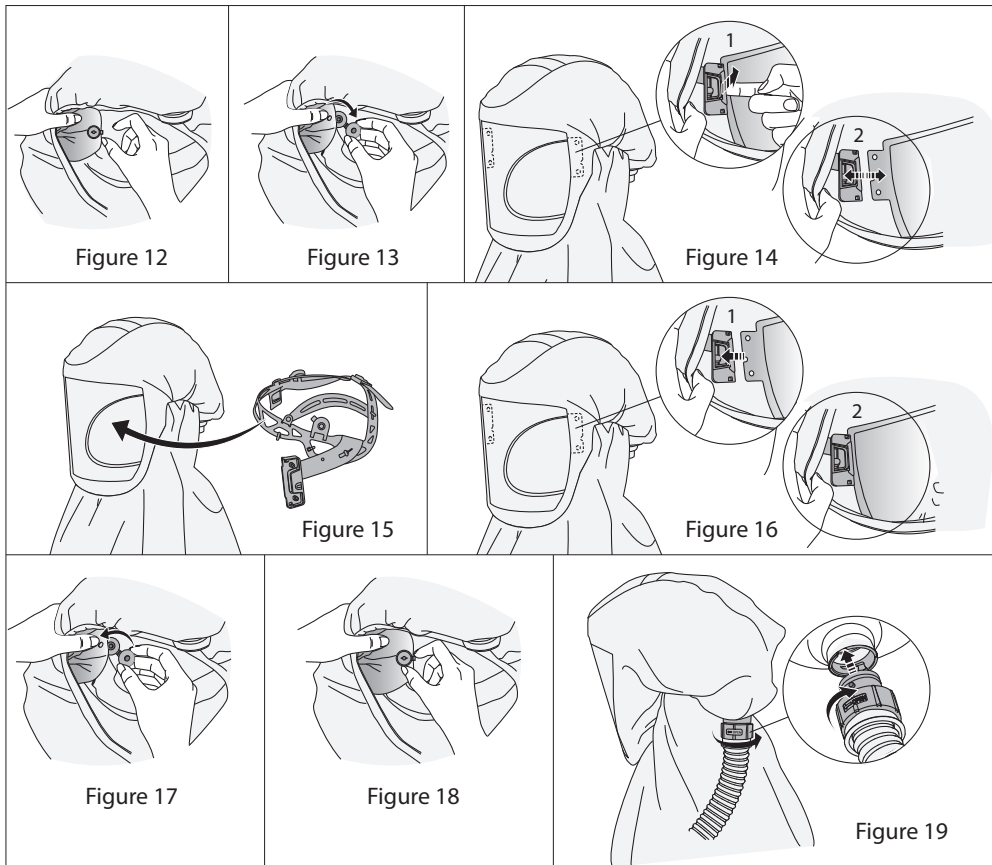


Figure 11

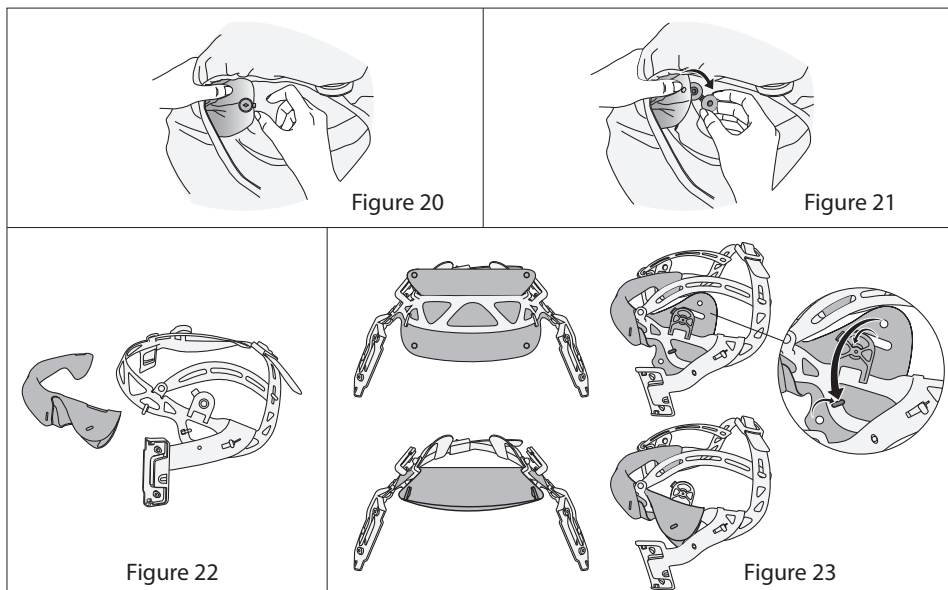
### Replace the hood

- Loosen the buckle on both sides of headgear (See Figure 12).
- Remove the pin from the round hole on either side (See Figure 13).
- Pull out the buckle of headgear through the hole inside both sides of hood and remove the headgear (See Figure 14).
- When installing the new hood, keep the sweatband in front and put the headgear in the hood (See Figure 15).
- Insert each side of the headgear into the its slot on either side of the lens (See Figure 16).
- Fix the round holes in the hood to the pin on each side of the headgear (See Figure 17).
- Fix the buckle to the pin (See Figure 18).
- Insert one end of the hose into the groove of the hood vent and rotate in the opposite direction of "OPEN" to complete the assembly (See Figure 19).

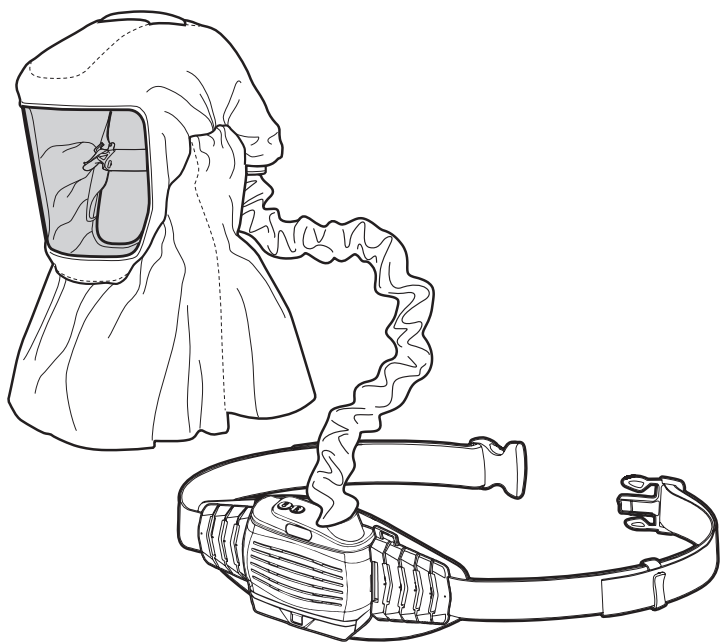


### Replace the sweatband

- Loosen the buckle on both sides of headgear (See Figure 20).
- Remove the pin from the round hole on either side (See Figure 21).
- Remove the sweatband (See Figure 22).
- Install clean sweatband (See Figure 23).



## CARE AND MAINTENANCE



### General Guidelines

#### ⚠ WARNING

#### Maintenance and Storage

- Read and follow all steps set forth in the Clear Shield Hood PAPR Unit Operator's Manual.
- Replace damaged or dirty air filters. Filters cannot be washed or cleaned with compressed air. Never reuse a dirty air filter.
- Never use solvents or abrasive cleaning solutions to clean the respirator. Keep water and other fluids out of blower assembly.
- Maintain accurate records of filter replacement and respirator maintenance.
- Cleaning is recommended after each use.
- After the whole set of the product is completely dry, connect the hood with the blower unit, install the new filters or accessories, and store it in a disposable medical plastic bag.

#### IMPORTANT NOTICE:

- Follow your facility's protocols for proper disposal of cleaning equipment and solutions.

#### Recommended Disinfection Method

**Sodium hypochlorite disinfection method** (free chlorine concentration is 5000 ppm (0.5%). This concentration standard is derived from the "Guidelines for Temporary Infection Control for Nursing Suspected or Diagnosed Filamentous Hemorrhagic Fever in Medical Institutions" issued by the WHO (World Health Organization) in August 2014. <http://www.who.int/csr/resources/who-ipc-guidance-ebolafinal-09082014.pdf?ua=1>

### Product Disinfection Handover

The Clear Shield Hood PAPR Hood can be handed over using the following steps:

1. Prepare a graduated spray bottle (1.0- 1.5L volume) with 1L clean water inside. Making the disinfecting solution of 5000mg/L by adding 10pcs of LIRCON effervescent tablets with an effective chlorine content of 500mg/tablet and mix thoroughly. (For reference only, subject to actual conditions of each hospital).
2. When medical workers wearing the Clear Shield Hood PAPR leave isolation section, please make sure the blower unit is always working (do NOT turn it off). Other medical workers spray the whole hood PAPR system (hood, hose, belt, and blower unit) with chlorine-containing disinfectant.
3. After spraying disinfectant, turn off the blower unit, take off the hood (from inside out), blower unit, and hose and pack them with the clean medical plastic bags. Put them in the designated area of the buffer zone, and take them to the disinfection area by a designated person for disinfection.

### Disinfection Process in Designated Area

#### Preparations:

1. Disinfectors must wear a full set of protective equipment including protective clothing, mask, and goggles.
2. Prepare two layers of nitrile gloves or vinyl gloves before cleaning.
3. Prepare 5000mg/L chlorine-containing disinfectant and medical gauze.

#### Initial Process:

1. Get the complete protective equipment out from the disposable medical bag.
2. Separate each part (hood, hose, blower unit) carefully.

#### Hood Disinfection

The Clear Shield Hood PAPR Hood can be cleaned following the steps below:

1. Remove the sweatband from the headband inside the hood, put the sweatband into a disposable medical plastic bag and discard.
2. Clean the hood inside and outside surface three times by using the medical gauze soaked with chlorine disinfectant (0.5%). Dip the neutral (PH6-8) cleaner to wipe the hood and use the clean water to wash off the remaining liquid of the cleaner.
3. Put the disinfected hood into a disposable medical plastic bag and dry them in a pollution-free area. Please make sure to assemble the new sweatband correctly before next use.

#### IMPORTANT NOTICE:

- If there is sufficient inventory for the hood, one-time use is recommended.
- The cleaned Hood should be carefully inspected per the Operator's Manual.
- Store Helmet when not in use in accordance with the Operator's Manual.

### Blower Unit Disinfection

The Clear Shield Hood PAPR Blower Unit can be cleaned by following the steps below:

1. Clean the surface of the blower unit (including the belt) and the hose connection area three times by using the medical gauze soaked with chlorine disinfectant (0.5%).
  - a. Note: When the complete hood PAPR system is running, the air is always clean after filtration, so only need to clean the hose connection area which is exposed to the air.
2. Please clean the white area inside the blower unit carefully.
  - a. Do NOT wash it with liquid, the liquid may penetrate into the equipment and cause damage.
3. Set the blower unit vertically, and open the filter cover. Remove the pre-filter and particle filter in order and put them into disposable medical plastic bags and discard.
4. Soak the filter cover in 1000mg/L chlorine disinfectant for 30 minutes.
  - a. Note: Please follow the disinfection instructions formulated by your organization and/or local regulatory authorities for the target microorganism or corona virus.
5. Clean the surface of the blower unit and the particle filter installation area three times by using the medical gauze soaked with chlorine disinfectant (0.5%).
6. Remove the battery, and clean the battery (including the connection area between the battery and the blower unit) three times by using the medical gauze soaked with chlorine disinfectant (0.5%).
  - a. Please clean the contacts on the bottom of the battery carefully. Make sure the area is completely dry before next use or storage.
7. Dip the neutral (PH6-8) cleaner to wipe all parts repeatedly and evenly, and use the clean water to wipe the remaining liquid of the cleaner.
8. Put the disinfected blower unit and battery into disposable medical plastic bag and dry them in a pollution-free area.

#### IMPORTANT NOTICE:

- Soaking any parts of the blower unit is prohibited.
- Insure all components are dry prior to reuse or storage.
- Reassemble unit as described in the product Operator's Manual.
- After cleaning, the PAPR Blower Unit and headgear should be inspected following the inspection procedures in the Operator's Manual for that item.

### Air Hose Disinfection

The Clear Shield Hood PAPR Air Hose can be cleaned by following the steps below:

1. Remove the air hose cover, and put it into disposable medical plastic bag and discard.
2. Soak the air hose in 1000mg/L chlorine disinfectant for 30 minutes.
  - a. Note: Please follow the disinfection instructions formulated by your organization and/or local regulatory authorities for the target microorganism or corona virus.
3. Dip the neutral (PH6-8) cleaner to wipe the air hose and use clean water to wash off the remaining liquid of the cleaner.
4. Put the disinfected air hose into a disposable medical plastic bag and dry them in a pollution-free area. Or, connect the air hose with the blower unit, and turn on the blower unit to dry the air hose.

#### IMPORTANT NOTICE:

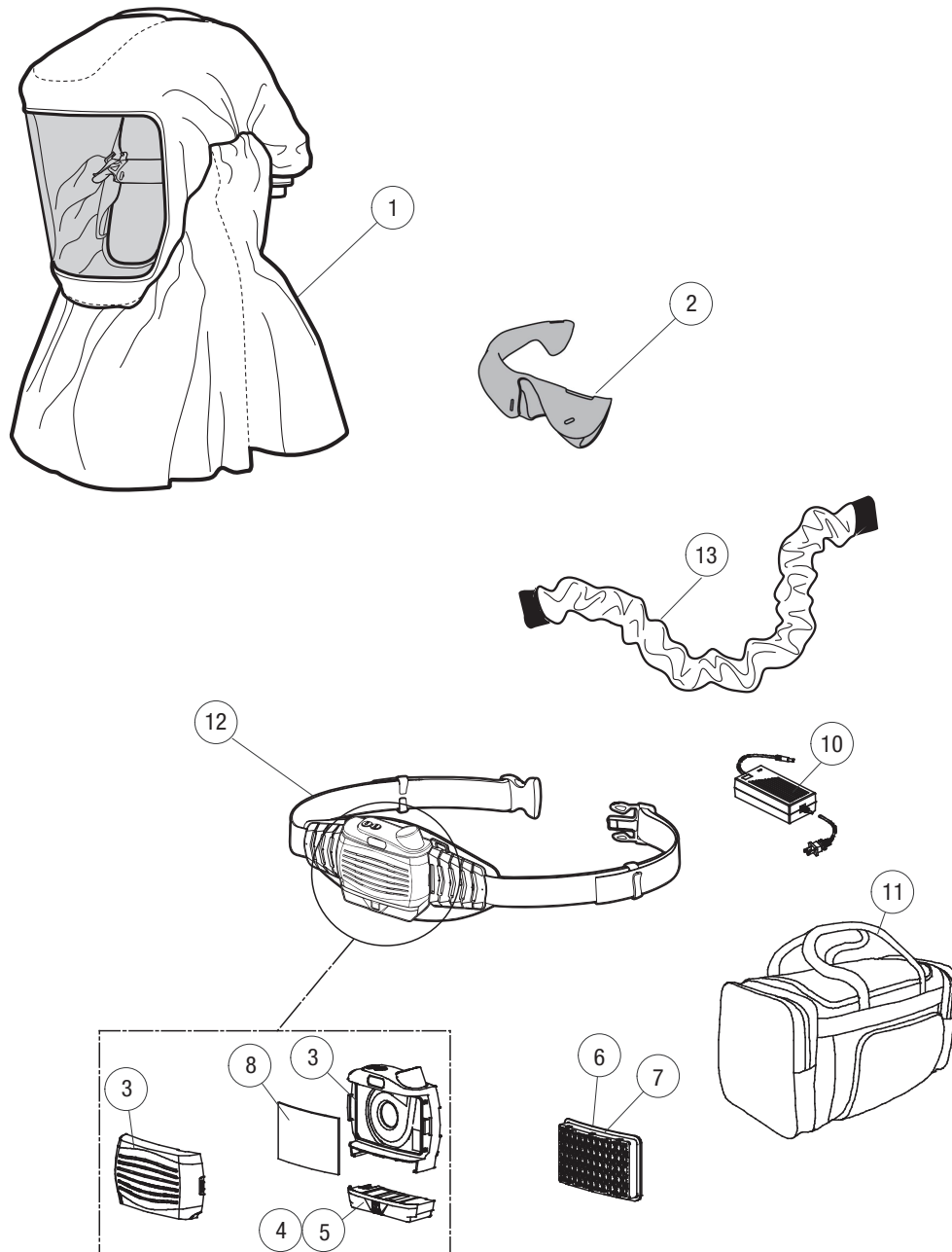
- Inspection of blower assembly and breathing tube after each use is good practice.
- Replace breathing tube if damaged or if inside of tube is dirty.
- Replace damaged or dirty air filters. Filters cannot be washed or cleaned with compressed air. Never reuse a dirty air filter.
- Do not immerse the battery pack during cleaning.
- Use caution when cleaning around the battery pack connector pins on the bottom of the motor/blower. It is critical not to bend or break the pins.
- Ensure the battery pack and the connector pins are thoroughly dry before next use or storage. It is critical not to bend or break the pins.
- Ensure all components are dry prior to reuse or storage.
- Follow your facility's protocols for proper disposal of cleaning equipment and solutions.
- Read and follow all steps set forth in the Clear Shield Hood PAPR Unit Operator's Manual.

## WARRANTY INFORMATION

**WARRANTY INFORMATION:** Reference IMWS1 included in Literature.

### SPATTER DAMAGE IS NOT COVERED BY WARRANTY:

Do not use this product without the correct protective clear lens installed properly. The clear lens supplied with this hood is properly sized to work with this product and substitutions from other suppliers should be avoided.



**PAPR CLEAR SHIELD POLYAMIDE HOOD****VIKING PAPR CLEAR SHIELD HOOD ASSEMBLY (PARTS PAGES)**

1	KP4887-1	PAPR CLEAR SHIELD HOOD	1
2	KP4890-1	PAPR HEADGEAR SWEATBAND	2
3	KP3944-1	PAPR VIKING BLOWER ASBLY	1
4	KP3937-1	PAPR VIKING BATTERY PACK 8 HR	1
5	KP3938-1	PAPR VIKING BATTERY PACK EXTENDED	1
6	KP3424-2	PAPR VIKING REPLACEMENT FILTER (PK OF 2)	1
7	KP3424-6	PAPR VIKING REPLACEMENT FILTER (PK OF 6)	1
8	KP3935-1	PAPR VIKING PRE-FILTER (PK of 6)	1
9	9SM25062-1	FILTER COVER ASSEMBLY	1
10	KP3932-1	PAPR VIKING BATTERY CHARGER	1
11	K3096-1	LINCOLN INDUSTRIAL DUFFLE BAG	1
12	KP4889-1	PAPR BELT ASSEMBLY	1
13	KP4888-1	PAPR HOSE ASSEMBLY	1
*14	KP4891-1	PAPR HOSE AND BLOWER CLEANING COVERS	2
*15	KP4892-1	PAPR HOSE COVER	1

\* ITEMS NOT SHOWN

## **CUSTOMER ASSISTANCE POLICY**

The business of The Lincoln Electric Company is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for advice or information about their use of our products. We respond to our customers based on the best information in our possession at that time. Lincoln Electric is not in a position to warrant or guarantee such advice, and assumes no liability, with respect to such information or advice. We expressly disclaim any warranty of any kind, including any warranty of fitness for any customer's particular purpose, with respect to such information or advice. As a matter of practical consideration, we also cannot assume any responsibility for updating or correcting any such information or advice once it has been given, nor does the provision of information or advice create, expand or alter any warranty with respect to the sale of our products.

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