

# RPB<sup>®</sup> PX4 AIR<sup>®</sup>

## INSTRUCTION MANUAL



**Employers:** Read this manual and the respirator head-top Instruction Manual and carry out the Employer Responsibilities (page 7).

**Product users:** Read this manual and the respirator head-top Instruction Manual and follow the Product User Safety Instructions (page 9).

Manuals are regularly updated. Make sure this manual is available to all users for reference.

**Current version of manual and Español:**  
[rpb-safety.com/product/px4-air/](http://rpb-safety.com/product/px4-air/)

The Respiratory Protection **Brand**®



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## EXPLANATION OF SIGNAL WORDS AND SYMBOLS

The following signal word and safety symbols are used in this manual and product labeling:



**WARNING** indicates a hazardous situation that, if not avoided, could result in death or serious injury.



**Read the Instruction Manual.**

Additional copies of RPB<sup>®</sup> manuals can be found at [www.rpbsafety.com](http://www.rpbsafety.com).

**RPB<sup>®</sup> Safety LLC is an ISO9001 certified company.**

## INTRODUCTION

The RPB® PX4 AIR® is approved by NIOSH as a Powered Air Purifying Respirator Fan Unit designed to be used in conjunction with the approved RPB® head-tops for different applications where there is a need for protection from airborne contaminants such as welding, grinding, painting, and other construction and industrial applications, depending on the selected head-top. For applications such as welding or grinding that produce sparks or high heat, a FR (Fire Retardant) specific model is available, with a FR belt and spark arrester to prevent sparks from entering the PAPR and igniting the filter material.

This product must be inspected and maintained in accordance with this instruction manual at all times.

See PROTECTION PROVIDED AND LIMITATIONS (page 4) for details.

### **RPB® SAFETY - GLOBAL HEADQUARTERS**

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## IMPORTANT SAFETY INFORMATION

### **WARNING**

Improper selection, fit, use, or maintenance of this product can result in injury; life threatening delayed lung, skin or eye disease; or death.

This product is intended for occupational use in accordance with applicable standards or regulations for your location, industry, and activity (see Employer Responsibilities, page 7). Familiarity with standards and regulations related to the use of this protective equipment is recommended, even if they do not directly apply to you. If self-employed or if used in a non-occupational setting, refer to Employer Responsibilities and Product User Safety Instructions. Go to [rpbsafety.com/importantsafetyinformation/](http://rpbsafety.com/importantsafetyinformation/) for helpful links to OSHA and other content.

**Employers:** Read this manual and the respirator head-top Instruction Manual and carry out the Employer Responsibilities (page 7).

**Product users:** Read this manual and the respirator head-top Instruction Manual and follow the Product User Safety Instructions (page 9).

**Check website for updates.** Product manuals are regularly updated.

Visit [www.rpbsafety.com/resources/](http://www.rpbsafety.com/resources/) for the most recent version of this manual before using the product.

## PROTECTION PROVIDED AND LIMITATIONS

### RESPIRATION

The RPB® PX4 AIR® is approved by NIOSH in the categories as follows:

#### Powered Air

The RPB® PX4 AIR® PAPR, when properly fitted and used with all required components, including the Breathing Tube Assembly and the approved head top, is part of a NIOSH approved powered air purifying respirator. As such, it significantly reduces, but does not completely eliminate, the breathing of contaminants by the respirator wearer. See the instruction manual and approval label for the selected head top for NIOSH approval with the PX4 AIR® and the assigned protection factor. Specific protection depends on the filter selected for use in the RPB® PX4 AIR® PAPR. It is approved to be used with the O3-985 High Efficiency (HE) Filter.

### HAZARD LIMITATIONS

The RPB® PX4 AIR® PAPR is **NOT FOR USE** if:

- In atmospheres immediately dangerous to life or health (IDLH).
- Wearer cannot escape without the aid of the respirator.
- Atmosphere contains less than 19.5% oxygen.
- In abrasive blasting applications.
- For protection against hazardous gases (e.g., carbon monoxide).
- Contaminants are in excess of regulations or recommendations.
- Contaminants or contaminant concentrations are unknown.

- Work area is poorly ventilated.
- The temperature is outside the range of 14°F to 131°F (-10°C to +55°C). If the internal battery temperature reaches 140°F (60°C) the unit will completely shut down.
- Flammable or explosive atmosphere is present. This system contains electrical parts that are not suitable for use in such environments. The PX4 AIR® is not intrinsically safe.

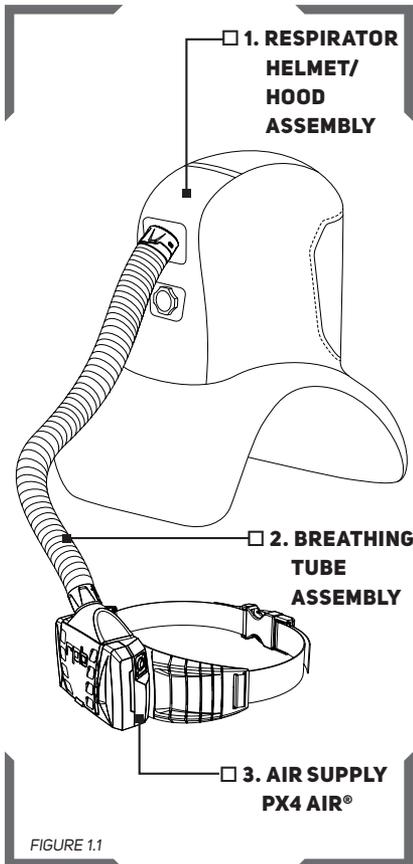
## **AIR SOURCE**

### **Powered Air**

Check that the contaminated area is within the limits of use for a Powered Air Purifying Respirator and determine the type of contamination. Once the contamination level has been confirmed you can then determine the filter cartridge to be used for the application, to make sure that you are sufficiently protected. Make sure that the area is well ventilated and that regular air samples are taken to confirm the atmosphere stays within the levels recommended by OSHA and other governing bodies.

## RESPIRATOR COMPONENT DIAGRAM

The RPB® PX4 AIR® is part 3 of the 3 main components that constitute a powered air purifying respirator. (Note the T-Link® has been used in the above diagram as an example.)



## NIOSH - CAUTIONS AND LIMITATIONS

### Powered Air

- 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 face pieces or six cfm (170 lpm) for hoods and/or helmets.
- 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.
- S. Special or Critical User Instructions and/or specific limitations apply. Refer to "S-Special or Critical User Instructions" on page 15 before donning.

## EMPLOYER RESPONSIBILITIES

Your specific responsibilities may vary by location and industry, but in general RPB® expects that employers will:

### ■ Follow all applicable standards and regulations for your location, industry, and activity.

Depending on your location and industry, a number of standards and regulations may apply to your selection and use of respirators and other personal protective equipment. These may include such things as federal (e.g., OSHA, MSHA, Canadian Occupational Health and Safety), local (e.g., state, provincial), or military standards and regulations and consensus standards such as ANSI and CSA. There are also requirements specific to particular contaminants, e.g. silica (see [rpbsafety.com](http://rpbsafety.com) for more information), asbestos, organic pathogens, etc. Know which requirements apply to your location and industry.

### ■ Have appropriate safety programs in place.

Have and follow:

- A workplace safety program.
- A written respiratory protection program in accordance with applicable standards and regulations (e.g., OSHA 29 CFR 1910.134; ANSI/ASSE Z88.2; CSA Z94.4, etc.).

### ■ In accordance with the above,

#### ■ Perform a hazard analysis and select appropriate equipment for each activity. A

hazard analysis should be performed by a qualified person. Controls should be in place as appropriate and a qualified person should determine what kind of respiratory, face and eye, head, and hearing protection is appropriate for the intended activities and environments of use. (For example, select a respirator appropriate to the specific airborne hazards, with consideration of workplace and user factors and with an Assigned Protection Factor (APF) that meets or exceeds the required level for employee protection, select welding face and eye protection appropriate to the type of welding to be done, etc.)

As applicable, check your workplace safety program, respiratory protection program, and standards and regulations for your activity or industry for related protection requirements, and see this manual (Protection Provided and Limitations, page 4) and the head top Instruction Manual for product specifications.

#### ■ Be sure employees are medically qualified to use a respirator.

Have a qualified physician or other licensed health care professional (PLHCP) perform medical evaluations using a medical questionnaire or an initial medical examination per OSHA 29 CFR 1910.134.

#### ■ Train employees in the PX4 AIR®'s use, maintenance, and limitations.

Appoint a qualified individual who is knowledgeable about the RPB® PX4 AIR® per ANSI/ASSE Z88.2 guidelines to provide training:

8.1 Qualifications of the Respirator Trainer. Anyone providing respirator training shall:

- a) be knowledgeable in the application and use of the respirator(s);
- b) have practical knowledge in the selection and use of respirator(s) and work practices at the site;

## EMPLOYER RESPONSIBILITIES CONTINUED

- c) have an understanding of the site's respirator program; and
- d) be knowledgeable of applicable regulations.

Train each PX4 AIR® user in the product's use, application, inspection, maintenance, storage, fitting, and limitations in accordance with the content of this Instruction Manual and the approved head top Instruction Manual and standard or regulatory requirements. Ensure that each intended user reads both these manuals.

### ■ **Ensure that equipment is properly set up, used, and maintained.**

Make sure that equipment is properly set up, inspected, fitted, used, and maintained, including selection of the appropriate air filter cartridge for the application.

### ■ **Measure and monitor airborne contaminants in the work area.**

Measure and monitor airborne contaminant levels in the work area in accordance with applicable requirements. Make sure work area is well ventilated.

### ■ **Exposure limits for mixtures:**

The American Conference of Government Industrial Hygienists (ACGIH) publishes a Guide to Occupational Exposure Values and also documentation for Threshold Limit Values and Biological Exposure Indices.

The information supplied by ACGIH provides formulas and information to calculate the exposure level of the atmosphere. This helps to determine the appropriate respirator category required for protection against all contaminants present. Check the ACGIH publications to help determine the right protection for your application.

### ■ **If you have any questions, contact RPB®.**

- Call Customer Service Department at:  
Tel: 1-866-494-4599 or  
Email: [customerservice@rpbsafety.com](mailto:customerservice@rpbsafety.com)  
Web: [rpbsafety.com](http://rpbsafety.com)

# PRODUCT USER SAFETY INSTRUCTIONS

## BEFORE INITIAL USE - BE TRAINED AND MEDICALLY QUALIFIED

Do not use this device until you have read this manual and the approved head top Instruction Manual (additional copies available at [www.rpbsafety.com](http://www.rpbsafety.com)) and been trained in the respirator's use, maintenance, and limitations by a qualified individual (appointed by your employer) who is knowledgeable about the RPB® PX4 AIR® PAPR.

Do not wear this respirator until you have passed a medical evaluation using a medical questionnaire or an initial medical examination by a qualified physician or other licensed health care professional (PLHCP).

**Allergens:** No known common allergens are used in this product.

Some materials could cause an allergic reaction in susceptible individuals. If you have a known allergy or develop irritation, inform your employer. Irritation may occur from lack of cleaning. Following all cleaning and care instructions provided in the instruction manuals for this and any other RPB® products you are using.

## MAKE SURE THE SYSTEM IS READY FOR USE

**Make sure you have a complete system.** The PX4 AIR® is only one component of a NIOSH approved respirator system. Verify that you have all required components for the PX4 AIR® to serve as a complete NIOSH approved respirator:

- Respirator Head-top Assembly
- Breathing Tube Assembly
- PX4 AIR® PAPR

*See Respirator Component Diagram (page 6).* See the instruction manual and approval label for the selected head top for NIOSH approval with the PX4 AIR® and the assigned protection factor. Use only authentic RPB® brand parts and components that are part of the NIOSH approved respirator assembly. Using incomplete or inappropriate equipment, including the use of counterfeit or non-RPB® parts, can result in inadequate protection and will void the NIOSH approval of the entire respirator. Do not modify or alter any part of this product.

**Inspect** all components daily for signs of damage or wear and tear that may reduce the level of protection originally provided, see Inspection and Cleaning (p. 24) for details. Remove any damaged component or product, including any belt, breathing tube, or front cover of the PAPR, from service until repaired or replaced. Damaged components should be replaced with genuine RPB® brand replacement parts. Replace HE filter when they are visually dirty, filter media is damaged, or the airflow is reduced. Inspect the prefilter and the spark arrestor for damage or blockage. Inspect the inside of the respirator for respirable dust or other foreign objects. Keep the inside of the respirator clean at all times.

**Make sure that the PAPR is correctly assembled** in the configuration that suits your application. Never use the respirator without a HE filter in place depending on the application. It is recommended that a prefilter always be used. For applications that produce sparks or high heat,



## PRODUCT USER SAFETY INSTRUCTIONS CONTINUED

use the FR (Fire Retardant) specific model of the PX4 AIR® with the FR belt and spark arrester. The PX4 AIR® must always be used with the correct filter(s), the front cover and the prefilter cover to form a complete system. An incomplete system could provide inadequate respiratory protection. *See Respirator Setup and Care (page 12).*

### VERIFY THAT YOU HAVE THE APPROPRIATE EQUIPMENT FOR YOUR ACTIVITY

Verify that the PX4 AIR® provides appropriate protection for your activity. As applicable, check your workplace safety program, respiratory protection program, and standards and regulations for your activity or industry. (See PROTECTION PROVIDED AND LIMITATIONS, page 4.)

### BEFORE DONNING THE PX4 AIR®:

#### Verify airborne contaminants are within recommended limits for respirator use:

- Determine the type and level of contamination. Verify that airborne contaminant concentrations do not exceed those allowed by applicable OSHA, EPA, or NIOSH regulations and recommendations for powered air purifying respirators or supplied air respirators.

#### Select the correct filter cartridge for the contamination and application:

- **PAPR:** Once the contamination level has been confirmed, determine the correct filter cartridge to be used for the application, to make sure that you are sufficiently protected.

#### Make sure the area is ventilated and monitored:

- Make sure that the area is well ventilated and that regular air samples are taken to confirm the atmosphere stays within the levels recommended by OSHA and other governing bodies.

If you have any questions, ask your employer.

#### DO NOT ENTER THE WORK AREA if any of the following conditions exist:

- Atmosphere is immediately dangerous to life or health.
- You cannot escape without the aid of the respirator.
- Atmosphere contains less than 19.5% oxygen.
- If flammable or explosive atmosphere is present. This system contains electrical parts that are not suitable for use in such environments. The PX4 AIR® is not intrinsically safe.
- Contaminants are in excess of regulations or recommendations.
- Contaminants or contaminant concentrations are unknown.
- Work area is poorly ventilated.
- The work area is a confined space (unless proper measures are taken).
- The temperature is outside the range of 14°F to 131°F (-10°C to +55°C).

#### LEAVE THE WORK AREA IMMEDIATELY IF:

- Any product component becomes damaged.
- Vision is impaired.

- Airflow stops or slows down, or alarm sounds. Do not use Powered Air Purifying Respirators if airflow is less than 6 cfm (170 lpm).
- Breathing becomes difficult.
- You become dizzy, nauseous, too hot, too cold, or ill.
- Your eyes, nose, or skin become irritated.
- You taste, smell, or see contaminants inside the helmet.
- You have any other reason to suspect that the respirator is not providing adequate protection.

### **PRODUCT CARE**

Never place the PX4 AIR® on hot surfaces. Do not apply paints, solvents, adhesives or self-adhesive labels except as instructed by RPB®. This product may be adversely affected by certain chemicals.

See the "Inspection and Cleaning" section for cleaning instructions.

### **INSTRUCTIONS FOR SPECIFIC USES OR ENVIRONMENTS**

#### **Welding and Grinding**

For welding, grinding, and other applications that produce sparks or high heat, be sure to use the FR (Fire Retardant) specific model of the PX4 AIR® with the FR belt and spark arrestor in place, see "Respirator Setup and Care" (page 12).

#### **Confined Spaces**

If this respirator is used in confined spaces, ensure the area is well ventilated and that all contaminant concentrations are below those recommended for this respirator. Follow all procedures for confined space entry, operation, and exit as defined in applicable regulations and standards.

#### **Welding in Confined Spaces**

Welding in a confined space can present an atmospheric hazard due to the generation of contaminants and displacement of oxygen. A pressure-demand SCBA or a multifunctional pressure-demand supplied-air respirator with self-contained air supply shall be used during welding in confined spaces when welding can reduce the ambient oxygen level and supplemental ventilation and atmospheric monitoring are not provided according to 29 CFR 1910.146 and ANSI/ASSE Z117.1. For more information on respirator types refer to annex A.2 of ANSI/ASSE Z88.

## RESPIRATOR SETUP AND CARE

### UNPACKING

Inspect the package contents for shipping damage and ensure all components are present.

### BATTERY PACK



#### **WARNING**

**To reduce the risk of battery fire or explosion or electric shock with the charger, follow these precautions and procedures:**

#### **Before charging**

- Allow the battery to cool before charging if it feels hot.
- Inspect the battery pack before each time it is charged. If there are any cracks or damage do not charge the battery pack.
- Inspect the charger and power cords before use. Replace if any parts are damaged. Do not substitute, modify or add parts to the chargers. Do not attempt to service the chargers. There are no user-serviceable parts inside.
- Use only the provided charger and cord.

#### **Where to charge**

Charge only:

- indoors,
- in a dry area,
- away from sources of heat,
- away from anything that can burn if exposed to heat or flame,
- in a well-ventilated place,
- where the charger can be monitored and easily observed during charging.

#### **Battery care**

- Do not use the battery outside the recommended temperature limits 14° F to 131° F (-10° C to 55° C).
- Do not charge the battery outside the recommended temperature limits 32° F to 113° F (0° C to 45° C).
- Do not store the battery outside the recommended temperature limits 14° F to 113° F (-10° C to 45° C).

#### **Do not disassemble or immerse the battery pack in water or other liquids.**

The battery can short if the contacts are accidentally connected by metal other than the PX4 AIR® or the charger. The protections built into the battery will make the battery test strip lights all turn off and appear as if there is no charge. To reset the battery, place the battery on the charging station. The battery will be good to use again.

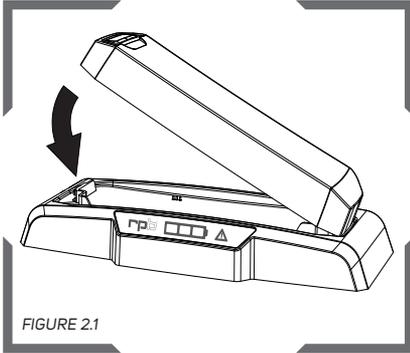
#### **Storage**

Store the battery detached from the PAPR unit. Make sure the battery and the contacts on the battery and the PAPR are completely clean and dry after every use to avoid corrosion.

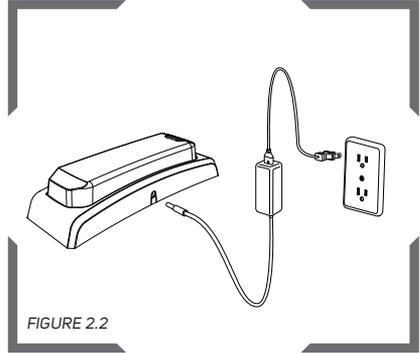
#### **Disposal**

Dispose of battery packs according to local 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.

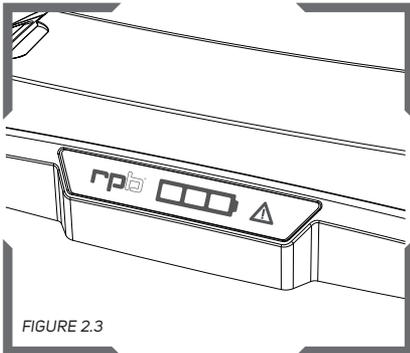
## CHARGING THE BATTERY PACK



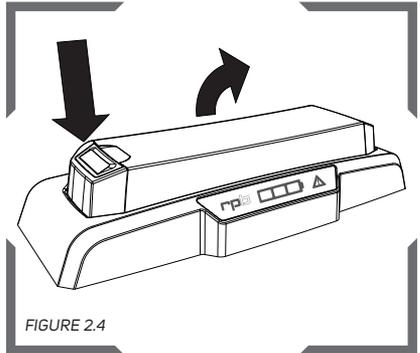
Fit the battery to the charging station by connecting the left side and rotate the battery down and latch into place.



Connect the Power Pack to the charging station. Connect the Power Pack to the Mains Electrical Source (110 - 240v), charging will begin.

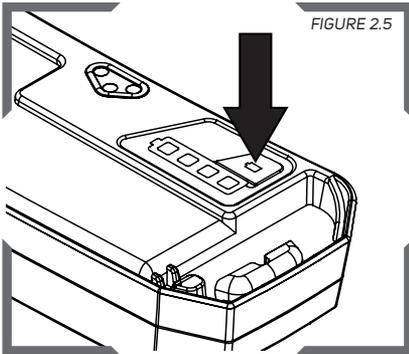


Follow the indicators from left to right on the front of the charging station to know the status of the charge process. The triangle warning light will indicate when there is a problem charging. Flashing lights indicate the battery is still charging. When all three lights are solid green, the battery is fully charged.

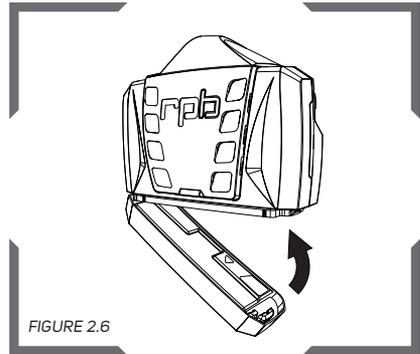


To remove the battery from the charging station, press the release latch on the bottom of the battery and lift the battery from the station.

## RESPIRATOR SETUP AND CARE CONTINUED



The battery has a power capacity indicator showing the approximate level of charge from 20% to 100%, press the test button to show the result. 4 green lights indicates 80-100% charged.



Now attach the battery to the RPB® PX4 AIR® by connecting the left hand edge to the base of the unit and rotate up into position, making sure that the latch snaps into place.

## FILTERS

### High Efficiency (HE) Filter

Use the HE filter in atmospheres that contain only solid or liquid particulates, such as dusts, mists, or fumes.

Before unpacking the O3-985 HE filter, make sure that the sealed plastic packaging is still intact. Once the seal is broken the filter is exposed to the environment and may become contaminated. Before inserting the filter make sure that the following points are checked:

1. Check the fan unit is switched off and the fan is not running before opening the door of the unit.
2. Inspect the filter for tears or any sign of damage to the filter media.
3. Inspect the seal on the back side of the filter is clean and free of cuts or distortions.

### Service Life of HE Filter, Prefilter and Spark Arrestor

The HE filter should be replaced if the airflow alarm is activated, or the flow indicator reading falls below the 6cfm (170 slpm) minimum airflow. The HE filter should also be replaced if there is damage to the filter media, such as a tear or puncture, etc., or the filter media becomes wet. The PX4 AIR® is approved to only be used with genuine RPB® filters and cartridges.

The Prefilter is recommended to be replaced when it is dirty or damaged or at the same time as the HE Filter. The Spark Arrestor should be replaced if it becomes damaged or clogged with debris.

## HIGH EFFICIENCY FILTER

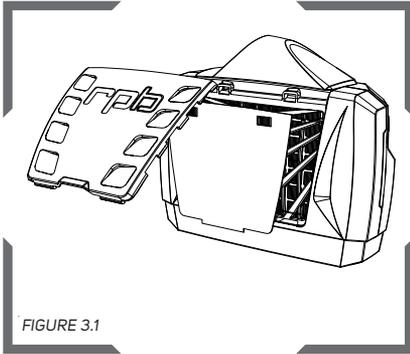


FIGURE 3.1

A 03-981 Prefilter is mounted in front of the 03-985 HE filter to prolong the life of the Filter.

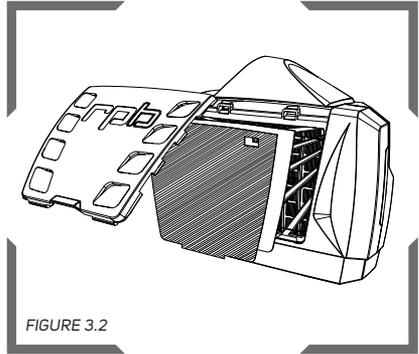


FIGURE 3.2

In environments with sparks, such as welding or grinding, use the 03-982 Spark Arrestor in front of the 03-981 Prefilter. This will reduce the risk of fire.

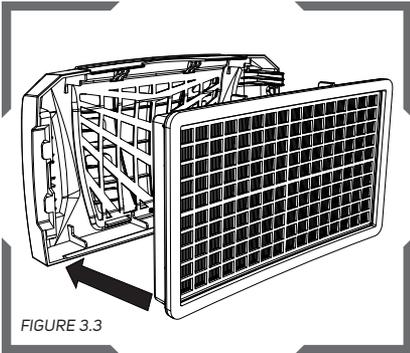


FIGURE 3.3

Mount the 03-985 HE Filter into the Door, note the logo on the front of the Filter should be to the bottom.

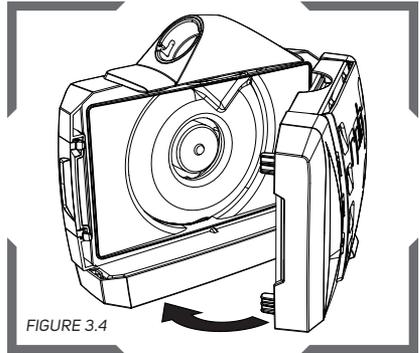


FIGURE 3.4

Slide the Door on to the hinge block on the right side of the fan unit as you face it, rotate the door to the left and latch in place.

## RESPIRATOR SETUP AND CARE CONTINUED

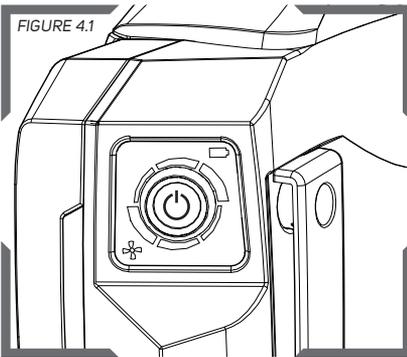
### FILTER REMOVAL

#### **⚠ WARNING**

Depending on the contaminants filtered by the PX4 AIR®, the used filter itself may be hazardous. Take appropriate precautions when handling to avoid exposure to released contaminants; a company disposal procedure may be needed.

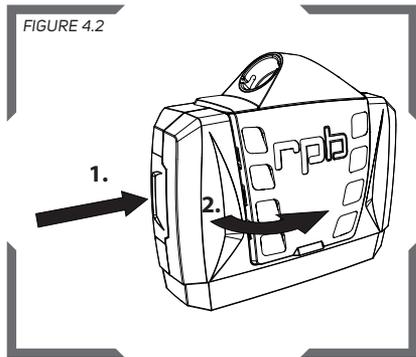
### TO REMOVE THE HE FILTER

FIGURE 4.1



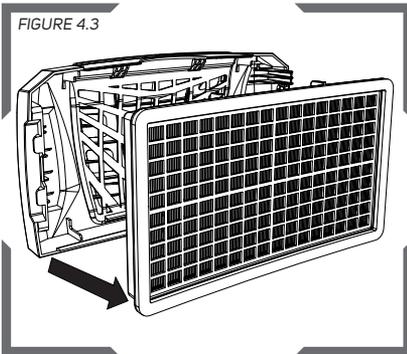
Make sure the O3-911 fan unit is switched off before attempting to open the Door. (Note: Press and hold button to power off.) If the unit is on, contaminants may get pulled into the unit and the suction may make it hard to remove the filter.

FIGURE 4.2



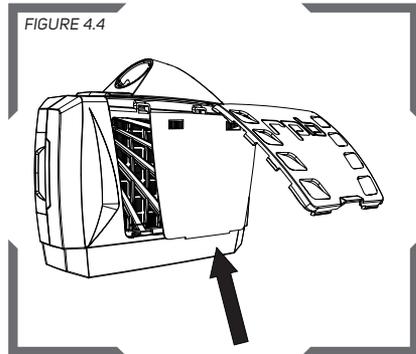
(1.) Depress the latch, (2.) Rotate the door to the right and lift the door off the latch.

FIGURE 4.3



Remove the O3-985 filter from the Door and dispose of it in a suitable way.

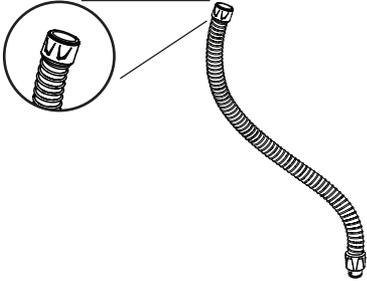
FIGURE 4.4



Install the new replacement O3-985 filter as per Fig 3.3 and 3.4. Inspect the O3-981 Prefilter and replace as needed.

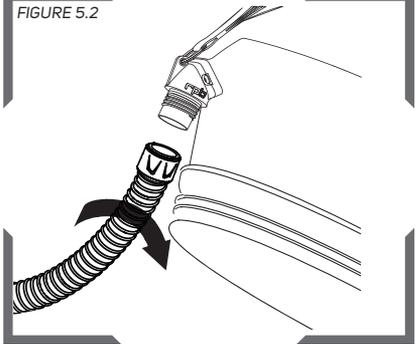
## BREATHING TUBE

FIGURE 5.1



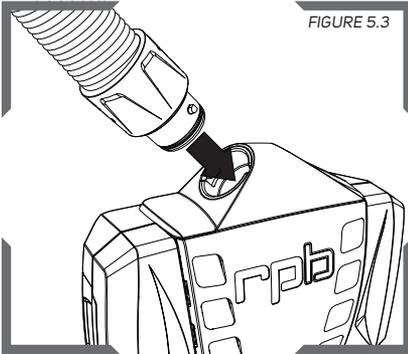
Select the flexible breathing tube that suits your respirator head-top (check that the fitting connects to your respirator type).

FIGURE 5.2



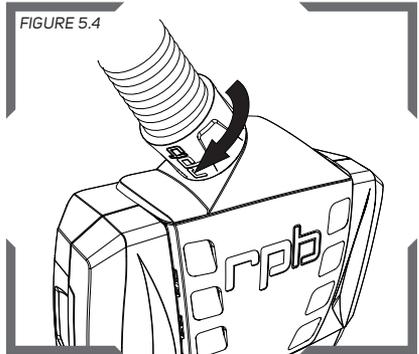
Take the end that fits to the respirator and connect it securely.

FIGURE 5.3



Now take the bayonet end, insert the connection into the PX4 AIR® and make sure the 2 small pegs line up with the slots in the PX4 AIR® outlet.

FIGURE 5.4



Twist the breathing tube clockwise a ¼ turn to lock into position. Make sure that it is fully locked in position.

**RESPIRATOR SETUP AND CARE CONTINUED**

**POWER BUTTON AND BATTERY INDICATION**

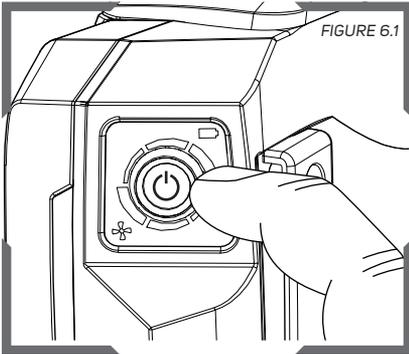


FIGURE 6.1

The power button is on the right side of the unit as you look at the front of the PX4 AIR®. **POWER ON:** Press and hold the power button (for about 1 second). Note the unit will always start up in the low speed setting and should reach nominal flow within 5-10 seconds. Allow the unit to warm up for 5 minutes or until the flow meter (O4-O91) is in the safe range before use, so that there is sufficient air flow.

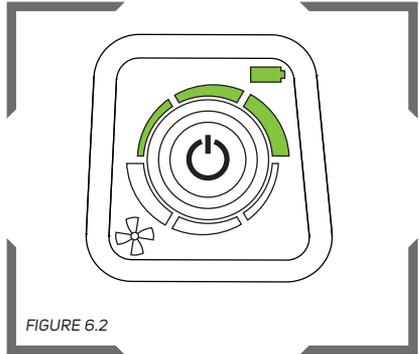


FIGURE 6.2

The top row of green lights indicate the charge of the battery. 3 lights is fully charged. 1 light means the battery is getting low. When it is time to change or charge the battery, there will be 1 light flashing alternately green and red.

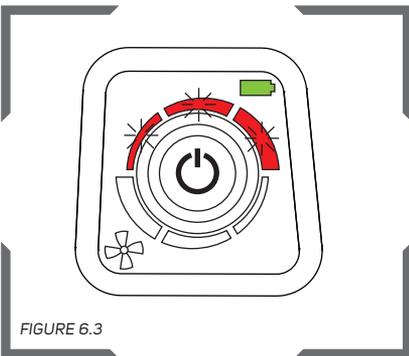


FIGURE 6.3

When the battery is out of charge the top row of lights will flash red and the alarm will sound. Immediately return to a safe environment and remove the respirator and change/charge the battery.

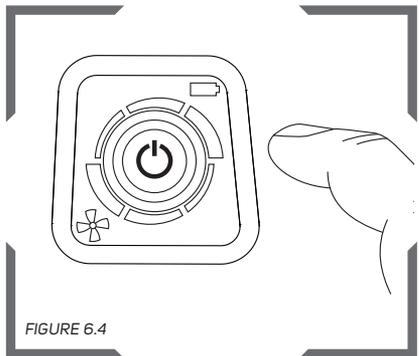
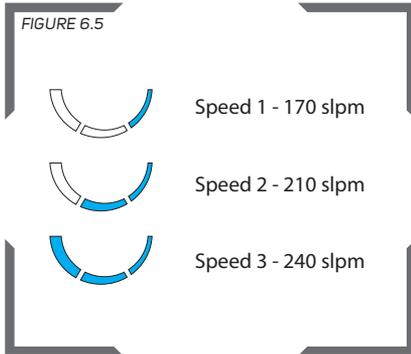


FIGURE 6.4

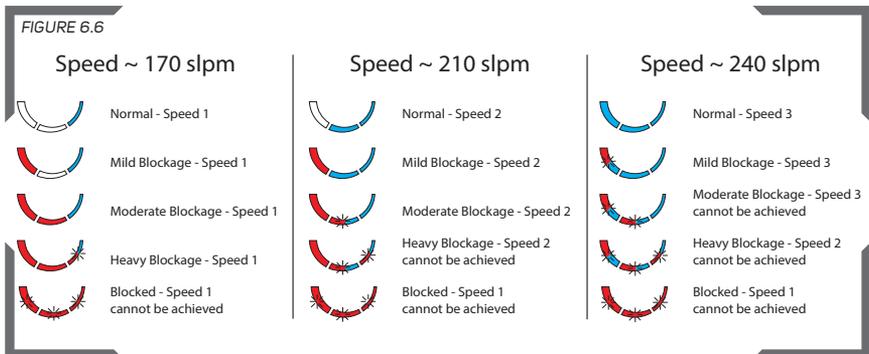
**POWER OFF:** Press and hold the power button (for about 1 second) and the unit will turn off.

## FAN SPEED AND AIR BLOCKAGE INDICATION



Speed Settings: Cycle through the 3 speed settings by pressing the Power Button. Each button press will advance through these speed settings.

## OPERATION LEGEND



The blue lights indicate the selected fan speed. The red lights indicate the level of blockage. When the lights flash red and blue, the selected fan speed cannot be reached, but sufficient air supply (170slpm) can still be reached. When 3 lights flash red, the alarm will sound indicating insufficient air supply is being produced. Return to a safe environment and check the filter and/or the airway for blockage. If the filter is contaminated, replace with a new cartridge.

When the alarm sounds it is recommended that you leave the work area immediately. Do not remove the respirator, remove the filter, or disconnect the breathing tube while in the work area. Once outside of the work area power the unit down and resolve the problem.

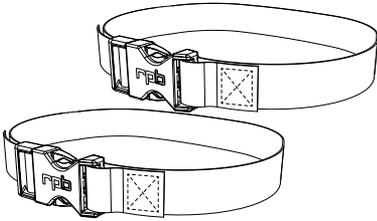
## RESPIRATOR SETUP AND CARE CONTINUED

**ALARMS** TABLE 1.1

<p><b>LOW AIRFLOW ALARM</b></p>	<p>A continuous alarm sounds when the airflow to the hood falls below the minimum requirement of 6cfm (170slpm) for more than 5-10 seconds in duration.</p> <p>Leave the work area to check the filter for blockage or anything obstructing the air path to the head-top. If the filter is blocked due to contaminants, replace the filter with a new one.</p>
<p><b>LOW BATTERY CHARGE ALARM</b></p>	<p>A pulsing alarm sounds when approximately 10-15 minutes of charge is left in the battery. Leave the work area. Power the unit off and remove the battery and place on the charger, if you have a second battery you can connect it to the device to continue operation. The pulsing alarm will also sound if the battery is overheating. If the unit is operated outside this temperature range for 10 minutes the battery alarm will activate.</p> <p>Alarm volume is 85 dBA at 4" (104mm).</p>

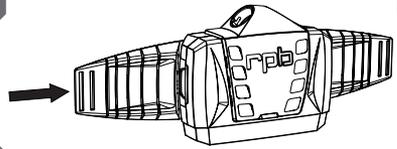
## BELT AND SUPPORT ATTACHMENT

FIGURE 7.1



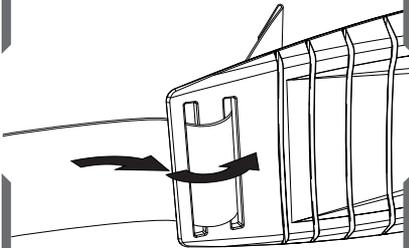
Choose the appropriate belt for the working environment; (O7-765 Belt Assembly (Standard) or O7-765-FR Belt Assembly - FR (Welding, grinding, where sparks may be present and High Heat Applications)).

FIGURE 7.2



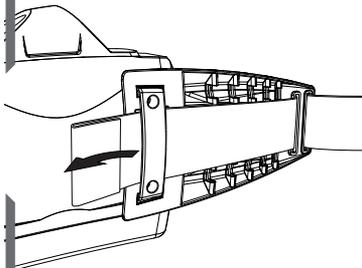
Thread the belt through the support in a left to right direction when looking at the front of the PX4 AIR®.

FIGURE 7.3



Take the loose end of the Belt and thread from behind through the outer slot (slot furthest out from the PX4 AIR®) in the left support and then back through the inner slot (closest to the PX4 AIR®).

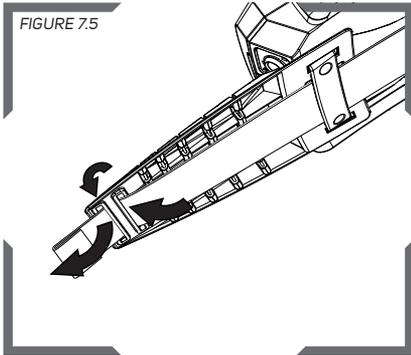
FIGURE 7.4



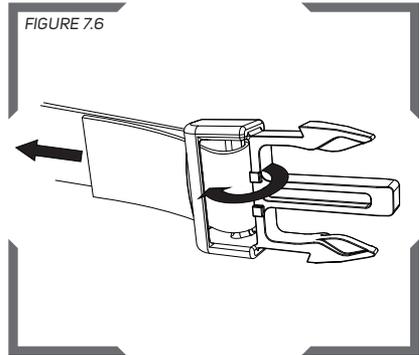
Thread the belt through the belt loops so that it passes between the loop and the support.

## RESPIRATOR SETUP AND CARE CONTINUED

### BELT AND SUPPORT ATTACHMENT CONTINUED



Thread the belt through the inner slot from the back and then back through the outer slot.



Now thread the clip end of the buckle on to the belt and pull to the desired length.

### INSPECTION AND CLEANING

Before each use the unit should be inspected for the following points. This helps to determine that the unit is operating as it was designed and it is suitably protecting the operator:

1. **PX4 AIR® PAPR SYSTEM:** Make a visual inspection of the entire unit, which includes the motor housing, filter door and door cover, filter and pre-filters, battery, belt and breathing tube. Also inspect that the correct hood or face pieces is attached.
2. **BATTERY PACK:** Check that the battery has a full charge (see the battery test strip on the top of the battery, Fig 2.5) to confirm that there is sufficient charge for the work period that you need to accomplish. Make sure that the battery is securely fitted to the PX4 AIR® PAPR.
3. **BREATHING TUBE:** Inspect the breathing tube completely, looking for splits and cracks in the tube, the fittings are held securely in the tube and that the O-ring is in place on the bayonet fitting that inserts into the PX4 AIR®. Make sure that the breathing tube fits firmly into the PX4 AIR® unit and seals without any leaks around the connection. See Fig 5.3 and 5.4
4. **HE FILTER:** Inspect the filter casing for cracks and distortions that will affect the seal to the PX4 AIR® unit. Inspect the filter paper and the seal carefully for any of the following defects; dirt, cuts and tears, distortions or indentations. The seal can be wiped clean with a damp cloth to remove dirt particles. Do not use solvents or detergents. The HE filter paper must not be cleaned or submersed in water at any time. Damage to the HE filter paper will affect its ability to filter the air and could expose users to harmful environments. All damaged filters, pre-filters and spark arresters must be replaced before using the PX4 AIR®.
5. **AIRFLOW METER:** Check the ball in the O4-O91 airflow meter is moving freely. Insert the

flow meter into the outlet of the PX4 AIR® and rotate ¼ turn to lock in place so that it is sitting vertical. Turn on the PX4 AIR® and let the air stabilize over a 30 second period. With the meter still in the vertical position check that the ball is sitting above the minimum flow rate marker.

Do not use the PX4 AIR® if the meter does not reach the minimum airflow rate on the flow meter. Low airflow will decrease the level of protection provided. See Fig 8.1.

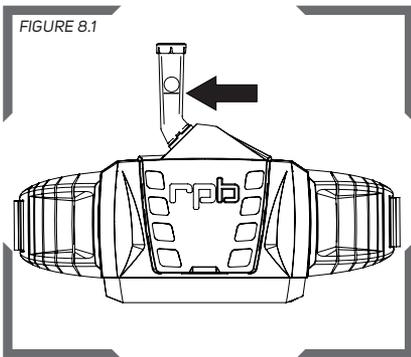
6. ALARM SIMULATION: Check the operation of the airflow alarm is functioning correctly. Power on the PX4 AIR® and place the palm of your hand over the outlet on the PX4 AIR®. Continuing to hold your hand tightly over the outlet, with the airflow restricted until the alarm sounds, (audible alarm and Red LED indicators on the button) after 5-10 seconds, indicating that the airflow is below the minimum airflow. Remove your hand and the alarm and LED should return to normal operation once the airflow is back to safe levels.
7. CLEANING: The PX4 AIR® unit can be cleaned with a damp cloth and mild detergent on the external surfaces and the face of the fan motor housing.

**⚠ WARNING**

**DO NOT submerge in water or use solvents on any parts of the PX4 AIR®. This device has electrical components and could cause injury if put in contact with water.**

8. BELT LOOPS/SUPPORTS: Check the Belt Supports and Belt Loops for cracks. If cracks or excessive wear is present, they should be replaced. To replace the Belt Supports (03-965) and the Belt Loops (03-924), unthread the Belt from the Belt Supports and the Belt Loops. Remove the Belt Loops by removing the two screws in each Belt Loop. Remove the old Belt Supports and place the new ones. Place the new Belt Loops and screw in tight until secure. Do not over tighten.

FIGURE 8.1



## RESPIRATOR SETUP AND CARE CONTINUED

### STORAGE

The PX4 AIR® should not be stored with the filter or battery attached if not being used for long periods of time, store in a clean, dry environment, away from direct heat sources between 14° F and 114° F (-10° C and +45° C), at a relative humidity of less than 70%.

All batteries must be stored in a cool dry atmosphere. DO NOT store a battery in ambient temperatures that exceed 114°F (45°C). It is recommended that the battery is stored at 14° F to 114° F (-10° C to 45° C) as the optimal temperature range for storage, to maximise the life of the battery.

All filters must be stored in an airtight plastic bag or container so that they are not exposed to contamination. Partially used filters should also be stored in an air tight plastic bag so that contaminants are contained.

## PRODUCT SPECIFICATIONS AND DATA TABLE 1.2

<b>AIR FLOW</b>	Speed 1: Greater than 6cfm (170slpm). Speed 2: Greater than 7.4cfm (210slpm) Speed 3: Greater than 8.4cfm (240slpm)
<b>OPERATING TEMPERATURE</b>	14° F to 131° F (-10° C to 55° C). If the unit is operated outside this temperature range for 10 minutes the battery alarm will activate.  If the internal battery temperature reaches 140° F (60° C) the unit will completely shut down.
<b>OPERATING NOISE</b>	Speed 1: 57 dBA at 12" (305mm) from the unit. Speed 2: 59 dBA at 12" (305mm) from the unit. Speed 3: 62 dBA at 12" (305mm) from the unit.  Note: readings were taken at the distance listed from the front of the unit when connected to a T100® Respirator at the 3 speed settings
<b>STORAGE TEMPERATURE</b>	14° F to 113° F (-10° C to 45° C) at a Relevant Humidity of less than 70%.  It is recommended that the battery is stored at 14° F to 113° F (-10° C to 45° C) as the optimal temperature range for storage, to maximise the life of the battery.

<b>BATTERY RUN TIMES</b>	Lithium-ion HE Filter Speed 1: 10-13 hours Speed 2: 7-10 hours Speed 3: 6-8 hours  Note that these times are estimated from testing using a new battery and new clean filter at 70°F (21°C). These times could be longer or shorter depending on environments and configurations.  <b>Note: you should consult with your transport specialist before transporting Lithium-ion batteries.</b>
<b>BATTERY CHARGING</b>	3 hours
<b>PRODUCT STORAGE LIFE</b> (from new if kept in original sealed packaging) <b>A. MOTOR/FAN UNIT</b> <b>B. BATTERY PACK</b> <b>C. FILTERS</b>	A. 5 years B. 1 year C. 5 years
<b>INTRINSIC SAFETY</b>	The PX4 AIR® PAPR is NOT classed as an Intrinsically Safe Device.
<b>ASSIGNED PROTECTION FACTOR (APF)</b>	The assigned protection factor is dependent on the type of respirator used with the PX4 AIR® PAPR.

## PARTS AND ACCESSORIES

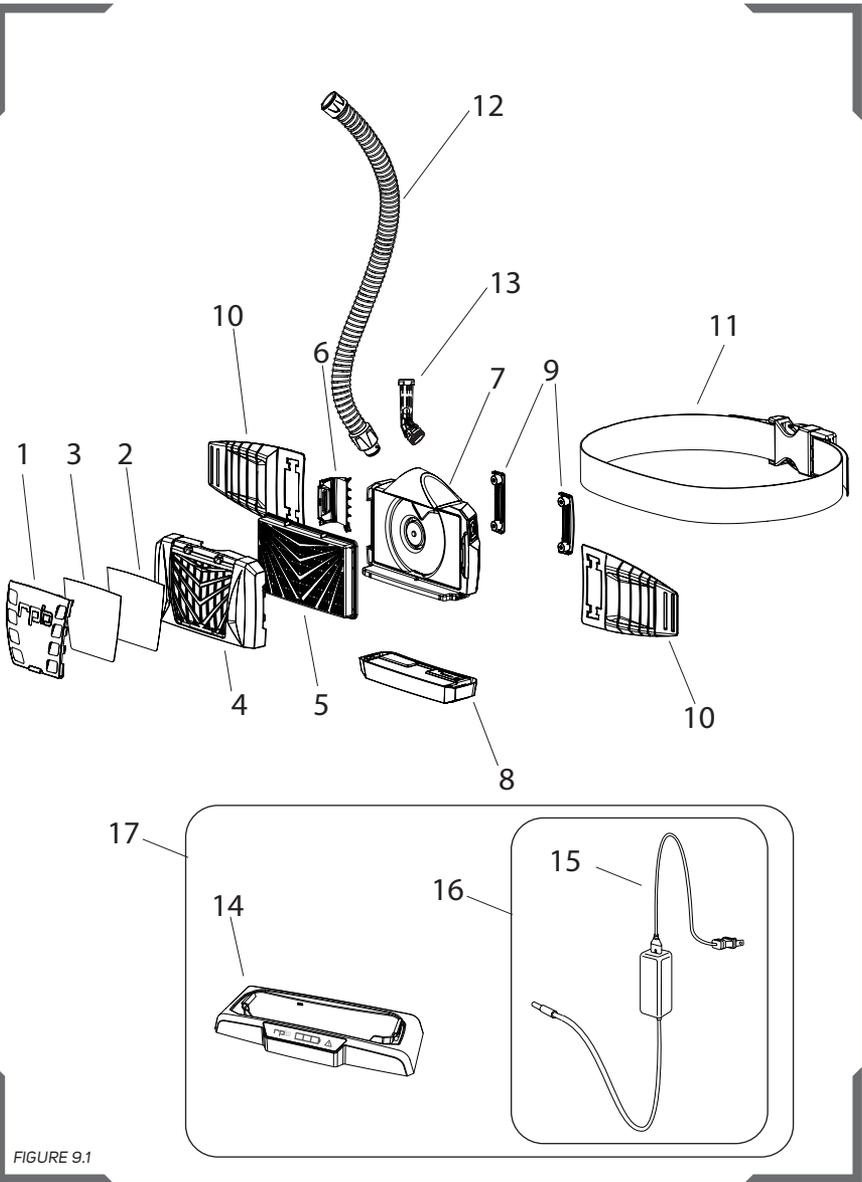


FIGURE 9.1

## PARTS LIST

Item Number	Description	Part Number
1	Prefilter Cover	03-922
2	Prefilter (Packet of 10)	03-981
3	Spark Arrestor	03-982
4	Main Door	03-921
5	High Efficiency (HE) Filter	03-985
6	Latch Kit	03-923
7	Fan Housing	03-911
8	Battery	03-955
9	Belt Loops with screws	03-924
10	Belt Supports (Pair)	03-965
11	2" Belt Assembly	07-765
	2" Belt Assembly - FR	07-765-FR
12	Breathing Tube (Z4®, Z-LINK®, T-LINK®, T100®)	04-837
	Breathing Tube (Z3®)	04-839
13	Flow Meter	04-091
14	Battery Charger	03-951
15	AC Power Cable - USA 2 pin	09-021
	AC Power Cable - UK 2 pin	09-021-UK
	AC Power Cable - EU 3 pin	09-021-EU
	AC Power Cable - AU 2 pin	09-021-AU
16	24 Volt Power Supply with Power Cord	03-952
	24 Volt Power Supply with Power Cord - AU	03-952-AU
	24 Volt Power Supply with Power Cord - EU	03-952-EU
	24 Volt Power Supply with Power Cord - UK	03-952-UK
17	Battery Charger and Power Supply Kit	03-950
	Battery Charger and Power Supply Kit -AU	03-950-AU
	Battery Charger and Power Supply Kit -EU	03-950-EU
	Battery Charger and Power Supply Kit -UK	03-950-UK



### WARNING

**Use only exact, authentic RPB® replacement parts (marked with the RPB® logo and part number), and only in the specified configuration. Using incomplete or inappropriate equipment, including the use of counterfeit or non-RPB® parts, can result in inadequate protection and will void the NIOSH approval of the entire respirator assembly.**



## **LIMITED WARRANTY**

RPB® warrants that its Products will be free from defects in materials and workmanship for one (1) year, subject to the terms of this limited warranty. The Products are sold only for commercial use, and no consumer warranties apply to the Products. This limited warranty is for the benefit of the original Product purchaser, and cannot be transferred or assigned. This is the sole and exclusive warranty provided by RPB®, and ALL CONDITIONS AND IMPLIED WARRANTIES (INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE) ARE EXCLUDED AND DISCLAIMED FROM WARRANTY COVERAGE. RPB's® limited warranty coverage does not apply to damage resulting from accident, improper use or misuse of the Products, wear and tear resulting from the normal use of the Products, or the failure to properly maintain the Products.

RPB's® limited warranty coverage runs from the original date of purchase of the Products, and applies only to warranted defects which first manifest themselves and are reported to RPB® within the warranty period. RPB® retains the right to determine to its reasonable satisfaction whether any claimed defect is covered by this limited warranty.

If a warranted defect occurs, RPB® will repair or replace the defective Product (or a component of the Product), in its sole discretion. This "repair or replacement" remedy is the sole and exclusive remedy under this limited warranty, and under no circumstances shall RPB's® liability under this limited warranty exceed the original purchase price for the Products (or the applicable component). RPB® has no responsibility for incidental or consequential damages, including loss of use, maintenance and other costs, and ALL INCIDENTAL AND CONSEQUENTIAL DAMAGES ARE EXCLUDED AND DISCLAIMED from this limited warranty. Contact RPB® to obtain warranty service. Proof of purchase must be provided to obtain warranty service. All costs of returning the Products to RPB® for warranty service must be paid by the purchaser.

RPB® reserves the right to improve its Products through changes in design or materials without being obligated to purchasers of previously manufactured Products.

## **LIABILITY**

RPB® Safety cannot accept any liability of whatsoever nature arising directly or indirectly from the use or misuse of RPB® Safety products, including purposes that the products are not designed for. RPB® Safety is not liable for damage, loss or expense resulting from the failure to give advice or information or the giving of incorrect advice or information, whether or not due to RPB® Safety's negligence or that of its employees, agents or subcontractors.

## NOTES

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## OTHER PRODUCTS

### RPB® Z-LINK®

The most versatile multi-purpose respirator system on the planet. From welding and grinding to chemical handling, the Z-Link® serves the widest spectrum of industries and applications on the market. This is more than a product. It's a system. Engineered to advance your safety. Designed to increase your productivity.



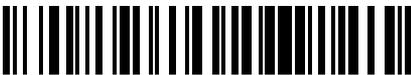
### RPB® T-LINK®

Built off the Z-Link® platform, the T-Link® is designed to work with you, not against you. Gone are the days of having to fight against a Tyvek® respirator. The T-Link® moves with the operator anywhere they turn.



### RPB® QUIET-LINK™ EAR DEFENDERS

The RPB® Quiet-Link™ ear defender system fits directly to the Z-Link® and T-Link® with no modifications. Combine with RPB® Earplugs for the ultimate in hearing protection. Protect your hearing for Life's Best Moments.



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