

Cleaning Reusable Respirators and Powered Air Purifying Respirator Assemblies

Purpose

The purpose of this document is to provide suggested guidelines for cleaning and disinfecting 3M™ Reusable Respirators (RR) and Powered Air Purifying Respirator (PAPR) assemblies following potential exposure to the Ebola virus.

Please always refer to the latest information from trusted sources such as the US Centers for Disease Control and Prevention (US CDC), the European Centre for Disease Prevention and Control (ECDC) and the World Health Organization (WHO) regarding selection, use, maintenance and cleaning of personal protective equipment.

WHO published the "[Interim Infection Prevention and Control Guidance for Care of Patients with Suspected or Confirmed Filovirus Haemorrhagic Fever in Health-Care Settings, with Focus on Ebola](#)". August 2014 and updated September 2014. This document does not include cleaning recommendations for reusable or PAPR respirators, but does include limited recommendations for cleaning of goggles, safety glasses and other eye/face protection and environmental surfaces.

In this document, WHO clearly states "Do not recycle any single-use disposable PPE." Goggles, safety glasses and other eye/face protection can be decontaminated if necessary, and should be cleaned "with water (+detergent) to remove any organic matter and then immersed fully in 5000 ppm [parts per million] of available chlorine (0.5%) for a minimum of 30 minutes (preferably overnight) for decontamination." Next, WHO states that goggles, safety glasses and other eye/face protection should be rinsed with clean water to prevent irritation from residual hypochlorite and salt deposits. As for clean-up, WHO states "The wipes used for the initial cleaning should be treated as infectious waste; the disinfectant can be safely poured down a sink or drain." As with any PPE, the manufacturer's User Instructions must be followed.

WHO instructs that all reusable equipment be carefully cleaned and decontaminated. Application of disinfectants should be preceded by cleaning to prevent inactivation of disinfectants by organic matter. Environmental surfaces or objects contaminated with blood, other body fluids, secretions or excretions should be cleaned and disinfected as soon as possible using hospital detergents/disinfectants (e.g. a 0.5% chlorine solution or a solution containing 5000 ppm available free chlorine). Following decontamination, equipment should be rinsed with water to remove potentially irritating residual disinfectant.

CDC gives limited guidance for PPE disinfection in their "[Guidance for Donning and Doffing Personal Protective Equipment \(PPE\) During Management of Patients with Ebola Virus Disease in U.S. Hospitals](#)".

CDC states that before removing any PPE, it should be inspected for visible contamination, cuts, or tears. "If any PPE is potentially contaminated, then disinfect using an EPA-registered disinfectant wipe. If the facility conditions permit and appropriate regulations are followed, an EPA-registered disinfectant spray can be used, particularly on contaminated areas." CDC notes that the disinfectant must have potency at least equivalent to that for a non-enveloped virus (e.g., norovirus, rotavirus, adenovirus, poliovirus). Reusable PAPR components should be separated for disinfection. Non-reusable PAPR components, N95 respirators, faceshields, gloves, gowns, shoe covers and coveralls must be discarded.

Your facility should review this information thoroughly prior to selecting the disinfecting product for your equipment and specific application. Please note that the preceding guidance emanates from WHO and CDC, and that 3M has not evaluated the effectiveness of any agents with regard to inactivating viruses on 3M products. Also note that components of RR and PAPR respiratory systems may become damaged over time with prolonged or extended use of disinfecting products. As discussed in the User Instructions, users must carefully inspect the components of their respiratory systems following each disinfecting

cycle and prior to re-use. If you discover any signs of damage, remove the respirator from service and discard the damaged components. Replace or repair the respirator system as appropriate, following the guidance in the appropriate product User Instructions or applicable cleaning guidance documents.

IMPORTANT NOTE

This document along with the respirator system User Instructions provides information on cleaning and disinfecting the respirator system components. The product User Instructions procedures should always be consulted and followed in conjunction with this document.

Follow the hygiene and infection control practices established by your employer for your particular work conditions. In the below questions and answers, please note the specific language for 'sterilize' vs. 'sanitize and/or disinfect.' Refer to the Glossary at the end of this document for definitions.

Frequently Asked Questions

1. Can disposable respirators, reusable facepieces and Powered Air Purifying Respirators (PAPRs) be sterilized prior to reuse?

No. Certain sterilization processes such as ethylene oxide, radiation and steam sterilization will damage the components and should not be used.

2. Do I need to fully disassemble the PAPR equipment to clean and disinfect after each use?

The CDC guidance states "If any PPE is potentially contaminated, then disinfect using an EPA-registered disinfectant wipe." This allows for a risk-based decision on the extent of cleaning appropriate for a given potential of exposure. For example, following a low risk of contamination exposure, a facility may assess its particular situation and decide to simply wipe down the exterior of the PAPR with a disinfectant rather than fully disassembling, cleaning, and disinfecting as described in this document. This document is intended to provide guidance for cleaning and disinfecting your equipment in conjunction with the U.S. CDC, ECDC, and WHO guidelines. The infection control program for your facility may differ.

3. How do I clean, sanitize and/or disinfect my 3M™ respirator?

For all types of respirators, follow the hygiene and infection control practices established by your employer for your particular work conditions. Users must read and follow procedures set forth in the User Instructions for their 3M™ respirator. This document does not replace the product's User Instructions, This document should only be used in conjunction with the applicable User Instructions.

General Guidelines

- It is important to follow all steps set forth in the User Instructions.
- Cleaning is recommended after each use.
- Always practice good hand hygiene.
- Always wear nitrile or vinyl gloves and other personal protective equipment (PPE) as required by your employer during cleaning of respirator components.
- Always follow the disinfecting agent manufacturer's user instructions in regard to usability, application, dilution ratio and contact time, and ensure all components are thoroughly rinsed with clean, warm water and thoroughly dried before use or storage.

IMPORTANT NOTE

It is important to rinse off chlorine based products. While rinsing is preferred, certain other disinfectants may not require this step. Follow the user instructions for the product selected.

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

3M™ Reusable Respirator 6000, 7000 and FF-400 Series

1. **Remove cartridges and/or filters.** Dispose of or reuse the filters/cartridges according to your infection control policy and/or service life determination. Properly dispose of the used filter/cartridge according to local regulations.

IMPORTANT NOTE

2000 series P100 and P95 filters cannot be cleaned or disinfected. The outside filter body of the 7093 P100 filters may be cleaned and disinfected as noted below.

2. **Clean the filter body.** Carefully wipe down the exterior of the filter body with a mild cleaning solution. If needed, rinse in a similar fashion with clean water.
 - a. Do not allow liquid to enter the filter body.
 - b. Do not attempt to clean the media inside of the filter body.
3. **Disinfect the filter/cartridge body.** Disinfect the outer surfaces of the filter body with a clean soft cloth dampened with a hospital disinfectant (e.g. a 0.5% chlorine solution or a solution containing 5000 ppm available free chlorine) specified by your facility, local health authority, WHO, or CDC. Follow the user instructions for the selected disinfectant.
 - a. Do not allow liquid to enter the filter body.
 - b. Do not attempt to clean the media inside of the filter body.
 - c. Do not spray the filter, as doing so may damage the filtering media.
4. Rinse the filter body. Rinse the filter body by wiping with a clean soft cloth dampened with clean warm ~49°C (120°F) water.

IMPORTANT NOTE

It is important to rinse off chlorine based products. While rinsing is preferred, certain other disinfectants may not require this step. Follow the user instructions for the product selected.

IMPORTANT NOTE

Do not allow liquid to enter the filter body.

5. **Clean facepiece (excluding filters and cartridges).** Immerse in a warm, mild pH-neutral (pH 6-8) detergent cleaning solution. The water temperature should not exceed 49°C (120°F). Scrub with a soft brush until clean. Do not use detergents that contain lanolin or other oils, organic or chlorinated solvents or abrasive cleaning agents.
6. **Disinfect facepiece.** Wipe the facepiece with a clean soft cloth dampened with a hospital disinfectant (e.g. a 0.5% chlorine solution or a solution containing 5000 ppm available free chlorine) specified by your facility, local health authority, WHO, or CDC. Follow the user instructions for the selected disinfectant, including specified contact time.
7. **Rinse facepiece.** Thoroughly rinse with clean, warm water and thoroughly dry before use or storage.

IMPORTANT NOTE

It is important to rinse off chlorine based products. While rinsing is preferred, certain other disinfectants may not require this step. Follow the user instructions for the product selected.

8. Ensure all components are dry prior to reuse or storage.
9. The cleaned facepiece and filters/cartridges should be carefully inspected per the 3M User Instructions. Store facepiece and filters/cartridges away from contaminated areas when not in use, and in accordance with the User Instructions.

3M™ Versaflo™ TR-300 and TR-600 PAPR Assembly

Follow the appropriate 3M User Instructions and this document for cleaning the 3M™ Versaflo™ TR-300 and TR-600 PAPR assembly. Please also refer to [3M™ Technical Data Bulletin #198 Inspection, Cleaning and Storage Procedures for 3M™ TR-300 PAPR Assemblies](#).

Initial Steps and Inspection

It is important to follow the inspection procedures in the User Instructions supplied with the TR-300 PAPR and TR-600 PAPR unit and headgear to identify any damage, excessive wear, or deterioration of components and replace them as necessary.

1. Detach the headgear from the breathing tube.
2. Detach the breathing tube from the motor/blower.
3. Detach the battery pack and waist belt from the motor/blower.
4. Discard the breathing tube cover (if one is used).

TR-300 and TR-600 Motor/Blower Unit and Battery Pack

1. **Clean PAPR components.** Clean the outer surfaces of the motor/blower assembly and battery pack with a clean soft cloth dampened with warm ~49°C (120°F) water containing a mild pH-neutral (pH 6-8) detergent. If needed, rinse in a similar fashion with clean water. Refer to the PAPR User Instructions for cleaning details.
 - Do not allow liquid to enter the air outlet port of the motor/blower.
 - Optional: For TR-600, use the outlet plug from the TR-653 Cleaning and Storage Kit to prevent water from entering the air outlet of the PAPR.
 - Do not immerse the TR-300 motor/blower or battery pack during cleaning. See submersion cleaning procedures for TR-600 below.
 - 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.
2. **Disinfect PAPR components.** Disinfect the outer surfaces of the motor/blower assembly and battery pack with a clean soft cloth dampened with a hospital disinfectant (e.g. a 0.5% chlorine solution or a solution containing 5000 ppm available free chlorine) specified by your facility, local health authority, WHO, or CDC. Follow the user instructions for the selected disinfectant.
 - Do not allow liquid to enter the air outlet port of the motor/blower.
 - Do not immerse the motor/blower or battery pack.
 - Use caution around the battery pack connector pins on the bottom of the motor/blower. It is critical not to bend or break the pins.
3. **Rinse PAPR components.** Rinse all cleaned and disinfected PAPR components by wiping with a clean soft cloth dampened with clean warm ~49°C (120°F) water.

IMPORTANT NOTE

It is important to rinse off chlorine based products. While rinsing is preferred, certain other disinfectants may not require this step. Follow the user instructions for the product selected.

- Do not allow liquid to enter the air outlet port of the motor/blower.
 - Use caution around the battery pack connector pins on the bottom of the motor/blower. It is critical not to bend or break the pins.
 - Ensure this area and the pins are thoroughly dry before next use or storage.
4. Ensure all components are dry prior to reuse or storage.

In order to prevent cross-contamination of material from the outside of the PAPR to the inside, it is recommended to clean and disinfect the outside of the unit first. Then, if needed, remove the filter/filter cover assembly.

 - Dispose of or reuse the filter according to your infection control policy.

- Properly dispose of the used filter according to local regulations.
- Follow the guidance provided above to clean/disinfect the filter cover and motor/blower.

IMPORTANT NOTE

The Spark Arrestor and Prefilter are intended to help extend the life of filters in high particulate environments. They are not needed for infection prevention applications (due to low particle loads), and are not recommended because they add an additional item to clean/disinfect.

The filter body can be cleaned/disinfected by following the steps below.

5. **Clean the filter body.** Carefully wipe down the exterior of the filter body with a mild cleaning solution. If needed, rinse in a similar fashion with clean water.
 - a. Do not allow liquid to enter the filter body.
 - b. Do not attempt to clean the media inside of the filter body.
6. **Disinfect the filter body.** Disinfect the outer surfaces of the filter body with a clean soft cloth dampened with a hospital disinfectant (e.g. a 0.5% chlorine solution or a solution containing 5000 ppm available free chlorine) specified by your facility, local health authority, WHO, or CDC. Follow the user instructions for the selected disinfectant.
 - a. Do not allow liquid to enter the filter body.
 - b. Do not attempt to clean the media inside of the filter body.
 - c. Do not spray the filter/cartridge, as doing so may damage the filtering media.
7. **Rinse the filter body.** Rinse the filter body by wiping with a clean soft cloth dampened with clean warm ~49°C (120°F) water.

IMPORTANT NOTE

It is important to rinse off chlorine based products. While rinsing is preferred, certain other disinfectants may not require this step. Follow the user instructions for the product selected.

Do not allow liquid to enter the filter body.

8. Ensure all components are dry prior to reuse or storage.
9. Reassemble unit as described in the product User Instructions.
10. After cleaning, the PAPR unit and headgear should be inspected following the inspection procedures in the User Instructions for that item.

TR-600 Submersion Cleaning

The 3M™ Cleaning and Storage Kit TR-653 is an optional accessory available for use with the TR-600 PAPR. It must be installed according to the User Instructions, including the inspection of sealing gaskets prior to each use. Blowers and battery packs which have been dropped or damaged should not use these submersion cleaning methods due to potential water ingress.

- With the TR-653 properly installed the motor/blower can be:
 - Rinsed under running water; water temperature <122°F(50°C)
 - Immersed (up to 3 feet for 30 minutes)*
 - Cleaned in a rack-style respirator washer
- With the TR-653 properly installed the batteries can be:
 - Rinsed under running water; water temperature <122°F(50°C)
 - Immersed (up to 3 feet of water for 3 minutes)*
 - Do NOT attempt to clean in a respirator washer

* While the motor/blower and batteries are rated to be immersed for up to 3 feet for 30 minutes, best practice is to limit submersion time and depth to those minimally acceptable. Allow the motor/blower unit to completely dry prior to reuse or storage.

S-Series and H-Series Hood Assemblies

IMPORTANT NOTE

Clean and disinfect the exterior of the hood prior to reaching into the hood to remove the reusable suspensions.

1. **Clean the hood.** Clean all outer surfaces of hoods and reusable suspensions with a clean soft cloth dampened with warm ~49°C (120°F) water containing a mild pH neutral (pH 6-8) detergent. If needed, rinse in a similar fashion with clean water. Refer to the headgear specific User Instructions for cleaning details. Do not soak hoods during cleaning. Alternately, reusable hood suspensions including the S-950, H-113 and H-213 can be submerged for cleaning. Remove and dispose of sweat pads prior to cleaning reusable suspensions.
2. **Disinfect the hood.** Wipe outer surfaces of hoods and reusable suspensions with a clean soft cloth dampened with a hospital disinfectant (e.g. a 0.5% chlorine solution or a solution containing 5000 ppm available free chlorine) specified by your facility, local health authority, WHO, or CDC. Follow the user instructions for the selected disinfectant. Do not soak hoods during cleaning. Alternately, reusable hood suspensions including the S-950, H-113 and H-213 can be submerged for cleaning. Follow the user instructions for the selected disinfectant.
3. **Rinse the hood.** Wipe all outer surfaces of hoods and reusable suspensions with a clean soft cloth dampened with clean warm ~49°C (120°F) water. Alternately, reusable hood suspensions including the S-950, H-113 and H-213 can be submerged for rinsing.

IMPORTANT NOTE

It is important to rinse off chlorine based products. While rinsing is preferred, certain other disinfectants may not require this step. Follow the user instructions for the product selected.

4. Ensure all components are completely dry prior to use or storage.

M-Series Headgear

Also refer to [3M™ Technical Data Bulletin #196 Inspection, Cleaning and Storage Procedures for 3M™ Versaflo™ M-Series Headgear Assemblies.](#)

Fabric faceseals are intended to be disposable. However, if the facility deems it necessary to re-use the fabric faceseals, the faceseals can be cleaned/disinfected by following the steps below.

IMPORTANT NOTE

It is important to follow the User Instruction inspection procedures supplied with the M-Series headgear to identify any damage, excessive wear, or deterioration of components and replace them as necessary.

1. **Clean the headgear shell, visors, visor frame, and other plastic parts.** Disassemble the headgear as needed in order to clean the visor, headgear shell, head suspension (including the webbing), and all other plastic parts with a clean soft cloth dampened with warm ~49°C (120°F) water containing a mild pH-neutral (pH 6-8) detergent. If needed, rinse in a similar fashion with clean water. Refer to the headgear specific User Instructions for cleaning details.
2. **Clean the M-935 faceseal and M-445 outer shroud.** Wipe outer surfaces and gaskets with a clean soft cloth dampened with warm ~49°C (120°F) water containing a mild pH neutral (pH 6-8) detergent. If needed, rinse in a similar fashion with clean water. Do not soak the fabric components.
3. **Clean the M-444 inner collar.** Wash with mild detergent at low temperature, not to exceed 104°F (40°C). Do not use chlorine bleach to clean the inner collar.
4. **Disinfect the headgear shell, visor, visor frame, and other plastic parts.** Wipe the visor, headgear shell, head suspension (including the webbing), and all other plastic parts with a clean soft cloth dampened with a hospital disinfectant (e.g. a 0.5% chlorine solution or a solution containing 5000 ppm available free chlorine) specified by your facility, local health authority, WHO, or CDC. Follow the user instructions for the selected disinfectant.

5. **Disinfect the M-935 faceseal and M-445 outer shroud.** Wipe the outer surfaces and gaskets of the M-935 faceseal and M-445 outer shroud with a clean soft cloth dampened with hospital detergents/disinfectants (e.g. a 0.5% chlorine solution or a solution containing 5000 ppm available free chlorine), as specified by the WHO. Follow the user instructions for the selected disinfectant. Do not soak the fabric components.

i IMPORTANT NOTE

It is important to rinse off chlorine based products. While rinsing is preferred, certain other disinfectants may not require this step. Follow the user instructions for the product selected.

6. **Rinse the headgear shell, visor, visor frame, other plastic parts and fabric components.** Wipe all headgear components (including fabric components) with a clean soft cloth dampened with clean warm ~49°C (120°F) water.

i IMPORTANT NOTE

It is important to rinse off chlorine based products. While rinsing is preferred, certain other disinfectants may not require this step. Follow the user instructions for the product selected.

7. Ensure all components are completely dry prior to use or storage.

Breathing Tube

1. **Clean breathing tube.** Clean the breathing tube by wiping it down with a soft cloth dampened with a warm ~49°C (120°F) water and mild pH neutral (pH 6-8) detergent solution. If needed, rinse in a similar fashion with clean water. Alternatively, the breathing tube can be immersed in the cleaning solution.
2. **Disinfect breathing tube.** Disinfect the outer surfaces of the breathing tube with a clean soft cloth dampened with a hospital disinfectant (e.g. a 0.5% chlorine solution or a solution containing 5000 ppm available free chlorine) specified by your facility, local health authority, WHO, or CDC. Follow the user instructions for the selected disinfectant. Alternatively, the breathing tube can be immersed in the disinfecting solution.
3. **Rinse breathing tube.** Wipe all outer surfaces with a clean soft cloth dampened with clean warm ~49°C (120°F) water. Note: It is important to rinse off chlorine based products. While rinsing is preferred, certain other disinfectants may not require this step. Follow the user instructions for the product selected. Alternatively, the breathing tube can be immersed in clean water.
4. Allow the breathing tube to completely air dry prior to reuse or storage. Air dry in an uncontaminated atmosphere, temperature not to exceed ~49°C (120°F). Alternatively, dry by connecting to the motor/blower unit and use it to force air through the tube until dry.

After Cleaning and Drying 3M™ Versaflo™ Systems

1. Reassemble unit as described in the respective product User Instructions.
2. Carefully inspect the PAPR unit and headgear following the inspection procedures in the User Instructions for that item.

3M™ Breathe Easy™ Turbo Blower/Filtration Unit

1. Disconnect breathing tube from any attached headgear.
2. Disconnect other end of breathing tube from PAPR assembly.
3. Remove the battery and blower assembly from the waist belt.
4. **Clean headgear.** Tight fitting facepieces, S-Series hoods, and M-Series headgear should be cleaned as stated in the product User Instructions or, as previously described in this document.

BE-Series headgear. Clean all parts of the headgear assembly with a clean soft cloth filter/cartridge body with a mild cleaning solution. Do not allow liquid to enter the filter dampened with warm 49°C (120°F) water containing a mild pH-neutral (pH 6-8) detergent. Do not use detergents that contain lanolin or other oils), organic solvents or abrasive cleaning agents. Hoods should not be soaked during cleaning, with the exception of the BE-10BR Butyl Rubber Hood. The BE-10BR hood can be cleaned using either a wiping or soaking method.

IMPORTANT NOTE

The option of soaking the BE-10BR is being provided as an additional optional cleaning method for this hood. The soaking method is not currently mentioned in the BE-10BR User Instructions.

5. **Disinfect headgear.** Wipe headgear components with a clean cloth dampened with a clean soft cloth dampened with a hospital disinfectant (e.g. a 0.5% chlorine solution or a solution containing 5000 ppm available free chlorine) specified by your facility, local health authority, WHO, or CDC. Follow the user instructions for the selected disinfectant. Do not soak hoods in disinfecting products, with the exception of the BE-10BR Butyl Rubber Hood. The BE-10BR hood can be cleaned using either a wiping or soaking method.

IMPORTANT NOTE

The option of soaking the BE-10BR is being provided as an additional optional disinfecting method for this hood. The soaking method is not currently mentioned in the BE-10BR User Instructions.

6. **Rinse headgear.** Rinse all cleaned and disinfected components by wiping with a clean soft cloth dampened with clean warm 49°C (120°F) water. The BE-10BR Butyl Rubber Hood can be rinsed using either a wiping or soaking method.

IMPORTANT NOTE

It is important to rinse off chlorine based products. While rinsing is preferred, certain other disinfectants may not require this step. Follow the user instructions for the product selected.

Ensure all headgear components are allowed to completely air dry prior to reuse or storage.

Clean the remaining parts of the system as follows. You should not use solvents to clean the motor/blower unit, battery case or filter/cartridge body as they may chemically weaken the plastics. Do not use detergents that contain lanolin or other oils, organic solvents or abrasive cleaning agents.

7. **Remove the filter cartridges from the PAPR motor/blower assembly.** Dispose of or reuse filter/cartridge according to your infection control policy and/or service life determination. Properly dispose of the used filter/cartridge according to local regulations. For cleaning for reuse, if available, install the caps packaged with new filters/cartridges. Wipe down the exterior of the filter/cartridge body with a mild cleaning solution. Do not allow liquid to enter the cartridge body. Do not attempt to clean the media inside of the filter/cartridge body. If the filter caps are available and installed, the filter/cartridge can be sprayed down with the cleaning solution.
8. **Wipe the battery pack with a mild cleaning solution.** Do not immerse the battery pack.

9. **Clean the breathing tube.** Wipe down with a soft cloth dampened with a warm water and mild pH-neutral (pH 6-8) detergent solution. If needed, rinse in a similar fashion with clean water. Air dry in uncontaminated atmosphere, temperature not to exceed 49°C (120°F). Alternatively, the breathing tube can be immersed in the cleaning solution. If this is done, the breathing tube must be rinsed in clean water, hung vertically and allowed to completely air dry prior to reuse or storage. The breathing tube can also be connected to the motor blower and air forced through the breathing tube until dry.
10. **Clean the motor/blower unit.** Wipe down with a soft cloth dampened with a warm water and mild pH-neutral (pH 6-8) detergent solution. If needed, rinse in a similar fashion with clean water. Do not immerse the PAPR motor/blower unit. Be careful not to let any of the cleaning solution enter into the PAPR motor/blower unit. Air dry in uncontaminated atmosphere, temperature not to exceed 49°C (120°F).
11. **Disinfect PAPR components.** Wipe all PAPR components, including the filter/cartridge body, a clean soft cloth dampened with a hospital disinfectant (e.g. a 0.5% chlorine solution or a solution containing 5000 ppm available free chlorine) specified by your facility, local health authority, WHO, or CDC. Follow the user instructions for the selected disinfectant. If the filter/cartridge caps are installed, the filter/cartridge can be sprayed down with the disinfectant.
12. **Rinse PAPR components.** Rinse all cleaned and disinfected PAPR components by wiping with a clean soft cloth dampened with clean warm 49°C (120°F) water. Note: It is important to rinse off chlorine based products. While rinsing is preferred, certain other disinfectants may not require this step. Follow the user instructions for the product selected.
13. Ensure all components are dry prior to use or storage.
14. Reassemble unit as described in the 3M Breathe Easy™ User Instructions.
15. After cleaning, the PAPR unit and headgear should be inspected following the inspection procedures in the User Instructions for that item.

3M™ Air-Mate™ Powered Air Blower/Filtration Unit

1. Disconnect breathing tube from any attached headgear.
2. Disconnect other end of breathing tube from PAPR assembly.
3. Remove blower assembly from the waist belt.
4. **Clean headgear.** Wipe down with a soft cloth dampened with a warm water and mild pH-neutral (pH 6-8) detergent solution. If needed, rinse in a similar fashion with clean water. Do not use detergents that contain lanolin or other oils organic solvents or abrasive cleaning agents. Refer to the headgear specific User Instructions for cleaning details. Do not soak the headgear during cleaning.
5. **Disinfect headgear.** Wipe the headgear with a clean soft cloth dampened with a hospital disinfectant (e.g. a 0.5% chlorine solution or a solution containing 5000 ppm available free chlorine) specified by your facility, local health authority, WHO, or CDC. Follow the user instructions for the selected disinfectant. Do not soak headgear in disinfecting agents.
6. **Rinse headgear.** Rinse all cleaned and disinfected components by wiping with a clean soft cloth dampened with clean warm 49°C (120°F) water.

IMPORTANT NOTE

It is important to rinse off chlorine based products. While rinsing is preferred, certain other disinfectants may not require this step. Follow the user instructions for the product selected.

Ensure all headgear components are allowed to completely air dry prior to reuse or storage.

Clean the remaining parts of the system as follows. You should not use solvents to clean the motor/blower unit or battery case as they may chemically weaken the plastics. Do not use detergents that contain lanolin or other oils, organic solvents or abrasive cleaning agents.

7. **Clean the breathing tube.** Wipe down with a soft cloth dampened with a warm water and mild pH-neutral (pH 6-8) detergent solution. If needed, rinse in a similar fashion with clean water. Air dry in uncontaminated atmosphere, temperature not to exceed 49°C (120°F). Alternatively, the breathing tube can be immersed in the cleaning solution. If this is done, the breathing tube must be rinsed in clean water, hung vertically and allowed to completely air dry prior to reuse or storage. The breathing tube can also be connected to the motor blower and air forced through the breathing tube until dry.

8. **Clean the motor/blower unit.** Clean the outer surfaces of the motor/blower assembly and battery pack with a clean soft cloth dampened with a warm ~49°C (120°F) water containing a mild pH-neutral (pH 6-8) detergent solution. If needed, rinse in a similar fashion with clean water.
 - Do not allow liquid to enter into the PAPR motor/blower unit.
 - Do not immerse the PAPR motor/blower unit.
9. **Disinfect PAPR components.** Disinfect the outer surfaces of the motor/blower assembly and battery pack a clean soft cloth dampened with a hospital disinfectant (e.g. a 0.5% chlorine solution or a solution containing 5000 ppm available free chlorine) specified by your facility, local health authority, WHO, or CDC. Follow the user instructions for the selected disinfectant.
 - Do not allow liquid to enter into the PAPR motor/blower unit.
 - Do not immerse the PAPR motor/blower unit.
10. **Rinse PAPR components.** Rinse all cleaned and disinfected PAPR components by wiping with a clean soft cloth dampened with clean warm ~49°C (120°F) water.

IMPORTANT NOTE

It is important to rinse off chlorine based products. While rinsing is preferred, certain other disinfectants may not require this step. Follow the user instructions for the product selected.

- Do not allow liquid to enter into the PAPR motor/blower unit.
 - Do not immerse the PAPR motor/blower unit.
11. Ensure all components are dry prior to reuse or storage.

In order to prevent cross-contamination of material from the outside of the PAPR to the inside, it is recommended to clean and disinfect the outside of the unit first. Then, if needed, remove the filter/filter cover assembly. Dispose of or reuse the filter according to your infection control policy. Properly dispose of the used filter according to local regulations.
 12. Clean the filter body. For cleaning for reuse, carefully wipe down the exterior of the filter body with a mild cleaning solution. If needed, rinse in a similar fashion with clean water.
 - Do not allow liquid to enter the filter body.
 - Do not attempt to clean the media inside of the filter body.
 - The filter body cannot be sprayed down as this may damage the filter media.
 13. Disinfect the filter body. Disinfect the outer surfaces of the filter body with a clean soft cloth dampened with a hospital disinfectant (e.g. a 0.5% chlorine solution or a solution containing 5000 ppm available free chlorine) specified by your facility, local health authority, WHO, or CDC. Follow the user instructions for the selected disinfectant.
 - Do not allow liquid to enter the filter body.
 - Do not attempt to clean the media inside of the filter body.
 - The filter body cannot be sprayed down as this may damage the filter media.
 14. Rinse the filter body. Rinse the filter body by wiping with a clean soft cloth dampened with clean warm ~49°C (120°F) water.

IMPORTANT NOTE

It is important to rinse off chlorine based products. While rinsing is preferred, certain other disinfectants may not require this step. Follow the user instructions for the product selected.

- Do not allow liquid to enter the filter body.
 - Do not attempt to clean the media inside of the filter body.
 - The filter body cannot be sprayed down as this may damage the filter media.
15. Ensure all components are dry prior to reuse or storage.
 16. Reassemble unit as described in the product User Instructions.
 17. After cleaning, the PAPR unit and headgear should be carefully inspected following the inspection procedures in the User Instructions for that item.

3M™ Jupiter™ Powered Air Blower/Filtration Unit

1. Disconnect breathing tube from any attached headgear.
2. Disconnect the other end of the breathing tube from the PAPR assembly.
3. Remove the blower assembly from the waist belt.
4. **Clean headgear.** Wipe down with a soft cloth dampened with a warm water and mild pH-neutral (pH 6-8) detergent solution. If needed, rinse in a similar fashion with clean water. Do not use detergents that contain lanolin or other oils, gasoline (petrol), chlorinated degreasing fluids (such as trichloroethylene), organic solvents or abrasive cleaning agents. Refer to the headgear specific User Instructions for cleaning details. Do not soak hoods during cleaning.
5. **Disinfect headgear.** Wipe headgear components with a clean soft cloth dampened with a hospital disinfectant (e.g. a 0.5% chlorine solution or a solution containing 5000 ppm available free chlorine) specified by your facility, local health authority, WHO, or CDC. Follow the user instructions for the selected disinfectant. Do not soak hoods in sanitizer.
6. **Rinse headgear.** Wipe all components cleaned with a clean soft cloth dampened with clean warm 49°C (120°F) water.

IMPORTANT NOTE

It is important to rinse off chlorine based products. While rinsing is preferred, certain other disinfectants may not require this step. Follow the user instructions for the product selected.

Ensure all headgear components are allowed to completely air dry prior to reuse or storage.

Clean the remaining parts of the system as follows. You should not use solvents to clean the motor/blower unit or battery case as they may chemically weaken the plastics. Do not use detergents that contain lanolin or other oils, gasoline (petrol), chlorinated degreasing fluids (such as trichloroethylene), organic solvents or abrasive cleaning agents.

7. **Remove the filter cartridges from the turbo PAPR blower assembly.** Dispose of or reuse filter/cartridge according to your infection control policy and/or service life determination. Properly dispose of the used filter/cartridge according to local regulations. For cleaning for reuse, wipe down the exterior of the filter/cartridge body with a mild cleaning solution. Do not allow liquid to enter the cartridge body. Do not attempt to clean the media inside of the filter/cartridge body.
8. **Wipe the battery pack with a mild cleaning solution.** Remove the battery pack and wipe down with a soft cloth dampened with a warm water and mild pH-neutral (pH 6-8) detergent solution. If needed, rinse in a similar fashion with clean water. Do not immerse the battery pack.
9. **Clean the breathing tube.** Wipe down with a soft cloth dampened with a warm water and mild pH-neutral (pH 6-8) detergent solution. If needed, rinse in a similar fashion with clean water. Air dry in uncontaminated atmosphere, temperature not to exceed 49°C (120°F). Alternatively, the breathing tube can be immersed in the cleaning solution. If this is done, the breathing tube must be rinsed in clean water, hung vertically and allowed to completely air dry prior to reuse or storage. The breathing tube can also be connected to the motor blower and air forced through the breathing tube until dry.
10. **Clean the PAPR blower unit.** Wipe down with a soft cloth dampened with a warm water and mild pH-neutral (pH 6-8) detergent solution. If needed, rinse in a similar fashion with clean water. Do not immerse the turbo PAPR blower unit. Be careful not to let any of the cleaning solution enter into the turbo PAPR blower unit. Air dry in uncontaminated atmosphere, temperature not to exceed 49°C (120°F).
11. **Disinfect PAPR components.** Wipe components with a clean soft cloth dampened with a hospital disinfectant (e.g. a 0.5% chlorine solution or a solution containing 5000 ppm available free chlorine) specified by your facility, local health authority, WHO, or CDC. Follow the user instructions for the selected disinfectant.
12. **Rinse PAPR components.** Wipe all components cleaned with a clean soft cloth dampened with clean warm 49°C (120°F) water.

IMPORTANT NOTE

It is important to rinse off chlorine based products. While rinsing is preferred, certain other disinfectants may not require this step. Follow the user instructions for the product selected.

13. Ensure all components are dry prior to use or storage.

14. Reassemble unit as described in the User Instructions.
15. After cleaning the PAPR unit and headgear should be carefully inspected following the inspection procedures in the User Instructions for that item.

IMPORTANT NOTE

In all instances, 3M recommends that product User Instructions be carefully followed. Technical information provided by 3M in this document is based on experience and/or test data believed to be reliable, but the results may not be relevant to every user's application. For this reason 3M does not accept any responsibility or liability, direct or consequential, arising from reliance upon any information provided. The employer and/or user must determine the appropriateness of deviation from any guidance provided in User Instructions, including the suitability of any disinfectant product for compatibility for use with 3M products.

Glossary of Terms

- **Cleaning:** Removal of all soil (organic and inorganic) and foreign material from objects and surfaces. This is typically accomplished with water and mechanical action. Detergents may be used to assist the process.

IMPORTANT NOTE

Failure to remove foreign material (soil, lubricants, etc.) from an object can make the disinfecting process ineffective.

- **Disinfecting:*** A process of inhibiting or destroying disease-producing microorganisms, but may not kill bacterial spores. It usually involves the use of chemicals, heat and/or ultraviolet light and is divided into three categories: high, intermediate and low level disinfection.
- **Sanitizing:*** A process to reduce the number of microorganisms on an inanimate object to "safe" levels, but may not destroy disease-producing organisms, e.g., dishes and eating utensils are normally sanitized.
- **Sterilizing:*** A validated process to render a product free of all forms of viable microorganisms including bacteria, viruses, spores and fungi. Note: Items must be thoroughly cleaned before effective sterilization can occur.
- **User Instructions:** User instructions provided by 3M for the relevant 3M product.
- **user instructions:** User instructions provided by a third-party for a non-3M product (such as detergents).

* Reference for Terms - Rutala, WA. American Journal of Infection Control. APIC Guideline for Selection and Use of Disinfectants. Vol. 24, No. 4, pp. 313-342, August 1996. Rutala, WA. CDC. Guideline for Disinfection and Sterilization in Healthcare Facilities. 2008.

IMPORTANT NOTE

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Bulletin Change Summary

Release 3, July 2017

- Updated hyperlinks throughout document.
- Updated available and approved products.
- Updated format.

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