Millennium®

APR RESPIRATOR

Industrial Application
CS/CN Respirator
GME-P100 Respirator

CBRN Application
APR/CBRN Respirator

OPERATION AND INSTRUCTIONS

⚠WARNING

This manual must be carefully read and followed by all persons who have, or will have, the responsibility for using or servicing Millennium APR Respirators. These Millennium APR Respirators will perform as designed only if used and serviced according to the instructions; otherwise, the respirator could fail to perform as designed, and persons who rely on the Millennium APR Respirators could sustain serious personal injury or death.

The warranties made by MSA with respect to the product are voided if the product is not installed, used and serviced in accordance with the instructions in this manual. Please protect yourself and your employees by following the instructions. Please read and observe the WARNINGS and CAUTIONS inside. For any additional information relative to use or repair, write or call 1-800-MSA-2222 during regular working hours.

See separate insert for NIOSH approval information:
P/N 10046605 (APR CBRN); P/N 818373 (CS/CN); P/N10035719 (GME-P100), as applicable.

For GME-P100 Millennium APR Respirator, also read and follow MSA Instruction Manual P/N 814175.

For More Information: Call (1-800-MSA-2222) or Visit Our Website at (ww.MSAnet.com)

MSA Be Sure. Choose MSA.

MINE SAFETY APPLIANCES COMPANY
PITTSBURGH, PENNSYLVANIA, U.S.A. 15230

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INTRODUCTION

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NIOSH APPROVAL INFORMATION
Millennium APR Respirator for Industrial Application

CAUTIONS AND LIMITATIONS

A- Not for use in atmospheres containing less than 19.5 percent oxygen.
B- Not for use in atmospheres immediately dangerous to life or health.
C- Do not exceed maximum use concentrations established by regulatory standards.
I- Contains electrical parts which have not been evaluated as an ignition source in flammable or explosive atmospheres by MSHA/NIOSH.
J- Failure to properly use and maintain the product could result in injury or death.
L- Follow the manufacturer s User s Instructions when 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.
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.

NIOSH APPROVAL INFORMATION
Millennium APR Respirator for CBRN Application

CAUTIONS AND LIMITATIONS

A- Not for use in atmospheres containing less than 19.5 percent oxygen.
J- Failure to properly use and maintain this product could result in injury or death.
I- Contains electrical parts which have not been evaluated as an ignition source in flammable or explosive atmospheres by MSHA/NIOSH.
L- Follow the manufacturer s User s Instructions for changing canisters.
M- All approved respirators shall be selected, fitted, used, and maintained in accordance with MSHA, OSHA and other applicable regulations.
O- Refer to User s Instructions, and/or maintenance manuals for information on use and maintenance of these respirators.

CBRN CAUTIONS AND LIMITATIONS

R- Some CBRN agents may not present immediate effects from exposure, but can result in delayed impairment, illness, or death.
T- Direct contact with CBRN agents requires proper handling of the respirator after

each use and between multiple entries during the same use. Decontamination and disposal procedures must be followed. If contaminated with liquid chemical warfare agents, dispose of the respirator after decontamination

V- Not for use in atmospheres immediately dangerous to life and health or where hazards have not been fully characterized.

W- Use replacement parts in the configuration as specified by the applicable regulations and guidance.

X- Consult manufacturer s User s Instructions for information on the use, storage, and maintenance of these respirators at various temperatures.

Y- This respirator provides respiratory protection against inhalation of radiological and nuclear dust particles. Procedures for monitoring radiation exposure and full radiation protection must be followed.

Z- If during use, an unexpected hazard is encountered such as a secondary CBRN device; pockets of entrapped hazard or any unforeseen hazard, immediately leave the area for clean air.

HH-When used at defined occupational exposure limits, the rated service time cannot be exceeded. Follow established canister change out schedules or observe End of Service Life Indicators to ensure that canisters are replaced before breakthrough occurs.

QQ-Use in conjunction with personal protective ensembles that provide appropriate levels of protection against dermal hazard. Failure to do so may result in personal injury even when the respirator is properly fitted, used, and maintained.

UU-The respirator should not be used beyond eight (8) hours after initial exposure to chemical warfare agents to avoid possibility of agent permeation. If liquid exposure is encountered, the respirator should not be used for more than two (2) hours.

NOTES

INSTRUCTIONS FOR USE AND CARE

⚠WARNING

1. An adequate respiratory protection program must include knowledge of hazards, hazard assessment, selection of proper respiratory protective equipment, instruction and training in the use of equipment, inspection and maintenance of equipment, and medical surveillance.
2. This respirator will perform as designed only if used and maintained according to the manufacturer's instructions. The Program Administrator and the users must read and understand these instructions before using or servicing this product.
3. If the respirator does not perform as specified in this manual, it must not be used until it has been checked by authorized personnel.
4. Do not alter, modify, or substitute any components.
5. Inspect the respirator regularly and maintain it according to the instructions. Repairs must only be made by properly trained personnel.
6. This respiratory protective device does not supply oxygen. Use only in adequately ventilated areas which conform to the appropriate standard.
7. This respirator must be used in conjunction with the proper chemical or particulate canisters for protection against specific contaminants. If you cannot determine that the filter canister used with this device is designed for the contaminant, or if you do not know the identity of the contaminant, do not use this device.
8. Do not use when concentrations of contaminants are unknown.
9. Do not use when appropriate exposure limit (PEL, REL, TLV, etc.) is not known.
10. Leave the contaminated area immediately if:
    a. Breathing becomes difficult
    b. Dizziness or other distress occurs
    c. You taste or smell the contaminant
    d. You experience nose or throat irritation
    e. Instructed by responsible individuals
12. Use strictly according to the instructions, labels, and limitations pertaining to this device. Follow an established canister change-out schedule.
13. This respirator may not provide a satisfactory seal with certain facial characteristics, such as beards or large sideburns, that prevents direct contact between the skin and the sealing surface of the facepiece. Do not use this facepiece if such conditions exist.
14. Do not wear eyeglasses under the facepiece. The temples or sidebars on eyeglasses will prevent an air-tight seal. If you must wear glasses, install the spectacle kit.
15. The user must perform a respirator fit test (Quantitative Test or Qualitative Test) and follow all warnings and limitations specified.
16. Wear impermeable protective clothing to prevent exposure to gases and vapors which can poison by skin absorption.
17. Do not use this full facepiece with self-contained breathing apparatus (SCBA).
18. Do not use this respiratory protective device in explosive atmospheres.

Failure to follow these all warnings, instructions, and established CBRN protective measures can result in serious personal injury or death.

CBRN Application

⚠DANGER

- This respirator provides LIMITED protection. It is NIOSH approved for respiratory protection against atmospheres containing CBRN (chemical, biological, radiological, & nuclear) warfare agents; however, it can not protect against all possible warfare agents.

- **Some CBRN agents may not present immediate effects from exposure, but can result in delayed impairment, illness, or death.**
- **DO NOT use without a complete understanding of the instructions and limitations for this respirator and proper training. Misuse can prevent the respirator from providing the necessary protection.**
- **CBRN agents may NOT be detectable by smell or sight. Don respirator before entering an area suspected of containing CBRN agent. Follow procedures established by proper authorities.**
- **DO NOT use this respirator beyond eight (8) hours after initial use in an atmosphere containing CBRN agents or beyond two (2) hours after initial use in an atmosphere containing CBRN agents in liquid or mist form; otherwise, agent permeation may occur.**
- **DO NOT remove respirator until respirator and clothing are decontaminated; otherwise, exposure to CBRN agents may result. Follow decontamination and disposal procedures established by appropriate authorities.**

Failure to follow the above in addition to all instructions and established CBRN agent protective measures can result in serious personal injury or death.

GENERAL DESCRIPTION

The Millennium APR Respirator is an air-purifying respirator intended for use in atmospheres which are not immediately dangerous to life or health (non-IDLH). This respirator is intended for applications which may require the user to enter or exit a hazardous area, or work within the area for a limited time.

Inhaled air is drawn through the canister, which contains chemicals and a filter that removes or neutralizes agents present. Exhaled air leaves the facepiece through the exhalation valve and consequently is not re-breathed.

It is important that the user becomes familiar with the application and operation of the Millennium APR Respirator and ensures that it fits properly before use.

When properly fitted to the user, the Millennium full-facepiece with nosecup and rubber head harness, combined with the appropriate cartridge/canister, becomes a complete respiratory protective device.

The respirator consists of the following sub-assemblies:

- full facepiece (with nosecup)
- filter cartridge/canister

Facepieces are available in three sizes:

P/N 10007423 SM (small)
P/N 10007422 MD (medium)
P/N 10007424 LG (large)

Facepiece size is identified on the front of the facepiece above the lens area.

ACCESSORIES

The facepiece may be equipped with the following accessories:

1. ESP II Communication System
2. Lens Shields (tinted), in small, medium, or large
3. Spectacle Kit
4. Hood

⚠CAUTION

Refer to the NIOSH Approval Matrix for a complete list of Approved Accessories. If you must wear corrective eyewear, install an approved spectacle kit, listed on the NIOSH approval matrix insert.

⚠WARNING

Know the contaminant(s) in the environment before entering. Always check that the filter cartridge/canister is appropriate for use in the environment. A filter cartridge/canister which is not designed for the contaminant present may not provide protection. Failure to follow this warning can result in serious personal injury or death.

NOTES

SIZE SELECTION

Regardless of facial dimensions and respirator sizing charts, an actual respirator fit test, either qualitative or quantitative must be performed to ensure the correct respirator size selected.

Fit test the respirator size relative to your facial features and dimensions. The Safety Administrator or Program Manager might assist in selecting the initial size to try.

Carefully don the mask and conduct an air tightness check.

If the facepiece does not pass the Negative Pressure Seal Test or feels uncomfortable, try the next nearest size relative to your face.

Passing the Negative Pressure Seal Test does not verify the size is correct. The size selected must be verified by successfully passing a Respirator Fit Test, either qualitative or quantitative. If the respirator passes an Air Tightness Test but DOES NOT pass a Respirator Fit Test, the next nearest size relative to your facial features and dimensions should be tried.

Once the proper size is selected, the respirator must pass a Negative Pressure Seal Test every time the mask is donned to ensure proper fit before using the respirator.

RESPIRATOR FIT TEST

⚠WARNING

The user must perform a respirator fit test (Quantitative Test or Qualitative Test) and follow all warnings and limitations specified. Failure to do so can result in serious personal injury or death.

A qualitative or quantitative respirator fit test must be carried out for each wearer of this respirator to determine the amount of protection it will provide. Respirator fitting tests are explained fully in the American National Standard "Practices for Respiratory Protection." ANSI Z88.2-1992, published by the American National Standards Institute. The Safety Admin-istrator or Program Manager might assist in selecting the initial size to try. Carefully don the mask and conduct an Negative Pressure Seal Test.

Quantitative Test - If a quantitative fit test is used:
For use in a CBRN application a fit factor of at least 1667 is recommended before any type of respirator is assigned to an individual.

For use in an Industrial application, 29 (CFR) 1910.134 Standard requires a fit factor of at least 500 before the respirator is assigned to an individual.

Qualitative Test - If a qualitative fit test is used, only validated protocols are acceptable.

For use in a CBRN application, the individual must pass a test designed to assess a fit factor of at least 1667 based on military recommendations.

For use in an Industrial application, the individual must pass at test designed to assess a fit factor of at least 500 as per 29 (CFR) 1910.134 before the respirator is assigned to an individual.

NOTES

PREPARING THE RESPIRATOR FOR USE

CHECKPOINTS BEFORE USE

1. Check that all parts of the respirator are complete and undamaged. See Use and Care section for Inspections Procedures.
2. Check that the filter cartridge/canister approval matches the contaminant in the environment.

INSTALLING/REPLACING THE CARTRIDGE/CANISTER

⚠WARNING

Know the contaminant(s) in the environment before entering. Always check that the filter cartridge/canister is appropriate for use in the environment. A filter cartridge/canister which is not designed for the contaminant present may not provide protection. Failure to follow this warning can result in serious personal injury or death.

After checking cartridge/canister for approval in the environment:

1. Verify shelf life expiration date on carton, bag, and cartridge/canister label has not been exceeded.

⚠WARNING

Do not use an expired cartridge/canister. Failure to follow this warning can result in serious personal injury or death.

⚠WARNING

Do not use the cartridge/canister if the foil bag or carton is opened, damaged, or missing. The cartridge/canister must be in its original packaging for uses in a contaminate environment. Do not reuse the cartridge/canister. Failure to follow this warning can result in serious personal injury or death.

2. Remove cartridge/canister from its packaging.
3. Inspect the cartridge/canister to be sure that its service life is suitable, and that it is not damaged.
4. Thread the filter cartridge/canister into the facepiece port and hand-tighten.

Use the cartridge/canister immediately upon opening the bag. Discard cartridge/canister after each use.

Replace the cartridge/canister after each use. Follow the established cartridge/canister change-out schedules to ensure that cartridge/canisters are replaced before breakthrough occurs. When used at defined occupational exposure limits, the rated service time cannot be exceeded.

For CBRN Applications Only:
DO NOT use this respirator beyond eight (8) hours after initial use in an atmosphere containing CBRN agents or beyond two (2) hours after initial use in an atmosphere containing CBRN agents in liquid or mist form; otherwise, agent permeation may occur.

⚠WARNING

Do not replace cartridge/canister in a contaminated area. Failure to follow this warning can cause inhalation of contaminated air, resulting in serious respiratory injury or death.

When the mask is adjusted properly, the wearer should not taste or smell the contaminant, or experience eye, nose, or throat irritation. The wearer s inhalation resistance should be as experienced during training.

⚠WARNING

If the respirator does not perform as specified, it must not be used until it has been checked by authorized personnel. Failure to follow this warning can result in serious personal injury or death.

⚠WARNING

Return to fresh air immediately if you experience unusual sensations (nausea, dizziness, eye irritation, unusual odor or taste, excessive fatigue, or difficulty breathing). Failure to follow this warning can result in serious personal injury or death.

NOTES

DONNING

⚠WARNING

Do not wear eyeglasses under the facepiece. The temples or sidebars on eye glasses will prevent an air-tight seal. If you must wear glasses, install an approved spectacle kit listed on the NIOSH approval matrix insert. Failure to follow this warning can cause inhalation of contaminated air, resulting in serious respiratory injury or death.

⚠WARNING

Verify that the respirator is properly prepared before donning. See Repairing the Respirator for Use section. Failure to follow this warning can result in serious personal injury or death.

DONNING PROCEDURES

1. Loosen the harness head straps on the facepiece so that the strap end tabs are approximately 1" from the buckles.

2. With the facepiece lens facing away, grasp the temple straps and neck straps in each hand.

3. Slightly expand the harness straps, place chin into the facepiece, and pull the harness over the back of the head.

4. Support the weight of the mask by holding the outlet valve assembly in the palm of one hand. With the free hand, adjust the facepiece securely to the face, making sure the chin and nose are seated securely.
5. While holding the facepiece securely in position, tighten one temple strap at a time by pulling straight back (not out) with small jerks until mask feels snug on that side.

6. Tighten the other temple strap in same manner until both sides feel the same.

7. Ensure facepiece is centered on face by looking down at the nosecup, it should be uniform on each side of the face. If not, readjust the temple straps.

Note: Ensure that no hair is under the tabs and sealing surface. Also, the straps should not cut into the ears.

8. Evenly tighten the neck straps by pulling them straight back.

9. Check that head pad is centered in the middle of the back of the head.

10. If necessary, tighten the top straps for best visibility and fit.

NEGATIVE PRESSURE SEAL TEST

The Negative Pressure Seal Test must be performed each time the facepiece is donned. You must know the face-to-facepiece seal is good before entering a hazardous area.

Perform the test as follows:
1. Ensure respirator is assembled properly.

DONNING

2. Block off cartridge/canister inlet using the palm of hand.
3. Inhale gently and hold breath for 10 seconds. If the seal is good, the facepiece will collapse and remain collapsed against face. Remove hand and breathe normally.
4. If the facepiece did not remain collapsed during the test, or any leakage is noticed, readjust straps and perform Negative Pressure Seal Test again.

Note: You may need to exhale sharply to open the valve. If this does not release the valve, do not use the facepiece.

⚠WARNING

This device may not seal properly with your face if you have a beard, gross sideburns or similar physical characteristics (see ANSI Z88.2). An improper facial seal may allow contaminants to leak into the facepiece, reducing or eliminating respiratory protection. Do not use this device if such conditions exist. The negative pressure seal test must be conducted and passed before each use. Never remove the facepiece except in a safe, non-hazardous, non-toxic atmosphere. Failure to follow this warning can result in serious personal injury or death.

5. If this does not correct the leak, the mask will not provide protection. If the leakage is from the face seal, a different size mask may provide a good seal. If other than face seal leakage is detected, the condition must be corrected before performing another test.

DONNING THE BUTYL COATED NYLON HOOD ACCESSORY

⚠WARNING

Ensure a complete Negative Pressure Seal Test is conducted and passed. Failure to follow this warning can result in serious personal injury or death.

1. Position the hood so that the lens opening of the hood is facing forward. Be sure that the hood is right side out with the drawstring exposed on the outside of the hood.

2. Fold the back panel of the hood upward to expose the inside of the hood at the lens opening. Next, in each hand, grasp the sides of the hood at the lens opening.

3. Expand and slide the lens opening of the hood over the cartridge/canister component. Ensure the facepiece seal is maintained.

4. Using both hands, grasp the back panel of the hood and pull it over the facepiece and head. The lens opening of the hood should coincide with the lens opening of the facepiece. (Use a buddy for assembly if situation requires).

5. Carefully tuck the elastic lens opening of the hood around the back of the facepiece lens rings, component housing assembly, and applicable accessory. The rain shield of the hood should be uniformly over the upper lens ring of the facepiece. The elastic lens opening should be in contact with the rubber surface of the facepiece. Be sure to smooth out any wrinkles or folds that might exist along the edge of the elastic.

DONNING

6. Conduct a successful Negative Pressure Seal Test.

7. Attach each of the arm straps to the front of the hood shroud using the Velcro attachment pads. Adjust the arm strap, using the buckle slides, so that the arm straps provide a snug fit, but still allow for easy movement.

8. Tighten the drawstring cord by securing the bottom of the cord and sliding the cord tightener toward the front of the neck. The drawstring should provide a snug comfortable fit. Ensure drawstring is not twisted or knotted.

⚠WARNING

Do not over-tighten the drawstring. Over tightening the drawstring can restrict breathing. Failure to follow this warning can cause serious injury or death.

9. Pull the shroud of the hood uniformly over the shoulders.

10. Repeat the Negative Pressure Seal Test to ensure a sufficient face-to-facepiece seal is achieved before exposure to a hazardous agent.

NOTES

REMOVING THE RESPIRATOR

DECONTAMINATION

⚠WARNING

Do not remove respirator until respirator and protective clothing are decontaminated; otherwise, exposure to contaminants may result. Follow decontamination and disposal procedures established by appropriate authorities. Failure to follow this warning may result in serious personal injury or death.

Once the protective equipment has been decontaminated, proper disposal of affected equipment must be performed. Disposal is to be performed as required by federal, state, and/or local laws.

PROCEDURE FOR REMOVING THE RESPIRATOR

1. To remove the facepiece, insert your thumbs under each of the harness head straps end tab and fully extend the harness head straps.
2. Grasp the facepiece by the speaking diaphragm or bottom head harness straps (not the exhalation valve or cartridge/canister).
3. Pull it up and away from your face.

Note: Before the next use, check the respirator facepiece and if necessary, clean and disinfect. Always use a new cartridge/canister. Do not reuse the cartridge/canister.

NOTES

CLEANING AND DISINFECTING

⚠CAUTION

Do NOT use alcohol as a germicide because it may deteriorate rubber parts.

Depending on the cleaning policy adopted, either a designated person or the user should clean the respirator after each use. Non-sudsing Confidence Plus® Cleaning Solution (P/N 10009971) from MSA is recommended. It is a germicidal cleaner that cleans and disinfects in one operation. It retains its germicidal efficiency in hard water to inhibit the growth of bacteria. It will not deteriorate rubber, plastic, glass, or metal parts. Refer to the label for use instructions. A solution as effective as Confidence Plus Cleaning Solution and compatible with MSA respirator components may be substituted. ANSI suggests that users be trained in the cleaning procedure.

⚠WARNING

Be careful not to breathe or touch the contaminant in handling the respirator or its parts. If necessary, use equipment disposal to protect you from the specific contaminant. Failure to follow this warning can result in serious personal injury or death.

1. Preparing Solution
   a. Follow the instructions with the Confidence Plus Cleaning Solution.
   b. If the Confidence Plus Cleaning Solution is not used, wash in a mild cleaning solution, rinse thoroughly, and submerge in a germicide solution for the manufacturer s recommended time.
2. Clean and Disinfect the Facepiece
   a. Remove the cartridge/canister from the facepiece.
   b. Thoroughly wash the facepiece (and nose cup) in the cleaning solution. A soft brush or sponge can be used to clean the soiled facepiece. Be sure to include cleaning the exhalation valve and seat.
   c. Rinse the facepiece and components in clean, warm (110°F), water (preferably running and drained).

⚠CAUTION

If not rinsed thoroughly, cleaning agent residue may irritate the wearer's skin.

   d. Allow the facepiece to air dry. Do not dry the parts by placing them near a heater or in direct sunlight. The rubber will deteriorate.
   e. Operate the exhalation valve by hand to be sure it works properly.
   f. Harness (straps and buckles)
   g. The facepiece and components should be air-dried or hand-dried with a clean lint-free cloth.

⚠CAUTION

Do not force-dry the parts by placing them in a heater or in direct sunlight. The rubber will deteriorate. When facepiece is thoroughly dried, store the facepiece in the clam shell in which it was shipped.

LENS CLEANING PROCEDURE

Occasionally, Millennium Facepieces may experience a "fogging" of the lens. Usually this fogging is caused by a wax that is part of the urethane lens formulation. This wax serves as a mold release when the lens is manufactured. Under conditions of high temperature or low atmospheric pressure, the wax can migrate to the surface of the lens and cause the fogging. The wax can be removed with VM&P Naphtha or Stoddard Solvent. The VM&P Naphtha and Stoddard Solvent should be available in a paint store.

1. To remove the wax, pour a small amount of VM&P Naphtha or Stoddard Solvent onto a clean soft cloth.

⚠WARNING

Apply VM&P Naphtha or Stoddard Solvent to the lens ONLY. Do NOT apply the VM&P Naphtha or Stoddard Solvent to the entire facepiece. If it contacts parts other than the lens those components must be replaced. Failure to follow this warning can result in serious personal injury or death.

2. Gently rub the lens to remove the wax. It may take several applications to remove all of the wax.
3. Once the lens becomes wet from the solvent it is difficult to see where the lens was rubbed and where it was not.
4. The number of repeat procedures will depend on the amount of wax present.
5. After wiping the lens to remove the wax, the facepiece should be cleaned with a respirator cleaner such as MSA Confidence Plus Germicidal Cleaner. This will help to remove residual solvent from the facepiece.

⚠WARNING

VM&P Naphtha and Stoddard Solvent have a distinct solvent odor that could be objectionable to respirator wearers. Individuals cleaning the facepieces should follow the use directions that come with the solvents, work in a well-ventilated area, and use proper personal protective equipment. Failure to follow this warning can result in serious personal injury or death.

⚠CAUTION

If the respirator is not properly cleaned after using VM&P Naphtha and Stoddard Solvent the wearer may experience discomfort.

INSPECTION

INSPECTION
(Before and After Each Use)

- Inhalation valve discs
- Exhalation valve disc
- Harness straps
- Lens
- Cartridge/canister
- Facepiece blank
- Accessories

INSPECTION PROCEDURES

1. Look for breaks or tears in the facepiece head-strap material.

2. Make sure all straps, fasteners, and adjusters are in place and not damaged.

3. Check the facepiece for dirt, cracks, tears, or holes.
4. Check the lens for cuts, scratches, or damage which would impair vision. Squeeze the lens. It should collapse easily between your fingers. Check that the lens is secured in the facepiece.
5. Look at the shape of the facepiece for distortion due to improper storage.

6. Unthread the cartridge/canister (if installed), and check that the spider gasket, inhalation valve, and deflector nose cup are installed and undamaged.

7. Grasp the spider gasket by the raised tabs and pull it gently out of the facepiece. The gasket must be free of cracks, tears, dirt, and distortion. The gasket must be soft and flexible.

8. Reach into the facepiece and remove deflector and inhalation valve. The deflector and inhalation valve must be free of cracks, tears, dirt, and distortion. The inhalation valve must be soft and flexible.

9. Set these parts aside in a clean location.

10. Insert the P/N 461828 spanner wrench into the side voice-mitter retaining ring. Turn the ring counter-clockwise to unthread.

11. Remove the side voice-mitter (smaller port on the side of the facepiece) from the port. The voice-mitter may need pushed from inside of facepiece to remove.
12. Inspect the side voice-mitter for signs of damage which would let contaminant enter the facepiece.
13. Inspect the front voice-mitter (large port in the center of the facepiece below the lens) for signs of damage which would let contaminant enter the facepiece.

14. Carefully remove the voice-mitter gasket from the port. Gasket must be free of cracks, tears, dirt, and distortion. The gasket must be soft and flexible.

15. Set the gasket aside in a clean location.

16. Remove the rubber cover from the exhalation valve. Lift the valve and inspect the seat and valve for cracks, tears, dirt, and distortion. The valve must be soft and flexible.

INSPECTION

17. Reinstall the rubber cover. Be sure that the cover lip surrounds the valve completely and that the tab is inserted through the cover.

18. Check the drink tube for cuts, abrasions, or other signs of damage. Grasp the knurled surface and pull the tube out of the cover to check it for signs of damage. Be sure the tube is reinstalled in its port completely.

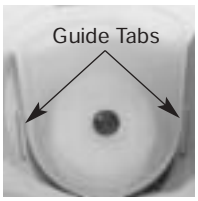
19. Reinstall the voice-mitter gasket in the side port. Be sure that it is flat.

20. Place the voice-mitter into the port.

Note: The voice-mitter s crimped side faces out (up).

21. Thread the retaining ring into the port and tighten using the spanner wrench.
22. Place the deflector (with the inhalation valve in place on the post) into the facepiece.

23. Line up the deflector so that it is between the guide tabs molded into the facepiece.



24. While holding the deflector in place, press the spider gasket on to the post from outside the facepiece.

25. Insert the gasket groove into the port so that the groove captures the lip of the port completely. Run your finger around the gasket to be sure the gasket lays flat.

26. Thread the cartridge/canister into the port. (see Preparing the Respirator for Use section)
27. If any part is damaged or deteriorated, it must be replaced. Store only undamaged respirators for further use. When not in use, store the respirator in cool, dry, and clean ambient air. Keep new filters in their packing.

STORAGE

Store only undamaged respirators for further use. When not in use, store the respirator in cool, dry, and clean ambient air.

CBRN respirators must be stored as indicated below.

Discard the cartridge/canister if the original foil bag or carton is opened or damaged

Storage for CBRN Application Only

Cartridge/canisters must be stored in ONE of the configurations listed:

- Cartridge/canister must be stored in original, unopened foil bag and in the extended clamshell (P/N 10046578), or
- Cartridge/canister must be stored in original, unopened foil bag and in the original, unopened carton.

Facepiece must be stored in ONE of the following clamshells:

- Extended clamshell (P/N 10046578), or
- Standard clamshell (P/N 10017571)

The clamshell is provided as a convenient storage container to protect the facepiece and cartridge/canister. Replace the clamshell if it becomes damaged.

SHELF LIFE

Follow the shelf life expiration date stamped on the carton, foil bag, and cartridge/canister as applicable. The expiration date will only apply if factory sealed and undamaged; otherwise the cartridge/canister must be discarded.

⚠WARNING

Do not use an expired cartridge/canister. Failure to follow this warning can result in serious personal injury or death.

NOTES

ACCESSORIES

HYDRATION SYSTEM

⚠WARNING

The hydration system is NOT approved in a CBRN application and must NOT be used. Failure to follow this warning can result in serious personal injury or death.

In an Industrial application only:

1. Return to an uncontaminated area before using the hydration system.
2. Grasp the knurled surface of the tube and pull the tube out of its cover (part of the exhalation valve cover)

3. Hold the tube with its inlet end up.
4. Push the tube inlet into the "NATO" canteen inlet.

5. Turn the canteen upside down. Its contents will flow by gravity.

6. Grasp the exhalation valve cover and press in at the top while pushing out at the bottom of the cover. This positions the drink tube outlet toward your lips.
7. After drinking, disengage the tube from the canteen and stow it in the exhalation valve port.

⚠CAUTION

Refer to the NIOSH Approval Matrix for a complete list of approved accessories. If you must wear corrective eyewear, install an approved spectacle kit, listed on the NIOSH Approval Matrix insert.

The accessories include:

- ESPII Communication System
- Spectacle Kits
- Butyl Coated Nylon Hood
- Lens Outsert

User s Instructions for installation and use of the ESP II Communication System and Spectacle Kit are enclosed with the accessory.

INSTALLATION OF OUTSERT ASSEMBLY

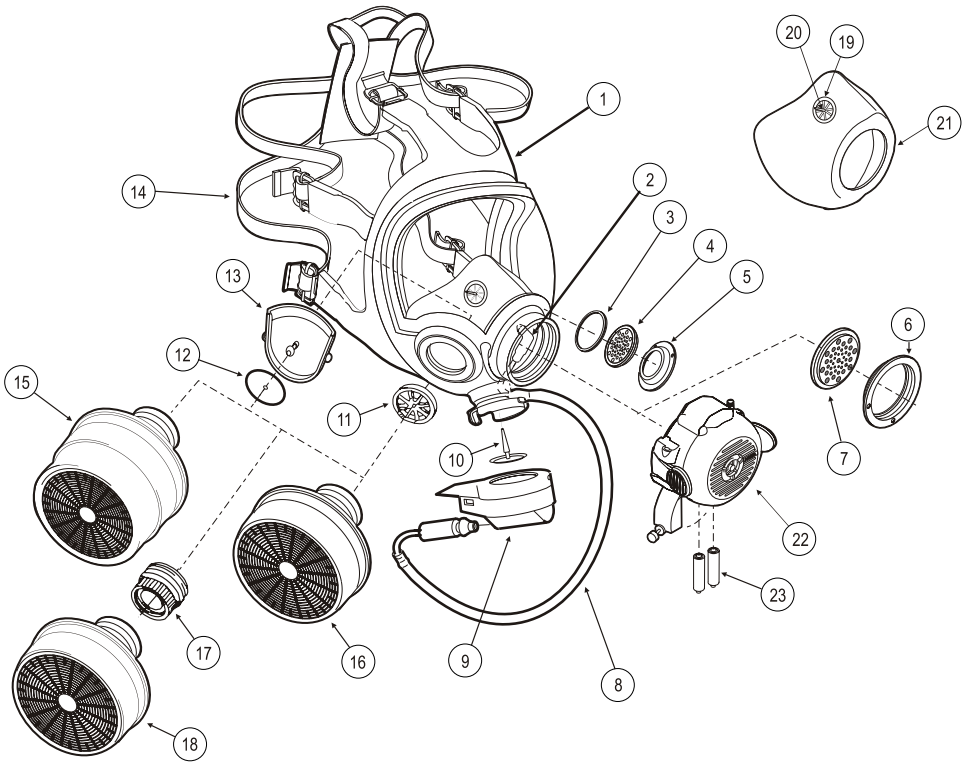
Install an outsert over the facepiece lens

1. Line up the outsert tabs and centerline mark with the facepiece lens.

2. Slide the outsert tabs down over the top of the facepiece lens.
3. Stretch the band down and under the facepiece voice-mitter.

Millennium®

Millennium Facepiece Assemblies	
Part No.	**Description**
10007423	Small
10007422	Medium
10007424	Large



Millennium® Facepiece		
Item No.	**Part No.**	**Description**
1	**10006591**	Small, Faceblank Lens Assembly
	10006590	Medium, Faceblank Lens Assembly
	10006592	Large, Faceblank Lens Assembly
2	**10008189**	Internal Drinking Tube
3	**10007979**	Gasket
4	**805343**	Voicemitter
5	**10007991**	Retaining Ring
6	**805111**	Metal Retaining Ring
7	**805103**	Speaking Diaphragm
8	**10008191**	External Drinking Tube
9	**10007997**	Exhalation Valve Cover
10	**10007996**	Exhalation Valve
11	**10007994**	Spider Gasket
12	**10007421**	Inhalation Valve Assembly
13	**10007388**	Deflector
14	**10008587**	Head Harness
15	**10012164**	Optifilter Canister (Order 10011890 Box/6)
16	**818263**	Millennium Canister (Order 818264 Box/6)
17	**94547**	Adapter

Millennium® Facepiece		
Item No.	**Part No.**	**Description**
Cartridges		
18	**817589**	Phalanx Canister (Order 817591 Box/6)
19	**491924**	Valve Seat
20	**491125**	Valve Disc
21	**10006824**	Small, Nosecup
	10006823	Medium, Nosecup
	10006825	Large, Nosecup
Not Shown	**10008907**	Lens Outsert, Small, Clear
	10088906	Lens Outsert, Medium/Large, Clear
	10008909	Lens Outsert, Small, Tinted
	10008908	Lens Outsert, Medium/Large, Tinted
Accessories and Optional Components		
22	**10026265**	ESP II Communication System
23		Batteries (2) Req'ed NEDA Type AAA Alkaline Cells
Not Shown	**816137**	Spectacle Kit
	10017571	Storage Case
	261828	Wrench

NOTES

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