



C50
Air Purifying Respirator
USER INSTRUCTIONS



PRO-TECH®
THE FUTURE IN TECHNOLOGY FOR LAW ENFORCEMENT

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1. INTRODUCTION

1.1. General

The Avon C50 is available in three sizes, with either left or right hand canister mount or and without a communications facility. The communication facility allows connection through the facepiece to connect to an internal microphone.

The Avon C50 head harness is designed for rapid donning and doffing (removal). After initial fitting and adjustment, only the bottom cheek strap is adjusted to don and doff the respirator.

The Avon C50 is available with, A vision correction system and outserts are available as optional accessories.

The drinking coupler on the Avon C50 respirator is specific to Avon. Water bottles or other drinking systems such as CamelBak® must be fitted with a compatible coupler in the water bottle cap or connecting tube. Contact Avon for more information.

1.2 Approved Canisters

The C50 is NIOSH approved for Industrial use with:

CTF12 Canister. This is designated as providing CN/CS/P100 protection TC-14G-0278

The C50 respirator, when used with the CBRNF12B 71510/1 Canister, is NIOSH approved for respiratory protection against airborne chemical, biological, radiological and nuclear agents (CBRN).

CBRNF12B 71510/1 Canister. The Canister is approved to NIOSH CBRN category Cap 1 TC-14G-0285

1.3 Cautions and Limitations

The user must adhere to the cautions and limitations given on the NIOSH Approval Labels as well as those contained in these user instructions.

The user must read and fully understand these user instructions prior to use.

The user must have received training in the use of the respirator including, but not limited to, sizing and fitting procedures, pre-use check, donning, seal check, use, doffing (removal), and after-use care of the respirator.

The respirator must be sized and adjusted for the individual user following the procedures given in these user instructions.

The respirator must be inspected before use. It must be decontaminated and cleaned after use. The respirator must be properly stored between uses.

5 - Special or Critical User's Instructions

The respirator must be kept in the carrier at all times except when worn or maintained. The Canister must remain sealed until fitted to the respirator prior to use.

1.4 Industrial APR Cautions and Limitations for Use:

- 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.
- H Follow established cartridge and canister change schedules or observe ESLI to ensure that cartridges and canisters are replaced before breakthrough occurs
- 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 canisters.
- 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.

WARNING

The failure to choose a CBRN respirator equipped with a CBRN filter suitable for the contaminant(s) in the atmosphere or likely to be released in the atmosphere during a CBRN incident may result in the respirator providing little or no protection against the contaminated atmosphere, leading to serious bodily injury or death.

1.5 CBRN APR Cautions and Limitations for Use:

- 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.
- 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.
- R Some CBRN agents may not present immediate effects from exposure, but can result in delayed impairment, illness, or death.
- S Special or critical User's Instructions and/or specific use limitations apply. Refer to User's Instructions before donning.
- 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.
- CC For entry, do not exceed maximum use concentrations established by regulatory standards.
- HH When used at defined occupational exposure limits, the rated service time cannot be exceeded. Follow established canister change 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.

1.6 CANISTER INSTRUCTIONS

The Following Canisters are approved for use with the Avon C50 Air Purifying Respirator when used in the approved configuration. See Approval Label for approved items.

The respirator must be correctly sized and fitted to the individual in accordance with the respirator user instructions in order to maintain maximum protection.

Both canister and respirator instructions should be read and understood before using the respirator.

Limitations in Wet Conditions

If the canister becomes damaged or water logged it should be replaced immediately. The canister becomes ineffective if immersed in, or heavily soaked in, water.

1.6.1 CTF12 Canister

This Canister is approved for use with the C50 Respirator to provide particulate and respiratory protection from chloroacetophenone (CN) or o-chlorobenzylidene malononitrile (CS) and P100 particulates.

Do not use the CTF12 where the concentrations of contaminants are unknown or immediately dangerous to life or health (IDLH).

Do not use when concentrations exceed the use limitations for the respirator specified in OSHA standards or applicable government regulations, whichever is lower.

Time use limitations

For use with particulates: if canister becomes damaged, soiled, or breathing becomes difficult, leave the contaminated area immediately and replace the canister. If used in environments containing oily aerosols, properly dispose of canister after 40 hours of use or 30 days, whichever is first.

For use with chemical contaminants: replace canister in accordance with an established change schedule or earlier if smell, taste or irritation from contaminants is detected. If a change schedule has not been developed do not enter contaminated area.

1.6.2 CBRNF12B

The Canister is approved to NIOSH CBRN category Cap 1.

CBRNF12B 71510/1 LIMITATIONS OF USE:

Limitations of Respiratory Protection

The respirator is designed to filter air contaminated with chemicals that might arise from a CBRN terrorist attack or similar incident.

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.

The respirator must not be used in an oxygen deficient atmosphere, as it will not supply or replace oxygen, nor will it remove carbon monoxide.

The respirator must only be used in areas of a CBRN incident where the risk assessment permits the use of negative pressure air purifying CBRN respirators. Do not use in concentrations of contaminants that are immediately dangerous to life or health or are unknown or when concentrations exceed the use limitations for the respirator specified in OSHA standards or applicable government regulations, whichever is the lower. May be used to escape from IDLH environments so long as there is adequate oxygen to support life.

Limitations in Wet Conditions

If the canister becomes damaged or water logged it should be replaced immediately. The canister becomes ineffective if immersed in, or heavily soaked in, water.

Limitations on Time of Use

Particulate Contaminants: The CBRNF12B 71510/1 canister meets the requirements for a P100 particulate filter (99.97% filtration efficiency). If breathing becomes difficult leave the contaminated area and change the canister.

Gaseous or Vapor Chemical Contaminants: The useful service life of the canister will depend on the work rate of the wearer, the type and concentration of the contaminant and environmental conditions such as temperature and humidity. The canister is tested by NIOSH to have a minimum service life of 15 minutes against the contaminants shown in the table. Gas life tests are performed at 25°C, 25 and 80 percent relative humidity, and a flow rate of 64 liters per minute. The canister also has a minimum service life of five minutes when tested at a flow rate of 100 liters per minute, 50% relative humidity and 25°C for each of the gases/vapors listed in the table.

Test Gas/Vapour	Test Concentration (ppm)	Breakthrough Concentration (ppm)
Ammonia	2500	12.5
Cyanogen Chloride	300	2
Cyclohexane	2600	10
Formaldehyde	500	1
Hydrogen Cyanide	940	4.7 ^{note 1}
Hydrogen Sulfide	1000	5.0
Nitrogen Dioxide	200	1 ppm NO ₂ or 25 ppm NO ^{note 2}
Phosgene	250	1.25
Phosphine	300	0.3
Sulfur Dioxide	1500	5

Note 1: Sum of HCN and C₂N₂

Note 2: Nitrogen Dioxide breakthrough is monitored for both NO₂ and NO. The breakthrough is determined by which quantity, NO₂ or NO reaches breakthrough first.

Special Instruction for CBRNF12B

Keep the canister in its foil packaging until it is ready to be used.

1.7 Changing the Canister

1. Remove the used canister from the respirator facepiece and dispose properly in accordance with any local Health and Safety Regulations.
2. Inspect the canister mount gasket in the respirator facepiece and replace if damaged. Only fit a new canister if the gasket is in good condition.
3. Remove the canister from its packaging.
4. Remove the plug and cap from the new canister before fitting.
5. Screw the new canister into the canister mount until slight resistance is felt. Turn the canister a further ¼ turn to achieve an air-tight seal. Do not over-tighten, as this may damage the gasket or cause distortion of the canister or facepiece.

WARNING

Do not over-tighten the canister. Over-tightening may distort the gasket resulting in leakage that may expose the wearer to substances that can cause serious personal injury or death.

2 OPERATION AND PERFORMANCE

2.1 Replacing Components

2.1.1 Components Removed & Replaced without Tools

The user must know which respirator components can be removed/replaced without specialist tools (fig 1). These are:

Canister Cartridge: The canister is an integral part of the respirator's protective system. It must be securely fitted into the canister mount.

Gasket: A gasket must be fitted into canister mount. The canister will not seal correctly to the respirator unless a gasket is fitted.

Inlet Valve: (Note that Inlet and Outlet Valves are identical). The inlet valve must be fitted into the canister mount. Failure to do so will permit exhaled air to pass back through the canister and degrade respirator performance.

Inlet Air Deflector: The air deflector directs inhaled air over the visor to prevent misting. It must be fitted at all times.

Outlet Valve: (Note that Inlet and Outlet Valves are identical). The outlet valve must be fitted into the outlet valve port in the Front Module correctly. Failure to do so will result in total loss of protection.

Internal Drink Tube: The internal drink tube must be correctly oriented inside the respirator.

Front Module Cover: The front module cover must be securely fitted to the front of the front module body to protect the outlet valve and aid speech.

Head Harness: The head harness must be properly adjusted for the individual wearer. After correct adjustment only the bottom cheek strap is used to don and doff the respirator

Accessories

Outserts: A range of outserts (Sunlight, Clear, Laser, and Blue Blocker) are available to provide improved vision as well as protection to the respirator eyelens.

Note It is essential to check that the chosen outsert provides adequate and appropriate protection for the conditions to be encountered.

Vision Correction System: A vision Correction System is available to provide prescription sight correction. Contact Avon for details on how to obtain prescription lenses.

Microphone Assembly (Microphone Adapter and Dynamic Microphone): Microphone Assemblies are available for compatibility with a wide variety of communications systems via the communication lead. They fall into two types Dynamic (M101 and M138 Style) and Electret. Contact Avon for details.

Communication Lead: The communication lead provides a link between a microphone inside the facepiece and an external communication system. Contact Avon for details

VPU-Voice Projection Unit: This unit attaches to the front of the respirator facepiece to improve voice intelligibility. It is used in conjunction with the Electret Microphone adaptor.

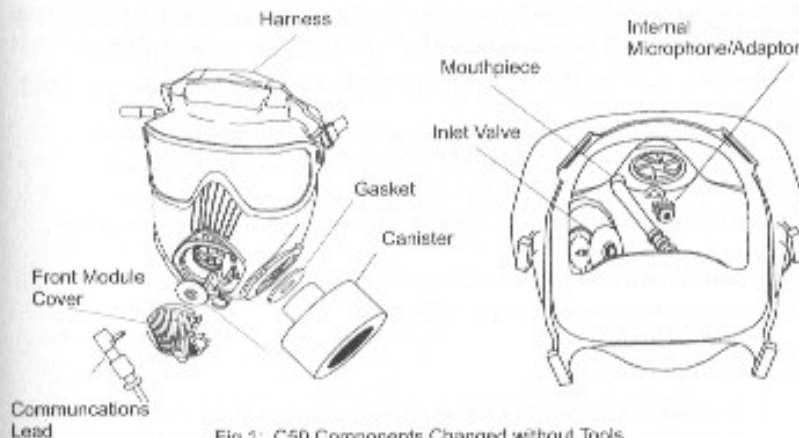


Fig 1: C50 Components Changed without Tools

2.1.2 Maintenance Requiring Specialist Tools

Only trained maintenance personnel using special tools may carry out specific repair and maintenance tasks on the respirator. Refer to Section 3.4 for detail.

2.2 Choosing the Correct Size of Respirator



WARNING

It is vital that the correct size of respirator be chosen for each individual wearer to ensure maximum protection. If the respirator is too small, the user will lose seal performance. If the respirator is too large the user will experience a very loose fit with subsequent respirator slippage. Use of an incorrectly sized respirator may cause exposure to contaminants that may lead to serious injury or death.

The Avon C50 respirator is available in three sizes.

A sizing tool is available to assist in initial selection of the correct respirator size. It does no more than assist initial selection. Only a successful completion of a quantitative fit test can determine correct fit.

It is a requirement that respirator size selection, initial harness set up and fit testing is arranged and monitored by a trained supervisor.

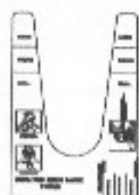
The C50 respirator is designed for quick donning where only the bottom cheek strap is adjusted during donning. Set up of the two upper straps during quantitative fit testing is essential for correct fit of the respirator.

A trained fitter can use the following method to choose the correct respirator size:

- Assess the most appropriate size of respirator for the subject, either visually or by using the sizing tool, if available (ref 2.2.1).
- Offer the respirator up to the subject's face
- Complete the facial contact sizing procedures and check eye level (ref 2.2.2 and 2.2.3).
- Complete the harness adjusting and fitting procedures (ref 2.3).
- Complete a quantitative fit test (ref 2.4).

2.2.1 Sizing Tool

- A useful aid to the sizing procedure is the sizing tool. It is used as follows:
- Present the tool to the face of the subject just above the ears (see fig 2)
- Adjust the position of the tool to find the widest measurement at the subject's cheekbones
- Read off the preferred size.
- If on or near the boundary between two sizes, select the smaller size



Present gauge diagonally to face



Read off mask size

Fig 2: Sizing Tool

2.2.2 Facial Contact

A correctly fitted respirator should make firm contact with the face around the full length of the face seal. With the respirator still held in place by the subject, check the following indicators:

- The chin should be positively located in the chin cup.
- The distance between the edge of the respirator and the lobe of the ear should be typically in the range of $\frac{1}{2}$ - 1 inch (15 to 25 mm).
- If there are gaps at the forehead and chin, the respirator is probably too large.
- If the respirator is perched on the end of the chin or forehead, the respirator may be too small.

2.2.3 Eye Level Assessment

It is important that the wearer's eyes are at the correct level in the lens to ensure the best fit and field of view. Always conduct the following eye level check to determine if the correct size of respirator has been selected.

- The fitter offers the respirator up to the subject's face
- The subject holds the respirator in the most comfortable position
- The fitter now checks the eye level in the respirator.
- The center of the pupil of the eye should ideally be at or slightly above the horizontal centerline of the lens (see fig 3). If the eyes are in this position the correct size of respirator has been selected.
- If the eyes appear far too high, then the respirator is probably too small. Choose a larger size and re-assess.
- If the eyes appear very low, then the respirator is probably too large. Choose a smaller size and re-assess.
- If the sizing tool is available use the eye location guide to assess if the eyes are in the correct zone, or are too high or too low. Select correct respirator size accordingly.

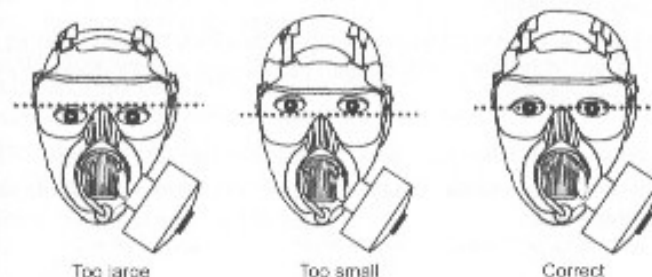


Fig 3: Eye Level Assessment

2.3 Fitting and Adjusting the Respirator before First Use

The C50 has three sets of straps. The brow and temple straps are adjusted and set during fit testing. Subsequent donning and doffing is achieved through use of the lower cheek straps. The upper brow and temple straps should not be adjusted without reassessing fit.

2.3.1 Preparing the Harness

Before fitting the respirator for the first time, the brow strap is set to an initial mid position and the Temple and Cheek straps are adjusted to be fully slack.

Brow Straps (initial setting)

Note: the brow straps are attached through brow strap slots and are adjusted using hook and loop fixings contained in a pocket on the harness skullcap.

Open the strap pockets and position the brow strap in the pocket so that the end of the loop section on the strap is in line with the bottom edge of the pocket.

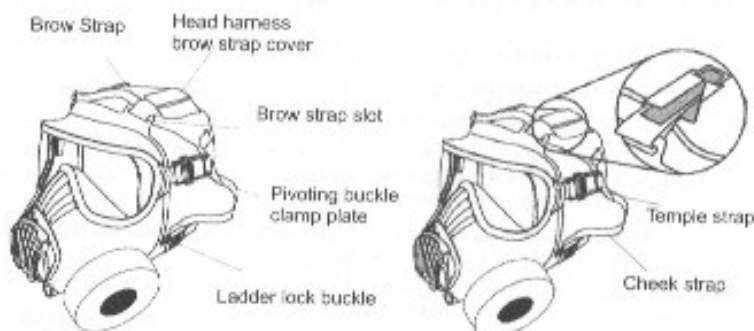


Fig 4: Harness Arrangement

Temple Strap (fully slack)

(Note: The temple strap buckles are pivoting cam-lock buckles (see fig 4 & 5), which are set using the clamp plates and not adjusted for donning and doffing the respirator).

- Lift the clamp plates. This allows free travel of the harness straps.
- Pull the harness straps through the buckle until the folded end reaches the restraining bar.

Cheek Strap (fully slack)

(Note: The cheek strap buckles (see fig 4 & 5) are ladder lock running buckles and are tightened and slackened every time the respirator is donned and doffed).

- Lift the buckle body away from the harness straps
- Pull the harness straps through the buckle until the folded end reaches the restraining bar.

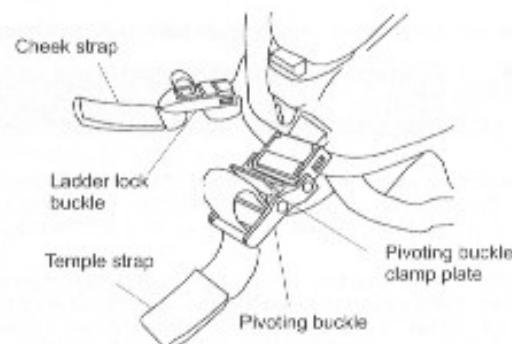


Fig 5: Cheek and Temple Strap Buckle differences

2.3.2 Adjusting the Harness

WARNING

A badly adjusted head harness will cause the respirator to lose seal performance and protection. Use of an incorrectly adjusted respirator may cause exposure to contaminants that may lead to serious injury or death.

CAUTION A loose head harness will allow the respirator to slip down the face, which might cause the user to lose maximum seal performance. A harness that is too tight will cause discomfort. Over tightening the harness may reduce seal performance.

Hold the respirator up to the wearer's face with the chin positively located in the chin cup. Pull the head harness over the head. Ensure the head harness skull cap is pulled tight down the back of the head.

Holding the respirator in place.

Temple Straps

Adjust the temple straps as follows:

- Pull the free ends of the harness straps, one at a time, until comfortably tight.
- Press down the clamp plates. The temple straps are now fixed and should not be adjusted again unless the respirator is not stable on the face (ref 2.3.3).

Cheek Straps

Adjust the cheek straps as follows:

- Pull the free ends of the harness straps until comfortably tight.
- The respirator should now be a firm, comfortable fit.
- Conduct a negative pressure test (ref 2.5.2). This is a fit check only and does not replace the quantitative fit test.

Brow Straps

Ensure the harness skull cap is pulled tight down the back of the head.

Adjust the brow straps as follows:

- Examine the position of the temple and cheek straps relative to the top and bottom of the ear.
- If the temple strap is cutting into the top of the ear, the brow straps are too long. Shorten by opening the pocket and pulling the strap further through the pocket. Close the pocket. Ensure left and right straps are the same length.
- If the cheek strap is cutting into the bottom of the ear, the brow straps are too short. Lengthen by opening the pocket and pushing the strap further out of the pocket. Close the pocket. Ensure left and right straps are the same length.

2.3.3 Adjusting the Fit

- The wearer should check the stability of the respirator by vigorously shaking the head.
- If the respirator moves, then tighten up the head harness straps (ref 2.3.2). Do not over-tighten, as the respirator could become uncomfortable and may lead to loss of protection. Ensure the head harness skull cap is pulled tight down the back of the head.

Having finalized the harness position, the wearer must complete a quantitative fit test (ref 2.4).



WARNING

The user must be properly fit tested to the respirator before use. Failure to check fit may result in subsequent increased leakage and consequent injury or death.

2.4 Quantitative Fit Test

The subject must confirm the sizing and adjusting procedures by completing a quantitative fit test using an acceptable fit test method and protocol (29 CFR 1910.134), such as ambient particle counting (PortaCount®). A fit of better than 2,500 must be achieved.

The drinks system facility provides an easy method of sampling air from within the respirator during quantitative fit testing. A fit test adaptor that connects to the drinks tube is available from Avon. See Section 3.6

A fit test must be completed prior to first use and a minimum of annually thereafter.

Once a successful quantitative fit test has been achieved, the brow straps and temple strap clamp plates should not be re-adjusted. The respirator is now sized and adjusted appropriately for the individual wearer.

2.5 Donning and Doffing the Respirator



WARNING

The user must be properly fit tested to the respirator before use. Failure to check fit may result in subsequent increased leakage and consequent injury or death.

2.5.1 Donning:

Before donning the respirator check that:

- The respirator has an approved canister fitted
- The top four harness straps are pre-adjusted and the temple strap clamp plates are locked (ref 2.3)
- The bottom cheek straps are fully slackened

To don the respirator:

- Before donning pull the harness over the front of the eyelens
- Grasp the front of the respirator with one hand (See Fig 6a)
- Insert the chin into the respirator, locating into the chin cup (See Fig 6b)
- Using the head harness loop pull the head harness over the head and pull down tight at the rear (See Fig 6c, d and e)
- Tighten the bottom two harness straps by grasping the free ends and pulling until comfortably tight (See Fig 6f)
- Run the hands quickly over the head harness and the edge of the respirator to ensure it is correctly fitted to the head and that there are no twisted straps
- Conduct a successful negative pressure test (ref 2.5.2)



Fig 6a



fig 6b



fig 6c



fig 6d



fig 6e



fig 6f

Fig 6: Donning the respirator

Note: only adjust the bottom cheek straps.

2.5.2 Negative Pressure Test

WARNING

Failure to perform a satisfactory negative pressure leak check may result in little or no respiratory protection and may expose the wearer to substances that can cause serious personal injury or death.

When the respirator is securely donned use the following procedure to check for a correct seal:

- Place the palm of the hand over the canister input port
- Inhale gently
- The respirator should collapse onto the face
- If this does not happen, run the hands quickly over the harness and the edge of the respirator to ensure it is correctly fitted to the head and that there are no twisted straps. Check bottom strap tightness.
- Repeat the test.
- Check that the canister is fitted correctly. Repeat the test.
- If there is no seal the respirator should not be used.

Only enter a contaminated area if a successful negative pressure test has been completed.

2.5.3 Doffing the Respirator:

WARNING

The doffing process shall be performed only in a non-hazardous environment. Failure to do so may result in serious bodily injury or death.

CAUTION: Do not adjust the top four harness straps when doffing the respirator

- Slacken fully the bottom two cheek straps as follows:
Grasp the ends of the buckle bodies
Lift them away from the harness
- Grasp the respirator by the front module in one or both hands
- Pull the respirator well forward off the face
- Lift the respirator upwards then backwards off the face

2.6 Using the Respirator

Only use the respirator in areas where it has been declared safe to use air purifying respiratory devices. Follow the cautions and limitations given in these instructions.

For CBRNF12B

Always fit a new filter when attending an incident. Change out filters in accordance with the filter users instructions. Do not remove the filter from its packaging until it is ready to be used

WARNING

The failure to choose a respirator equipped with a filter suitable for the contaminant(s) in the atmosphere or likely to be released in the atmosphere may result in the respirator providing little or no protection against the contaminated atmosphere, leading to serious bodily injury or death.

2.6.1 Pre-Check Procedure

Always perform the following pre-use check procedure before using the C50 facepiece:

- Ensure the facepiece is complete and correctly fitted and adjusted for the user following instructions for sizing, adjusting and quantitative fit testing as described in sections 2.2 through 2.4.
- Check that there are no cuts or tears in the rubber components, no chips or cracks in the plastic components and the lens is optically clear.
- Check that the brow straps are correctly adjusted and properly secured in the brow strap pockets (figure 4).
- Check that the temple straps are correctly adjusted and the buckle clamp plates are down. The top four straps should be tight but comfortable when properly adjusted.
- Check that the lower two cheek straps are fully slackened prior to donning.
- Always check that the facepiece is fitted with the correct canister and that it is securely fitted. See section 1.7.
- On facepieces with two filter mounts, check that the filter mount plug is correctly fitted into the opposite filter mount. The facepiece must never be used with two canisters.

2.6.2 Using the Drinking System

Note: The external drink tube must be used with an Avon canteen cap. See Section 3.6. The Canteen cap must be securely fitted to the canteen/water bottle. If using a flexible drinking system such as CamelBak® a compatible converter must be used.



Water Canteen Cap

- Unplug the drink coupler from the storage pocket under the front module and unwrap the external drink tube.
- Push the drink coupler fully into the canteen cap.
- Turn the drink valve ON by rotating the small lever located on the left side of the front module. This rotates the internal drink tube towards the mouth.

- Hold the canteen upside down at eye level and blow into the internal drink tube to pressurize the canteen. Drink as required. When finished drinking blow through the internal drink tube to clear water from the drinking tube.
- Turn the lever in the opposite direction to turn the valve OFF to move the internal drink tube to the side of the respirator facepiece. Ensure the valve is in the position prior to disconnecting the canteen.
- Uncouple the canteen by pulling the drink coupler from the canteen cup. Do not unscrew the cap. Store the external drinking tube and coupler within the drink coupler receptacle provided on the respirator.

EN

CAUTION - This drink system is not approved by NIOSH. Users are advised not to drink in a contaminated environment.

2.7 Using Respirator Accessories

Accessories are available from Avon: See section 3.6 for details.

2.7.1 Installation and Removal of the Vision Correction System

The vision correction system is supplied as an assembly containing the optical insert mounting frame and optical insert. Details of inserts and how to obtain prescription lenses are available from Avon.

To fit the Vision Correction System in the respirator

- Place the respirator on a flat surface with the respirator facing away from you.
- Place the Optical Insert Mounting Frame inside the facepiece. Reach inside the facepiece and move and hold the nosecup away from the Optical Insert Mounting Frame. Push the Optical Insert Mounting Frame up to place the central supporting slot over the central supporting stand-off and then push down to locate the Optical Insert Mounting Frame.
- Flex the facepiece in the temple strap area on the left or right side of the facepiece; gently push the Optical Insert Mounting Frame-mounting tab into the socket to the side of the facepiece visor. Repeat for the other side. Run finger around edge of the Optical Insert Mounting Frame to ensure it is located correctly around edge of visor.
- Lift the locking tab and position the optical insert up and down to give best optical performance. Ensure that the locking tab is down once optimum position is achieved.

To remove the frame, reverse the above procedure.

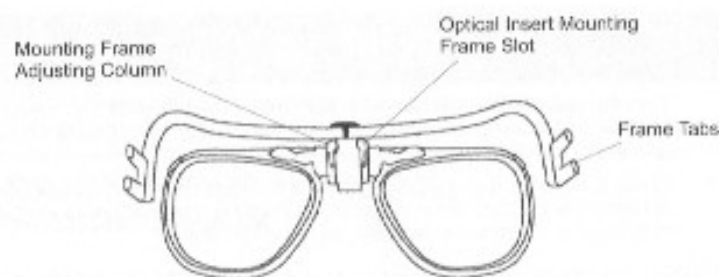


Fig 7: Vision Correcting Frames

2.7.2 Installation and Removal of the Outserts

Fit the outsert locking tabs into the outsert tab receptacles either side of the lens. The tab must be pushed completely through the rubber to engage the locking ridge. To remove the outsert grab the bottom edge and lift upwards and away from the lens.

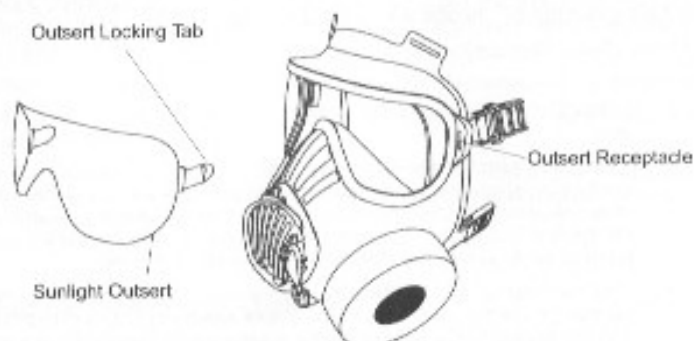


Fig 8: Outserts (Clear or Tinted)

2.7.3 Installation and Removal of the Microphone Assembly and Communications Lead

Note : Communication Accessories can only be fitted to facepieces with communication facility. See assembly Matrix.

Microphone Assembly Installation

Place the respirator on a flat surface facing down. Align the connector pins on the microphone assembly with the receptacle on the communications port in the back of the front module assembly. Gently press the adapter pins into the communications port.

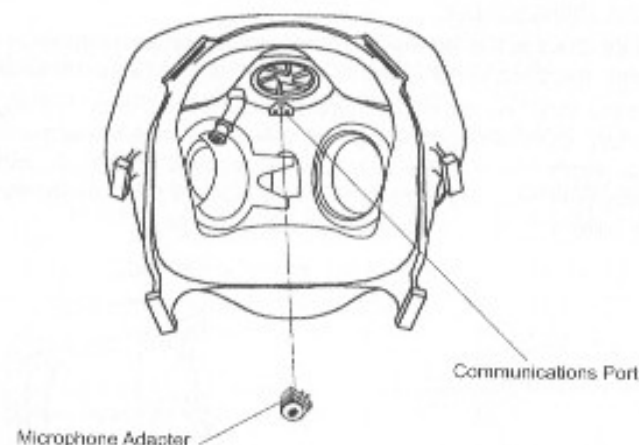


Fig 9: (nose cup removed to help location identification of Comms connector)

Communications Lead Installation

Open the communications port cover. Align the connector pins on the lead with the connector receptacle in the port and gently press the lead connections into the port.

Once the respirator is donned attach the clothing clip to clothing near the neck. Check that the lead does not pull on the restrict movement of the head which might break the face seal.

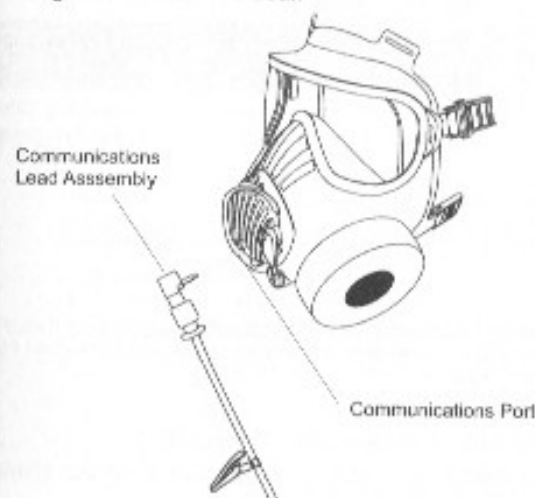


Fig 10

VPU -Voice Projection Unit

This unit attaches to the front of the respirator facepiece to improve voice intelligibility. It is used in conjunction with the Electret Microphone adaptor.

To attach the VPU, open the communications port trap door on the front module cover, engage the top two claws, and then rotate the VPU downwards to attach the electrical connections. Continue rotating downwards until the bottom claws click into place (figure 10). To remove, squeeze bottom claw clip to release and tilt upwards.

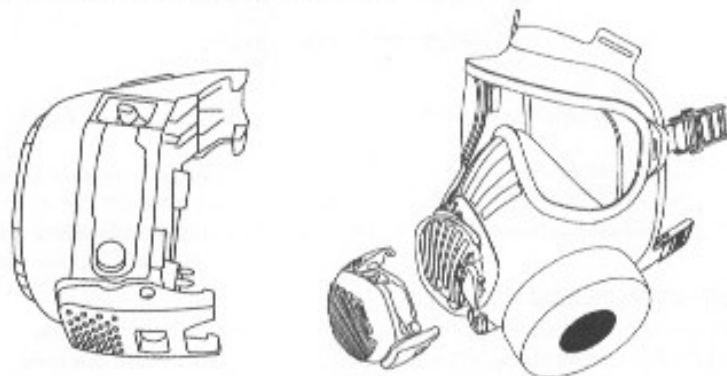


Fig 11

3. CLEANING, STORAGE AND MAINTENANCE

3.1 Cleaning the Respirator after Use

WARNING

Failure to properly clean and inspect the respirator may result in it providing little or no protection on next use and may expose the user to substances that can cause personal injury or death.

Keep the respirator bag clean inside and out at all times.

Clean the respirator after each use, using the following suggested procedure.

- Remove the canister (If the canister becomes water logged then it must be replaced immediately. A canister becomes ineffective if immersed in, or heavily soaked with water.)
- Remove the Front Module front cover.
- Remove the vision correction frame and outserts, if fitted
- Immerse the respirator in warm water containing a weak solution of mild disinfectant or a mild, non-allergic soap.

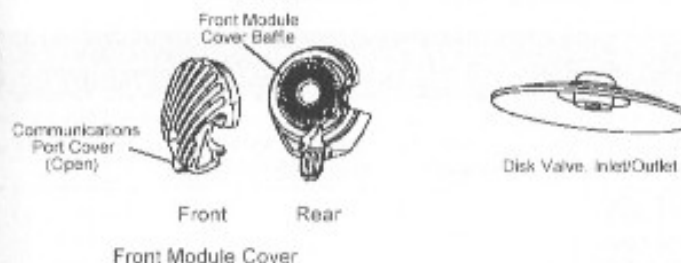
CAUTION Do not use detergent, spirit or solvent cleaner.

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- Gently agitate the respirator in this solution, wiping with a soft, lint-free cloth (face cloth) particularly under the reflex seal and nose cup.
- Lift out the respirator and shake off the excess solution.
- Immerse the respirator in clean warm water ensuring that all trace of solution is removed.
- Lift out the respirator and shake off excess water as before and dry with clean, dry cloth, or air dry. Take extra care that the fabric head harness is dry before final stowage.
- Separately clean the vision correction system and outsert, if fitted
- If necessary clean valves and valve seats using the procedure given below.
- Replace the front module cover and vision correction system and outsert, if fitted.
- Replace the respirator into the respirator storage bag. Ensure that the CBRN canister is kept in its original sealed foil bag.

To clean the drinking system, fill a water bottle with sterilizing solution and couple to respirator. Open drink valve and allow solution to run through tubes and out of the internal drink tube. Repeat with clean water.

3.2. Removing and Replacing Valves



3.2.1 Outlet Valve Removal

- Unplug the drink coupler from the storage pocket under the front module and unwrap the external drink tube. Rotate Drinks valve to align with cutout in front cover.
- Remove Front Module Cover by pulling on the undercut created by the drink tube recess at the bottom left of the cover.
- Grasp the valve between finger and thumb.
- Pull valve off valve mounting post.

3.2.2 Outlet valve replacement

- Hold valve between finger and thumb and push over valve mounting post.
- Rotate drink valve to align with cutout in front cover, nearly full on.
- Replace Front Module Cover.

3.2.3 Inlet Valve Removal

- Inside the facepiece push nosecup to one side.
- Remove air deflector using location tab at the bottom of the guide.
- Grasp valve between finger and thumb inside canister mount.
- Pull valve off valve mounting post.

3.2.4 Inlet valve replacement

- Inside the facepiece push nosecup to one side.
- Hold valve between finger and thumb and push over valve mounting post.
- Install the air deflector ensuring the guide outlet is upward and the tab at the bottom of the guide is fitted around the drink storage boss inside the facepiece.

3.2.5 Reconfiguring Canister Port Left/Right

WARNING

This procedure must be performed by trained personnel only. Failure to follow the procedure correctly and afterwards check the mask for leakage could result in the mask providing low protection which may lead to injury or death.

SPECIAL TOOL:

Filter mount plug tool, P/N 71515/1

- Remove the filter
- Firmly grip the filter mount containing the plug.
- Using the filter mount plug tool, unscrew the plug and remove from the filter mount.
- Examine the filter canister gasket and replace if damaged.
- Insert the plug into the opposite filter mount and screw in until hand tight.
- Firmly grip the filter mount with one hand and using the tool, tighten the plug with as much force as the tool will allow. Starting from hand tight, the plug should turn through at least 1/5 of a rotation.
- Examine the interior of the mask and check that the air deflectors and inlet valves are fitted correctly in BOTH filter mounts. Adjust or replace if necessary.
- Perform a leak tightness check on the mask in accordance with established procedures.
- Replace the filter canister prior to use.

3.3 Storing the Respirator

WARNING

The storage of the respirator is an important aspect for maintaining its performance. If these guidelines are not adhered to the respirator may not provide adequate protection when it is used next, which may cause personal injury or death.

CAUTION Before storing, the respirator and the carrier and liner must be clean and dry

Store the respirator in the carrier and liner at all times except when it is being used or maintained.

Store the carrier in a cool dry environment away from direct sunlight away or direct heat sources (e.g. radiator).

Do not store sharp objects with the respirator in its carrier

The CBRNF12B 71510/1 Canister must be stored sealed in its original individual packaging. If the CBRN canister packaging seal is broken the canister must be disposed of after 8 hours even if it has not been put into service.

Do not store the carrier where it could be crushed by external objects.

3.4 Inspecting the Respirator (Routine User Maintenance)

Always clean the respirator as soon as practicable following use. Carry out the following care and maintenance procedures regularly and at least monthly:

- Inspect all components for damage. Do not use the respirator unless all components are in good condition.
- Clean and inspect the lens for scratches. Do not use the respirator if vision is impaired.
- Clean and inspect inlet and outlet valves and valve seats. Always replace damaged valves. If valve seats are damaged do not replace valves and do not use the respirator until it has been repaired or replaced.

3.5 Repair and Maintenance by Trained Maintenance Personnel

Respirator users must only perform routine maintenance activities that do not involve using special tools (ref 2.1).

Trained maintenance personnel must carry out all other repair and maintenance activities. Avon provides training courses for users and maintenance personnel. Contact Avon for details of maintenance training.

3.6 Maintenance Allocation Chart

The maintenance allocation chart specifies which category of maintenance is allocated to which respirator component.

Users may conduct maintenance in category 1. Only trained maintenance personnel must conduct repair and maintenance procedures for categories 2 and 3.

Maintenance categories

Category 1

No tools required to perform maintenance operation.

Category 2

Specialist tools required as supplied within the maintenance kit.

(Details of the maintenance kit are available from Avon)

Category 3

Items are not serviceable and must be replaced. Unserviceable items must be properly disposed of in accordance with local regulations.

Note Items that show part numbers may be purchased as spares.

Component /Assembly	Maintenance Category		
	1	2	3
Cleaning			
Cleaning Eyelens	•		
Cleaning Valves	•		
Cleaning Valve Seats	•		
Cleaning Drink System	•		
Replacement of components and assemblies			
Facepiece			•
Nosecup		•	
Head Harness	•		
Valves (outlet & inlet)	•		
Air Deflector	•		
Front Module Front cover	•		
Internal Drink Tube	•		
Gasket: 70047/7/2	•		
Canister mount body		•	
Blanking Plate		•	
Canister mount clamp ring		•	
Cam buckle (Temple Strap)		•	
Ladder lock buckle (cheek Strap)		•	

3.7 Part Numbers and Contact Information

Respirators

RESPIRATOR W/O Comms Port	Part No.
Facepiece, RH Size Large	70501-178
Facepiece, RH Size Medium	70501-179
Facepiece, RH Size Small	70501-180
Facepiece, LH Size Large	70501-184
Facepiece, LH, Size Medium	70501-185
Facepiece, LH, Size Small	70501-186

RESPIRATOR With Comms Port	Part No.
Facepiece, RH Size Large	70501-175
Facepiece, RH Size Medium	70501-176
Facepiece, RH Size Small	70501-177
Facepiece, LH Size Large	70501-181
Facepiece, LH, Size Medium	70501-182
Facepiece, LH, Size Small	70501-183

TWIN PORT RESPIRATOR	Part No.
Facepiece Size Large With Comms	70501-190
Facepiece Size Medium With Comms	70501-191
Facepiece Size Small With Comms	70501-192
Facepiece Size Large Without Comms	70501-187
Facepiece Size Medium Without Comms	70501-188
Facepiece Size Small Without Comms	70501-189

Replaceable Components

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COMPONENT	Part No.
Head Harness: 5 each	70501/159
Harness Buckle: 5 each	70501/160
Complete NIOSH Harness with Buckles	70501/228
Valves (outlet and inlet): 10 each (100 each)	70501/169 (70501/170)
Gasket: 10 each	70501/168
Internal Drink Tube: 5 each	70501/163
Front Module Cover: 5 each	70501/162

ACCESSORIES	Part No.
Carrier	70501/227
Outsert (Clear)	70501/156
Outsert (Sun Light)	70501/157
Outsert (Blue Blocker)	70501/158
Vision Correction System (Prescription Lenses Supplied by Individual)	70501/155
Microphone Adapter	Contact Avon
Microphone Dynamic	Contact Avon
Communications Lead	70501/167
Voice Projection Microphone	71009/5
Voice Projection Unit	70501/229
Canteen Cap & Strap Assembly	71009/2
Canteen	70006/31
Filter mount plug tool (71515/1)	70501/161

Fit Test Adapter Contact TSI <http://www.tsi.com/>

CONTACT INFORMATION

Avon Protection Systems, Cadillac MI 231-779-6201
 Avon Technical Products Melksham UK +44 1225 896375
www.avon-rubber.com/protection
protection@avon-rubber.com

This manual could contain technical inaccuracies or typographical errors. Updates are made periodically to the information herein. If you have comments please forward them to AVON.

Thank You.



Avon Protection Systems
503 Eighth Street
Cadillac, MI 49601
231 779 6201
C50

THIS RESPIRATOR IS APPROVED ONLY IN THE FOLLOWING CONFIGURATIONS

RESPIRATOR COMPONENTS												
TC-	PROTECTION ¹	ALTERNATE FACEPIECES										ALTERNATE CANISTER
		C50 FACEPIECE SMALL WITHOUT COMMS	C50 FACEPIECE MEDIUM WITHOUT COMMS	C50 FACEPIECE LARGE WITHOUT COMMS	C50 FACEPIECE SMALL WITH COMMS	C50 FACEPIECE MEDIUM WITH COMMS	C50 FACEPIECE LARGE WITH COMMS	C50 FACEPIECE SMALL TWIN PORT WITH COMMS	C50 FACEPIECE MEDIUM TWIN PORT WITH COMMS	C50 FACEPIECE LARGE TWIN PORT WITH COMMS	C50 FACEPIECE SMALL TWIN PORT WITHOUT COMMS	C50 FACEPIECE MEDIUM TWIN PORT WITHOUT COMMS
		C50 FACEPIECE SMALL WITHOUT COMMS	C50 FACEPIECE MEDIUM WITHOUT COMMS	C50 FACEPIECE LARGE WITHOUT COMMS	C50 FACEPIECE SMALL WITH COMMS	C50 FACEPIECE MEDIUM WITH COMMS	C50 FACEPIECE LARGE WITH COMMS	C50 FACEPIECE SMALL TWIN PORT WITH COMMS	C50 FACEPIECE MEDIUM TWIN PORT WITH COMMS	C50 FACEPIECE LARGE TWIN PORT WITH COMMS	C50 FACEPIECE SMALL TWIN PORT WITHOUT COMMS	C50 FACEPIECE MEDIUM TWIN PORT WITHOUT COMMS
		C50 FACEPIECE SMALL WITHOUT COMMS	C50 FACEPIECE MEDIUM WITHOUT COMMS	C50 FACEPIECE LARGE WITHOUT COMMS	C50 FACEPIECE SMALL WITH COMMS	C50 FACEPIECE MEDIUM WITH COMMS	C50 FACEPIECE LARGE WITH COMMS	C50 FACEPIECE SMALL TWIN PORT WITH COMMS	C50 FACEPIECE MEDIUM TWIN PORT WITH COMMS	C50 FACEPIECE LARGE TWIN PORT WITH COMMS	C50 FACEPIECE SMALL TWIN PORT WITHOUT COMMS	C50 FACEPIECE MEDIUM TWIN PORT WITHOUT COMMS
		C50 FACEPIECE SMALL WITHOUT COMMS	C50 FACEPIECE MEDIUM WITHOUT COMMS	C50 FACEPIECE LARGE WITHOUT COMMS	C50 FACEPIECE SMALL WITH COMMS	C50 FACEPIECE MEDIUM WITH COMMS	C50 FACEPIECE LARGE WITH COMMS	C50 FACEPIECE SMALL TWIN PORT WITH COMMS	C50 FACEPIECE MEDIUM TWIN PORT WITH COMMS	C50 FACEPIECE LARGE TWIN PORT WITH COMMS	C50 FACEPIECE SMALL TWIN PORT WITHOUT COMMS	C50 FACEPIECE MEDIUM TWIN PORT WITHOUT COMMS
		C50 FACEPIECE SMALL WITHOUT COMMS	C50 FACEPIECE MEDIUM WITHOUT COMMS	C50 FACEPIECE LARGE WITHOUT COMMS	C50 FACEPIECE SMALL WITH COMMS	C50 FACEPIECE MEDIUM WITH COMMS	C50 FACEPIECE LARGE WITH COMMS	C50 FACEPIECE SMALL TWIN PORT WITH COMMS	C50 FACEPIECE MEDIUM TWIN PORT WITH COMMS	C50 FACEPIECE LARGE TWIN PORT WITH COMMS	C50 FACEPIECE SMALL TWIN PORT WITHOUT COMMS	C50 FACEPIECE MEDIUM TWIN PORT WITHOUT COMMS
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14G-0278	CN/CS/P100	X	X	X	X	X	X	X	X	X	X	X
14G-0285	CBRN Cap 1	X	X	X	X	X	X	X	X	X	X	X

1. PROTECTION

CBRN Cap 1 - Capacity meets minimum 15 minute test time

P100 - (99.97% filter efficiency level) effective against all particulate aerosols

CBRN - Chemical, Biological, Radiological and Nuclear

CN - Chloroacetophenone CS - Chlorobenzylidene malononitrile

2. 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.
- H- Follow established cartridge and canister change schedules or observe ESL to ensure that cartridges and canisters are replaced before breakthrough occurs.
- I- Contains electrical parts that may cause an ignition in flammable or explosive atmospheres.
- J- Failure to properly use and maintain this product could result in injury or death.
- L- Follow the manufacturer's User's Instructions for changing cartridges, canister and/or filters.
- M- All approved respirators shall be selected, fitted, used, and maintained in accordance with MSHA, OSHA, and other applicable regulations.
- N- Never substitute, modify, add, or omit parts. Use only exact replacement parts in the configuration as specified by the manufacturer.
- O- Refer to User's Instructions, and/or maintenance manuals for information on use and maintenance of these respirators.
- P- NIOSH does not evaluate respirators for use as surgical masks.
- S- Special or critical User's instructions and/or specific use limitations apply. Refer to User's instructions before donning.



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RESPIRATOR COMPONENTS												
HARNES	STORAGE	ACCESSORIES										CAUTIONS AND LIMITATIONS ^{2,3}
C50 NET HEAD HARNESS	C50 RESPIRATOR STORAGE BAG	C50 RESPIRATOR STORAGE BAG LINER	CLEAR VISOR OUTSERT	SUN VISOR OUTSERT	BLUE BLOCKER VISOR OUTSERT	SIGHT CORRECTION	COMMUNICATIONS CONNECTION LEAD	COMMUNICATIONS MICROPHONE M101 STYLE	COMMUNICATIONS MICROPHONE M138 STYLE	MICROPHONE ADAPTOR PLAIN	MICROPHONE ADAPTOR ELECTRET	VOICE PROJECTION UNIT
70501-76	7152/1	7152/2	70501-73	70501-74	70501-75	70501-79	70501-95	70501-90	70501-96	70501-93	70501-92	71009/2
X			X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X

ABCHIJLMNOP

AJLMOSRTVWXYZ,
CC, HH, QQ, UU

3. 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 or 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- The 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.
- CC- For entry, do not exceed maximum use concentrations established by regulatory standards.
- HH- When used at defined occupational exposure limits, the rated service time cannot be exceeded. Follow established canister change out schedules.
- 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) 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.

22 January 2006

THIS CANISTER IS APPROVED ONLY IN THE FOLLOWING CONFIGURATIONS

RESPIRATOR COMPONENTS
1. Canister
2. Canister Mounting Bracket
3. Canister Mounting Bracket
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99. Canister Mounting Bracket
100. Canister Mounting Bracket

TC-		PROTECTION ¹	ALTERNATE FACEPIECES
		C50 FACEPIECE SMALL NO COMMS	
		C50 FACEPIECE MEDIUM NO COMMS	
		C50 FACEPIECE LARGE NO COMMS	
		C50 FACEPIECE SMALL WITH COMMS	
		C50 FACEPIECE MEDIUM WITH COMMS	
		C50 FACEPIECE LARGE WITH COMMS	
		C50 FACEPIECE SMALL TWIN PORT WITH COMMS	
		C50 FACEPIECE MEDIUM TWIN PORT WITH COMMS	
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		C50 FACEPIECE LARGE TWIN PORT WITHOUT COMMS	
		C50 FACEPIECE SMALL WITHOUT COMMS	
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		C50 FACEPIECE LARGE WITHOUT COMMS	
		C50 FACEPIECE SMALL WITH COMMS	
		C50 FACEPIECE MEDIUM WITH COMMS	
		C50 FACEPIECE LARGE WITH COMMS	
14G-0278	CN/CS/P100	X 70501-61	
		X 70501-62	
		X 70501-63	
		X 70501-64	
		X 70501-65	
		X 70501-66	
		X 70501-124	
		X 70501-125	
		X 70501-126	
		X 70501-127	
		X 70501-128	
		X 70501-129	
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		X 70501-135	
		X 70501-136	
		X 70501-137	
		X 70501-138	
		X 70501-139	

1. PROTECTION P100 - (99.97% filter efficiency level) effective against all particulate aerosols
- CN - Chloroacetophenone CS - Chlorobenzylidene malononitrile
2. 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.
H- Follow established cartridge and canister change schedules or observe ESLI to ensure that cartridges and canisters are replaced before breakthrough occurs.
I- Contains electrical parts that may cause an ignition in flammable or explosive atmospheres.
J- Failure to properly use and maintain this product could result in injury or death.
L- Follow the manufacturer's User's Instructions for changing cartridges, canister and/or filters.
M- All approved respirators shall be selected, fitted, used, and maintained in accordance with MSHA, OSHA, and other applicable regulations.
N- Never substitute, modify, add, or omit parts. Use only exact replacement parts in the configuration as specified by the manufacturer.
O- Refer to User's Instructions, and/or maintenance manuals for information on use and maintenance of these respirators.
P- NIOSH does not evaluate respirators for use as surgical masks.

RESPIRATOR COMPONENTS

C50 FACEPIECE SMALL TWIN PORT WITH COMMS		ACCESSORIES	CAUTIONS AND LIMITATIONS ²
CANISTER	HARNES		
C50 FACEPIECE MEDIUM TWIN PORT WITH COMMS			
C50 FACEPIECE LARGE TWIN PORT WITH COMMS			
C50 FACEPIECE SMALL TWIN PORT WITHOUT COMMS			
C50 FACEPIECE MEDIUM TWIN PORT WITHOUT COMMS			
C50 FACEPIECE LARGE TWIN PORT WITHOUT COMMS			
CTF12 CNICSP100 CANISTER			
C50 NET HEAD HARNES			
CLEAR VISOR OUTSERT			
SUN VISOR OUTSERT			
BLUE BLOCKER VISOR OUTSERT			
SIGHT CORRECTION			
COMMUNICATIONS CONNECTION LEAD			
COMMUNICATIONS MICROPHONE M101 STYLE			
COMMUNICATIONS MICROPHONE M138 STYLE			
MICROPHONE ADAPTOR PLAIN			
MICROPHONE ADAPTOR ELECTRET			
VOICE PROJECTION UNIT			

THIS CANISTER IS APPROVED ONLY IN THE FOLLOWING CONFIGURATIONS

RESPIRATOR COMPONENTS											
TC-	PROTECTION ¹	ALTERNATE FACEPIECES									CANISTER
				CBRN FM12 RESPIRATOR FACEPIECE LEFT OR RIGHT SIZE 1 LARGE							
				CBRN FM12 RESPIRATOR FACEPIECE LEFT OR RIGHT SIZE 2 MEDIUM							
				CBRN FM12 RESPIRATOR FACEPIECE LEFT OR RIGHT SIZE 3 SMALL							
				C50 FACEPIECE SMALL WITHOUT COMMS							
				C50 FACEPIECE MEDIUM WITHOUT COMMS							
				C50 FACEPIECE LARGE WITHOUT COMMS							
				C50 FACEPIECE SMALL WITH COMMS							
				C50 FACEPIECE MEDIUM WITH COMMS							
				C50 FACEPIECE LARGE WITH COMMS							
				C50 FACEPIECE SMALL TWIN PORT WITH COMMS							
				C50 FACEPIECE MEDIUM TWIN PORT WITH COMMS							
				C50 FACEPIECE LARGE TWIN PORT WITH COMMS							
				C50 FACEPIECE SMALL TWIN PORT WITHOUT COMMS							
				C50 FACEPIECE MEDIUM TWIN PORT WITHOUT COMMS							
				C50 FACEPIECE LARGE TWIN PORT WITHOUT COMMS							
				CBRNF12B CANISTER							
14G-0275	CBRN Cap 1	X	X	X							
14G-0285	CBRN Cap 1				X	X	X	X	X	X	

1. PROTECTION	CBRN Cap 1 - Capacity meets minimum 15 minute test time
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CBRN - Chemical, Biological, Radiological and Nuclear

2. 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.
- 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.
- O- Refer to User's Instructions, and/or maintenance manuals for information on use and maintenance of these respirators.
- S- Special or critical User's instructions and/or specific use limitations apply. Refer to User's instructions before donning.

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3. CBRN CAUTIONS AND LIMITATIONS

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| 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 or 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- | The respirator provides respiratory protection against inhalation of radiological and nuclear dust particles. |
| Z- | Procedures for monitoring radiation exposure and full radiation protection must be followed. |
| CC- | 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. |
| CH- | For entry, do not exceed maximum use concentrations established by regulatory standards. |
| HH- | When used at defined occupational exposure limits, the rated service time cannot be exceeded. Follow established canister change out schedules. |
| 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) 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. |