Full Facepiece Respirator
7000 Series

User Instructions for 3M™ Silicone, Small 7800S, Silicone, Medium 7800S, Silicone, Large 7800S Full Facepieces

Important: Keep these *User Instructions* for reference.

GENERAL SAFETY INFORMATION

Intended Use

The 3M™ Full Facepiece Respirators 7000 Series are NIOSH approved and designed to help provide respiratory protection against certain airborne contaminants when used in accordance with all use instructions and limitations and applicable safety and health regulations.

The 3M Full Facepiece 7000 Series meets the requirements of the ANSI Z87.1-2003 standard, high impact level, for face and eye protection. These products help provide limited eye and face protection against flying particles.

⚠WARNING

This respirator helps protect against certain airborne contaminants. **Misuse may result in sickness or death.** For proper use, see supervisor, or *User Instructions*, or call 3M in U.S.A., 1-800-243-4630. In Canada, call Technical Service at 1-800-267-4414.

These *User Instructions* provide information about facepiece use only. Important information is provided in the *User Instructions* with each of the air filtration/supplied air systems that are NIOSH certified to be used with the Full Facepiece Respirator 7000 Series. Failure to follow the *User Instructions* for the air filtration/supplied air systems being used **may result in sickness or death.**

When in supplied air mode, your employer must provide breathing air that meets at least the requirements of the specification for Grade D breathing air, as described in the Compressed Gas Association Commodity Specification G-7.1-1997 in the United States. In Canada, breathing air systems must be supplied with air which meets at least the requirements of CSA Standard Z180.1. Failure to do so **may result in sickness or death**.

CAUTION:

This product contains natural rubber latex which may cause an allergic reaction.

USE INSTRUCTIONS AND LIMITATIONS

Important

Before use, the wearer must read and understand these *User Instructions*. Keep these *User Instructions* for reference.

Use For

Respiratory protection from certain airborne contaminants according to NIOSH approvals, OSHA limitations, in Canada CSA standard Z94.4 requirements, other applicable regulations and 3M instructions.

Do Not Use For

Concentrations of contaminants which are immediately dangerous to life or health, are unknown or when concentrations exceed 10 times the permissible exposure limit (PEL) in air-purifying mode when qualitatively fit tested, 50 times the PEL in air-purifying mode when quantitatively fit tested, 1000 times the PEL in powered air-purifying or supplied air mode, or according to specific OSHA standards or applicable government regulations, whichever is lower.

Use Instructions

1. Failure to follow all instructions and limitations on the use of this respirator and/or failure to wear this respirator during all times of exposure can reduce respirator effectiveness and **may result in sickness or death.**
2. Before using this respirator, a written respiratory protection program must be implemented meeting all the requirements of OSHA 29 CFR 1910.134 such as medical evaluation, training and fit testing and applicable OSHA substance specific standards. In Canada, follow the recommendations of CSA Z94.4 and/or requirements of the applicable jurisdiction, as appropriate. When used in supplied air mode, your employer must supply breathing air that meets at least the requirements of Grade D breathing air in Compressed Gas Association Commodity Specifications G-7.1-1997. In Canada, breathing air systems must be supplied with air which meets at least the requirements of CSA Standard Z180.1.
3. The airborne contaminants which can be dangerous to your health include those that are so small you may not be able to see or smell them.
4. Leave the contaminated area immediately and contact supervisor if you smell or taste contaminants or if dizziness, irritation, or other distress occurs.
5. Store respirator away from contaminated areas when not in use.
6. Dispose of used product in accordance with applicable regulations.

Use Limitations

1. This respirator does not supply oxygen when used in air-purifying mode. Do not use in atmospheres containing less than 19.5% oxygen.
2. Do not use when concentrations of contaminants are immediately dangerous to life or health, are unknown or when concentrations exceed 10 times the permissible exposure limit (PEL) in air-purifying mode when qualitatively fit tested, 50 times the PEL in air-purifying mode when quantitatively fit tested, 1000 times the PEL in powered air-purifying or supplied air mode, or according to specific OSHA standards or applicable government regulations, whichever is lower.
3. Do not alter, abuse or misuse this respirator.
4. Do not use with beards or other facial hair or other conditions that prevent a good seal between the face and the faceseal of the respirator.

Time Use Limitations

1. If respirator becomes damaged, leave the contaminated area immediately and repair or replace the respirator.
2. Replace filters in accordance with the filter Time Use Limitation. (See filter User Instructions.)
3. Replace cartridges in accordance with an established change schedule or earlier if smell, taste or irritation from contaminants is detected.

NIOSH Cautions and Limitations

The following restrictions may apply. See NIOSH approval label.

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.

D – Air-line respirators can be used only when the respirators are supplied with respirable air meeting the requirements of CGA G-7.1 Grade D or higher quality.

E – Use only the pressure ranges and hose lengths specified in the User's Instructions.

F – Do not use powered air-purifying respirators if airflow is less than four cfm (115 lpm) for tight fitting facepieces or six cfm (170 lpm) for hoods and/or helmets.

G – If airflow is cut off, switch to filter and/or cartridge or canister and immediately exit to clean air.

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 which have not been evaluated as an ignition source in flammable or explosive atmospheres by MSHA/NIOSH.

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, canisters 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 use limitations apply. Refer to User's Instructions before donning.

S-Special or Critical User's Instructions

3M™ Mercury Vapor Cartridges (6009 and 60929) are equipped with passive 3M™ End of Service Life Indicators (ESLI). The color change indicator must be readily visible when wearing the respirator without manipulation. If you cannot readily see the ESLI, do not use. The mercury vapor cartridges must be discarded when the ESLI changes to the discard color found on the mercury vapor cartridge label; or within 30 days of opening packaging; or when ESLI becomes dirty or damaged; or when odors of vapors or gases become noticeable, whichever occurs first. Mercury vapor has no odor.

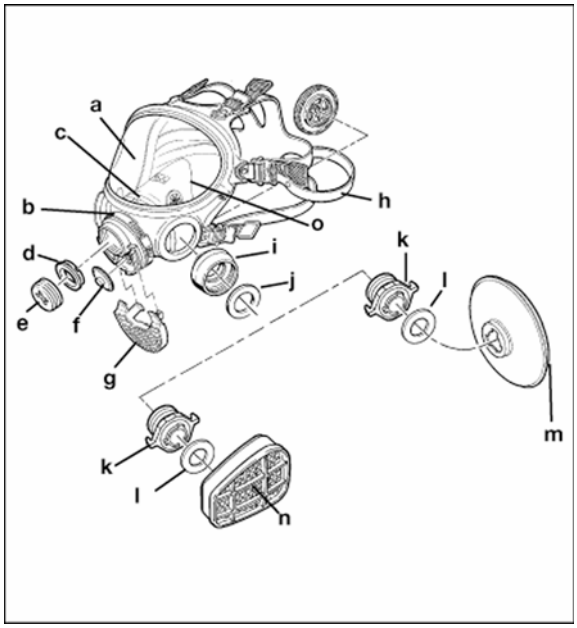
To assemble 3M™ Dual Airline Combination Breathing Tubes with 3M™ Cartridges/Filters, the facepiece inhalation valves must be removed.

If the facepiece is to be used in air-purifying mode (without using the 3M™ breathing tubes SA-1600 or SA-2600), the inhalation valves must be replaced in the facepiece before use.

3M™ Nose Cup Assembly 7881S or 7981S must be used in all Full Facepiece 7000 Series applications except for Face-Mounted Power Air-Purifying Systems.

Cartridge and Filter Selection and Approvals

Before using any of these products, the user must read the specific use for, use limitations and warning information in the *User Instructions* and product packaging or call OH&ESD Technical Service at 1-800-243-4630. In Canada, call Technical Service at 1-800-267-4414. Do not exceed maximum use concentrations established by local regulatory agencies. Cartridges/filters are approved as assemblies for use with 3M™ facepieces 7800S (S), 7800S (M) or 7800S (L). For NIOSH approval refer to NIOSH approval label packaged with facepiece.



LIST OF PRODUCTS

3M™ 7800S Full Facepiece Respirator Parts, Filters, Chemical Cartridges, or Airline Accessories

3M™ Facepiece

Facepieces do not include filters, chemical cartridges, retainers or airline accessories.

Number	**Description**	**Button Color** (7989)
7800S (S)	silicone, small	red
7800S (M)	silicone, medium	yellow
7800S (L)	silicone, large	green

Number		**Description**
7884	(a)	Lens
7914	(b)	Band Clamp
7916	(c)	Breathing Room Assembly
7999	(d)	Air Inlet Gasket
7890	(e)	Full Face Plug

7283	(f)	Exhalation Valve
7918	(g)	Exhalation Valve Cover
7893S	(h)	Head Strap Assembly, Silicone
7886	(i)	Removable DIN Connector
7887	(j)	Inhalation Port Gasket
701	(k)	Cartridge/Filter Adapter for 3M™ Cartridges 6000 Series or 3M™ 2000 Series Filters
6895	(l)	Inhalation Gasket (included in 701)
	(m)	3M™ Filters 2000 Series
	(n)	3M™ Cartridge 6000 Series
7881S 7981S	(o)	Nose Cup Assembly, Silicone (includes Nose Cup Valve Assembly 7882), or Nose Cup Assembly, Silicone, Small (includes Nose Cup Valve Assembly 7882)

3M™ Accessories and Parts

Number	Description
Not Pictured	
601	Fit Test Adapter (for quantitative fit testing with 3M™ P100 Filters 2091 or 7093)
7282	Inhalation Valve
7882	Nose Cup Valve Assembly
7883	Neckstrap Assembly
7885	Lens Frame Kit
7894	Eyeglass Frame and Mount with case
7895	Speaking Diaphragm Kit (includes Diaphragm, Gasket, Retainer Ring, Tool)
7899-25	Lens Cover (25 pack)
7899-100	Lens Cover (100 pack)
7915	Shroud TychemQC®
7925	Spectacle Kit
7986	Tinted Lens Cover (25 pack)
7989	Buttons
7990	Clip-on Welding Shield Kit
7991	Electronic Lens Assembly
7993	Welder's Shroud

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CAUTION

Failure to properly dispose of spent cartridges, filters, or respirators contaminated by hazardous materials can result in environmental harm. Handling, transportation and disposal of spent cartridges, filters, or respirators must comply with all applicable federal, state, and local laws and regulations.

3M™ Filters 2000 Series and 3M™ Filter 7093/7093C and 3M™ Filter Adapter 502
(3M™ Cartridge/Filter Adapter 701 is required. May also be used with 3M™ Adapter 502 as prefilters on 3M™ Cartridges 6000 Series).

Number	Description
502	Filter Adapter for 3M™ 2000 Series or Filters 7093/7093C
2071	P95 Particulate Filter
2076HF	P95 Particulate Filter, hydrogen fluoride, with nuisance level acid gas relief[1]
2078	P95 Particulate Filter, 3M recommended ozone protection[2], with nuisance level organic vapor/acid gas relief[1]
2091	P100 Particulate Filter
2096	P100 Particulate Filter with nuisance level acid gas relief[1]
2097	P100 Particulate Filter, 3M recommended ozone protection[2], with nuisance level organic vapor relief[1]
7093	P100 Particulate Filter
7093C	P100 Particulate Filter, hydrogen fluoride, with nuisance level organic vapor/acid gas relief[1]

[1] 3M recommended for relief against nuisance levels of acid gas or organic vapors. Nuisance levels refers to concentrations not exceeding OSHA PEL or applicable exposure limits, whichever is lower. Do not use for respiratory protection against acid gas/organic vapor.

[2] 3M recommended for ozone protection up to 10 times the OSHA PEL or applicable government occupational exposure limits, whichever is lower. **Note: Not NIOSH approved for use against ozone.**

3M particulate filters should be changed when increased breathing resistance is noticed.

3M™ Filters and Retainer

(Use with 3M™ Cartridges 6000 Series and 3M™ Filter Retainer 501)

Number	Description
501	Filter Retainer for 3M™ Filters 5N11 and 5P71
5N11	N95 Particulate Filter
5P71	P95 Particulate Filter

3M™ Cartridges 6000 Series

(3M™ cartridge/filter adapter 701 is required)

Number	Description	NIOSH Approval for respiratory protection

		against the following contaminants up to ten times the permissible exposure limit when qualitatively fit tested, up to fifty times the permissible exposure limit when Quantitatively Fit Tested, and up to 1000 times the PEL in powered air-purifying or supplied air mode.
6001	Organic Vapor	Certain organic vapors
6002	Acid Gas	Chlorine, hydrogen chloride, and sulfur dioxide or chlorine dioxide or hydrogen sulfide (escape only)
6003	Organic Vapor/Acid Gas	Certain organic vapors, chlorine, hydrogen chloride, and sulfur dioxide or hydrogen sulfide or hydrogen fluoride
6004	Ammonia and Methylamine	Ammonia and methylamine
6005	Formaldehyde and Organic Vapor	Formaldehyde and certain organic vapors
6006	Multi-Gas and Vapor	Certain organic vapors, chlorine, hydrogen chloride, chlorine dioxide, sulfur dioxide, ammonia, methylamine, formaldehyde, hydrogen fluoride, or hydrogen sulfide
6009	Mercury Vapor/Chlorine Gas	Mercury vapor or chlorine gas
60921	Organic Vapor/P100	Certain organic vapors and particulates
60922	Acid Gas/P100	Chlorine, hydrogen chloride, and sulfur dioxide or chlorine dioxide or hydrogen sulfide and particulates
60923	Organic Vapor/Acid Gas/P100	Certain organic vapors, chlorine, hydrogen chloride, and sulfur dioxide or hydrogen sulfide or hydrogen fluoride, and particulates
60924	Ammonia/Methylamine/P100	Ammonia and methylamine and particulates
60925	Formaldehyde/Organic Vapor/P100	Formaldehyde and certain organic vapors and particulates
60926	Multi-Gas/Vapor/P100	Certain organic vapors, chlorine, hydrogen chloride, chlorine dioxide, sulfur dioxide, hydrogen sulfide, ammonia/methylamine, formaldehyde or hydrogen fluoride and particulates
60928	Organic Vapor/Acid Gas/P100	Certain organic vapors, chlorine, hydrogen chloride, and sulfur dioxide or hydrogen sulfide or hydrogen fluoride and particulates[1]
60929	Mercury Vapor/Chlorine Gas/P100	Mercury vapor or chlorine and particulates

[1] 3M recommended for use against methylbromide or radioiodine up to 5 ppm with daily cartridge replacement. **Note: Not NIOSH approved for use against methylbromide or radioiodine.**

3M™ Responder Cartridge and Canister

Number	Product Name	Description
450-02-11R06	CP3N Canister	Alpha chloroacetophenone (CN), ortho chlorobenzylidene malonitrile (CS); and P100
FR-64	Cartridge	Certain organic vapors, chlorine, hydrogen chloride, chlorine dioxide, sulfur dioxide, ammonia, methylamine,

formaldehyde, hydrogen fluoride, hydrogen sulfide, alpha chloroacetophenone (CN), ortho chlorobenzylidene malonitrile (CS) or phosphine; and P100

Service Life of Chemical Cartridges and Filters

3M™ Chemical Cartridges 6000 Series should be used before the expiration date on cartridge packaging. The useful service life of these cartridges will depend upon activity of wearer (breathing rate); specific type, volatility and concentration of contaminants; and environmental conditions such as humidity, pressure, and temperature. Cartridges must be replaced in accordance with an established change schedule, regulations or earlier if smell, taste or irritation from contaminants is detected.

Filters must be replaced if they become damaged, soiled or if an increase in breathing resistance occurs. N-series filters should not be used in environments containing oils. R-series filters may be limited to 8 hours of continuous or intermittent use if oil aerosols are present. In environments containing only oil aerosols, P-series filters should be replaced after 40 hours of use or 30 days, whichever is first.

ASSEMBLY INSTRUCTIONS

The 3M™ 7800S can be used in many different configurations. It can be used as a positive or negative pressure air-purifying respirator or in systems that are air supplied. The following assembly instructions include negative pressure air-purifying, air supplied or combinations of both air supplied and air-purifying. Separate assembly instructions are required for assembly in powered air-purifying systems (PAPR) and supplied air systems. These assembly instructions are included with the powered air-purifying systems (PAPR) and supplied air systems.

Powered Air-Purifying Respirator (PAPR)
- – 3M™ GVP Belt-Mounted PAPR with 3M™ Breathing Tube GVP-123
- – 3M™ Powerflow™ Face-Mounted PAPR

Supplied Air Respirator (SAR)
- – 3M™ Dual Airline
- – 3M™ Air Control Devices – Continuous Flow

Negative Pressure
- – 3M™ Responder Cartridge FR-64 and CP3N Canister (Front-Mounted)
- – 3M™ 2000 Series and Filters 7093/7093C and Cartridges 6000 Series (Side-Mounted)

3M™ Air-Purifying Assembly

The facepiece is pre-assembled with 3M™ Cartridge/Filter Adapters 701. When the cartridge/filter adapter 701 is used, the bayonet style filters/cartridges can be attached directly to the facepiece.

3M™ 2000 Series and 3M™ Filters 7093/7093C

3M™ Filters 2000 Series and 3M™ P100 Filter 7093/7093C can be attached directly to the cartridge/filter adapters 701.

1. Align opening of filter with filter attachment on facepiece.
2. Turn filter clockwise until it is firmly seated and cannot be further turned. (Fig. 1)
3. Repeat for second filter.

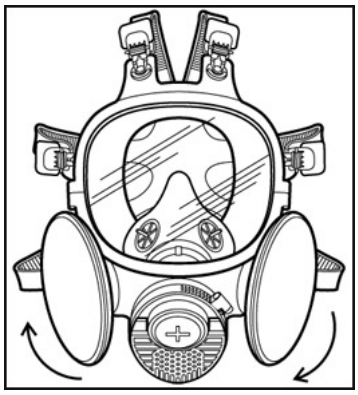

Fig. 1

3M™ Cartridges 6000 Series

3M™ Cartridges 6000 Series can be attached directly to the 3M™ Cartridge/Filter Adapters 701.

1. Align the cartridge notch with the small solid bayonet lug on facepiece and push together.
2. Turn cartridge clockwise to stop (1/4 turn)
3. Repeat with second cartridge. (Fig. 2 and 3)
4. Loosen the adapter nuts and position cartridge to desired location.
5. Hold cartridge in place and tighten nuts.

Note: If 3M™ Mercury Vapor Cartridges 6009 or 60929 are being used, position the cartridge at the location that allows the greatest visibility of the ESLI. If the wearer cannot see the ESLI, do not use for Mercury Vapor exposures.

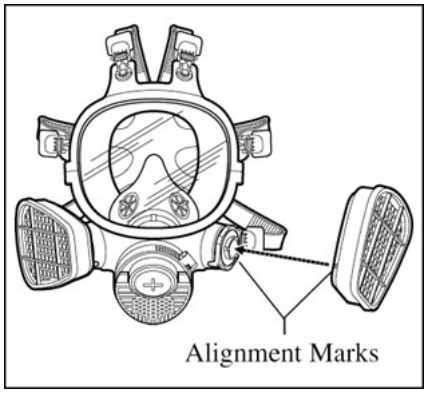

Fig. 2

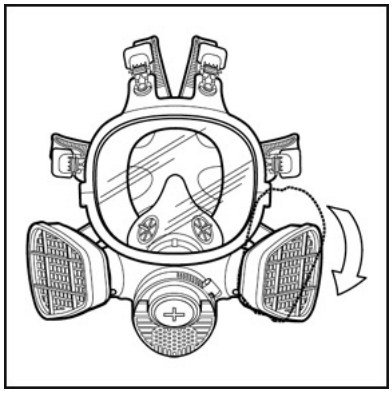

Fig. 3

Filter Assembly (for 3M™ Filters 5N11 and 5P71)

1. Place filter into 3M™ Retainer 501 so printed side of filter faces the cartridge.
2. Press cartridge into filter retainer. It should snap securely into filter retainer. When correctly installed, filter should completely cover face of cartridge. (Fig. 4)
3. To replace filter, remove retainer by lifting on TAB.

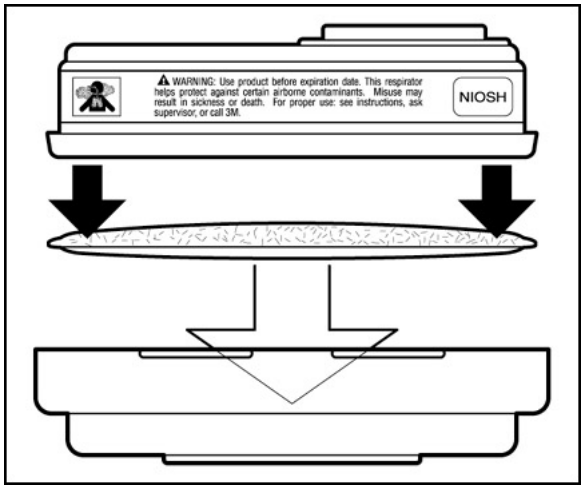

Fig. 4

3M™ Filter Adapter 502 Assembly and Filter Attachment

1. Align adapter over cartridge. Engage front snap by squeezing front of cartridge and adapter together, placing thumbs of both hands over top of adapter and fingers along bottom sides of cartridge. (Fig. 5)
2. Engage back snap by squeezing back side of cartridge and adapter together using the same hand positions. An audible click should be heard as each snap is engaged. (Fig. 6)
3. Place filter onto the filter holder so that filter comes into even contact with gasket. Twist clockwise a quarter turn until it is firmly seated and filter cannot be turned further. Repeat for second filter.

Note: The 3M™ Filter Adapter 502, once installed on a 3M™ Cartridge 6000 Series, is not to be removed or reused. Removal or reuse may result in leakage, overexposure, sickness or death.

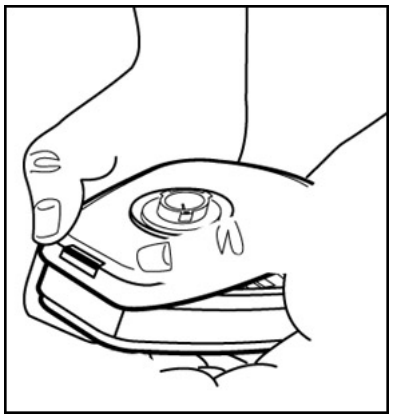

Fig. 5

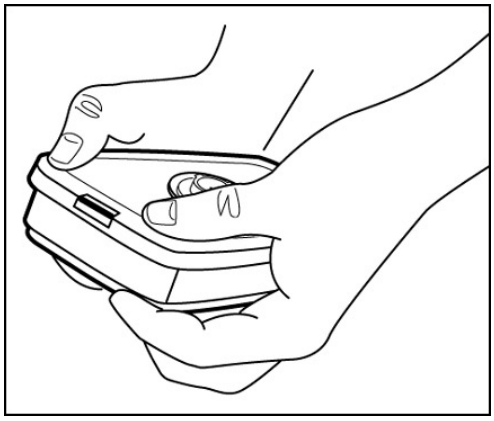

Fig. 6

3M™ 2000 Series and Filters 7093/7093C with 3M™ Filter Adapter 502

Place filter onto the filter holder so that filter comes into even contact with gasket. Twist clockwise one quarter, turn until it is firmly seated and filter cannot be turned further. Repeat for second filter.

Note: The 3M™ Filter Adapter 502, once installed on a 3M™ Cartridge 6000 Series, is not to be removed or reused. Removal or reuse may result in leakage, overexposure, sickness or death.

3M™ Responder Cartridge and Canister Assembly

Important *User Instructions* on proper use and use limitations are included with the 3M™ CP3N Canister 450-02-11R06 and 3M™ Cartridge FR-64. Remove Cartridge/Filter Adapters 701 from facepiece. Before installing the canister/cartridge, check that the gasket is in place and in good condition. Screw the responder canister/cartridge into the DIN Port Adapter and tighten with moderate hand pressure.

In the remaining inlets, ensure that gaskets have been properly installed and are not warped or torn. Securely fasten 3M™ Plugs 7890 on top of the gaskets.

3M™ GVP PAPR Assembly

Screw 3M breathing tube GVP-123 elbow into center DIN port on facepiece. User must follow *User Instructions* provided with GVP PAPR assembly.

3M™ Powerflow PAPR Assembly

User must follow *User Instructions* provided with Powerflow PAPR.

⚠WARNING

The Powerflow PAPR systems are NOT NIOSH approved for use with a nose cup. Do not use a nose cup. Use of a nose cup, **may result in sickness or death**

⚠WARNING

The connection between the Powerflow PAPR and the 7800S facepiece must be checked every time the unit is assembled or swiveled. This check should be performed outside the contaminated environment. Entering the contaminated area while the connection between the PAPR assembly and the facepiece is loose **may result in sickness or death.**

3M™ Supplied Air Systems

⚠WARNING

Your employer must provide breathing air that meets at least the requirements of the specification for Grade D breathing air, as described in the Compressed Gas Association Commodity Specification G-7.1-1997 in the United States. In Canada, breathing air systems must be supplied with air which meets at least the requirements of CSA Standard Z180.1. Failure to do so **may result in sickness or death**.

3M™ Airline/Air-Purifying Assembly

If required, attach 3M™ Cartridges/Filters 2000 or 6000 Series according to previous instructions. If cartridges/filters are not required, remove Adapters 701. Screw 3M™ Full Face Plugs 7890 into both sides of the facepiece.

3M™ Breathing Tube Assembly W-3188

1. Remove 3M™ Full Face Plug 7890 and screw in 3M™ Adapter W-3187 into center opening. (Fig. 7)

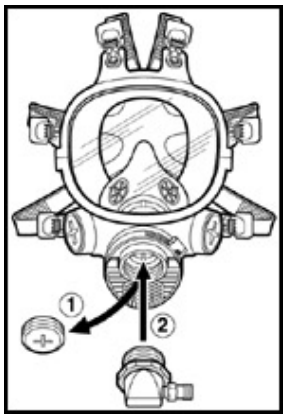

Fig. 7

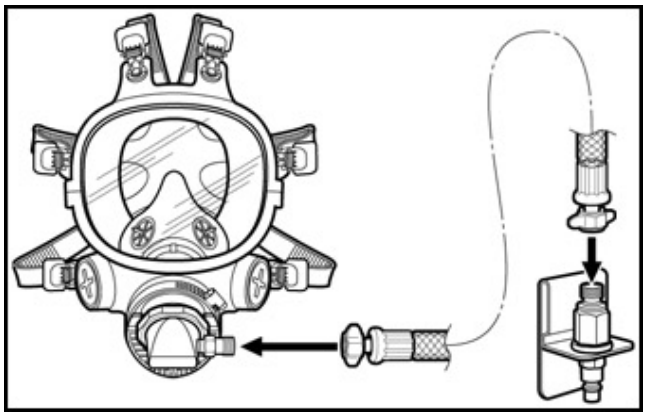

Fig. 8

2. Connect 3M™ Breathing Tube W-3188 to adapter. (Fig. 8)
3. Connect 3M™ Breathing Tube W-3188 to air regulator valve. (Fig. 8)
4. Check all attachments for secureness. See *User Instructions* included with air regulating valves for further information.

3M™ Breathing Tube Assembly W-3264

1. Remove Full Face Plug 7890 and screw in 3M™ Breathing Adapter Tube W-3264 into center opening. (Fig. 9)

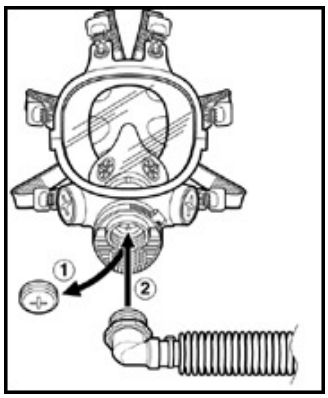

Fig. 9

2. Connect the other end of breathing tube to air regulating valve
3. Check all attachments for secureness prior to each use. *See User Instructions* included with air regulating valves for further information.

3M™ Dual Airline System

3M™ Dual Airline Respirator Assembly

User must follow Dual Airline Supplied Air Respirators *User Instructions* provided with the 3M™ Dual Airline Supplied Air Respirators.

Assembly of 3M™ Combination Dual Airline Respirator with Cartridges and/or Filters

The 3M™ front-mounted SA-1600 and back-mounted SA-2600 versions of the 3M dual airline breathing tubes allow use of selected NIOSH approved 3M™ 6000 Series Cartridges and 2000 Series Filters. For the listing of approved cartridges and filters, reference the NIOSH approval label included with 3M dual airline adapter kits.

To assemble 3M™ Dual Airline Combination Breathing Tubes with 3M™ Cartridges/Filters, the facepiece inhalation valves must be removed.

If the facepiece is to be used in air-purifying mode (without using the 3M SA-1600 or SA-2600 breathing tubes), the inhalation valves must be replaced in the facepiece before use.

Using the 3M™ Combination Dual Airline Breathing Tubes without Cartridges and/or Filters

To use the 3M combination dual airline breathing tubes SA-1600 and SA-2600 without cartridges or filters, attach a 3M™ Bayonet Cap 6880 to each outer bayonet mount on the dual airline breathing tube. When used as a straight, Type C, continuous flow supplied air respirator, the Assigned Protection Factor is 1000 times the PEL or TLV guidelines for full facepiece respirators.

⚠WARNING

To meet the U.S. National Institute for Occupational Safety and Health (NIOSH) requirement for minimum (4 cfm/115 lpm) and maximum (15cfm/424 lpm) airflow, the air control valves approved for use with the 3M™ 7000 Series Respirators must be operated within the supply pressure ranges and hose lengths stated in *User Instructions* with air regulating valves. **Failure to do so may result in sickness or death**.

FITTING INSTRUCTIONS

Must be followed each time respirator is worn.

Note: Do not use with beards or other facial hair or other conditions that prevent a good seal between the face and the faceseal of the respirator. Standard eyeglasses cannot be worn with full facepiece respirators. If corrective eyeglasses are required a 3M Spectacle Kit must be used inside the respirator. To help maintain a good seal between the face and the faceseal all hair, hoods, or other equipment must be kept out of respirator faceseal area at all times.

Note: Before assigning any respirator to be worn in a contaminated area, a qualitative or quantitative fit test must be performed per OSHA Standard 1910.134, or CSA Standard Z94.4.

Donning Respirator

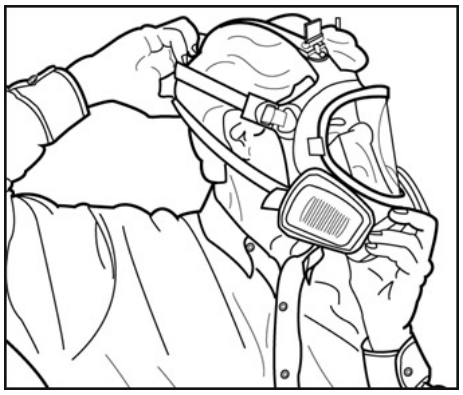

Fig. 10

1. Fully loosen all six head straps. With one hand pull hair back out of facepiece sealing area. Place chin in the respirator chin cup. While holding the facepiece in place, pull the head harness to back of head. (Fig. 10)
2. Pull the ends of the six straps to adjust tightness, starting with the neck straps first followed by the temple straps and finally forehead straps. Do not overtighten the headstraps. (Fig. 11)
3. Perform a positive and/or negative pressure user seal check each time the respirator is donned.

User Seal Checks

Always check the seal of the respirator on your face before entering a contaminated area.

Positive Pressure User Seal Check

1. Place the palm of the hand over the exhalation valve cover and exhale gently. (Fig. 12)
2. If the facepiece bulges slightly and no air leaks are detected between the face and facepiece, a proper seal has been obtained.
3. If air leakage is detected, reposition respirator on face and/or readjust tension of straps to eliminate the leakage.

If you cannot achieve a proper seal, DO NOT enter contaminated area. See your supervisor.

Negative Pressure User Seal Checks

3M™ Cartridges/Filters 6000 Series

1. Place palms of hands to cover face of cartridge or open area of filter retainers and inhale gently. If you feel facepiece collapse slightly and pull closer to your face with no leaks between the face and facepiece, a proper seal has been obtained. (Fig. 13)
2. If faceseal air leakage is detected, reposition respirator on face and/or readjust tension of straps to eliminate the leakage.

If you cannot achieve a proper seal, DO NOT enter contaminated area. See your supervisor.

3M™ Filters 2000 Series

1. Place your thumbs onto the center portion of the filters, restricting airflow through filters and inhale gently. If you feel facepiece collapse slightly and pull closer to your face with no leaks between the face and facepiece, a proper seal has been obtained. (Fig. 14)
2. If faceseal air leakage is detected, reposition respirator on face and/or readjust tension of straps to eliminate the leakage.

If you cannot achieve a proper seal, DO NOT enter contaminated area. See your supervisor.

3M™ Filter 7093/7093C

1. Using both hands press or squeeze filter covers toward facepiece and inhale gently. If you feel facepiece collapse slightly and pull closer to your face with no leaks between the face and facepiece a proper seal has been obtained.
2. If faceseal air leakage is detected, reposition the respirator on your face and/or readjust the tension of the straps to eliminate the leakage.

If you cannot achieve a proper seal, DO NOT enter contaminated area. See your supervisor.

3M™ GVP PAPR

1. Place the palm of the hand over the breathing tube opening.
2. Inhale gently. If you feel the facepiece collapse slightly and pull closer to your face with no leaks between the face and the facepiece, a proper seal has been obtained.
3. If faceseal air leakage is detected, reposition respirator on face and/or readjust tension of straps to eliminate air leakage.

If you cannot achieve a proper seal, DO NOT enter contaminated area. See your supervisor.

3M™ Powerflow PAPR and Canister/Cartridge

1. Place palms of hands over the air inlet of the cartridge/canister.

2. Inhale gently. If you feel the facepiece collapse slightly and pull closer to your face with no leaks between the face and the facepiece, a proper seal has been obtained.
3. If faceseal air leakage is detected, reposition respirator on face and/or readjust tension of straps to eliminate the leakage.

If you cannot achieve a proper seal, DO NOT enter contaminated area. See your supervisor.

Negative Pressure User Seal Check with Dual Airline, Center Mounted Airline, and Pressure Demand

1. Disconnect airline hose from air control valve.
2. With breathing tube still connected to respirator and the air control valve inhale gently. If you feel facepiece collapse slightly and pull closer to your face with no leaks between the face and facepiece, a proper seal has been obtained.
3. For Combination Dual Airline where cartridges or filters are attached perform user seal check as described above under the appropriate cartridge or filter that is being used.
4. If faceseal air leakage is detected, reposition the respirator on your face and/or readjust the tension of the straps to eliminate the leakage and recheck seal.

If you cannot achieve a proper seal, DO NOT enter contaminated area. See your supervisor.

RESPIRATOR REMOVAL

1. Fully loosen all six head straps by lifting up on buckles.
2. Remove respirator by pulling straps over head.

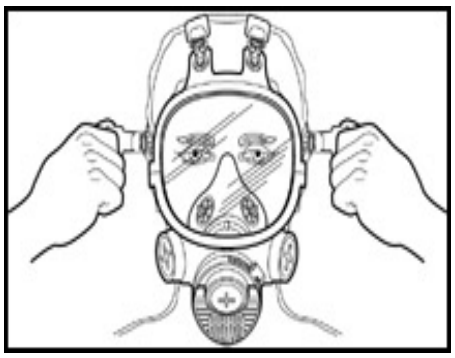

Fig. 11

Fig. 12

Fig. 13

Fig. 14

FIT TESTING

The effectiveness of a respirator will be reduced if it is not fit tested properly. Therefore, either qualitative or quantitative fit testing must be conducted prior to the respirator being used.

Note: Fit testing is both a U.S. Occupational Safety and Health Administration (OSHA) and Canadian requirement.

Quantitative Fit Testing (QNFT) can be conducted using a 3M™ Fit Test Adapter 601 and 42 CFR 84 P100 filters such as the 3M™ P100 Particulate Filters 2091 or 7093.

Qualitative Fit Testing (QLFT) with the 3M™ Qualitative Fit Test Apparatus FT-10 or FT-30 can be conducted using any of the NIOSH approved 42 CFR 84 Particulate filters.

Fit testing should be conducted using the heaviest cartridge, canister, filter or combination that each wearer will use in their work environment. Respirators should also be fit tested while wearing any personal protective equipment (PPE) the wearer may use in their work environment that may affect the fit of the respirator (e.g. hoods, hardhats, safety glasses, hearing protections, etc.).

Note: For further information concerning fit testing, contact 3M OH&ESD Technical Service at 1-800-243-4630 or a 3M location in your region. In Canada call Technical Service at 1-800-267-4414.

INSPECTION, CLEANING AND STORAGE

Inspection Procedure

This respirator must be inspected before each use to ensure it is in good operating condition. Any damaged or defective parts must be replaced before use. Do not enter a contaminated area with damaged or defective parts. The following procedure can be used as a guideline.

1. Check the faceseal for cracks, tears and dirt. Examine the inhalation valves for signs of distortion, cracking or tearing.
2. Check that the headstraps are intact and have good elasticity.
3. Examine all plastic parts and gaskets for signs of cracking or fatiguing and replace if necessary.
4. Remove the exhalation valve cover and examine the exhalation valve and seat for signs of dirt, distortion, cracks or tears.
5. Replace the valve if necessary. Secure the valve cover prior to use. (Fig. 15) Examine the lens for signs of cracking or other damage. Replace if necessary.

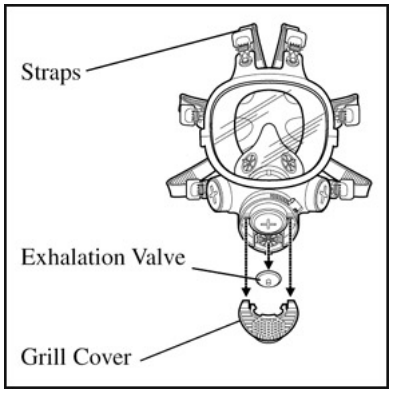

Fig. 15

Cleaning and Storage

Cleaning is recommended after each use.

⚠WARNING

Do not clean respirator with solvents. Cleaning with solvents may degrade some respirator components and reduce respirator effectiveness. Inspect all respirator components before each use to ensure proper operating condition. **Failure to do so may result in sickness or death.**

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1. Remove cartridges, filters and/or breathing tubes. The center adapter, lens and faceseal can also be removed if necessary.
2. Clean facepiece (excluding filters and cartridges), by immersing in warm cleaning solution, water temperature not to exceed 120° F (49° C), and scrub with soft brush until clean. Add neutral detergent if necessary. Do not use cleaners containing lanolin or other oils.
3. Disinfect facepiece by soaking in a solution of quaternary ammonia disinfectant or sodium hypochloride (1 oz [30 ML] household bleach in 2 gallons [7.5 L] of water), or other disinfectant.
4. Rinse in fresh, warm water and air dry in noncontaminated atmosphere.
5. Respirator components should be inspected prior to each use. A respirator with any damaged or deteriorated components should be repaired or discarded before use.
6. The cleaned respirator should be stored away from contaminated areas when not in use.

REPLACEMENT PART INSTRUCTIONS

Respirator parts should be inspected prior to each use. Replace worn or deteriorated parts with new parts before use.

3M™ Lens 7884
The lens should be inspected for cracking or crazing. Replace if necessary. Replace as follows: Remove two screws on either side of lens with a Phillips screwdriver, remove the top and bottom lens frame and remove the lens. To reassemble, first align the center of the lens with the centerline of the facepiece. The center of the lens is marked by two small lines, one at the top center and second at the bottom center of the lens. Place the lens into the facepiece and then reattach the lens frame. Replace the two center screws and tighten.

3M™ Exhalation Valve Cover 7918 and Exhalation Valve 7283
Remove the 3M™ Exhalation Valve 7918 cover by lifting out on the two top prongs on either side of the center opening and sliding down. Remove the exhalation valve by grasping and pulling on the edges of the valve. Replace the valve if it is warped, distorted, cut, split or if it will not seal tightly on the valve seat. Replace by pushing the valve onto the exhalation valve post.

3M™ Speaking Diaphragm Kit 7895
Remove the nose cup. Using the diaphragm removal tool, turn diaphragm retaining ring counter clockwise and remove. Push diaphragm assembly out of the facepiece from underneath using the eraser end of a pencil or a similar object. Check the speaking diaphragm gasket for damage or deformation. To replace the diaphragm, follow the steps in reverse.

Note: The grill pattern with deep indentation in the center should be visible from inside the respirator.

3M™ Removable DIN Connector 7886
Hold the inside part of the connector secure, grasp the outside of the connector and twist counter clockwise to remove. To replace the connector, press the inner section into the facepiece until the end of the threads are flush with the facepiece exterior, then screw on the outer piece by turning clockwise.

3M™ Inhalation Valves 7282
Grasp the edges of the valve and pull away from the plastic post. Replace if the valve is distorted, cut, split or cannot be sealed on the valve seat. If the valve seat is damaged, replace the removable DIN connector 7886.

3M™ Air Inlet Gasket 7999
Remove the gasket from the air inlet opening base. Replace the gasket if it is warped, distorted, cut, split or cannot be reassembled into the air inlet. To replace, position the gasket so the small cut-out on the gasket is pointing toward the lens. Push the gasket groove onto the plastic bar and seat the gasket.

3M™ Inhalation Port Gaskets 7887
Remove the gaskets from each side of the facepiece. Replace the gaskets if they are warped, distorted, cut or split. Replace one gasket on each side of the facepiece. Be sure the gasket is flat and seated correctly.

3M™ Nose Cup Valves 7882
The nose cup valves are supplied as a complete 3M™ Nose Cup Valve Assembly 7882. Remove the nose cup valves if they become warped, torn or otherwise damaged. Replace the valves in the nose cup such that the post points away from the nose.

3M™ Inhalation Port Gasket 6895 Replacement
Replace if gasket is warped, distorted, cracked or split.

FOR MORE INFORMATION

In United States, contact:

Website: www.3M.com/OccSafety
Technical Assistance: 1-800-243-4630

For other 3M products:

1-800-3M-HELPS or 1-651-737-6501

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3M Center, Building 0235-02-W-70
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