

# USER INSTRUCTION MANUAL

**COMPACT** **air**

respiratory protection equipment

## SUPPLIED AIR RESPIRATOR



**WELDING AND SAFETY PRODUCTS**

**85 Independence Drive, Taunton, MA 02780**

Instruction Manual P/N M-CASA-WD-01 Rev A

## Definition of Safety Signal Words per ANSI Z 535.4



### **WARNING**

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



### CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.



Do not use this product until you have read and understood this instruction manual which is an essential part of the COMPACT AIR™ SAR System.

If the equipment is not properly assembled, connected, and used in strict conformance with this instruction manual, contaminated air could be drawn in the system, resulting in exposure, which may lead, to serious bodily injury or loss of life.

If used by unqualified or untrained persons, or use other than in accordance with this instruction manual, is dangerous and could expose you to serious bodily injury or loss of life.

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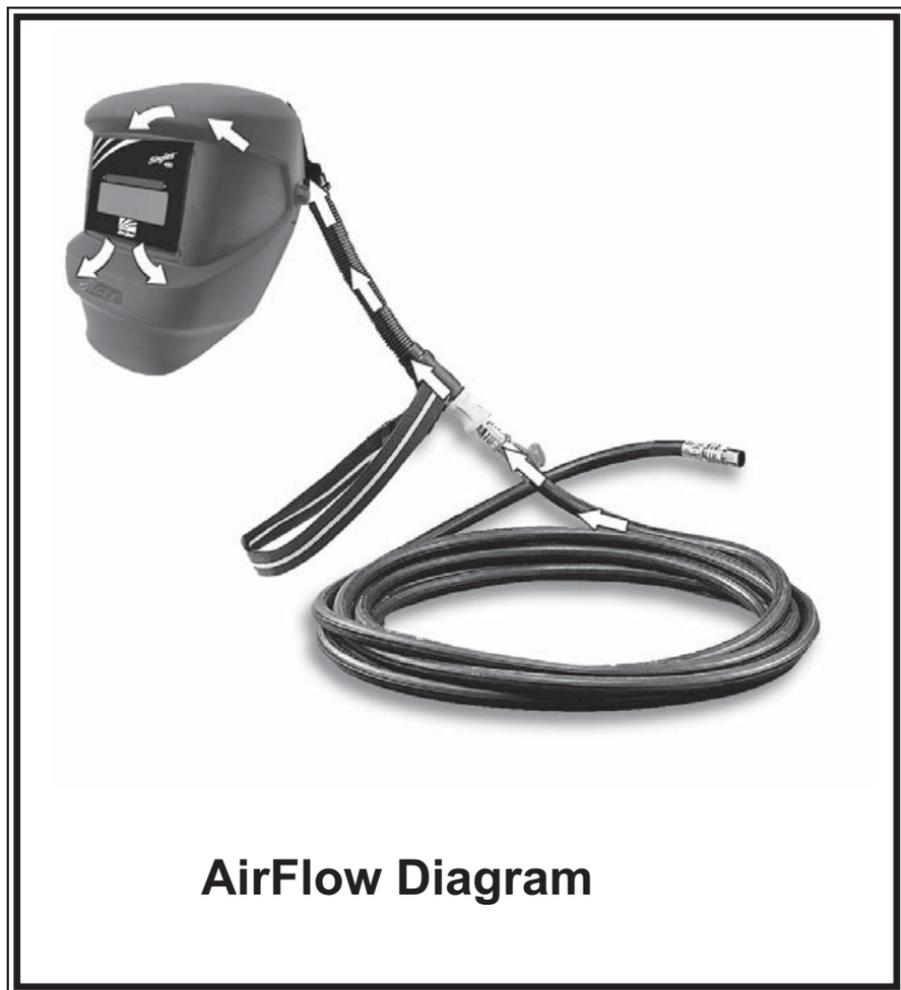
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Appendix I - NIOSH Respirator Approval Label

**ARCONE™**

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**COMPACT air™** by **ARCONE™**  
respiratory protection equipment



**AirFlow Diagram**

Available in the following Helmet Styles with a choice of Auto-Darkening Lens:

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### Vision Series Helmets



Singles™

Shade 9,10,11 or 12

5 x 4" Fixed Front or  
2 x 4" Fixed Front  
2 x 4" Lift Front



Shades™

Variable Shade Se-  
lections 9-12

5 x 4" Fixed Front



Industrial™

Infinite Shade  
Selections 7 - 14

5 x 4" Fixed Front

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### Eagle Series Helmets (4 x



Singles™

Shade 9,10,11 or 12



Shades™

Variable Shade  
Selections 9-12



Industrial™

Infinite Shade  
Selections 7 - 14

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### Falcon Helmet (5 x 4)



Singles™

Shade 9,10,11 or 12



Shades™

Variable Shade  
Selections 9-12



Industrial™

Infinite Shade  
Selections 7 - 14

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### Hawk Helmet (2 x 4)



Singles™

Shade 9,10,11 or 12



# 1.0 General Information

## 1.1 Introduction

Congratulations! You have purchased the ultimate in comfortable welding supplied air respiratory protection equipment. The complete **ARCONE™ COMPACT AIR™** Supplied Air welding respirator protection system provides a welder with eye, face, and respiratory protection in a lightweight, "State-Of-The-Art" technological integrated system.

The **ArcOne SA** (Supplied Air) system consists of the **COMPACT AIR** Supplied Air inline regulator respirator, a choice of distinct lightweight welding helmets: Eagle, Hawk, Vision, or the durable reinforced fiberglass Falcon. Also available with this system is ArcOne's family of electronic auto-darkening welding lenses.

The **ARCONE** auto-darkening lens provides a clear view prior to striking the welding arc, as soon as you strike an arc, your welding filter will automatically darken. There are no switches to worry about. Our advanced optical detection system monitors your welding process to ensure that your filter remains in the dark state in a wide range of arc welding applications. Protection from harmful UV and IR radiation is provided on a permanent basis whether the lens is light or dark. To insure proper eye protection and maximum comfort, select the correct shade for your application. (Enclosed is an auto-darkening welding helmet "User Instruction Manual," please refer to that manual for details on **ARCONE's** welding helmets and auto-darkening lenses).

Our goal is to make your demanding job comfortable and safe. The **COMPACT AIR SA** system has been engineered not only for safety and functionality but also for lightweight comfort. You can wear the **COMPACT AIR SA** system all day with no worry of fatigue or respiratory stress.

To assure your complete satisfaction we ask you read the user and safety instructions thoroughly before using the **ARCONE COMPACT AIR SA** respirator system.

## 1.2 Operating Principals

**ARCONE's COMPACT AIR SA** system respirators, when properly used, provide a continuous flow of air from a remote compressed air source. The **COMPACT AIR SA** respirators offer protection from airborne contaminants that are not immediately dangerous to life or health (IDLH), or that do not exceed concentrations allowed by applicable OSHA, MSHA, EPA, NIOSH or ACGIH regulations and recommendations, or any other applicable regulation for continuous flow airline respirators.

The unique inline airflow regulator is a masterpiece of design and simplicity of operation. A durable yellow plastic cylindrical collar revolves around the tube, covering two flow holes. By turning the cylindrical collar, the operator can open or close the holes, controlling the airflow as required. A bleeding hole in the tube center supplies the minimum required continuous airflow to the helmet at all times.

**ARCONE's COMPACT AIR SA** system is compatible with any required source of compressed air, of grade D or better that is carried through a piping system to distributed purification and regulation panels which filter out piping debris and regulated air pressure to the respirator. The quick disconnect couplings that are used in the system are a double action safety type, preventing unintentional disconnection.

**ARCONE** provides an additional safety silencer in the system to reduce the noise level to the helmet. The silencer also provides a final barrier between the air line hose and the air provided to the welding helmet.

## NIOSH APPROVED SYSTEM CONCEPT

Failure to use complete NIOSH-Approved **ArcONE COMPACT AIR** SAR replacement parts voids approval of entire assembly.

Respirator Welding Helmet  
w/Airduct

AutoDarkening Lens

Breathing Tube

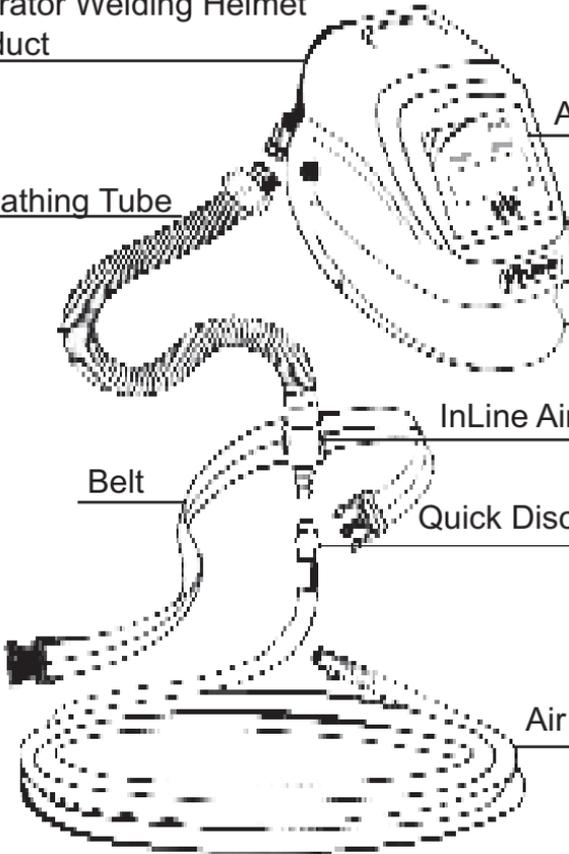
Inner Face Seal

InLine AirFlow Regulator

Belt

Quick Disconnect

Air Supply Hose



**WARNING**

This respirator must be supplied with clean, breathable air, Grade D or better, at all times. This respirator does not purify or filter out contaminants.

### 1.3 Respirator Approvals

The **COMPACT AIR SA** System as described in this instruction manual has been approved by the following Standards Agency:

- **NIOSH 42 CFR Part 84**

### 1.4 Helmet and Auto-Darkening Lens Approvals

The **ArcONE** welding helmets Eagle, Hawk, Falcon and Vision series and the Auto-Darkening Lenses have been tested and approved under the following Standards Agencies:

- **ANSI Z87.1 - 1989 (USA)**
- **CSA Z94.3-M88 (Canada)**

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## 2.0 System Use

### 2.1 Preparation for Safe Use

Before using the **COMPACT AIR SA** System, you should ensure that all conditions for safe use have been satisfied. The following limitations apply:

#### CAUTIONS AND LIMITATIONS

- B. Not for use in atmospheres immediately dangerous to life or health.
- C. Do not exceed maximum use concentrations established by regulatory standards.
- D. Airline respirators can be used only when 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 users instructions.
- J. Failure to properly use and maintain this product could result in injury or death.
- 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.
- S. Special or critical User's Instructions and/or specific use limitations apply.

#### Special User's Instruction

*Refer to Table I Before Donning.*



## WARNING

Improper respirator use may cause injury or death. Improper use may also cause certain life-threatening delayed lung diseases.

Regulations require that the employer provide training to the user on proper use, maintenance and limitations of the **COMPACT AIR** SA respirator system. Each person using this respirator must first read and understand this entire instruction manual.

Before using the **COMPACT AIR** SA respirator system, be sure your employer has determined that airborne contaminant concentrations do not exceed those allowed by applicable OSHA, MSHA, EPA, NIOSH or ACGIH regulations for continuous flow airline respirators. Federal law requires that your employer measure and monitor airborne contaminant levels in the work area.

DO NOT wear this respirator system if any of the following conditions exist:

- Atmosphere is immediately dangerous to your life or health (IDLH).
- You CANNOT escape without the aid of the respirator.
- Atmosphere contains less than 19.5% oxygen.
- Work area is inadequately ventilated.
- Unknown contaminants are present.
- Contaminant concentrations are in excess of regulations or recommendations.

Do Not modify or alter the **COMPACT AIR** SA respirator system in any manner. Use only **COMPACT AIR** SA components and replacement parts approved by NIOSH for use with this system. Failure to use components and replacement parts approved by NIOSH for use with this respirator system voids NIOSH approval of the entire respirator, invalidates all **ARCONE** warranties, and may cause death, lung disease or exposure to other hazardous or life-threatening conditions.

Inspect all components of the **COMPACT AIR** SA respirator system during cleaning and before and after each use for signs of wear, tear or damage that might reduce the degree of protection originally provided. Immediately replace worn or damaged components with **ARCONE's COMPACT AIR** SA components approved by NIOSH for use with this respiratory system.

DO NOT connect the respirator's air supply hose to nitrogen, oxygen, toxic or inert gases. Failure to connect to the proper air source may result in serious injury or death. Be certain that it has been determined that the breathing air source provides at least Grade D breathable air.

DO NOT use the **COMPACT AIR** SA respirator system in inadequately ventilated areas, where oxygen is less than 19.5%, or in confined spaces such as tanks, small rooms, tunnels or vessels unless the confined space is well-ventilated and contaminant concentrations are below the recommendations for this system. The procedures for confined space entry, operation and exit are defined in applicable regulations and standards, including 29 CFR 1910.146.

## 2.2 Breathing Air Requirements



**This Respirator must be supplied with clean, breathable air, Grade D or Better, at all times. This respirator system does not purify or filter out contaminants.**

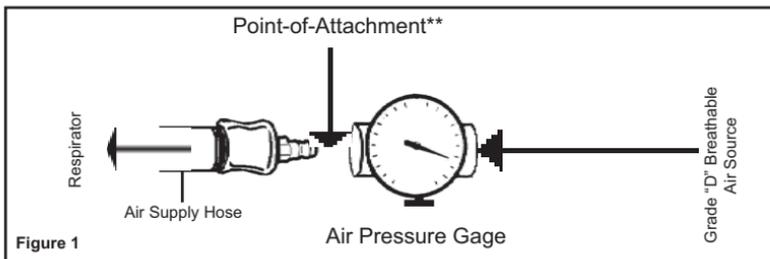
Respirable, breathable air must be supplied to the point-of-attachment of the approved **ARCONE COMPACT AIR** hose. The point-of-attachment is the point at which the air supply hose connects to the air source. A pressure gauge is required and must be attached to the air source that it is used to monitor the pressure of air provided to the respirator wearer. (See Figure 1)

Supplied breathing air must **AT MINIMUM** meet the requirements for Type 1 gaseous air described in the Compressed Gas Association Commodity Specification G-7.1 for Grade D or higher quality as specified by Federal regulations 42 CFR, Part 84.141 (b) and 29 CFR 1910.134 (i).

The requirement for Grade D breathable air include:

- Oxygen \_\_\_\_\_ 19.5-23.5%
- Hydrocarbons (condensed)  
in mg/m<sup>3</sup> of gas \_\_\_\_\_ 5 mg/m<sup>3</sup> max.
- Carbon monoxide \_\_\_\_\_ 10 ppm max.
- Carbon dioxide \_\_\_\_\_ 1,000 ppm max.
- \*Odor \_\_\_\_\_
- No toxic contaminants at levels that make air unsafe to breathe.

\*Specific measurements of odor in gaseous air is impractical. Air may normally have a slight odor. The presence of a prominent odor should render the air unsuitable.



**\*\*Use a quick discount coupler to attach the air supply hose**

## 2.3 Air Source

Locate a source of compressed air supply. Always use an inlet filter on your air source to ensure the air remains contaminant-free. The air should be regularly sampled to be sure that it meets Grade D requirements.

## 2.4 Breathing Air Pressure

Air pressure should be monitored at the point-of-attachment while in use. A reliable air pressure gauge is required to monitor the air pressure during actual respirator operation.

The Breathing Air Pressure Table (See Table 1) has been defined with the air pressure ranges necessary to provide the **COMPACT AIR** SA systems with a volume of air that falls within the required range of 6-15 cfm or 170-425 lpm. (Ref.42 CFR, Part 84, Subpart J, 84.150)

Be sure you understand the information provided in the Breathing Air Pressure Table before using the Compact Air SA system.

## 2.5 Breathing Air Supply Hoses and Hose Fittings

ONLY use NIOSH approved **ARCONE COMPACT AIR**, air supply hose(s) between the breathing tube/inline regulator connection fitting located on the wearer's belt and the point-of-attachment to the air supply.

NIOSH approved quick-disconnect fittings present on the air hoses MUST be used to connect all **COMPACT AIR** air supply hose lengths together. The quick connection coupler is a safety double action system designed for preventing unintentional disconnection.

The total connected hose length and number of hoses MUST be within the ranges specified on the Breathing Air Pressure Table. (See Table 1)

The breathing tube/inline regulator quick-disconnect fitting MUST be secured to the belt that is supplied with the **COMPACT AIR** respirator system. The attachment of the breathing tube/inline regulator to the belt helps prevent the air supply hose from disconnecting or pulling the welding helmet off your head.

**ARCONE** requires a Cejn female coupler with a 3/8" N.P.T. male pipe thread to be used for the fitting on the compressor line. You may purchase this through **ARCONE** as an accessory to the **COMPACT AIR** SA system

(See Appendix I ).

The breathing tube/inline regulator quick-disconnect fitting MUST be secured to the belt that is supplied with the **Compact Air** respirator system. The attachment of the breathing tube/inline regulator to the belt helps prevent the air supply hose from disconnecting or pulling the welding helmet off your head.

**ARCONE** recommends a Cejn female coupler with a 3/8" N.P.T. male pipe thread for the fitting on the compressor line be used. You may purchase this through **ARCONE** as an accessory to the **Compact Air** SA system.

## TABLE I Breathing Air Pressure Table

This Breathing Air Pressure Table defines the air pressure ranges necessary to provide the Welding Helmet respirators with a capacity of air that falls within the required regulatory range of 6-15 cfm or 170-425 lpm according to NIOSH 42 CFR, Part 84, Subpart J, 84.150, Table 8.

| Air Supply Hose   | Air Supply Hose Length (feet) | Max. No. Hose Sections | Required Pressure Range (psig air) |
|---|-------------------------------|------------------------|------------------------------------|
| 1. Heavy Duty Rubber<br>Part# CA-HRH-0025<br>Part# CA-HRH-0050                      | 25-75                         | 3                      | 58-60                              |
| 2. Heavy Duty Rubber<br>Part# CA-HRH-0025<br>Part# CA-HRH-0050<br>Part# CA-HRH-0100 | 100-150                       | 4                      | 60-65                              |
| 3. Heavy Duty Rubber<br>Part# CA-HRH-0025<br>Part# CA-HRH-0050<br>Part# CA-HRH-0100 | 175-225                       | 5                      | 65-70                              |
| 4. Heavy Duty Rubber<br>Part# CA-HRH-0025<br>Part# CA-HRH-0050<br>Part# CA-HRH-0100 | 250-300                       | 6                      | 65-75                              |

**NOTE: Maximum Allowable Length of Air Supply Hose is 300 Ft.**



**Failure to supply the minimum required pressure at the point-of-attachment for your hose length and welding helmet will reduce airflow and may cause injury, disease or death.**

## 2.6 Respirator Welding Helmet Assembly

Your **ARCONE** welding helmet comes completely assembled. Before you begin to use the COMPACT AIR SA system it is **important** that you read the **ARCONE** Auto-Darkening Welding Helmet “**User Instruction Manual**” which is enclosed.

**Ensure that the auto-darkening lens you have selected is the adequate shade for your welding application.**

*Refer to ANSI/AWS F2.2-89, BS 679 or EN169*

- Ensure that the A/D lens is properly installed and operational (Refer to the enclosed A/D “User Instruction Manual”.
- Check that the face seal is properly installed and in good condition with no holes, runs, or tears.
- Connect the breathing tube to the airduct on the back of the welding helmet by rotating the bayonet connector until the projection tab lines up in the slot. Make sure the rubber O-Ring around the end of the breathing tube is in place and not damaged or deteriorated. (See Figure 2)
- The headgear has both crown (height) and circumference adjustments. Adjust the crown height via the pin/hole adjustment on the top strap of the headgear. The circumference is easily adjusted by means of a knob located at the back. Push ratchet knob in to make this adjustment as you wear your respirator welding helmet. (See Figure 3)

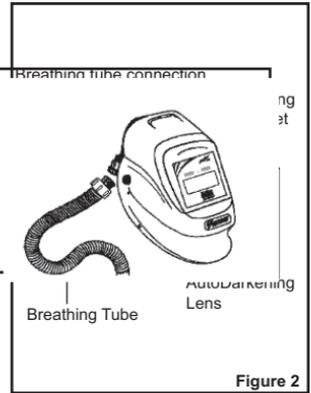


Figure 2

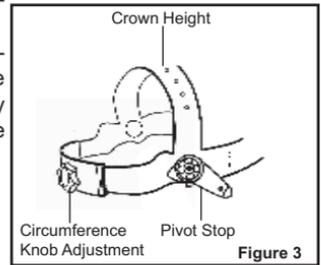


Figure 3

Headgear shown without airduct

## 2.7 Donning Respirator Welding Helmet



**Do Not put the respirator on in a Hazardous Atmosphere. Do Not remove the respirator in a hazardous atmosphere except for emergency escape purposes.**

Before using the **COMPACT AIR SA** system:

- Connect the NIOSH-approved **ARCONE COMPACT AIR** supply hose to an air source supplying Grade D breathable air. Turn on the breathing air source.
- With the air flowing, connect the breathing tube and welding helmet assembly to the air supply hose by connecting the safety quick-disconnect coupler on the air supply hose. Once the fitting is secured, release coupling sleeve to lock fittings together. Pull on both hoses to make sure they are attached securely.

(See Figure 4)

- Adjust air pressure at point-of-attachment within the approved pressure range for the hose length being used. (See Figure 5).

See the Breathing Air Pressure Table (Table 1) for approved pressure ranges.

- With the air still flowing, don the welding helmet assembly to your head fitting the face seal under the chin and around the face. The face seal can be worn in front of, or behind the ears.

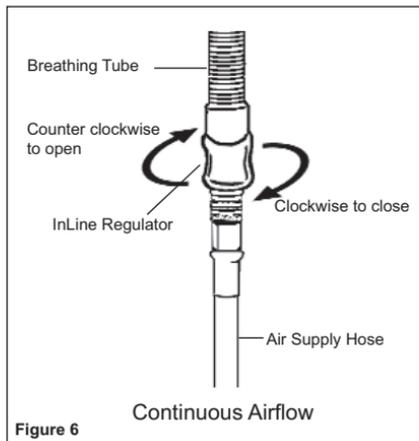
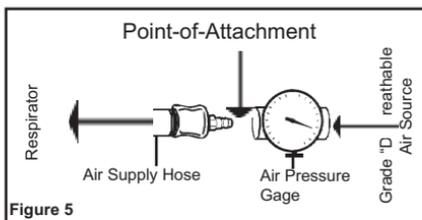
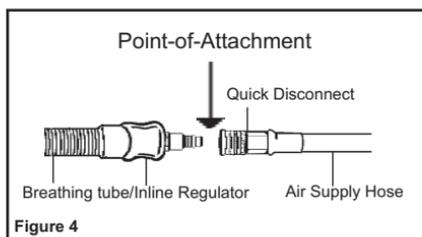
- Position headgear for a comfortable fit. See instructions on previous page for proper sizing.

- With breathing tube assembly attached to the welding helmet, fasten belt to the waist or hip level and adjust for comfort.

- Recheck air pressure and adjust air flow by turning the yellow cylindrical collar (**InLine Regulator**) located at the bottom base of the breathing tube and just above the point-of-attachment to the airline hose. Clockwise to close; Counter clockwise to open.

**NOTE:** Airflow is continuous. (See Figure 6)

- With air flowing into the respirator, you are now ready to enter the work area.



## 2.8 Doffing Respirator Welding Helmet

When work is completed, always leave the work area wearing the respirator and the air still flowing. Once outside contaminated area, remove respirator welding helmet and belt, then disconnect the air supply hose using the quick-disconnect fittings.



### LEAVE WORK AREA IMMEDIATELY IF:

- Any respirator component becomes damaged.
- Airflow into respirator welding helmet stops or slows down.
- Air pressure gauge drops below the minimum specified in the Breathing Air Pressure Table. (See Table 1)
- Breathing becomes difficult.
- You experience dizziness, nausea, or illness.
- You taste, smell or see contaminations inside the respirator welding helmet.
- If you feel eye or throat irritation.

## 3.0 Inspection, Maintenance, and Storage

### 3.1 Inspection

All components should be checked daily when used regularly. Regardless of the usage, each respirator system requires a documented inspection and replacement program. A trained and competent person with full knowledge of respiratory equipment should carry this out. Records should be maintained throughout the life of the equipment. Regulatory Guidance can be found in the following documents: OSHA 29CFR 1910 Part 134 and ANSI Z88.2

Use only **ArcONE COMPACT AIR SA** components and replacement parts manufactured by **ArcONE** and approved by NIOSH for use with the respirator system. Inspect all components of the respirator system during cleaning and before and after each use for signs of wear, tear or damage that might reduce the degree of protection originally provided. Respirators used by more than one person must be cleaned, inspected, and sanitized after each use. If not cleaned, contamination may cause illness or disease.



**Do Not** store the respirator system in your work area or leave it unattended in a contaminated environment. Respirable contaminants can remain suspended in the air after work activity ceases, even though you may not see them. Proper work practice requires you to wear the respirator until you are outside the contaminated environment. If you set the respirator down in a contaminated area, contaminants, dirt and dust could get into the respirator. When you don the respirator again you could breathe in contaminants upon reuse.

## 3.2 Welding Helmet Assembly

**MAINTENANCE:** Clean the helmet and polycarbonates with a soft cloth dampened in a mild detergent solution of clean water. Abrasive cleaners should **NEVER** be used.

The auto-darkening filter requires virtually no maintenance other than cleaning. Use a soft cloth with a mild detergent, or standard window cleaner. Make sure that the cloth you use is clean. Abrasive particles in the cloth could scratch the highly polished lens surface.

The airduct headgear can be disassembled from the welding helmet to be cleaned. Again use a mild detergent solution and avoid abrasive cleaners.

Detach the face seal from the airduct headgear assembly before cleaning. Hand wash in a mild solution of clean water and mild detergent.

Allow the complete welding helmet assembly components to air dry before reassembling.

**INSPECTION:** Inspect the welding helmet, auto-darkening lens, and airduct headgear for excessive wear, cracks, or holes that might reduce the degree of protection originally provided. Inspect the face seal for elasticity. When in doubt always replace the component. Never try to repair the components; it might reduce the degree of protection originally provided.

## 3.3 Breathing Tube

**MAINTENANCE:** Detach the breathing tube from the helmet assembly, and wipe the connection sites, with a cloth dampened in a mild detergent solution in clean water. **DO NOT** submerge the breathing tube/Inline regulator in water. During cleaning make sure the rubber seal ring on the bayonet connector end has not deteriorated. This can happen due to extensive use and natural aging. When in doubt replace the seal ring.

**INSPECTION:** Inspect the breathing tube for tears, cracks, holes, or excessive wear that might reduce the degree of protection. When in doubt replace the breathing tube. **NEVER** patch the breathing tube.

## 3.4 InLine Regulator

**MAINTENANCE:** The Inline regulator located on the nipple fitting end of the breathing tube should be cleaned by blowing clean compressed air through it. Inside the top portion of the inline regulator there are 3 stacked felt silencers; check these periodically to make sure they are in good condition and clean. **DO NOT** allow water to enter into the inline regulator.

**INSPECTION:** Inspect the quick-disconnect fitting, make sure it is screwed tightly into the inline regulator breathing tube so no air can escape during use. Check the yellow cylindrical adjustable inline regulator collar for cracks or excessive wear that might reduce the degree of protection. When in doubt replace the breathing tube/Inline regulator.



### WARNING

**DO NOT** remove the 3 stacked silencer sections inside the top portion of the inline regulator. The silencer sections helps reduce the noise level of the incoming air supply. It does not filter or purify your breathing air. NIOSH has approved the respirator with the silencers in place only. Removal voids NIOSH APPROVAL.

### 3.5 Air Supply Hose

**MAINTENANCE:** The air supply hose(s) should be wiped with clean water and mild detergent, rinsed and air dry. **DO NOT** allow water to enter into the air supply hose.

**INSPECTION:** Inspect the air supply hose(s) closely for abrasions, corrosion, cuts, cracks and blistering. Be sure the hose fittings are crimped tightly to the hose so that no air can escape. Make sure the hose has not been kinked or crushed by any equipment that may have rolled over it. Make sure you place the safety cap on the end of the hose when not in use.

**NEVER** patch the air supply hose. If any of the above conditions exist or excessive wear is detected, replace the hose(s) immediately.

### 3.6 Storage

Before storing the respirator system, it should be thoroughly dry. Store the respirator and parts in a clean and protected area away from contamination, distortion and damage from dust, moisture, heat, or direct sunlight.

## 4.0 Component Replacement

### 4.1 Face Seal Replacement

- Remove the face seal by unscrewing the thumbnuts on both sides of the helmet. Be sure to retain all hardware.

- Line up the square cut out in the face seal with the square cut out on the inside of the helmet.

- Line up the airduct headgear with the same square cut out in the face seal with the inside of the helmet, while you screw the parts back in place. (See Figure 7)

**NOTE:** For the **Falcon** Welding Helmet only- There are (3) three rivets installed on the helmet, one on each side of the helmet and one at the chin area.

**NOTE:** For the **Vision** Welding Helmet only- There are (4) four rivets installed on the helmet, two on each side of the helmet.

- Install the face seal by lining up the holes in the plastic portion of the face seal with the rivets installed in the helmet. One on each side of the helmet and one in the chin area. Line up each hole and push the holes into the rivets.

- Line up the airduct headgear with the square cut out in the face seal with the inside of the helmet, while you screw the parts back in place.

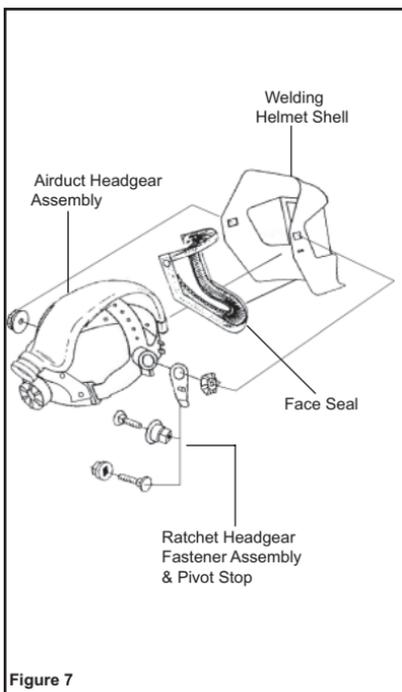


Figure 7

### 4.2 Airduct Headgear Assembly Replacement

- Remove the airduct headgear assembly by unscrewing the thumbnuts on both sides of the helmet. Be sure to retain all hardware.

- Install the new airduct headgear assembly. (See Figure 8)

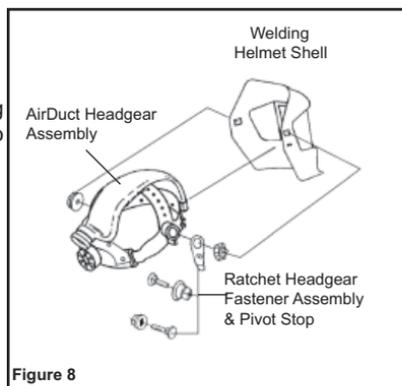
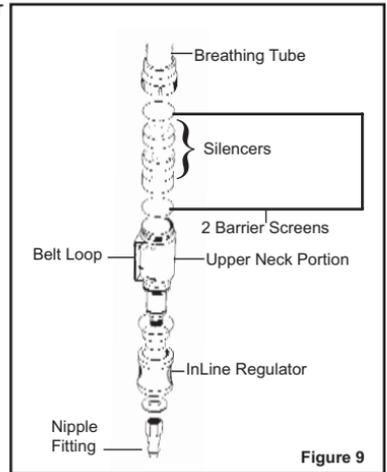


Figure 8

### 4.3 InLine Regulator Silencer

- Unscrew the black upper neck portion of the inline regulator.
- Replace the 3 stacked silencers along with the 2 barrier screens inside the neck portion of the inline regulator or replace the optional active carbon filter.
- Always replace the entire stacked system. (See Figure 9)



### 4.4 Auto-Darkening Lens Replacement

• Refer to the Auto-Darkening Lens User Instruction Manual which is enclosed. The following information is provided on:

- Lens mounting
- Protection plate

## 5.0 Customer Information

### 5.1 Replacement Parts and Accessories

When ordering replacement parts or accessories, use the part numbers and descriptions listed below. Failure to use only **ARCONE COMPACT AIR** SAR parts and accessories will void the NIOSH Approval and **ARCONE**'s warranty and may expose the user to the risk of serious bodily injury or loss of life. **ARCONE** is NOT responsible for system performance if other than **ARCONE COMPACT AIR SAR** parts are used to repair or refurbish the equipment. Please contact **ARCONE**'s Customer Service Department if you have any questions ordering replacement parts.

#### 5.1.1 Helmet Assembly Replacement Parts:

| <b>Part No.</b> | <b>Description</b>                                |
|-----------------|---|
| CA-HGA-01       | Ratchet Headgear - AirDuct Assembly               |
| 01-HGA          | Ratchet Headgear - Fastener Assembly & Pivot Stop |
| CA-HGS-01       | Headgear Sweatband                                |
| SS2-KA          | Shade Adjustment Knob                             |
| CA-COL-02       | Face Seal, Eagle                                  |
| CA-COL-03       | Face Seal, Hawk                                   |
| CA-COL-04       | Face Seal, Falcon                                 |
| CA-COL-05       | Face Seal, Vision                                 |

See ArcOne's User Instruction Manual for Auto-Darkening Lenses and Welding Helmets for specific replacement parts that are not covered in this manual.

#### 5.1.2 Supplied Air System Replacement Parts:

| <b>Part No.</b> | <b>Description</b>                                |
|-----------------|---|
| CA-BTC-02       | Breathing Tube w/Complete Inline Regulator System |
| CA-WBT-02       | Waistbelt   |
| CA-SIL-01       | Silencer Assembly                                 |
| CA-FIL-01       | Active Carbon Filter                              |

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### 5.1.3 Air Supply Hose Replacement and Accessories

| <b>Part No.</b> | <b>Description</b>   |
|-----------------|--|
| CA-HRH-0025     | 25' Heavy Duty Black Rubber 3/8" I.D. Hose 200 PSI, w/CEJN Safety Coupling w/ 3/8" Barb  |
| CA-HRH-0050     | 50' Heavy Duty Black Rubber 3/8" I.D. Hose 200 PSI, w/CEJN Safety Coupling w/ 3/8" Barb  |
| CA-HRH-0100     | 100' Heavy Duty Black Rubber 3/8" I.D. Hose 200 PSI, w/CEJN Safety Coupling w/ 3/8" Barb |
| CA-CPL-01       | 3/8" CEJN Double-Safety Coupling (Series 342)  |

## 5.2 Technical Specifications

### COMPACT AIR SAR System

|                    |  |
|--------------------|--|
| Respirator Type:   | Type "C" Supplied Air Respirator       |
| Protection Factor: | Loose Fitting                          |
| Type of AirFlow:   | 25<br>Continuous 6 cfm/170 lpm minimum |

#### Breathing Tube/InLine Regulator

|                             |  |
|-----------------------------|--|
| Material:                   | Corrugated Rubber  |
| Breathing Tube hose Length: | 29.5 in/750mm  |
| Breathing Tube Hose I.D.:   | .87in/22mm   |
| Breathing Tube Connection:  | Bayonet connector to welding helmet<br>Steel Nipple connector to air line hose |
| Belt Length:                | 54 in/Nylon Webbing  |
| Color:                      | Black/Yellow   |

#### Welding Helmet

##### Eagle

|           |                               |
|-----------|-------------------------------|
| Material: | Nylon                         |
| Weight:   | 12.8 oz.                      |
| Style:    | 4 x 5 horizontal mount        |
| Colors:   | Black, Red, Reflective Silver |

##### Hawk

|           |                                |
|-----------|--------------------------------|
| Material: | Nylon                          |
| Weight:   | 10.6 oz.                       |
| Style:    | 2 x 4 opening horizontal mount |
| Colors:   | Black, Red, Reflective Silver  |

##### Vision

|           |  |
|-----------|--|
| Material: | Nylon  |
| Weight:   | 14.7 oz.   |
| Style:    | 2 x 4 horizontal mount or 2 x 4 Flip Front<br>horizontal mount or 5x4 vertical mount |
| Colors:   | Black, Bronze Red, Reflective Silver   |

##### Falcon

|           |                            |
|-----------|----------------------------|
| Material: | Fiberglass                 |
| Weight:   | 14.7 oz.                   |
| Style:    | 5x4 opening vertical mount |
| Colors:   | Black                      |

|                           |  |
|---------------------------|--|
| Welding Helmet Approvals: | <b>ANSI Z87.1</b> - American National<br>Standard for Eye & Face Protection<br><b>CSA Z94.3</b> - National Standard of<br>Canada for Eye and Face Protection |
|---------------------------|--|

#### Auto-Darkening Lens

|                   |   |
|-------------------|---|
| Types:            | Single Shades 9,10,11,12, Manual<br>Variable Shades 9-13                                  |
| Sizes:            | 2" x 4 1/4" x 0.2"<br>4 1/2 x 5 1/4" x 0.2" Horizontal<br>5 1/4" x 4 1/2" x 0.2" Vertical |
| Shade Protection: | UV/IR Protection to Shade 16  |
| Switching Time:   | 0.5 milliseconds  |
| Power:            | Solar Cells   |

|                                  |   |
|----------------------------------|---|
| Auto-Darkening Filter Approvals: | <b>ANSI Z87.1</b> - American National<br>Standard for Eye & Face Protection |
|----------------------------------|---|

SEE **ARCONE'S ENCLOSED AUTO-DARKENING FILTER/WELDING HELMET USER INSTRUCTION MANUAL** FOR MORE REPLACEMENT PARTS.

**NOTE:** THE NIOSH APPROVAL COVERS COMPLETE RESPIRATOR SYSTEMS ONLY, AS CONFIGURED FROM APPROVED COMPONENTS AND AS REFERENCED ON THE NIOSH APPROVAL LABEL FOR THIS SYSTEM(S).

## 5.3 Warranty and Customer Service Information

**ARCONE** warrants the complete **Compact Air** SAR System(s) for one (1) year from the date of purchase against all manufacturing defects resulting from materials or workmanship. Proof of purchase establishing the sale date of the respirator system must be provided, should a warranty claim be submitted. The purchaser's only remedy under this limited warranty shall be limited to **ARCONE's** sole option to repair, replace or refund (not to exceed the purchase price). This limited warranty is void in the case of unauthorized modification, tampering, and damage due to misuse, abuse, inadequate maintenance or improper storage. This limited warranty is not transferable from the original purchaser to a secondary owner. **ARCONE** shall in no event be liable or responsible for the use or misuse of this product. This limited warranty is exclusive and is in lieu of any other warranty implied, either oral or written. Please read the instruction manual carefully to avoid certain situations which may void this limited warranty.

### Warranty Registration Card

**ARCONE** provides you with a Warranty Registration Card, please fill out the warranty card as soon as you unpack the product. Please note that the warranty card is for the complete respirator system including the welding helmet and the auto-darkening lens.

**For Warranty or Non-Warranty repairs or replacements  
please proceed as follows:**

**PLEASE DO NOT CONTACT THE DISTRIBUTOR OR RETAILER  
FROM WHOM YOU PURCHASED THE RESPIRATOR.**

1. Contact **ARCONE** Customer Service (800-223-4685) for a Service Tag Number.
2. Send the respirator, freight prepaid, directly to the **ARCONE** Service Center, 85 Independence Drive, Taunton, MA 02780. Reference your assigned Service Tag Number on the outside of the package and on all accompanying paperwork.
3. Provide a brief description of the problem. Provide return shipping information. Complete information will help to expedite the process.
4. Before returning the respirator, decontaminate and clean it to remove any hazardous materials which may have settled on the respirator during use. Laws and/or regulations prohibit the shipment of hazardous or contaminated materials. Respirator(s) suspected to be contaminated will be professionally discarded at the customer's expense.
5. Visa, MasterCard, or checks are the only forms of payment accepted. In the case of credit cards include credit card number, expiration date, the full name as it appears on the credit card, and your signature as authorization for the total repair amount.
6. All warranty repairs are covered for the balance of the original warranty period.
7. All non-warranty repairs carry a 90-day, limited warranty.

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**CALL**  
**ARCONE Service Center**  
**(800-223-4685)**  
**MONDAY - FRIDAY**  
**8:00 A.M. - 5:00 P.M. E.S.T.**

**OR**  
**Visit Our Website**  
**[www.arc1weldsafe.com](http://www.arc1weldsafe.com)**



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