SECTION 1 – SAFETY PRECAUTIONS – READ BEFORE USING

Protect yourself and others from injury — read, follow, and save these important safety precautions and operating instructions.

1-1. Symbol Usage

DANGER! – Indicates a hazardous situation which, if not avoided, will result in death or serious injury. The possible hazards are shown in the adjoining symbols or explained in the text.

Indicates a hazardous situation which, if not avoided, could result in death or serious injury. The possible hazards are shown in the adjoining symbols or explained in the text.

NOTICE – Indicates statements not related to personal injury.

1-2. Breathing Air Hazards

The symbols shown below are used throughout this manual to call attention to and identify possible hazards. When you see the symbol, watch out, and follow the related instructions to avoid the hazard. The safety information given below is only a summary of the more complete safety information found in the Principal Safety Standards listed in Section 1-4. Read and follow all Safety Standards.

Only qualified persons should install, operate, maintain, and repair this equipment. A qualified person is defined as one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training and experience, has successfully demonstrated the ability to solve or resolve problems relating to the subject matter, the work, or the project and has received safety training to recognize and avoid the hazards involved.

During operation, keep everybody, especially children, away.

BREATHING UNFILTERED AIR can be hazardous.

Welding produces fumes and gases. Misuse of the air filtration system may expose you to fumes and gases hazardous to your health.

- Read and follow these instructions and the safety labels carefully. The air filtration system helps protect the user from specific airborne contaminants but must be used correctly to be fully effective. Have an industrial hygienist test the air in your facility to ensure the air filtration system helps protect you.

- The air filtration system provides adequate protection from contaminants in your environment. If you have questions about the air filtration system, see equipment NIOSH label and consult your Safety Director and a certified Industrial Hygienist. For occupational use applications, employers must implement a written respiratory protection program meeting the requirements of OSHA 29 CFR 1910.134 (USA) or CSA Standard Z180.1 (Canada). Use appropriate filters and carbon monoxide alarms to ensure breathable air is supplied.

- Do not use the air filtration system without all components or with parts or accessories not supplied by the manufacturer. Use only those components that are part of the NIOSH-approved assembly.

- Have a qualified person test the breathing air to ensure it meets Grade D requirements. Breathing air testing shall be done in accordance with a written respirator protection program (prepared by a qualified person) specific to the workplace.

- Operate the air filtration system within specified air pressures and air hose lengths. The air supply system (air supply lines, fittings, filters, couplings, air pump/tanks) must be able to deliver sufficient air volume within safe limits, 125 psig (862 kPa) maximum. If correct pressure is not maintained, negative air pressure can develop in the helmet and create a risk of contaminants being inhaled. Also, unless removed by filters, oil, water, and other contaminants could flow downstream from the compressed air supply and adversely affect the supplied air respirator’s performance. While air is flowing, use a reliable pressure gauge to continually monitor air pressure at the air source connection point.

- To ensure adequate cooling of supply air, follow air compressor manufacturer’s recommendations when selecting air hose length. Do not use an air compressor that supplies air warmer than 160°F (71°C); supply air exceeding this temperature will degrade the air hose, which could adversely affect the supplied air respirator’s performance.

- Dangerous contaminants may not smell or be visible. Leave the area immediately if you notice any of the following:
  - Breathing becomes difficult.
  - You experience dizziness, impaired vision, or eye, nose, or mouth irritation.
  - The air supply smells or tastes unusual.
  - The equipment is damaged.
  - Air flow decreases or stops.
  - If you think the equipment is not supplying adequate protection.

- Do not use an air compressor that supplies air warmer than 160°F (71°C); supply air exceeding this temperature will degrade the air hose, which could adversely affect the supplied air respirator’s performance.

- Do not remove the equipment until you are in a safe area.

- Before each use, inspect air filtration system for damage and verify it operates properly. Before using the air filtration system, test the air flow to verify the system is receiving an adequate volume of air. Clean and maintain the air filtration system according to the manufacturer’s instructions.

- Do not use the air filtration system without all components or with parts or accessories not supplied by the manufacturer. Use only those components that are part of the NIOSH-approved assembly.

- Suitable filters, couplings, air pump/tanks) must be able to deliver sufficient air volume within safe limits, 125 psig (862 kPa) maximum. If correct pressure is not maintained, negative air pressure can develop in the helmet and create a risk of contaminants being inhaled. Also, unless removed by filters, oil, water, and other contaminants could flow downstream from the compressed air supply and adversely affect the supplied air respirator’s performance. While air is flowing, use a reliable pressure gauge to continually monitor air pressure at the air source connection point.

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• Operate air filtration system only with filters in vertical/upright position. Filters must be kept vertical/upright during operation or the following events may occur:
  . . . Auto drains will not function properly, which may result in contamination of the CO monitor and cause water to pass through the air supply hose and into the supplied air respirator.
  . . . Auto drains may become clogged, requiring that they be cleaned or replaced. See instructions for cleaning or replacing auto drains.
  . . . Moisture and/or contaminants may accumulate in filters. See instructions for filter replacement.

• The air filtration system does not remove toxic fumes and gases, including Carbon Monoxide (CO), Carbon Dioxide (CO2), and Nitrogen. The air filtration system does not increase the oxygen content of the air supply, and the system should not be used if the air entering the system is oxygen deficient.

**COMPRESSED AIR can injure or kill.**

- Before working on compressed air system, turn off unit, release pressure, and be sure air pressure cannot be accidentally applied.
- Check compressed air system components and all connections and hoses for damage, leaks, and wear before operating unit.
- Do not direct air stream toward self or others.
- Wear protective equipment such as safety glasses, hearing protection, leather gloves, heavy shirt and trousers, high shoes, and a cap when working on compressed air system.
- Use soapy water or an ultrasonic detector to search for leaks—never use bare hands. Do not use equipment if leaks are found.
- Reinstall doors, panels, covers, or guards when servicing is finished and before starting unit.
- If ANY air is injected into the skin or body seek medical help immediately.

**ELECTRIC SHOCK can kill.**

- Do not use equipment in damp, wet, or confined spaces, or if there is a danger of falling.
- Disconnect input power before installing or servicing this equipment.
- Do not touch live electrical parts.
- Do not use equipment in damp, wet, or confined spaces, or if there is a danger of falling.

**TRAPPED AIR PRESSURE AND WHIPPING HOSES can injure.**

- Release air pressure from air filtration system before servicing

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**1-3. California Proposition 65 Warnings**

⚠️ WARNING: Cancer and Reproductive Harm – www.P65Warnings.ca.gov

**1-4. Principal Safety Standards**

- **Safe Practice For Occupational And Educational Eye And Face Protection**, ANSI Standard Z87.1 from American National Standards Institute. Website: www.ansi.org.
- **OSHA Important Note Regarding the ACGIH TLV, Policy Statement on the Uses of TLVs and BEIs.** Website: www.osha.gov.