

PERSONAL AIR BREATHING UNIT



Operation & Maintenance Manual

MARTECH SERVICES
C O M P A N Y

1-800-831-1525

Personal Air Breathing Unit

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Personal Air Breathing Unit

Introduction:

The Martech Services Company, Personal Air Breathing Unit is designed to insure that the breathing air being supplied to personnel, meets the OSHA standards for Grade “D” breathing air.

The unit is designed to be worn on the person’s waist, to provide the proper filtration and monitoring prior to delivery to a NIOSH approved air-supplied respirator.

The Personal Air Breathing Unit comes complete with an integral breathing air filter cartridge, carbon monoxide monitor, pressure regulator, gauge, and quick coupler. An accessory outlet is provided prior to the unit along with a 54” tool air hose, to allow the operator the ease of use as a single line hose system.

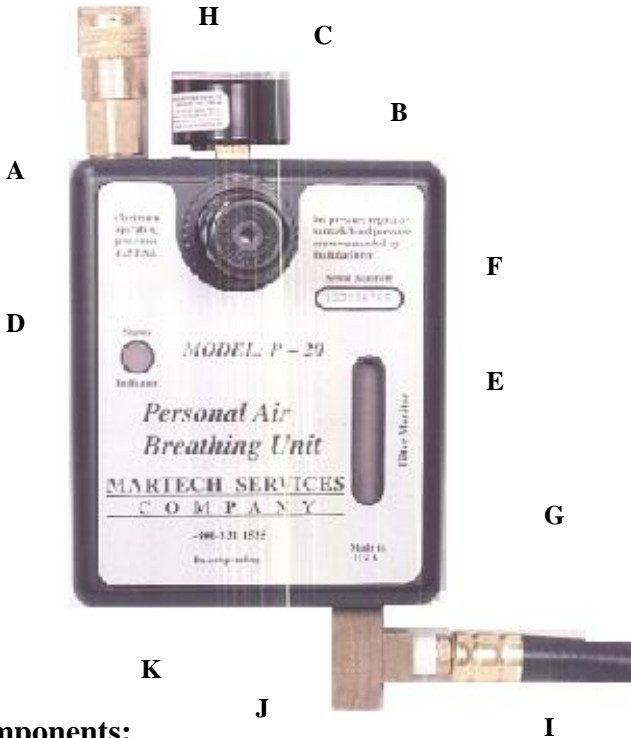
In the following sections the features, start up, operations, and maintenance of your unit have been outlined. In general, the operation is simple and self-explanatory, but **PLEASE READ THE MANUAL FIRST.**

Personal Air Breathing Unit Features:

- Waist worn to allow for total portability
- Operates on a single battery
- Audible and visual alarms on CO monitor
- Filter condition monitor window
- Built in pressure regulator and gauge
- Rugged case with quick clip belt
- Easy to service and maintain

Personal Air Breathing Unit

Figure: 1



Components:

- A - Personal Air Breathing Unit enclosure
- B - Pressure Regulator
- C - Pressure Gauge
- D - Monitor Status Indicator window
- E - Filter Condition Monitor window
- F - Serial Number
- G - Belt Loops (backside of enclosure)
- H - Quick Coupler, output
- I - Tool Hose, 54"
- J - Input opening
- K- Service label

Personal Air Breathing Unit

START UP PROCEDURES:

1. Install alkaline battery (supplied) into carbon monoxide monitor, being careful to align the “+” & “-“ terminals to the corresponding marks inside the battery area.
2. The monitor will turn on when the correct battery is installed. A self-test and battery check is affected automatically. Only by removing the battery will the monitor turn off. The battery will provide up to six months of power.
3. Install back of housing cover to front cover.
4. Tighten three screws with minimal pressure.
5. Note date of service on supplied service label. Crack-n-peel label backer and apply over the two halves of the housing case, on the bottom side.

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OPERATION OF UNIT:

1. **MOUNTING OF UNIT:** The unit is supplied with a quick clip belt system, to allow for a comfortable fit at the wearer's waist.
2. **VERTICAL POSITION:** This unit is designed to be worn in a vertical position, with the pressure gauge facing upward toward the wearer's face.
3. **INLET AIR ATTACHMENT:** Connect a male plug to the 1/4" NPT female opening provided at the brass fitting located on the bottom of the unit. (This fitting has been omitted to allow the wearer to supply a fitting that will match the supply air hose coupler.)
4. **TOOL HOSE ASSEMBLY:** A 54" tool air hose is supplied (shipped loose) for assembly as a single line hose system. To do this, remove the 1/4" allen set plug from the side of the brass fitting located on the bottom of the unit. Attach one end of the tool air hose into the opening, and secure tightly with Teflon tape.
5. **OUTLET AIR COUPLER:** The brass outlet coupler supplied on the top of the unit is designed to fit most applications. It is possible to change this coupler, by removing the unit from the compressed air supply. Then disassemble the unit and replace the coupler with one that matches the application desired.



WARNING: Be certain the unit has been removed from the compressed air supply before making any changes to the unit. Failure to do so may result in injury.

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ALARMS:

Self-Test: The carbon monoxide monitor will initiate a self-test when the battery is first installed. Only by removing the battery can the monitor be turned off.

Low battery alarm: If the battery provides a residual capacity of 15 minutes then the alarm will sound one short buzzer signal and an alarm light will flash every minute. This alarm will continue to repeat until the battery is replaced.

Excess CO alarm: If carbon monoxide is detected in excess of 10 parts per million, the monitor will begin to sound and LED alarm light flashes

NOTE: The audible signal is a loud alarm at 91 dB at 3 feet. The visual LED flashes will be visible through the status indicator window.

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MAINTENANCE: Replace both the filter cartridge and the monitor battery every four to six months, depending on usage. To replace the monitor battery, see page 4. To replace the filter cartridge, place the Unit with the front of the unit laying on a flat surface. Remove the three screws from the back of the housing case. Lift the back cover from the unit. Gently lift the brass fitting attached to the bottom of the filter cartridge. Depress the miniature quick coupler release and pull the brass fitting from the filter. Then, with the filter rotated upwards from the housing case, depress the other miniature quick coupler next to the pressure regulator. Pull the filter cartridge free from the unit. To install the new filter, simply reverse the process. Be certain that you hear the miniature quick couplers “click” into place. This assures you, that you have locked the filter cartridge, safety into position.



WARNING: Be certain the unit has been removed from the compressed air supply before making any repairs to the unit. Failure to do so may result in injury.

Reassemble the housing case, and gently secure the three screws on the back of the housing case. Record the service date on the provided service record label, and attach the label to the bottom of the case, across the two halves of the case, itself.

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CALIBRATION: A calibration kit is available to recalibrate your monitor after it has been in service for one year. The monitor, when new, was shipped from the manufacturer already calibrated and ready to use.

Recommended frequency: It is recommended that the monitor be recalibrated on an annual basis. It may require recalibration more frequently with more frequent usage. Make note of sequential calibration dates on the maintenance label sticker, which is located on the bottom of the housing case.

CALIBRATION PROCEDURE:

To calibrate monitor place unit with the front of unit lying on a flat surface, remove the three screws from the back of the housing case and lift the back cover from the unit.

Carefully remove the black sample air hose from the black sensor cover. Attach the calibration hose to the white fitting on the side of the black sensor cover. Flow 10 ppm test gas at .8 to 1 CFM to sensor, for approximately 30 seconds. After 30 seconds adjust the calibration control clock wise until alarm light just comes on. Turn off Calibration gas and remove calibration hose from white fitting on black sensor cover. Reattach black sample hose to the black sensor cover. Monitor is now calibrated.

Reassemble Breathing unit and document this calibration on service label.

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TROUBLESHOOTING:

Air is leaking inside the housing case: Follow instructions on page #7 to be certain the miniature quick couplers have been properly seated.

Filter monitor is pink in color: The filter cartridge needs to be changed. Follow directions for changing as outlined on page #7.

Low battery alarm: The monitor will provide one buzzer signal and an alarm light flash every minute.

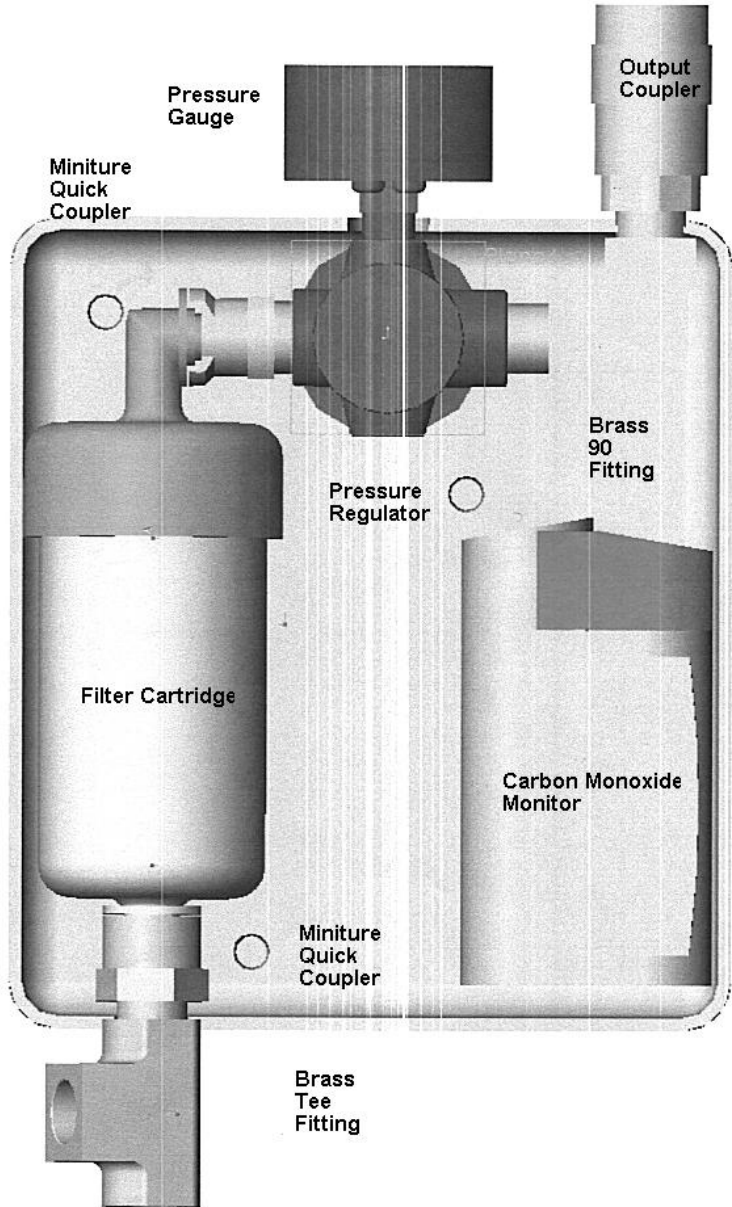
Odor or tastes are present: The filter cartridge needs to be changed. Follow directions for changing as outlined on page #7.

Pressure gauge will not hold pressure: Check to be certain the pressure and volume of air supplied to the unit is sufficient to handle the demand.

NOTE: Service assistance is available 24 hours per day, 7 days a week, by calling toll free; 1-800-831-1525. If evening or weekend hours, a technician will be paged, via satellite pager, and your call will be promptly returned.

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REPLACEMENT PARTS:



Personal Air Breathing Unit

WARRANTY STATEMENT:

Martech Services Company, warrants each new *Personal Air Breathing Unit* manufactured by it, to be free from defective material and workmanship as to its merchantability and fitness for the purpose intended, for a period of one (1) year, from the date of sale to the original purchaser, and agrees to remedy any such defect or to furnish a new part (at the company's option) in exchange for any part of any unit of its manufacture which under normal use, and service disclosed such defect; provided the product is delivered by the purchaser to Martech Services Company's factory, intact, for our examination, provided that such examination discloses, in our judgment, that it is thus defective.

The warranty does not extend to any systems that have been subjected to misuse, neglect, accident, unauthorized modification, or to use in violation of instructions furnished by us, nor does it extent to systems that have been repaired or altered outside of our factory.

THIS WARRANTY IS IN LIEU OF ALL WARRANTIES EXPRESSED OR IMPLIED AND NO REPRESENTATIVE OR PERSON IS AUTHORIZE TO ASSUME FOR US ANY OTHER LIABILITY IN CONNCECTION WITH THE SALE OF OUR SYSTEMS. ALL IMPLIED WARRANTIES ARE LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. IN NO EVENT IS MARTECH SERVICES COMPANY, LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING FROM ANY BREACH OF WARRANTY OF THE PERSONAL AIR BREATHING UNIT.

Personal Air Breathing Unit

RECORDS:

Date of Purchase: _____

Purchased from: _____

Serial Number: _____

CONTACT INFORMATION:

Dealer Name: _____

Dealer Address: _____

Dealer Phone: _____

MANUFACTURER INFORMATION:

Martech Services Company

P.O. Box 7079

Mazeppa, MN 55956

U.S.A.

Office: 507-843-4700

Toll Free: 800-831-1525

Fax: 507-843-4953

Website: www.breathingsystems.com

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