

**AQUA  LUNG**

# **Micra™ Air System**

**(M.A.S. & H.A.B.D.)**



**User's  
Manual**

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M.A.S. Owner's Manual, P/N 1006-97 - Rev. 10/99

### TRADEMARK NOTICE

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## Warnings, Cautions and Notes

Pay special attention to information provided in warnings, cautions, and notes, that is accompanied by these symbols:



A **WARNING** indicates a procedure or situation that may result in serious injury or death to the user.



A **CAUTION** indicates any situation or technique that will result in potential damage to the product.



A **NOTE** is used to emphasize important points, tips, and reminders.

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### General Precautions & Warnings

- Before using the Micra Air System (M.A.S.), you must have successfully received training and certification in the technique of SCUBA diving from a recognized certification agency. (Recognized certification agencies include: PADI, NAUI, YMCA, SSI, NASDS, BSAC, CMAS, PDIC and all U.S. Military or U.S. Government Diving Schools.) Use of this equipment by a person who is not certified by a recognized agency shall render all warranties, express or implied, null and void. **Use of SCUBA equipment by uncertified, or untrained persons, is dangerous and can result in serious injury, or death.**
- Visual inspection and factory prescribed service for the M.A.S. must be performed at least once annually by a factory trained Aqua-Lung Service Technician. Repair, service, and visual inspection must not be attempted by persons who are not factory trained and authorized by Aqua Lung.
- DO NOT attempt to overfill the M.A.S. beyond 3,000 psi at 70°F. Doing so may seriously weaken the cylinder and cause it to rupture, resulting in serious injury or death.
- DO NOT fill or use the M.A.S. if it has been exposed to extreme heat exceeding 250°F, or open flame. Instead, discharge the cylinder completely and return it to an Authorized Aqua Lung Dealer for inspection and possible hydrostatic testing.
- The M.A.S. is designated compatible for use only with normal, atmospheric, compressed air (21% oxygen and 79% nitrogen by volume). DO NOT attempt to fill with other gases, including pure oxygen, or air which has been enriched with oxygen exceeding 21% in content. Failure to observe this warning may result in serious injury or death due to fire and explosion, or the serious deterioration and failure of the equipment.

- The M.A.S. is intended for use only as an alternate air source to assist the diver in making an emergency ascent. Due to its limited volume, it must not be relied upon as a primary air source under any circumstances. (For more information about the M.A.S. cylinder volume, see the section titled Technical Specifications.)
- DO NOT apply any type of petroleum-based lubricant, such as household oil or motor oil to any part of the M.A.S. The M.A.S. does not require any lubrication under normal circumstances, except that which is performed during annual inspection and service by a factory trained service technician.
- DO NOT apply any type of aerosol spray to the M.A.S. Doing so may cause permanent damage to certain plastic components, including the second-stage housing.
- The entrance of water into the M.A.S. must be prevented whenever possible by ending each dive with air pressure remaining inside the cylinder. Whenever the system has been completely emptied of air underwater (or where moisture may have otherwise entered the cylinder), you must return the M.A.S. as soon as possible to an Authorized Aqua Lung Dealer for visual inspection and any necessary service before attempting to refill it.
- Department of Transportation (DOT) and Federal Aviation Administration (FAA) regulations prohibit passengers from transporting cylinders containing compressed air or other gases aboard commercial airlines. Completely discharge your M.A.S. before bringing it onboard a commercial aircraft, and advise an airline representative that you have done so upon checking in.
- When diving in cold water (below 50°F, or 10°C) you must have received training and certification in the techniques of cold water diving from a recognized certification agency. (See following section, titled, Cold Water Diving.)

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### Cold Water Diving

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**WARNING:** SCUBA regulators and other equipment have operational limits when used in water colder than 50°F (10°C). If you attempt to dive in cold water without first obtaining the necessary training and preparation of your equipment, you risk serious personal injury and death.

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You must first receive training and certification in cold water diving techniques from a recognized certification agency before attempting an unsupervised dive in these conditions, and take the necessary precautions to prevent regulator freeze-up. These procedures are available from many of the certification agencies named on page 4 through their cold water training programs.

Whenever your primary air cylinder is filled, request verification that the water vapor content of the supplied air is less than -65°F dewpoint. (Most dive stores and air stations obtain regular testing and certification to provide evidence of compliance with pure air standards.) Excess water vapor in the air can cause ice to form inside your regulator and the M.A.S., and interfere with the operation of the system.

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### Introduction

The purpose of this manual is to familiarize you with the correct setup, filling, inspection, maintenance, and warranty registration of your new Aqua Lung Micra Air System (M.A.S.) or H.A.B.D.

The M.A.S. is covered by Aqua Lung's exclusive 30-Day Satisfaction Guarantee™ and a Limited Two-Year Warranty™, provided that it has been purchased new from an Authorized Aqua Lung Dealer. **Please be sure to read the warranty section completely and remember to save your sales invoice and receipts for annual service. Copies of these receipts must be presented whenever obtaining warranty service.**

## Preparation and Setup

Your M.A.S. (P/N 1006-20) or H.A.B.D. (P/N 1028-00) has been packaged fully assembled and is ready to use after it has been filled with air. Before using it, however, it is very important to carefully read and understand the procedures outlined in this manual for filling the unit and performing a pre-dive inspection.



**NOTE:** M.A.S. w/o Cylinder (P/N 1006-30) is sold independent of a SCUBA cylinder, and will require final assembly and preparation by an Authorized Aqua-Lung Dealer.

Your Authorized Aqua Lung Dealer can answer questions you have pertaining to the information in this manual, and demonstrate the correct filling procedure.



*Fig. 1 - Component Identification*

## Filling Procedures - General



**NOTE:** The average duration of air supply listed in the Technical Specifications section of this manual is based on a completely full M.A.S. cylinder, filled to exactly 3,000 psi with a total volume of 2.5 cubic feet of air. It is strongly recommended that the M.A.S. be filled to exactly 3,000 psi (cold fill), in order to provide maximum breath volume.

1. Before attempting to fill the M.A.S., ensure that the fill adapter and first-stage are completely dry - especially in the area surrounding the high pressure port.
2. Examine the markings stamped on the cylinder below the neck to determine the month and date of manufacture, which also indicates when the cylinder was hydrostatically tested. (See Fig. 2.) If the markings do not indicate that it has been tested within the past five years, return it immediately to an Authorized Aqua Lung Dealer to obtain visual inspection and a hydrostatic test.



**WARNING:** DO NOT attempt to fill the M.A.S. if its markings do not indicate that it has been tested within the past five years by a qualified hydrostatic testing facility. Doing so may result in rupture or explosion, which could lead to serious injury or death. (The 1.7cf H.A.B.D. cylinder is exempt.)

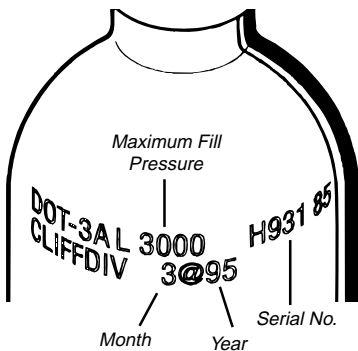


Fig. 2 - Hydro Test /  
Manufacture Date Stamp



Fig. 3 - EOI Sticker



3. Examine the cylinder to determine whether an Evidence of Inspection (EOI) sticker is affixed, and the month and year that the most recent visual inspection was performed. (See Fig. 3.) If an EOI sticker is not present or does not indicate that the cylinder has been inspected within the past year, return it immediately to an Authorized Aqua Lung Dealer to obtain visual inspection.



**WARNING:** DO NOT attempt to fill or use the M.A.S. if its EOI sticker is not present or does not indicate that the cylinder has been inspected within the past twelve months by an Authorized Aqua Lung Dealer or Professional Scuba Inspectors (PSI) qualified facility. Doing so may result in rupture or explosion, which could lead to serious injury or death.

4. Examine the position of the ON-OFF indicator ring in relation to the indicator pin to determine whether the valve is open or shut. If necessary, turn the first-stage clockwise while holding the cylinder secure until it stops and the indicator pin is positioned to the far right inside the aperture marked "OFF." (See Fig. 4.)
5. Depress the second-stage purge button to ensure that the system is completely depressurized.
6. Apply a  $\frac{9}{16}$ " open-end wrench to the pressure gauge assembly, located between the HP port which contains the safety disc assembly and the low pressure port which contains the LP hose swivel. (See Fig. 5.) Turn the pressure gauge assembly counter-clockwise to loosen and remove from the first-stage.
7. Closely inspect the port opening to ensure that no debris, residue, or moisture is found to be present.

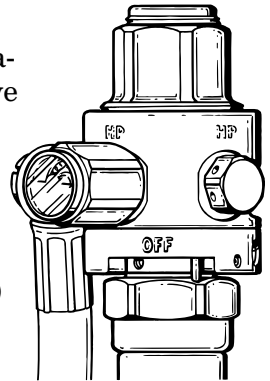


Fig. 4 - "OFF" Position

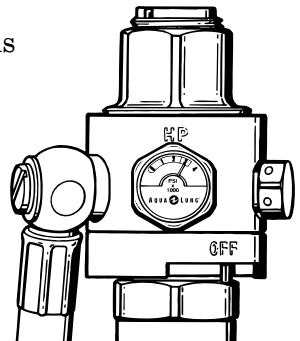


Fig. 5 - Pressure Gauge



**CAUTION:** If moisture is found to be present inside the port opening, indicating that water may have entered the M.A.S. first-stage and cylinder, **DO NOT** fill or attempt to use the M.A.S. until it has received complete inspection and any required service by an Authorized Aqua Lung Dealer.

### FILLING THE M.A.S. FROM A SCUBA CYLINDER

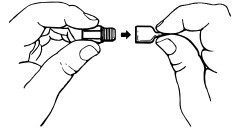


**NOTE:** The H.A.B.D. system, sold under P/N 1028-00, does not include a fill adapter. The fill adapter (P/N 1006-55) may be purchased separately. (Refer to Figure 1 shown on page 7 for component identification.)

1. With a pressure gauge that has been determined to be accurate, check the pressure of the supply cylinder to ensure that it contains at least 2,800 psi and no more than 3,100 psi. It is very important to ensure that the M.A.S. is filled to its total capacity, but not overfilled.
2. Remove the protector cap from the threaded nozzle of the fill adapter. Inspect the nozzle to ensure the O-ring is present and seated evenly at the base of the threads.



**NOTE:** The pressure gauge assembly may be placed inside the cap to prevent loss or damage while filling the M.A.S.



3. Mate the threaded nozzle of the fill adapter into the open HP port, and turn clockwise by hand until snug. **DO NOT** apply a wrench or otherwise overtighten the fill adapter into the first-stage.
4. Loosen the fill adapter yoke screw as needed so that the dust cap can be removed from the inlet fitting and the yoke can be placed over the valve of the supply cylinder.
5. While supporting the M.A.S. with one hand, place the yoke of the fill adapter over the cylinder valve to align the inlet fitting flush against the valve O-ring. Tighten the fill adapter yoke screw clockwise into the small dimple on the backside of the cylinder valve only until finger snug. (See Fig. 6.)

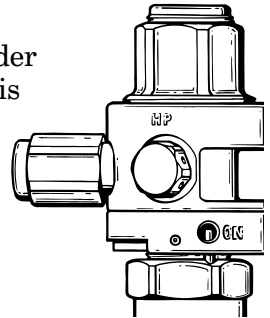


*Fig. 6 - Filling the M.A.S.*



**WARNING:** DO NOT attempt to fill the M.A.S. from a supply cylinder which contains more than 3,100 psi. Doing so may weaken and damage the M.A.S. cylinder, and could cause it to rupture and explode, possibly resulting in injury or death.

6. While holding the first-stage and fill adapter secure, turn the M.A.S. cylinder counter-clockwise until a single click is felt and the ON-OFF indicator pin can be sighted through the small aperture marked "ON." (See Fig. 7.)
7. Support the M.A.S. cylinder with one hand, and slowly turn the supply cylinder valve handwheel counter-clockwise to open and begin filling.



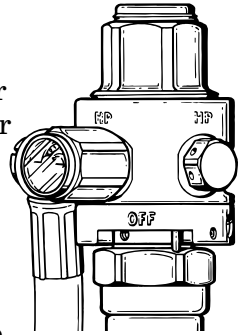
*Fig. 7 - "On" Position*



**NOTE:** Always fill the M.A.S. as slowly as possible by turning the handwheel of the primary cylinder valve slowly to control the rate of fill. Rapid filling will generate heat and may result in an incomplete fill after the cylinder cools. If the cylinder is warm to the touch afterward, the fill rate was too rapid.

8. When at least one minute has elapsed, and air can no longer be heard flowing from the supply cylinder into the M.A.S., slowly open the supply cylinder valve completely.

9. To conserve the limited air supply of the M.A.S., it is strongly recommended that you perform a pre-dive inspection of the second-stage purge while it is connected to the supply cylinder as follows:
  - a. Depress the purge button to ensure that sufficient airflow is provided to clear the second-stage of water.
  - b. Immediately after releasing the purge button, listen closely to ensure that the second-stage does not continue to flow any air.
10. While holding the first-stage and fill adapter secure, turn the M.A.S. cylinder clockwise until it stops and the indicator pin is positioned to the far right inside the aperture marked "OFF." (See Fig. 8.) Turn the handwheel of the supply cylinder valve clockwise until shut.
11. Hold the second-stage purge button depressed until airflow can no longer be heard from the second-stage and the LP hose between the first and second stages is completely depressurized.
12. While supporting the M.A.S. cylinder with one hand, turn the yoke screw of the fill adapter counter-clockwise to loosen until the complete system can be lifted off and removed from the supply cylinder valve.
13. While holding the M.A.S. secure, turn the fill adapter counter-clockwise at the fitting to loosen and remove from the first-stage. Replace the dust cap over the inlet fitting, and tighten the yoke screw until finger snug.
14. Remove the pressure gauge assembly from the protector cap which is connected to the fill adapter. (Place the protector cap securely over the threaded nozzle of the fill adapter and set aside.) Examine the pressure gauge assembly to ensure that the O-ring appears to be clean and dry, without any signs of decay or damage, and is seated evenly at the base of the threads. If the O-ring appears to be in worn or damaged condition, it is important to obtain a new O-ring from an Authorized Aqua Lung Dealer before attempting to use the M.A.S.



*Fig. 8 -  
"Off" Position*

15. Examine the opposite side of the pressure gauge assembly to ensure that it is completely clean and free of any debris or signs of damage which may interfere with the movement of the indicator pin.
16. Mate the threaded end of the pressure gauge assembly into the open HP port and turn clockwise by hand until finger snug. Apply a  $1\frac{1}{16}$ " open end wrench and tighten the pressure gauge assembly to a torque measurement of 20 inch-pounds ( $\pm 5$ ). DO NOT overtighten.

### FILLING THE M.A.S. WITH COMPRESSOR ADAPTER



**NOTE:** The Compressor Fill Adapter (P/N 1006-56) is not included with the M.A.S. or H.A.B.D., and must be purchased separately from an Authorized Aqua-Lung Dealer.



**CAUTION:** Do not attempt to fill the M.A.S. directly from a compressed air filling station unless you have received the necessary training and authorization to do so. If done incorrectly, this procedure poses certain hazards which may cause severe injury or death.

1. Inspect the fill adapter to ensure that the O-ring is present and seated evenly inside its groove, and the male fitting is clean and free of any damage to its threads.
2. Mate the male fitting of the fill adapter into the high pressure fill port of the first-stage, and turn clockwise only by hand until lightly snug. DO NOT apply a wrench or otherwise overtighten the fill adapter.
3. Loosen the yoke screw of the compressor fill yoke as needed so that the yoke can be placed over the block of the fill adapter.
4. While supporting the M.A.S. with one hand, place the yoke of the compressor fill yoke over the block of the fill adapter to align the

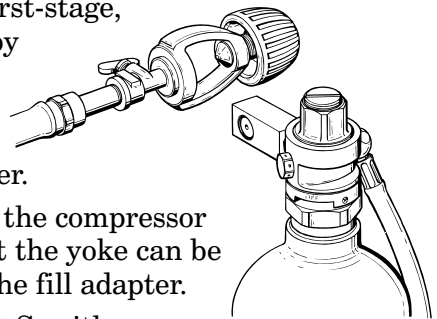


Fig. 9 -  
Fill Yoke Connection

inlet fitting flush against the valve O-ring. Tighten the fill yoke screw clockwise into the small dimple on the backside of the fill adapter block only until finger snug (see Fig. 9).



**WARNING:** DO NOT attempt to fill the M.A.S. from an air supply which exceeds 3,000 psi. Doing so may weaken and damage the M.A.S. cylinder, and could cause it to rupture and explode, possibly resulting in injury or death.

5. While holding the first-stage and fill adapter secure, turn the cylinder counter-clockwise until a single click is felt and the ON-OFF indicator pin can be sighted through the small aperture marked "ON" (see Fig. 10).

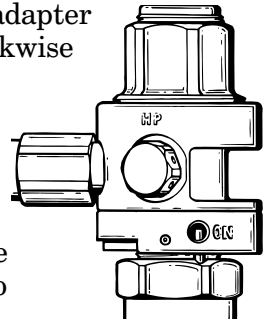


Fig. 10 - "On" Position

6. Ensure that the M.A.S. is supported, and turn the compressor valve **very slowly** until it is slightly open to fill the cylinder with approximately 500 psi. Turn the fill valve shut and wait 45-60 seconds before proceeding to fill the cylinder any further. Repeat this procedure to fill the cylinder very slowly in small increments of 500 psi or less, until it is filled to exactly 3,000 psi.



**NOTE:** Always fill the M.A.S. as slowly as possible. Rapid filling will generate heat and may result in an incomplete fill after the cylinder cools. If the cylinder is warm to the touch afterward, the fill rate was too rapid.

7. To conserve the limited air supply of the M.A.S., it is strongly recommended that you perform the following pre-dive inspection of the second-stage purge while the M.A.S. is connected to the compressor fill yoke and pressurized via the compressor fill adapter:
- Briefly depress the purge button to ensure that sufficient airflow is provided to clear the second-stage.
  - Immediately after releasing the purge button, listen closely to ensure that the second-stage does not continue to flow any air.

8. Turn the compressor fill valve completely closed. While holding the first-stage and compressor fill adapter secure, turn the M.A.S. cylinder clockwise until it stops and the indicator pin is visible inside the "OFF" aperture.




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**CAUTION:** DO NOT turn the first-stage any further than is necessary to shut the valve. Doing so will cause undue stress and possible damage to the main valve, and may bend the indicator pin.

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9. Hold the second-stage purge button depressed until airflow can no longer be heard from the second-stage and the LP hose is depressurized.
10. While holding the M.A.S. cylinder supported, turn the yoke screw of the compressor fill yoke counter-clockwise to loosen until the compressor fill valve can be removed from the block of the fill valve adapter. Return the compressor fill yoke to its storage location.
11. Examine the pressure gauge assembly to ensure that the O-ring appears to be clean and dry, without any signs of decay or damage, and is seated evenly at the base of the threads. If the O-ring appears to be in worn or damaged condition, it is important to obtain a new O-ring from an Authorized Aqua Lung Dealer before attempting to use the M.A.S.
12. Examine the opposite side of the pressure gauge assembly to ensure that it is completely clean and free of any debris or signs of damage which may prevent it from reading clearly and accurately.
13. Mate the threaded end of the pressure gauge assembly into the open HP port and turn clockwise by hand until finger snug. Apply either a  $1\frac{1}{16}$ " open-end wrench (as required) and tighten the pressure gauge assembly to a light torque measurement of 20 inch-pounds, within 5 inch-pounds, plus or minus. DO NOT overtighten.

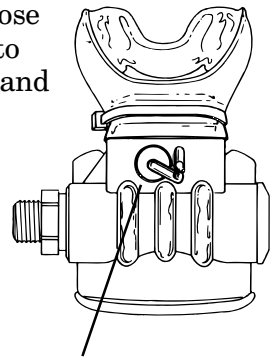
## Pre-Dive Checkout

Before each use, the unit must be given a thorough visual inspection and functional test. NEVER dive with an M.A.S. which shows signs of damage or provides substandard performance until it has received inspection and service from an Authorized Aqua Lung Dealer.



**NOTE:** The M.A.S. second-stage does not contain an adjustable Vane Adjustment Switch (V.A.S.) that is a feature of standard Micra second stages. Instead, the deflector vane inside the second-stage is permanently set in the "MIN" position to minimize the possibility of second-stage freeflow, and cannot be adjusted. (See Fig. 11.)

1. Carefully inspect the low pressure hose to ensure it is securely connected into its respective port on the first-stage and onto the second-stage. Inspect the length of the hose to ensure that it is not blistered, cut, or otherwise damaged. If a hose protector is present, slide it back to expose the hose fitting and inspect for any signs of corrosion.



*Fig. 11 - Fixed Vane Adjustment Switch*

2. Visually inspect the entire system for any external damage, such as dents, gouges, or severe external corrosion.
3. While the M.A.S. valve is completely shut and the system is depressurized, inspect the pressure gauge assembly to ensure that it is securely fastened to the first-stage and cannot be loosened by hand. Closely examine the pressure gauge to ensure that the needle rests at zero.



**CAUTION:** If the pressure gauge does not read zero when the valve is shut and the system is depressurized, DO NOT attempt to use the system until it has received inspection and service from an Authorized Aqua Lung Dealer.



4. While holding the first-stage secure, slowly turn the M.A.S. cylinder counter-clockwise until a single click is felt and the indicator pin can be sighted through the "ON" aperture.



**CAUTION:** DO NOT attempt to open the M.A.S. valve without first checking to ensure that the LP hose and pressure gauge assembly are securely fastened to the first-stage.

5. Closely examine the pressure gauge dial face to determine that the M.A.S. cylinder is full. (See Fig. 12.) If the gauge does not register at least 2,500 psi, repeat the filling procedure using a supply cylinder that is filled to 3,000 psi.

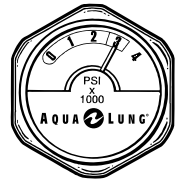


Fig. 12 - "Full" Indication

6. Immerse the M.A.S. in water to check for any signs of freeflow from the second-stage, or leakage from the hose, pressure gauge, safety disc assembly, first-stage, or cylinder neck. If leakage is found, do not attempt to use the M.A.S. until it has received service from an Authorized Aqua Lung Dealer.



**NOTE:** If the second-stage purge was checked during the filling procedure, it is not necessary to repeat steps 7 & 8.

7. Briefly depress the purge button to ensure that sufficient airflow is provided to clear the second-stage of water.
8. Immediately after releasing the purge button, listen closely to ensure that the second-stage does not continue to flow any air.

Provided that these pre-dive inspection requirements have all been met, the M.A.S. is now ready for use. Refer to the next section, titled Mounting Options, to determine which mounting position may be most compatible with your diving activities and personal equipment.



**CAUTION:** DO NOT enter the water or dive with the M.A.S. valve turned to the "OFF" position. Doing so will delay access to it in an out-of-air situation, and may also allow the entrance of moisture through the second-stage.

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## Mounting Options

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**NOTE:** H.A.B.D. units sold under P/N **1028-00** do not include the holster. The holster may be purchased as an optional accessory from an Authorized Aqua Lung Dealer.

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When used as an alternate air source for SCUBA diving, the holster is an integral part of the Micra Air System, and allows you to mount the M.A.S. in a variety of positions according to your personal preference. To install the cylinder into the holster, roll the neoprene portion down the outside to expand the opening. Wet the holster around the opening, and gently guide the end of the cylinder into the opening. Slide the holster up until it completely covers the cylinder. Roll the neoprene portion up and inspect around the opening to ensure there are no tears or cuts that may allow the cylinder to accidentally fall out when inverted.

The Micra Air System may be mounted in any position that meets the following requirements:

- The second-stage must be positioned on the front of the diver's torso, where it may be easily accessed and shared with another diver from either side.
- The LP hose must not become trapped beneath or entangled with another piece of equipment or accessory.
- The cylinder may be easily removed from the holster by another diver without any obstructions.
- The system will not interfere with the removal or ditching of weight in an emergency.
- The system will not easily become entangled with fishing line, kelp, nets, or other obstructions.

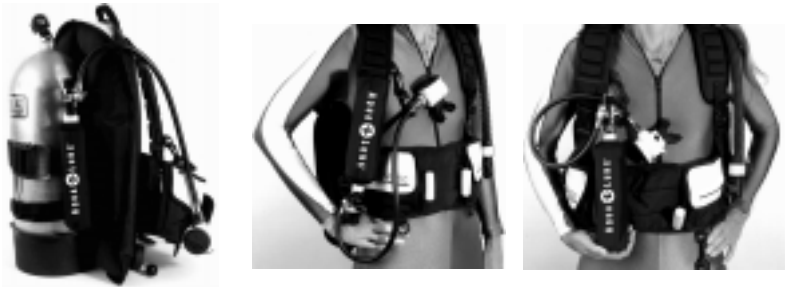


**WARNING:** DO NOT attach or mount the M.A.S. to your weight belt. Doing so may interfere with the removal or ditching of your weight in an emergency, or result in the loss of the M.A.S. when you need it most.

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Provided that these requirements are met, the M.A.S. may be mounted in a variety of positions that will best work with your B.C. or cylinder harness system. Figure 13 illustrates the three most commonly used options.

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a. Cylinder Mount

b. B.C. Shoulder Strap

c. B.C. Cummerbund

Fig. 13 - Mounting Options

## User Care & Maintenance

It is important to provide the proper preventative maintenance in order to ensure the best possible performance and maximum life of your Micra Air System. The following maintenance procedures should be performed routinely after each use of the equipment.

1. After each day of diving, the M.A.S must be cleaned, inspected, and prepared for the next use, or for storage.
2. As soon as possible after diving, the M.A.S. should be removed from its holster and soaked thoroughly for at least one hour in warm (not over 120°F) tap water to loosen and dissolve salt and mineral deposits. Before soaking, turn the valve to the "ON" position to pressurize the system. This will best prevent the entrance of moisture into the system through the second-stage.



**CAUTION:** If the M.A.S. cylinder does not contain air, it is important to ensure that the valve is completely turned to the "OFF" position, and the second-stage purge button is not depressed while the system is submerged or wet. Moisture may otherwise be allowed to enter the valves and the cylinder, which will require that the system be returned to an Authorized Aqua Lung Dealer for inspection and service.

3. After the system has been properly soaked, it is important to rinse it vigorously by flushing the mainspring cavity of the first-stage, the second-stage mouthpiece,

and the openings in the second-stage front cover with a pressurized stream of water. This will remove the salt and mineral deposits that were loosened during soaking.

4. When it has been properly soaked and rinsed, wipe the system as dry as possible with a clean towel and gently shake the second-stage to dislodge any water inside it.
5. Check to ensure that the M.A.S. valve is turned to the "OFF" position, and depress the purge button of the second-stage to ensure that the system is completely depressurized before storing or transporting.
6. Due to the possibility of fire and exposure to extreme heat, the M.A.S. must be stored either completely full or completely empty. If the system is exposed to fire while partially filled, the cylinder wall may rupture before the internal pressure becomes great enough to burst the safety relief disc. For this reason, Aqua Lung recommends that the cylinder be completely emptied and the valves kept shut to prevent the entrance of moisture before storing the system for an indefinite period.



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**WARNING:** DO NOT store the M.A.S. partially filled. Doing so may prevent the safety relief assembly from functioning properly in the event of fire or exposure to extreme heat. This may cause the cylinder to rupture or explode, possibly resulting in severe injury or death.

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7. When the M.A.S. is completely dry, store in a clean equipment box, or sealed inside a plastic bag. Do not store it where it may be exposed to extreme heat or an electric motor, which produces ozone. Prolonged exposure to extreme heat, ozone, chlorine, and ultraviolet rays can cause premature degradation of rubber parts and components, and must be prevented.
8. When transporting the M.A.S., take the necessary precautions to ensure that it is surrounded by a protective cushion to prevent undue shock or impact.
9. Do not use any type of solvent or petroleum based substances to clean or lubricate any part of the regulator. Do not expose the regulator to aerosol spray, as some aerosol propellants attack or degrade rubber and plastic.

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## Dealer Inspection & Service

1. It cannot be assumed that the M.A.S. is in good working order on the basis that it has received little use since it was last serviced. Remember that prolonged or improper storage can still result in internal corrosion and/or deterioration of O-ring seals and valve springs.
2. It is imperative that you obtain factory prescribed service for your M.A.S. at least once a year from an Authorized Aqua Lung Dealer, including a visual inspection of the cylinder, and complete overhaul of the regulator first and second-stages. Your M.A.S. may require this service more frequently, depending on the amount of use it receives and the environmental conditions it is used in.
3. The M.A.S. cylinder (2.5cf or larger) must receive hydrostatic testing from a Department of Transportation (DOT) authorized facility at least once every five years.
4. If the M.A.S. is used for rental or training purposes in salt, chlorinated, or silted fresh water, it will require complete overhaul and factory prescribed service every three to six months, or whenever it is suspected that moisture has entered the system. Use in chlorinated swimming pool water will accelerate the deterioration of most rubber components, and require more frequent service than in other typical conditions.
5. DO NOT attempt to perform any disassembly or service of your M.A.S. Doing so may cause the regulator to dangerously malfunction, and will render the warranty null and void. All service must be performed by an Authorized Aqua Lung Dealer.

**OBTAIN FACTORY AUTHORIZED SERVICE FOR YOUR MICRA AIR SYSTEM AT LEAST ONCE ANNUALLY. YOUR PERSONAL SAFETY AND THE MECHANICAL INTEGRITY OF YOUR M.A.S. DEPENDS ON IT.**



**NOTE:** For your convenience, an Annual Service Record is provided in the rear of this manual.

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## **Warranty Information**

All warranty transactions must be accompanied by proof of original purchase from an Authorized Aqua Lung Dealer. Be sure to save your sales and service receipts, and present them whenever returning your M.A.S. for warranty service.

### **THE AQUA LUNG SATISFACTION GUARANTEE™**

If any Aqua Lung product that you have purchased from an Authorized Aqua Lung Dealer fails to meet your expectations, Aqua Lung will replace or exchange the product free of charge within thirty (30) days of the original purchase. Exchanges will be made through the same Authorized Aqua Lung Dealer for merchandise of lesser or equal value, and will be made only for Aqua Lung products. Aqua Lung makes this guarantee of satisfaction a part of all product warranties because of the confidence we have in our products.

### **TWO-YEAR LIMITED WARRANTY**

**Aqua Lung warrants to the original purchaser for a period of two years from the date of purchase that the product will be free from defects in material and workmanship provided that it receives normal use, proper care, and prescribed dealer service subject to those restrictions stated on page 23. This limited warranty is extended only to the original purchaser for purchases made from an Authorized Aqua Lung Dealer, and is not transferable. This warranty is limited to repair or replacement only at the discretion of Aqua Lung.**



**WARNING:** It is dangerous for untrained and uncertified persons to use the equipment covered by this warranty. Therefore, use of these products by an untrained person renders any and all warranties null and void. Use of SCUBA equipment by anyone who is not a certified diver, or receiving training through a recognized certification agency, shall render void all warranties, expressed or implied.

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ALL WARRANTIES, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED IN DURATION TO A PERIOD ENDING TWO YEARS FROM THE DATE OF PURCHASE (LIFETIME FOR BLADDER SEAMS).

Some states in the U.S. and certain foreign countries do not allow limitations on the duration of implied warranties, so this may not apply to you.

This warranty gives you specific legal rights. You may have rights which vary from state to state and country to country.

AQUA LUNG AMERICA, INC. DISCLAIMS AND EXCLUDES ANY LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. SOME STATES IN THE U.S. AND CERTAIN FOREIGN COUNTRIES DO NOT ALLOW EXCLUSIONS OR LIMITATIONS OF LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THIS MAY NOT APPLY TO YOU.

## **RESTRICTIONS**

The following restrictions apply to this warranty:

1. Factory prescribed service by an Authorized Aqua Lung Dealer must be performed at least once annually.
2. This warranty does not extend to normal wear.
3. This warranty does not extend to damages caused by improper use, improper maintenance, neglect, unauthorized repairs, modifications, accidents, fire, or casualty.
4. Cosmetic damage, such as scratches, dents, and nicks are not covered by this warranty.
5. This warranty does not extend to equipment used for rental, commercial, or military purposes.
7. Failure to meet any of the above requirements will render the warranty null and void.

## **RETURNING YOUR M.A.S. FOR SERVICE**

Whenever your M.A.S. requires annual service or warranty repair, Aqua Lung recommends that you bring it to your nearest Authorized Aqua Lung Dealer.

If you need to return products covered by this warranty, follow these steps:

1. Provide the dealer with photocopies of your original sales invoice and receipt from your last annual service if the product is more than one year old.
2. If you intend to ship directly to Aqua Lung America, Inc., for warranty service, you must first obtain a Return Merchandise Authorization (RMA) number from the factory by calling 1-760-597-5000.
3. Write the RMA number on the address label. This is important.
4. Enclose photocopies of your original sales and service receipts, along with the product and a letter detailing the problem as precisely as possible. Include your name, address, and daytime telephone number in the letter.
5. Ship the package to:

**Aqua Lung America, Inc.  
2340 Cousteau Ct.  
Vista, CA 92083  
Attention: Repair Dept.**

You must prepay all freight charges. Aqua Lung does not accept C.O.D. shipments.



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**NOTE:** Aqua Lung America, Inc. reserves the right to substantiate the validity of all warranty claims.

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## **CONTACTING AQUA LUNG VIA ELECTRONIC MAIL**

You can contact Aqua Lung by visiting our website at:  
**[www.aqualung.com](http://www.aqualung.com)**



## **Technical Specifications**

<b>Part Number:</b>	<b>1006-20 (Sport Diving Model) 1028-00 (Military Diving Model)</b>
<b>Holster Material</b>	<b>Nylon</b>
<b>Cylinder Volume</b>	<b>2.5cf (M.A.S.) / 1.7cf (H.A.B.D.)</b>
<b>Cylinder Material</b>	<b>Aluminum</b>
<b>Cylinder Length with Regulator</b>	<b>12.5" (M.A.S.) / 10.5" (H.A.B.D.)</b>
<b>Rated Cylinder Pressure</b>	<b>3,000 p.s.i.</b>
<b>Low Pressure Hose Length</b>	<b>24" (M.A.S.) / 20" (H.A.B.D.)</b>
<b>First-stage Hose Connection</b>	<b>360 degree swivel</b>
<b>Regulator First-stage</b>	<b>Modified Conshelf (Balanced Diaphragm)</b>
<b>Regulator Second-stage</b>	<b>Modified Micra</b>
<b>Pressure Gauge</b>	<b>Integrated w/ First-stage</b>
<b>Over Pressure Relief</b>	<b>Safety Burst Disc Assembly - First-stage Mounted</b>
<b>System Weight</b>	<b>Approximately 3 pounds</b>
<b>Buoyancy Full</b>	<b>Approximately -2.0 pounds</b>
<b>Duration of Air Supply</b>	<b>*Approximately 24 breaths at 33 ft.</b>
	<b>*Based on an average breath volume of 1.5 Liters, with a starting supply pressure of 3,000 p.s.i. (Exactly 2.5cf - M.A.S. only)</b>

# Annual Service & Inspection Record



Serial Number \_\_\_\_\_

Purchase Date \_\_\_\_\_

Store Name \_\_\_\_\_

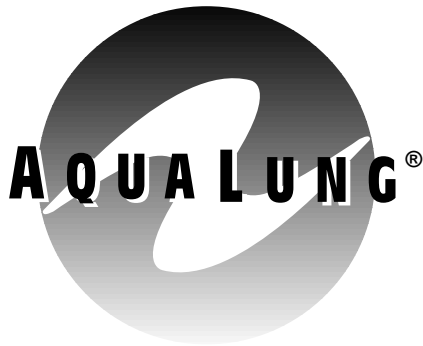
Date	Dealer Name & Number	Technician Name	Stamp

**IMPORTANT NOTICE ABOUT MAIL ORDER  
SALES OF AQUA LUNG PRODUCTS:**

Beware of any retailer that offers to sell and ship our life supporting products by mail, for orders placed by phone or the Internet. These retailers are NOT authorized Aqua Lung Dealers. All authorized Aqua Lung Dealers must execute a Dealer Agreement that does not allow the sale of Aqua Lung products except "in-store." Many Aqua Lung dealers advertise on the Internet, but they are not allowed to deliver our products other than "over-the counter." This is our assurance that you will receive the proper pre-sale, point-of-sale, and post-sale assistance, and that only trained and certified divers will use our products.

If you obtain our product from one of these retailers, your warranty is therefore not valid and we cannot offer you the assurances of quality and satisfaction afforded by the Aqua Lung Warranty Program. If you would like to verify whether or not a retailer is an authorized Aqua Lung Dealer, please call:

1-(760) 597-5000



**2340 Cousteau Ct.  
Vista, CA 92083  
Fax (760) 597-4900  
Phone (760) 597-5000**

**[www.aqualung.com](http://www.aqualung.com)**