

Atlantic[®]-Air Instruction Manual

!!! WARNING !!!

Before using Atlantic[®]-Air, the user must have received full training in its use, have read and understood this manual before using. Failure to do so can result in injury or death for the user!

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High Priority Information for Users

To be read carefully before using the breathing device

- 1- Before mounting or storing your **Atlantic®-Air Emergency Escape Breathing Device (EEBD)**, make sure that the following are provided regarding the Regulation 13 of SOLAS Chapter II-2;
 - Are the safe escape routes provided?
 - Are these safe escape routes being maintained in a safe condition and clear of obstacles?
 - Are the additional aids for escape provided to ensure accessibility, clear marking, and adequate design for emergency situations as necessary?
- 2- **Atlantic®-Air** apparatus is designed for emergency situations only and should not be used for entry or re-entry into irrespirable atmospheres.
- 3- **Atlantic®-Air** is not to be used for underwater escape activities.
- 4- **Atlantic®-Air** is not for rescue of fire fighting purposes
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- 5- Only adults in good physical and physiological condition should use the **Atlantic®-Air**
- 6- Always ensure that the length of the escape route is within the duration stated on the **Atlantic®-Air**.
- 7- If the anti-damper tag is broken, the apparatus must be checked, recharged if required, and a new tag should be applied.
- 8- After transportation, ensure that the bag and contents including the gauge have not been damaged and that the anti-damper tags are intact.

A- TECHNICAL DESCRIPTION

A.1 - General

The escape breathing apparatus **Atlantic®-Air** is a compressed air breathing apparatus to be used for emergency escape from irrespirable atmospheres. It has been designed and tested in accordance with EN 1146 to demonstrated compliance with safety requirements of EC directive 89/686/EEC. It is a lightweight apparatus that is simple to use and gives a consistent flow of breathable air.

The **Atlantic®-Air** has duration of minimum 15 minutes. This is the duration required by IMO. In the apparatus a fast positive method of operation permits air to pass from the compressed cylinder into a flexible hood which can be slipped over the head in a fast maneuver without any complicated adjustment and provides protection to any wearer, including those with beard and/or spectacles.

A.2-Cylinder

The compressed air cylinder is manufactured in accordance with the directive 84/525/EEC.

| | Atlantic®-Air Cylinder |
|--------------------------------------|-------------------------------|
| Water Capacity | 3L |
| Charging Pressure | 200 bar |
| Working Pressure | 200 – 10 bar |
| Duration | Min. 15 minutes |
| Free Air Capacity | 600L |
| Charged Weight of Complete Apparatus | 5.76kg |

Note! The compressed air cylinder used with this apparatus shall comply with national regulations. The cylinder shall be approved with respect to the appropriate pressure.

A.3-Bag

- The Cylinder and the hood are carried in the bag.
- The orange colored bag is made of a flame retardant strong PVC material and has a quick opening through Velcro strips. The reflecting tapes provide an easy identification to the set.
- The pressure gauge is readable through the transparent window. This allows the user to check the gauge without opening the bag.
- The duration time for the apparatus, approvals and pictorial user instructions are briefly printed on the bag.
- When pulling the firing strap, the anti-tamper tag breaks, the airflow starts and the bag is opened so that the hood can be taken and be pulled over the head.
- The neck belt made of synthetic fiber allows the user to wear and carry the apparatus easily.

A.4-Regulator / Cylinder Valve

The regulator is mounted on the cylinder. The regulator has a quick start function. By pulling the firing strap the cylinder valve is opened in one movement. When the firing pin is drawn the airflow starts. From the outlet of the regulator, a flexible hose leads the flow of air into the hood. The airflow minimizes CO₂ built up however the hood must be removed as soon as the clearance of the hazard area. A constant reading pressure gauge is fitted to the regulator, providing a continuous indication of the cylinder pressure which always has to be kept in the green sector by maintenance.

| | Regulator / Cylinder Valve |
|------------------|--|
| Material | High Pressure nickel-plated brass |
| System | Piston-spring type, built in pressure relief valve |
| Working Pressure | 200 bar |
| Air Supply | 35 L/min. |
| Starting | Automatic starting when the hood pulled out |
| Charging | Through EN 144-2 G-5/8 200 bar |

A.5-Hood

The hood assembly consists of a bright yellow hood, an inner mask, a visual alarm indicator in the field of vision and the air supply hose. The bright yellow hood is made of flame retardant bright yellow PVC.

When the **Atlantic®-Air** is operated, the hood is filled with air and provides a reservoir of air. When the user takes a breath, air goes from the hood to the inner mask and will be inhaled. Exhalation goes through an exhalation valve from the inner mask to the ambient atmosphere.

The non-misting visor is designed for maximum field of vision during escape.

The visual indicator shows duration status information and indicates when to remove the hood as the cylinder empties. The inner harness provides automatic and easy adjustment for the inner mask. The harness design guides the mask onto the user's face and assumes the correct position. The inner mask and the air supply prevent the building up of high levels of carbon dioxide. The neck seal accommodates a wide range of fits and needs no adjustments after donning.

A.6- Standards Met

- TS EN 1146/15 including A1, A2, A3
- SOLAS 74 including amendments 2000 (IMO Res.MSC.99 (73), Reg.II-2/13, 3.4 and 13, 4.3
- International Code of Fire Safety Systems (IMO Res.MSC.98 (73), Chapter 3, Para.2.2
- MSC/Circ.849-Guidelines for the performance, location, use and care of Emergency Escape Breathing Devices (EEBD)

B- DONNING AND USE



- 1- Remove the Atlantic-Air from its storage.
Pass your head through the neck strap.



- 2- Hold the bag, not the cylinder valve, pull the firing strap upwards.
Listen for airflow.
Check that the firing pin is fully withdrawn.
If the firing pin is still in place, access the valve and unscrew the cap completely.



- 3- Insert hands into the neck seal opening and pull the hood over the head.
Adjust inner mask and neck seal to seal.
Ensure that hair/clothing is not trapped under the neck seal.



- 4- Check that the set is correctly working.
The breathing starts now. Breathe normally.



- 5- **MAKE YOUR ESCAPE FROM THE HAZARD AREA IMMEDIATELY!!!**
Do not remove hood until well clear of danger.

Note!

When the cylinder is almost empty the green warning pin, visible inside the hood, will change to red, CO₂ will start to increase and the hood must be removed.

Once the Atlantic® -Air has been used it must be returned for servicing and maintenance, including recharging, by trained personnel.

C- MAINTENANCE

Note!

Only trained and tasked persons shall do the maintenance of the device on board. If there is not a person relating those qualifications, a trained service facility should maintain the apparatus.

C.1- Checks

C.1.1- Regular Checks

It is mandatory that all escape equipment be checked at monthly intervals, even in a central store.

In addition, apparatus issued to individuals should be checked at issue and then daily. Apparatus in ready to use lockers should also be checked daily.

Regular Checks Should Be as Follows;

- 1- Check that the contents gauge shows fully charged.
- 2- Check that the bag is clean and undamaged.
- 3- Check that the anti-tamper tag is located and unbroken.
- 4- Check that access to the bag is unobstructed.

Apparatus that fails any of these checks must be withdrawn from use and sent to a qualified facility for maintenance or repair.

C.1.2- Once a Year

C.1.2.1- Visual Checks

Check that there are no mechanical damages such as cuts, tears, abrasions or mechanical damages on the following parts:

- The carrying bag, straps / bands and the firing mechanism.
- The air hose connectors and o-rings. Excessively stiff hoses should be replaced with new ones. Hose connection port O-rings are available as spares.
- Hood, neck seal and mask. The valve disc in the exhalation valve must be replaced every 3 years and spares are available.
- Cylinder valve / first stage regulator and pressure gauge.

C.1.2.2- Functional Checks

In addition to the visual checks described, the device should be tested to ensure that it functions correctly.

The pressure gauge must indicate from full to empty during the test. Once the inspection and tests are complete the cylinder should be charged and made ready for service as described in the charging and packing sections.

Record inspections and tests of the **Atlantic®-Air** including details of the actual date and serial number of the set. Any damaged parts must be replaced before it can be returned to service and all malfunctions corrected.

Note!

If any signs of damage or malfunction are faced:

The device should be sent for service or necessary parts should be replaced.

C.2- Cleaning

C.2.1- After Use

- 1- Caution: Do not immerse the device
- 2- Remove the hood and supply hose from the regulator.
- 3- Clean the internal and the external surface of the hood with a damp cloth and Sanitizing wipe. Dry with a soft lint free cloth.
- 4- Clean the inner mask with a mild disinfectant sanitizing wipe.
- 5- Recharge the cylinder as described under charging.
- 6- Pack the apparatus as described under packing
- 7- Replace the apparatus in its storage point.

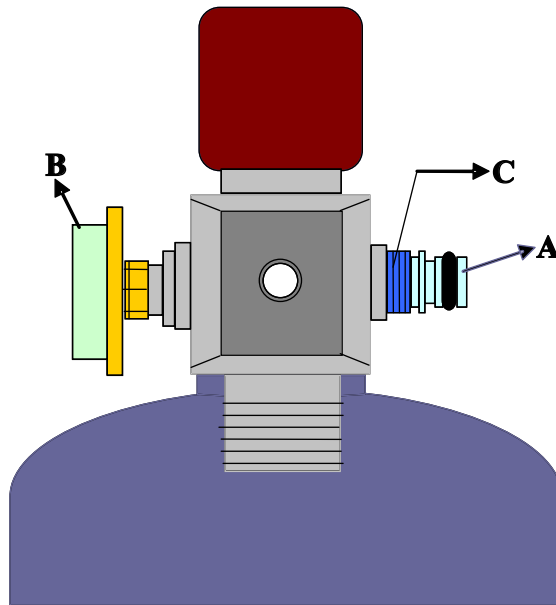
C.2.2- When Atlantic®-Air has been worn but not operated:

- 1- Examine the apparatus for any signs of damage. Damaged parts shall be replaced or sent for service.
- 2- Check that the cylinder is fully charged and the anti-damper tag is intact. If not, send the apparatus for service / charging.
- 3- Clean the bag if necessary.
- 4- Replace the apparatus to its storage point.

C.3- Charging

Note!

High pressure compressors and charging apparatus must only be used by trained operators and all safety procedures must be observed.



- 1- Break the damper proof tag (if necessary), open the zipper on the bag and take out the hood.
- 2- Untie the belt fixing the tube to the bag.
- 3- Take the cylinder out of its bag.
- 4- The mask hose which is connected to "A" must be unplugged by removing the R shaped Cotter fixing the hose to the valve arrangement.
- 5- Unscrew "A" from the valve using 10-11 spanner. Only part "C" should remain on the valve in order to fix the ATLANTIC FILLING APPARATUS.
- 6- Connect the ATLANTIC FILLING APPARATUS to "C" by hand. Check that there is O-ring present inside the filling apparatus. Screw the Apparatus until the o-ring completely fits its place. Then plug it to air compressor.
- 7- Immerse the cylinder vertically to the water until the $\frac{3}{4}$ of its length is covered with water. DO NOT IMMERSE THE CYLINDER VALVE!
- 8- Operate the filling compressor and slowly open the supply valve of the compressor.
- 9- Charge the cylinder until observing 200 bar both on the compressor and cylinder manometers. Wait until the cylinder cools down, then top fill the cylinder until the pressure gauge again reads full.
- 10- Open the drain valve of the compressor and drain the high pressure left between the "Atlantic Air Filling Apparatus" and the compressor.
- 11- Unscrew the "Atlantic Air Filling Apparatus" from the valve arrangement.
- 12- Screw back the coupling to the charging adapter on the valve
- 13- Wait until the cylinder cools again. Observe if there is any air leakage from the cylinder in the water while waiting. If so, the device must be withdrawn and sent to a qualified service in order to be renewed.
- 14- If there is not any problem observed, the filling process is completed.

C.4-Packing

- 1- Once the cylinder is fully charged, the dust cap must be replaced on the charging port. The reconnected hood is packed by laying the hose along the top of the cylinder away from its connection point towards the closed end of the zipper and then laying the hood back towards the regulator, it should not reach the regulator if packed correctly.
- 2- Connect the clip at the end of the strap to the firing pin and check that the strap is not tangled and is free to move. The strap lies on top over the packed hood.
- 3- Ensuring that no material is trapped in the teeth close the zip until it passes the break point zip teeth, holding the hood in place, keeping the loop in the strap outside the bag.
- 4- Make sure that the pressure gauge is readable through the bag window (you should not see the hood)
- 5- Fold the flap over and feed the strap loop through it to trap it.
- 6- Feed the anti tamper tag through the eyelets in the bag and flap but under the strap loop and close the tag. Adjust the size of the tag loop such that it is as small as possible but still slightly loose. The tag should not be under tension.
- 7- The **Atlantic[®]-Air** is now in its ready for use state. (When the firing strap is pulled the tamper proof tag breaks. The firing pin is pulled from the cylinder valve, airflow commences and the zipper opens).