

# **SURFACE SUPPLIED HARNESS**



## **USER'S MANUAL**

## COPYRIGHT NOTICE

This owner's manual is copyrighted, all rights reserved. It may not, in whole or in part, be copied, photocopied, reproduced, translated, or reduced to any electronic medium or machine readable form without prior consent in writing from Aqua Lung America, Inc.

©2010 AQUA LUNG AMERICA.  
SURFACE SUPPLIED HARNESS (SSH) USER'S MANUAL PN 769181  
SSH SIZE #1 PN 769161  
SSH SIZE #2 PN 769169

You can contact a Technical Adviser via e-mail at:

rbedard@aqualung.com  
grubin@aqualung.com  
dstancil@aqualung.com  
dsumian@aqualung.com

Military sales: ksilver@aqualung.com

## Trademark Notice

Aqua Lung<sup>®</sup>, is a registered trademark of  
Aqua Lung America, Inc.

## 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, if not avoided, could result in serious injury or death to the user.



A **CAUTION** indicates any situation or technique that could cause damage to the product, and could subsequently result in injury to the user.



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

---

## CONTENTS

FEATURES.....	4
DONNING AND ADJUSTMENT PROCEDURES.....	5
ADJUSTING TANK BAND AND CYLINDER KEEPER.....	5
SECURING CYLINDER TO HARNESS .....	6
THREADING THE CAM BUCKLE.....	7
INSTALLING DOUBLE ACTION WEIGHT RELEASE SHEATH .....	8
REMOVING DOUBLE ACTION WEIGHT RELEASE SHEATH .....	9
LOADING WEIGHT INTO SURELOCK™ POUCH.....	10
INSTALLING SURELOCK™ POUCH INTO WEIGHT SHEATH .....	10
REMOVING SURELOCK™ POUCH FROM WEIGHT SHEATH .....	10
SSH PRE-DIVE CHECKLIST .....	11
SSH POST-DIVE CHECKLIST.....	11
MANUFACTURER'S RECOMMENDED MAINTENANCE CHECKS .....	12
TECHNICAL DATA.....	12
RECOMMENDED SPARE PARTS LIST .....	12
ANNUAL INSPECTION & SERVICE RECORD .....	13
MAINTENANCE NOTES.....	14
WARRANTY INFORMATION .....	15

# FEATURES

The Surface Supplied Harness (SSH) is a harness system specifically designed for commercial and military diving purposes, providing a working harness for any tended surface or saturation diving application.

- The harness is adjustable to fit a large spectrum of body shapes and sizes.
  - Size #1 waist 30-38 inches (76-97 cm)
  - Size #2 waist 38-46 inches (97-117 cm)
- Four umbilical attachment points – 2 upper and 2 lower (a).
- Two reflective tabs- for high in-water visibility (b).
- Chest and waist adjustments – to accommodate various sizing, chest (c), waist (d).
- Vertical torso adjustment (e).
- Adjustable crotch strap (f).
- Single and two point extraction D-rings (g).
- Dual adjustable tank bands (h).
- Adjustable cylinder keeper (i).
- Up to 10 lb non-ditchable weight may be carried under the comfort pad (j).
- Universal comfort pad (k).
- SureLock™ Double Action Weight Release system.
  - Two 20lb. SureLock™ weight pouches (l)
  - Malice Clips® (m)
  - Two 20lb. double action weight release sheaths (n).

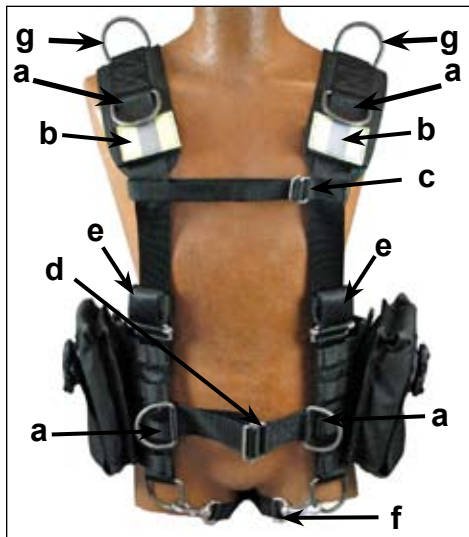


Fig. 1



Fig. 2



Fig. 3



Fig. 4

## SSH Donning and Adjustment Procedures

1. Don the SSH.
2. Thread the waist band webbing through the buckle and pull the webbing until a snug fit is achieved, repeat the same process for the chest strap.
3. Release the hook and loop retainer on one of the torso adjustment straps (**e**). Pull the webbing in a vertical motion until a snug fit is achieved through the torso, re-fasten the hook and loop retainer. Repeat the same process on the other torso adjustment strap.
4. Bring the two clips (**f**) of the crotch strap between your legs and fasten them to the lower metal D-rings on the front of the harness.

\*(See Fig. 6 for above section)

5. The crotch strap is adjustable from the rear (See Fig. 5).



## Adjusting Tank Band and Cylinder Keeper

1. Unfasten webbing from the hook and loop. Remove the free end of the cylinder band (**h**) from the outer slot of the cam buckle. Loosen the cylinder bands by clasp the inside cylinder band with your left hand and cam buckle with your right. To loosen the band, pull the webbing to the left.
2. Unfasten webbing from the hook and loop. Loosen the adjustable cylinder keeper (**i**) by grabbing the buckle with your right hand and inside webbing with your left hand. To loosen, pull the webbing to the left.

\*(See Fig. 7 for above section)



Fig. 6



Fig. 7

## Securing Cylinder to Harness

1. Wet the cylinder bands and then slide them over the cylinder so that the harness is at the desired position in relation to the cylinder valve. Make sure the cylinder valve air outlet is facing toward the diver's back. Pull the cylinder keeper tight to the cylinder and secure the hook and loop. While holding the cylinder secure, pull the free end of the upper cylinder band until there is a very tight fit between the harness and the cylinder. Repeat process on lower band (See Fig. 8).



Fig. 8

2. Close the buckle halfway to hold the cylinder band taut, and thread the free end of the band through the open slot in the end of the buckle (See Fig. 9).



Fig. 9

3. Pull the cam buckle closed so that it lies flat against the cylinder. Secure the end of the cylinder bands with the hook and loop attachment. Test the tightness by pushing/pulling the harness (See Fig. 10).



Fig. 10



**WARNING:** The cylinder band will initially stretch as it becomes wet. Always wet the band before making the final adjustment; apply enough tension to ensure that the cylinder is completely secure. Test this connection before every dive.

## Threading the Cam Buckle

**NOTE:** Harness cylinder bands adjust for all standard cylinder diameters: 6.9" (17.5 cm), 7.25" (18.5 cm), and 8.0" (20.3 cm). The cylinder bands are properly threaded to the buckles when the harness leaves the factory. If rethreading is necessary, follow the procedure in this section.

**NOTE:** The cam buckle is labeled with numbers (1-4) and directional arrows (↑↓) that indicate threading order and direction of tank band.

1. While firmly holding the metal D-ring with your left hand, rotate the buckle back towards the webbing. The buckle should form an angle with the metal D-ring as shown in the top view (See Fig. 11).

2. Insert band through the metal D-ring # 1↓, then through the middle slot #2↑ (See Fig. 12).

3. Insert band through the inside slot #3↑ (See Fig. 13).

4. Insert band through the outer slot #4↑ (See Fig. 14).

**NOTE:** This final threading step is done when the harness is secured to the cylinder (refer to Securing Single Cylinder Step: 2). Close the buckle half way to prevent the webbing from slipping and thread the free end of the band through the open slot in the end of the buckle.

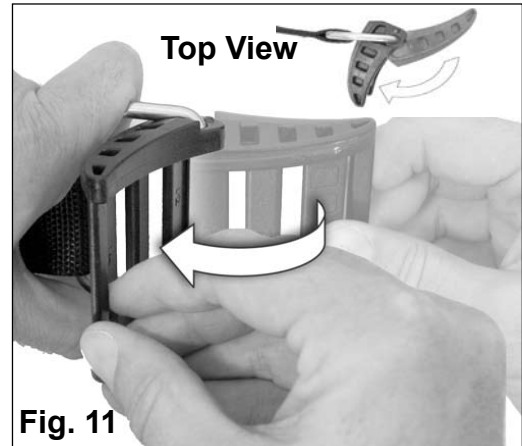


Fig. 11



Fig. 12

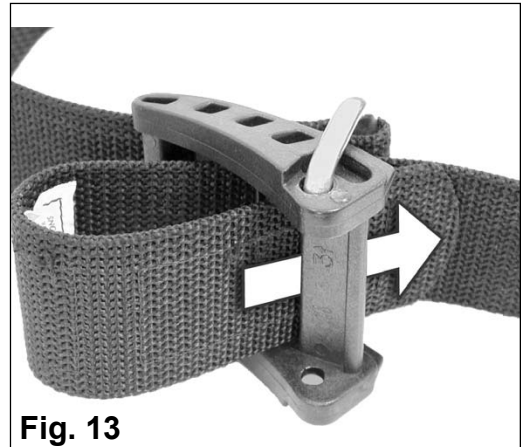


Fig. 13

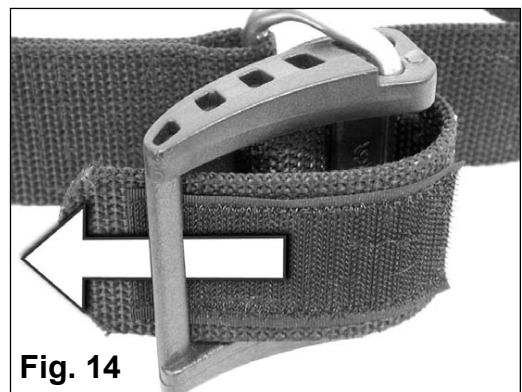


Fig. 14

## Installing Double Action Weight Release Sheath

1. Remove the SureLock™ weight pouch from the sheath. Insert Malice clip® through all five MOLLE loops on the weigh sheath, "TAB" side of Malice clip® facing out (See Figs. 15 & 16).



Fig. 15



Fig. 16

2. Weave the Malice clip® under the MOLLE/Malice loops (Loops are counted from the top to the bottom) in the following order to secure the weight sheath to the harness (See Fig. 17).

1. MOLLE Loop: 3
2. Malice Loop: 4
3. MOLLE Loop: 2
4. Malice Loop: 2
5. MOLLE Loop: 1

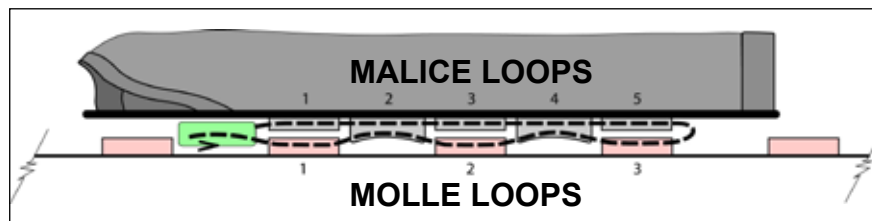


Fig. 17



3. When the Malice clip® has been woven completely through both MOLLE and Malice loops as directed, secure the open end of the Malice clip® into the tab slot. Hold the tab, then pull on the inserted end to ensure the clip has been completely inserted and locked down (See Figs. 18 & 19).



Fig. 18



Fig. 19

## Removing Double Action Weight Release Sheath

1. Remove SureLock™ pocket from weight sheath. Insert a medium flat blade screwdriver behind the tab and lift up to release the Malice clip®. Repeat process on other clip and unweave weight sheath from harness (See Figs. 20- 23).



Fig. 20



Fig. 21



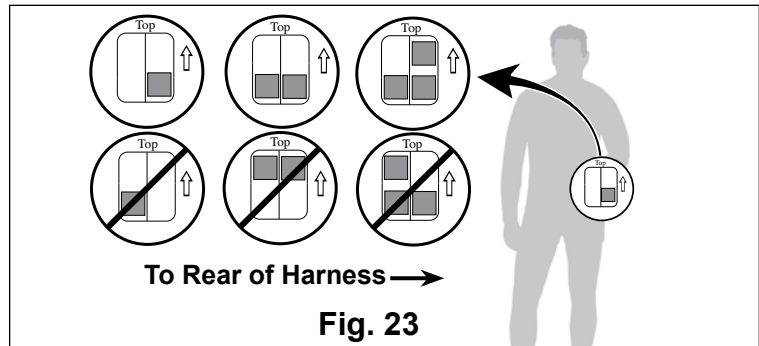
Fig. 22



Fig. 23

## Loading Weight into SureLock™ Pouch

1. Load each weight pouch with equal amounts of weight for optimum balance, preventing the tendency to roll to one side during the dive. Also, it is strongly recommended that each weight pouch is fully loaded with four separate blocks. For example, if you want to load the weight pouch with 12 pounds, use four separate 3 pound blocks.



2. The 20 lb SureLock™ weight pouch has a right and left weight compartment. Fill each pouch with four separate weight blocks (two per compartment); however, if you need to partially fill the pouch, use the diagram to the upper right for proper weight placement (See Fig. 23).

**NOTE:** The SureLock™ weight system features two interchangeable weight pouches which can be filled with either block weights or “soft weight” (pouches containing lead shot), in increments of 5 pounds or less. For ease of operation, low-profile block weight is strongly recommended.

## Installing SureLock™ Pouch into Weight Sheath

1. The SureLock™ pouches are installed with the plastic panel facing outward (pouch flap facing toward the harness). To install either pouch, slide the closed end of the pouch into the opening of the sheath. Insert the male portion of the SureLock™ buckle into the female receptacle on the sheath until you can hear/feel it “CLICK” into place. Close the flap of the weight sheath over the pouch and secure the outer buckle of the weight sheath (See Figs. 24 & 25).



Fig. 24



Fig. 25

## Removing SureLock™ Pouch from Weight Sheath

2. Unclip the weight sheath outer buckle so the flap is open, exposing the SureLock™ weight pouch. Pull straight down on the SureLock™ handle, releasing the weight pouch from the sheath (See Figs. 26 & 27).



Fig. 26




Fig. 27

**SSH Pre-Dive Checklist**

Diver Name \_\_\_\_\_ Date \_\_\_\_\_

SSH Number \_\_\_\_\_

 **WARNING:** Before each use, the SSH must be given a thorough visual inspection and functional test. NEVER dive with a harness that shows signs of damage until it has been repaired and reinspected.

**Initials**

- \_\_\_\_\_ 1. Inspect all buckles and slides for damage. Connect and disconnect each buckle/slide for proper orientation.
- \_\_\_\_\_ 2. Inspect all stitching component webbing and hook/loop material for damage or excessive wear.
- \_\_\_\_\_ 3. Adjust harness for proper fit.
- \_\_\_\_\_ 4. Install weights into SureLock™ weight pouches as needed.
- \_\_\_\_\_ 5. Install loaded SureLock™ weight pouches into weight release sheaths.
- \_\_\_\_\_ 6. Verify that all harness straps are connected properly and operate correctly.
- \_\_\_\_\_ 7. Diving Supervisor will check previous steps and record deficiencies below.

Remarks \_\_\_\_\_  
 \_\_\_\_\_


\_\_\_\_\_  
**Divers Signature**

\_\_\_\_\_  
**Diving Supervisor Signature**

**SSH Post-Dive Checklist**

Diver Name \_\_\_\_\_ Date \_\_\_\_\_

SSH Number \_\_\_\_\_

 **NOTE:** Avoid prolonged exposure to sun, extreme heat and heavy pool chemicals to prevent deterioration. To prevent premature damage, thoroughly rinse the SSH with fresh water at the end of each diving day using the following procedures:

**Initials**

- \_\_\_\_\_ 1. Remove all weights from SureLock™ pouches.
- \_\_\_\_\_ 2. Thoroughly rinse harness & pouches and allow to dry overnight before stowing.

Remarks \_\_\_\_\_  
 \_\_\_\_\_

\_\_\_\_\_  
**Divers Signature**

\_\_\_\_\_  
**Diving Supervisor Signature**

### Manufacturer's Recommended Maintenance Checks

1. Annual Inspection- Inspect SSH for wear or damage.
  - Inspect buckles and slides.
  - Inspect stitching components, webbing and hook/loop material.
  - Inspect SureLock™ weight pouch locking mechanism.
2. Pre-Dive repeat annual inspection.
3. Post-Dive Rinse and dry.

### Technical Data

- BREAKING STRENGTH OF COMPLETE HARNESS = 1100 LB / 500 KG / 4900 N
- BREAKING STRENGTH OF ALL 2" D-RINGS = 5000 LBS
- SURELOCK™ WEIGHT POUCH CAPACITY = 20 LBS EACH
- MOLLE EQUIPMENT ATTACHMENT CAPABILITY
- SLIDES AND CROTCH STRAP CLIPS STAINLESS STEEL
- DRY WEIGHT AND SIZE
  - Size #1 9 lbs, waist size 30-38 inches (76-97 cm)
  - Size #2 10 lbs, waist size 38-46 inches (97-117 cm)

### SSH Recommended Spare Parts List

PART #	DESCRIPTION	QTY
769162	SSH Harness Assembly, Size 1	1
769163	Crotch Strap, Size 1	1
769183	SSH Harness Assembly, Size 2	1
768184	Crotch Strap, Size 2	1
769144	20 LB SureLock™ Weight Pouch	2
769159	20 LB Double Action Weight Release Sheath	2
769166	Tank Band /Traction Sleeve	2
769148	Universal Comfort Pad	1
769164	Cylinder Keeper	1
769182	Malice Clips® (pr)	2






## Warranty Information - Military & Commercial

All requests for warranty transactions must be accompanied by an in-service date and by documentation of Aqua Lung America Inc. factory recommended maintenance\* in accordance with this Manual whenever returning your military or commercial product for warranty service.

The Aqua Lung® One Year Limited Warranty™

Aqua Lung America, Inc. warrants to the original purchaser for a period of one year from the purchase date that the product will be free from defects in material and workmanship; provided that it receives normal use, proper care and prescribed maintenance subject to those restrictions stated below. This limited warranty is extended only to the original purchaser for purchases made from Aqua Lung America, Inc. or an authorized Aqua Lung® dealer, and is not transferable. With this warranty, Aqua Lung America, Inc. reserves the right to repair or replace the product at its sole discretion.

ALL WARRANTIES, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES, OR MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED IN DURATION TO A PERIOD ENDING ONE YEAR FROM THE DATE OF PURCHASE OR IN-SERVICE DATE.


 **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 Surface Supplied or SCUBA equipment by anyone who is not a certified diver or receiving training through a recognized training certification agency (either military or commercial), shall render void all warranties, expressed or implied.

AQUA LUNG AMERICA, INC. DISCLAIMS AND EXCLUDES ANY LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. IN SOME STATES WHICH DO NOT ALLOW EXCLUSION OF LIABILITY, THIS MAY NOT APPLY TO YOU.

### Restrictions

The following restrictions apply to this warranty:

- This warranty does not extend to abrasion or seam separation caused by chemical attack, including prolonged exposure to chlorine.
- This warranty does not extend to damages caused by improper use, improper maintenance, neglect, unauthorized repairs, modifications, accident, fire or casualty.
- Cosmetic damage, such as scratches, fraying, and nicks are not covered by this warranty.
- This warranty does not extend to products that have been not properly inspected or maintained in accordance with the recommended Aqua Lung America, Inc. factory requirements.
- Failure to meet any of the above requirements will render the warranty null and void.

 **WARNING:** Failure to maintain this equipment and perform the required Aqua Lung America, Inc. factory maintenance in accordance with the factory manual renders any and all warranties expressed or implied, null and void.

\* Reference Annual Inspection & Service Record provided in manual



# Surface Supplied Harness

**AQUA  LUNG®**

**Military & Professional Operations**

2340 Cousteau Court • Vista, CA 92081  
Phone (760) 597-5000 • Fax (760) 597-4900  
[www.aqualung.com/militaryandprofessional](http://www.aqualung.com/militaryandprofessional)