



# Comfort Harness User's Guide

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# **Buoyancy Compensator** **User's Guide**

**Thank you for choosing OMS,**

OMS buoyancy compensators have been constructed from rugged materials with unique features adaptable to advanced underwater environments. The general design philosophy allows for complete system integration of a number of components achieving high lift capacities, low drag, and increased safety through redundancy. With a selection of different harnesses, different air cells and accessories, a diver can configure his or her system for the specific environment they are operating in. This equipment is intended for use by individuals with the training and experience to dive these environments safely

## **General Precautions & Warnings**

- Before using this buoyancy compensator (BC), you must receive instruction and certification in SCUBA diving and buoyancy control from a recognized training agency. Use of SCUBA equipment by uncertified or untrained persons is dangerous and can result in injury or death.
- Read this owner's manual completely before attempting to use your BC, and become familiar with it first in a controlled environment such as a swimming pool, in order to weight yourself properly and to become comfortable with using its many features and adjustments.
- Before every dive, perform a complete pre-dive inspection according to the procedure prescribed in this manual, to ensure that all components are functioning properly and no signs of damage or leaks are present. If you find that your BC is not functioning properly or is damaged, remove it from service until it can be repaired.
- Your BC is not a lift bag. Do not use it to bring heavy objects to the surface. Doing so may cause permanent damage to the BC, and could also result in serious injury or death due to embolism or decompression sickness.
- In an emergency such as an out of air situation or uncontrolled descent, it is important to remove and jettison weight immediately. Do not depend solely on using your BC's power inflator to lift you to the surface.
- In the event of an uncontrolled, rapid ascent, it is important to immediately begin venting air from the BC. Continue venting air to slow your ascent rate if neutral buoyancy cannot be reestablished.
- Do not inhale from your oral inflator. The BC may contain harmful contaminants or gasses, which could cause suffocation or injury.

- The function of your buoyancy compensator is to help you maintain neutral buoyancy while in a comfortably balanced, face-down swimming position underwater. It is also designed to provide you with flotation so that you can rest on the surface, but it is not designed to function as a life preserver or personal flotation device (PFD). A buoyancy compensator (BC) is not a life jacket. It is not designed to provide face-up flotation in all situations, and therefore it does not meet U.S. Coast Guard regulations for a life preserver or personal flotation device (PFD).
- Have your OMS equipment inspected and serviced annually by an authorized OMS dealer or at any time you have any concerns about your equipment's function or condition.



## The Comfort Harness System

The OMS Comfort Harness System is available assembled with a stainless steel back plate or aluminum back plate. This guide will help in the assembly of the harness that hasn't been assembled or the installation of the harness on a back plate you already have.

The Comfort Harness System Includes: (back plate purchased separately)

(Measurements and components may vary slightly)

- 90" of 2" webbing with grommet in center (for upper shoulder assembly)
- 70" of 2" webbing with grommet in center (for waist assembly)
- 33" pieces of 2" webbing with an eye sewn in one end (Lower shoulder assembly)
- 40" piece of 1" webbing (used as crotch strap)
- Shoulder pads 2- OMS hose holders
- 1" slide/keeper (used with crotch strap)
- 1" male buckle (used with crotch strap)
- 2" male buckles 1- quick release
- 10 – 2" slide/keepers
- D-rings 1- upper crotch strap assembly (scooter ring, female 1" buckle, sewn loop)
- Right side chest strap/female buckle assembly
- Left side chest strap/female buckle assembly

### Assembly of the Comfort Harness

#### **Crotch Strap Assembly:**

Install the two 1" slides/keepers on the 40" length of webbing keeping one of them about 4" from the end. String the same end through the 1" male quick release buckle then back through the 1" slide/keeper. String the other end of the assembly through the 1" slot on the bottom of the plate then double back and string it through the second 1" slide keeper.



## Assembly of the Comfort Harness (continued)

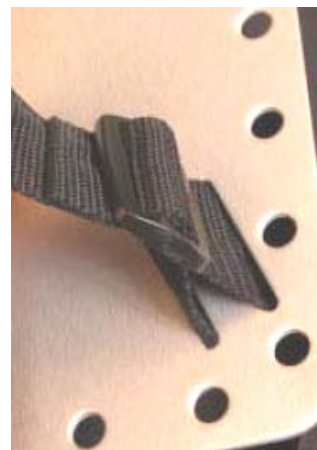
### **Lower Shoulder Strap Assemblies**

Assemble the two lower shoulder strap assemblies by threading a 2" male buckle onto the 20" webbings that have the delrin eyes sewn onto the bottom. Next thread on the 2" slides facing the opposite side of the webbing from the male buckles.



### **Lower Shoulder Strap Assembly Installation**

Attach the two lower shoulder assemblies one to each side of the back plate by inserting the free end of the webbing through the lower inside slot of the back plate from front to back (either side of plate). Pull the webbing back up through the outer slot and string through the slide/keeper. Be sure the slide/keeper faces away from the diver. Repeat on other side.



## Assembly of the Comfort Harness (continued)

### **Lower Shoulder Strap Assemblies**

Check the completed Lower Shoulder Strap Assemblies to make sure that there are no twists and that all buckles and rings face the right direction relative to the diver.



### **Waist Strap Installation and Assembly**

From the back of the plate insert each end of the 70" piece of webbing through the outer lower slot of each side of the back plate. Center the grommet so it lines up with the center bolt slot in the center of the plate.



## Assembly of the Comfort Harness (continued)

### **Waist Strap Installation and Assembly**

Up to two D-rings can be installed on the waist strap. Thread the webbing through one slot of a slide/keeper through the D-ring then through the other slot of the slide/keeper. Once the D-rings are in place, slide the loop of the upper crotch strap assembly on to the right hand waist strap. Next, install the belt buckle positioned for a left hand release onto right waist band. Thread the waist strap through the first slot furthest from the pivot from the inside out then back through the middle slot and back out the last slot.



Check the completed Waist Strap Assemblies to make sure that there are no twists and that all buckles and rings face the right direction relative to the diver.



## Assembly of the Comfort Harness (continued)

### Upper Harness Assembly

First install a slide/keeper onto the 90" webbing about 7" from the center grommet. Slide the same end of the webbing through the second slot on a shoulder pad. Slide the shoulder pad all the way up the webbing until the slide/keeper lays flat on top of the shoulder pad. Slide another slide/keeper up the same end to hold the shoulder pad in place. Tighten up the slide/keepers against the shoulder pad so it is held securely in place.



Next, thread the free end of the webbing at the bottom of the shoulder pad through the D-ring of the lower shoulder strap assembly then back up through the slide/keeper above it. Be sure to check the orientation of the sternum strap buckle. Install a D-ring above the slide/keeper by threading the webbing through one slot of another slide/keeper, through a D-ring, then down through the second slot of the slide/keeper.

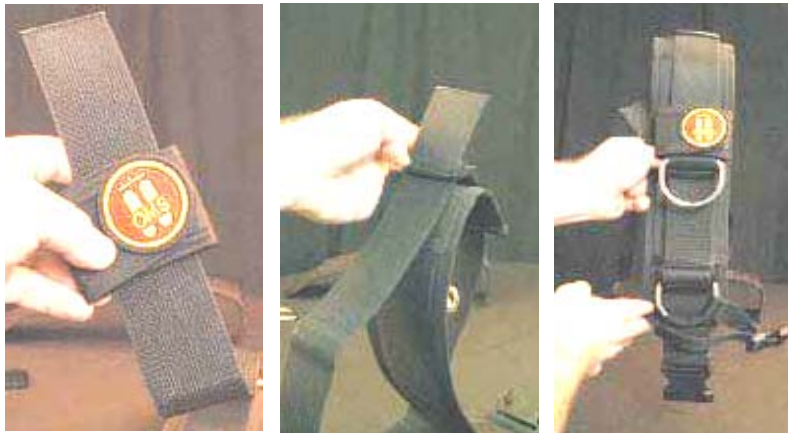




## Assembly of the Comfort Harness (continued)

### Upper Harness Assembly

Install an OMS hose holder onto the free end of the webbing above the D-ring. Slide the webbing through the sewn loop in the back of the hose holder. Next weave the webbing through the slide/keeper at the top of the shoulder strap.



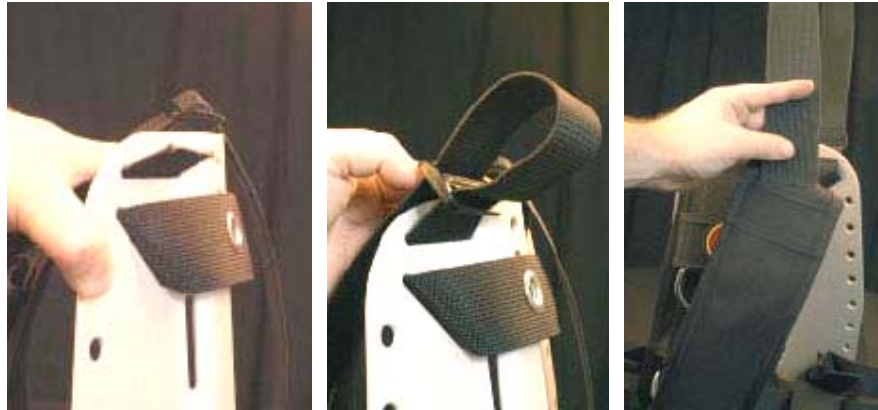
One side is now completely assembled. Look at the orientation of the sternum strap to determine if you have a right or left shoulder strap. Thread the free end of the webbing through the uppermost slot of the corresponding side on the back plate from back to front. Then thread the webbing through the angled slot below the uppermost slot, back to front. Pull the free end of the webbing completely through the back plate until the grommet hole on the webbing aligns with the center bolthole in the back plate. Next thread the webbing through the opposite angled slot back to front.



## Assembly of the Comfort Harness (continued)

### Upper Harness Assembly

Thread the free end of the webbing through the uppermost slot on the back plate from back to front. Weave the webbing through another slide/keeper and move it down so that it secures the webbing against the back plate. Then slide the free end of the webbing down through the second slot on the shoulder pad. Install another slide/keeper onto the webbing where it exits the shoulder pad. Tighten the slide/keeper against the shoulder pad to hold it in place.



Install the lower shoulder strap assembly as you did on the other side. Thread the free end of the webbing through the D-ring on the lower shoulder strap assembly from back to front paying attention to the orientation of the sternum strap. Next thread the webbing up through the lower slide/keeper and pull tight.



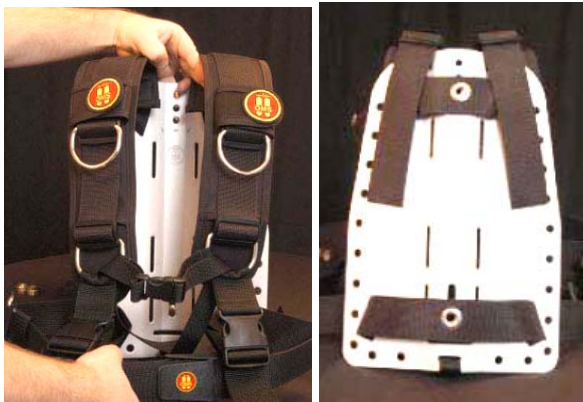
## Assembly of the Comfort Harness (continued)

### Upper Harness Assembly

Install a D-ring and the OMS hose holder on to the free end of the webbing just as you did on the other side then weave the webbing through the upper slide/keeper and pull tight.



Make all adjustments while wearing your exposure suit. Trim excess but allow length for future changes and the addition of more D-rings. If you have any questions, please contact OMS and speak with a technical support representative.





# Operations

## Pre-Dive Checks

- Check all fittings and connections for damaged components (cracks, tears, etc.)
- Inflate each bladder until the dump valve vents, leave inflated for 30 minutes.
- On dual bladder models test each bladder separately (do not inflate both bladders at the same time)
- With the bladder fully inflated check that pull dump cord or folds in the bladder are not trapped by the retraction bands
- Check the security of weight systems before entering the water.
- After entry, inspect units for bubbles indicating leaks.
- Test pull dumps for smooth operation and positive seal.

## Operations

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- Inflate the bladder with short controlled bursts of air by pressing the inflate button.
- The unit can be inflated orally through the oral inflator. Depress the deflate button completely and exhale into the oral inflator.
- On dual bladder models, the bladder against the diver's back is the primary bladder. Do not inflate both bladders at the same time. This could decrease the overall lift provided by the jacket.
- Deflate the jacket by pressing the deflate button on the inflator or by pulling a pull dump. Use proper descent techniques taught in scuba training.

**WARNING! Repeated improper use of the Oral Inflation/ Deflation mechanism or dump valves assemblies may allow water to enter the BC with a subsequent reduction in buoyancy. Reduced buoyancy can cause a loss of buoyancy control resulting in PERSONAL INJURY OR DEATH**

## Post-Dive Checks

- Connect the inflator to an air supply to pressurize the inflator mechanism then use a garden hose to direct fresh water into the oral inflator while pressing the deflate button.
- Partially inflate the unit and allow the water to wash around the interior of the bladder. Drain completely and store partially inflated away from temperature extremes and direct sunlight.
- Do not attempt to service a malfunctioning piece of equipment. Take it to an authorized OMS dealer for repair.



# WARRANTY

## WARRANTY AND LIMITATION OF LIABILITY

1. OMS® warrants to the purchaser that goods sold by OMS® to the purchaser will be free from manufacturing defects in materials and workmanship for a period of ninety (90) days after the date of purchase from an authorized OMS® dealer.
2. EXCEPT AS EXPRESSLY SET FORTH IN SECTION 1 'WARRANTY AND LIMITATION OF LIABILITY', COMPANY MAKES NO WARRANTIES TO THE PURCHASER, WRITTEN OR ORAL, EXPRESS, IMPLIED OR STATUTORY, IN ANY MANNER OR FORM WHATSOEVER INCLUDING BUT NOT LIMITED TO ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR USE OR PURPOSE, WHICH ARE HEREBY EXPRESSLY DISCLAIMED.
3. The warranty does not apply to goods that have been subject to abuse, misuse, neglect, improper installation or alteration after delivery to the carrier for shipment to the purchaser. At OMS'® request, the purchaser shall return goods to OMS® at its Middletown, NY, office for verification that the warranty set forth in these terms and conditions as limited by this paragraph is applicable. Any such returns are subject to the provisions in the RETURN POLICY Section.
4. In the event OMS® determines that the warranty set forth above in #1 of this Section are limited by #3 in this Section is applicable to any goods, OMS® shall, as the purchaser's sole remedy, replace, repair or at OMS'® sole discretion, issue to the purchaser a credit for an amount not to exceed the original purchase price paid by the purchaser for the affected goods. OMS® shall have no liability with respect to warranty claims made by the purchaser more than ninety (90) days after OMS'® sale of the goods involved to the purchaser. In no event shall OMS® be liable to the purchaser for a special, incidental or consequential damages. OMS® shall have no liability to the purchaser for any delay or failure in carrying out its obligation to the purchaser for reasons beyond OMS'® control, including without limitation, acts of God, war, natural disasters, labor disputes, changes in or compliance with laws, regulations or governmental policies and shortages of supplies and services. OMS® may extend delivery until any such cause of delay has been removed, or at its option, cancel the undelivered portion of any order so affected without liability to the purchaser; except for the return of any payment made by the purchaser to OMS® with respect to any undelivered portion of the order so canceled.