



# OWNER'S MANUAL

## Table of Contents

<b>General Precautions &amp; Warnings .....</b>	<b>2</b>
<b>Attaching the Low Pressure Hose to the First Stage Regulator .....</b>	<b>2</b>
<b>Attachment of the BC to the Cylinder .....</b>	<b>3</b>
Rethreading the Tank Band System .....	3
<b>Twin Cylinder Setup .....</b>	<b>4</b>
Twin Cylinder Strap Kit .....	4
Twin cylinder mounting with metal bands .....	4
<b>Customizing the Raider .....</b>	<b>6</b>
Adjustable Shoulder System .....	6
Raider Waistband Adjustment .....	8
Repositioning the Modular Weight Adjustment System .....	8
<i>Optional Extension Kit</i> .....	9
Adjusting the Chest Strap .....	10
Adjustable Shoulder Metal D-rings .....	10
Carrying and Positioning Handle .....	11
<i>For positioning on a single cylinder</i> .....	11
<i>For positioning on twin cylinders using a twin manifold system</i> .....	11
<b>Weight Integration Features .....</b>	<b>11</b>
Weight Holster System - Setup & Installation .....	11
Weight Pouch Installation .....	12
Releasing the Weight Pouches .....	13
Non-Releasable Weight .....	13
<b>Power Inflator Operation .....</b>	<b>14</b>
Inflation Methods .....	14
<i>Oral Inflation</i> .....	14
<i>Power Inflation</i> .....	14
Deflation Methods .....	14
<i>Deflation via the Oral Inflator</i> .....	15
<i>Deflation via the Dual Exhaust Valve</i> .....	15
<i>Upper right shoulder and lower dump valves/over pressure relief (OPR) valves</i> .....	15
<b>Pre-Dive Inspection .....</b>	<b>16</b>
Inspection Checklist: .....	16
<b>Post Dive Care &amp; Maintenance .....</b>	<b>16</b>
<b>Inspection &amp; Service .....</b>	<b>17</b>
<b>Optional Accessory Kits .....</b>	<b>17</b>
22kg / 50 lbs. Redundant bladder kit (part no. 427060) .....	17
Replacement bladder (part no. 427058) .....	18
Optional knife .....	18
Optional retractor .....	18
Optional crotch strap kit (part no. 427038) .....	19
<b>Warranty .....</b>	<b>19</b>

## General Precautions & Warnings

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.

Disassembly, repair, or lubrication must not be attempted by persons who are not factory trained and authorized by Aqua Lung/SeaQuest.



**WARNING: A buoyancy compensator (BC) is NOT a lifejacket! It is not designed to provide face-up flotation in all situations. If you become unconscious in the water without a buddy present to immediately assist you, you may suffer serious injury or death from drowning.**



**WARNING: Although this manual provides some basic guidelines for certain buoyancy control techniques, it is not a substitute for training. Failure to weight yourself properly may create a hazardous condition that could lead to serious injury or death. If you are unsure how to weight yourself in order to achieve optimum buoyancy underwater and on the surface, do not dive until you have obtained the necessary instruction.**



**WARNING: DO NOT connect the inflator hose to a high pressure (HP) port (greater than 200 psi). This may cause the hose to burst when pressurized, which can result in serious injury.**

## Attaching the Low Pressure Hose to the First Stage Regulator

*Note: If you are unsure which regulator port is low pressure (LP) or high pressure (HP), consult with your dealer before attaching the hose.*

1. Remove the inflator hose from the power inflator body by gripping the grooved sleeve over the quick disconnect coupling with your thumb and forefinger and sliding the sleeve back.
2. Remove the port plug from a low pressure port on the regulator using an appropriate size hex wrench or key.
3. Check to ensure the O-ring is present and in good condition, and screw the threaded end of the hose into the port. Tighten to 40 inch-pounds (7kg/cm) with a  $\frac{9}{16}$ " wrench.

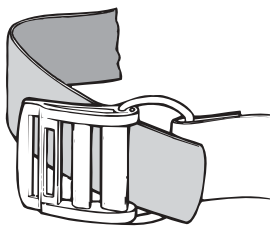
## Attachment of the BC to the Cylinder

*Note: Aqua Lung/Sea Quest BC cylinder bands adjust for all standard cylinder diameters: 6.9" (17.5 cm), 7.25" (18.5 cm), and 8.0" (20.3 cm).*

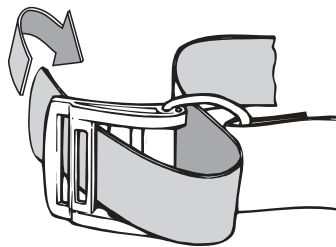
1. The cylinder bands are properly threaded to the buckles when the Raider leaves the factory. If rethreading is necessary, follow the procedure in the section below, "Rethreading the Tank Band System."
2. Wet the cylinder bands and then slide them over the cylinder. Drape the positioning strap over the cylinder valve. Slide the cylinder bands down the cylinder until the positioning strap is taut.
3. While holding the cylinder secure, pull the free end of the cylinder bands until there is a very tight fit around the cylinder.
4. Close the buckle halfway to hold the cylinder band taut, and thread the end of the band through the open slot in the end of the buckle.
5. Pull the cam buckle closed so that it lies flat against the cylinder. Attach the loose webbing end to the hook & loop on the cylinder band. Repeat this process for the 2nd cylinder band.
6. Test the tightness by pushing/pulling the BC from the shoulders.

### Rethreading the Tank Band System

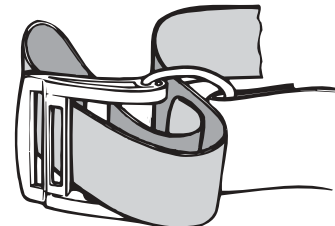
1. Start with the metal bale as close to the main body of the BC as possible. This provides the greatest range of adjustment. Weave the free end of band through metal bale between buckle and strap (Figure 1).
2. With the buckle fully open, thread the cylinder band through the middle slot and back through the slot closest to the metal bale (Figure 2 & 3). Pull the free end of the cylinder band to firmly tighten around the cylinder.
3. Close the buckle halfway to prevent the webbing from slipping and thread the webbing through the open slot in the end of the buckle. Completely close the buckle and secure the free end of the band with the hook & loop fastener. Repeat this process for the 2nd cylinder band.



*Figure 1*



*Figure 2*



*Figure 3*

## Twin Cylinder Setup

Sea Quest offers 2 different ways to mount twin cylinders to your Raider BC: A Double Cylinder Strap Kit or a hard mount using metal grommets provided on the Raider.

### Twin Cylinder Strap Kit

The Tank Band Kit for Twin Cylinders (P/N 427059) allows mounting of twin cylinders to the Raider via the use of nylon bands. Please see mounting instruction provided with kit.

*Note: To prevent damage stress on the valve manifold and for tank stability, secure the bottom third of the twin cylinders with a single metal strap.*

*Figure 4 - Doubles mounted with Double Cylinder Strap Kit (SeaQuest p/n 427059)*



*To prevent damage to the valve manifold, Secure bottom of cylinders with steel band when using Double Cylinder Strap Kit*

### Twin cylinder mounting with metal bands

The Raider's backpack has 2 grommet holes (11" / 28 cm on center) to accommodate twin cylinders mounting with metal bands (see figure 5). As there are such a large variety of cylinders on the market, you will need to provide your own metal bands.

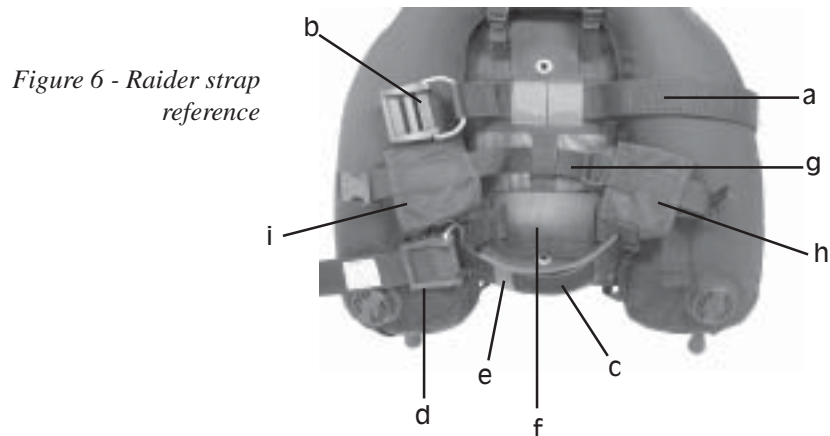
Requirements - 2 metal bands with bolts, nuts, washers & lock washers

*Figure 5 - Doubles mounted with metal bands (not available from SeaQuest)*



*Note: Make sure the mounting bolts are 11" or 28 cm apart. This will allow for proper positioning with the grommet holes on the BC.*

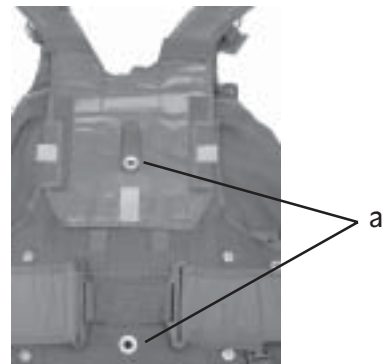
1. Unweave the upper tank strap (figure 6, a) from the cam buckle (b). Pull the buckle-end of the strap and completely remove it from the BC.
2. Unweave the lower tank strap (c) from the cam buckle (d). Slide the grip pad (e) off the strap. Pull the buckle-end of the strap and completely remove it from the BC. This will also free the traction pad (f). Store the bands, grip pads, and traction pad for future use.
3. Detach the hook & loop retainer (g) on the non-release weight pocket strap and separate the right non-release weight pocket (h) from the strap. After the right pocket is detached, pull out the left non-release pocket (i).



4. Lay cylinders down flat with bolts facing up (figure 7).
5. Open back pad to expose the grommet holes as shown (figure 8, a).



*Figure 7 - Lay cylinder with bolts facing upward. Bolts need to be 11" / 28cm apart*



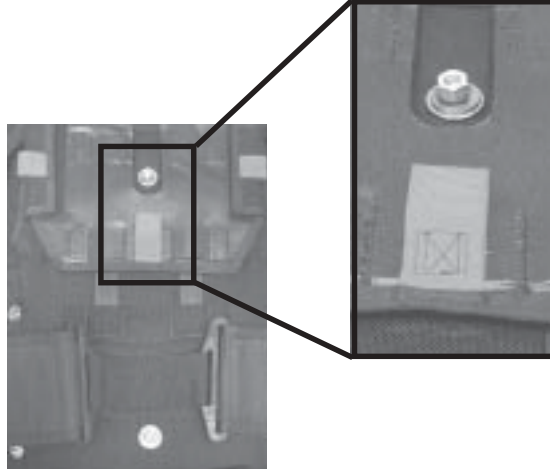
*Figure 8- Expose grommet holes*

*procedure continued...*

6. Lay the BC atop the cylinders so that the bolts align with, and pass through, the grommet holes. Install the washer, lock washer & nut on each bolt as shown in figure 9.



**CAUTION: Make sure the bolts are a proper length. If they are too short, you will not be able to mount the retaining washer, lock washer & bolt; if they are too long, the bolt and nut will damage the back pad, possibly injuring the diver.**



*Figure 9 - Install the washers and locknut*

- 7 Tighten the bolts to the manufacturers specifications and check for stability.

*NOTE: Check this attachment periodically to confirm that it is tightly attached.*

## Customizing the Raider

One of the Raider's key features is its ability to be custom fit to the diver's body. By utilizing an adjustable shoulder system, adjustable length waistband, and repositionable modular weight system (described later in this manual), the Raider can accommodate a wide range of body shapes and sizes, all within the three basic sizes of small, medium and large.

The Raider also features an adjustable chest strap, adjustable D-rings, and an adjustable length carry handle/tank positioning strap.

When all these features are properly adjusted for your body size/shape, exposure suit and equipment configuration, the Raider will feel like it was tailored just for you.

For optimum fit, SeaQuest suggests that you make all your adjustments while wearing your normal exposure suit. The adjustments should be made in the following order: 1) Shoulder length; 2) waistband length; 3) weight module position; 4) chest strap and shoulder straps.

### Adjustable Shoulder System

Your Raider BC is equipped with an adjustable shoulder system, which allows for precise shoulder strap positioning.

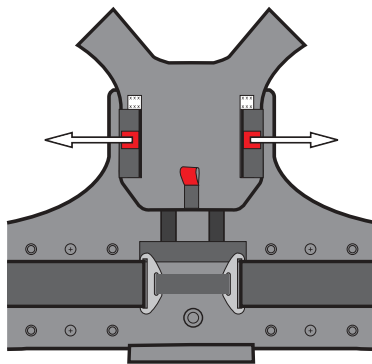
The Raider also features the patented Self Adjusting Lumbar Support System (SLS). See figure 10. This system automatically finds and fills the gap between your lower back and the back pad. When adjusting your shoulders, make sure that the SLS is properly positioned in your lower back in order to take full advantage of the system.



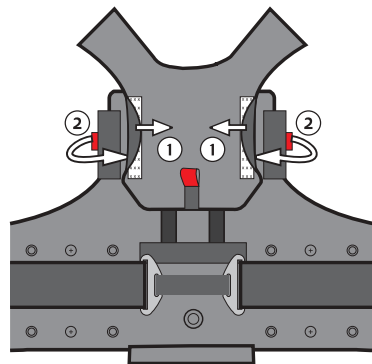
*Figure 10 - Self-adjusting Lumbar Support (SLS) System*

Note: The pictures shown below are the same pictures that are sewn on the backside of the backpad.

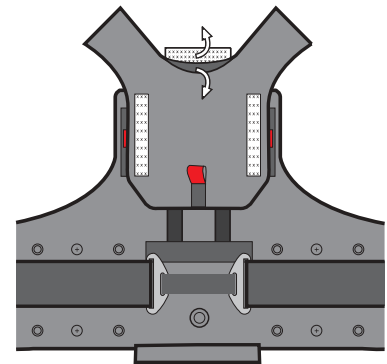
1. Lay your Raider so that the front of the BC is facing you. Unhook the waistband buckle, the waistband, chest strap and shoulder straps so you have open access to the back pad.
2. There are two red webbing tabs located on the top backside of the back pad. Pull the tabs out and flip the back pad so that the Sea Quest logo is face down.
3. To adjust the shoulder length, follow the sequence pictured below:



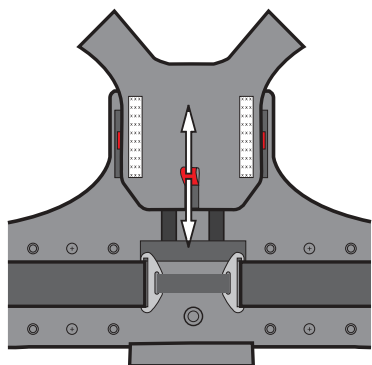
- a. Unhook the two retaining flaps located on each side of the harness by pulling on the two red tabs.



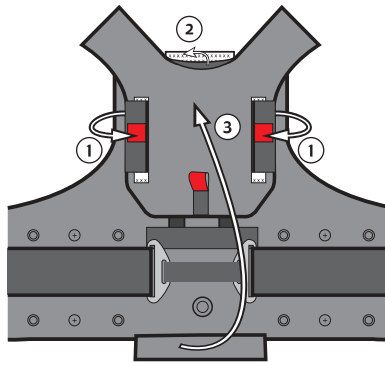
- b. Tuck the flaps underneath the harness.



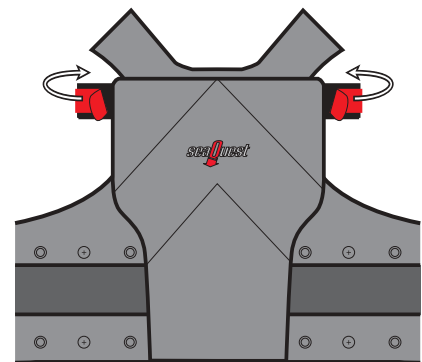
- c. On the back side (bladder side) of the harness is another hook & loop flap located at the top of the harness. Disconnect the flap and fold it down.



- d. To adjust the length of the shoulders, Pull up or down on the red webbing loop located at the bottom middle of the harness.



- e. Once adjusted, resecure the harness with the three hook & loop flaps. Flip the back pad back up into its original position.



- f. Secure the back pad by reattaching the hook & loop red tabs.

4. Try on the Raider with your exposure suit and check for proper shoulder strap positioning. Repeat this procedure until the shoulder length is adjusted perfectly.

## Raider Waistband Adjustment

1. Lay your Raider so that the front of the BC is facing you. Unhook the waistband buckle, the waistband, chest strap and shoulder straps so you have open access to the back pad.
2. There are two red webbing tabs located on the top backside of the back pad. Pull the tabs out and flip the back pad so that the Sea Quest logo is face down.
3. For each side of the waistband, detach the hook & loop and adjust to the desired position, then resecure the hook & loop (figure 11).
4. Resecure the backpad and try on the BC to make sure the waistband length is correct. Repeat this procedure until the proper length is achieved.



*Figure 11 - Adjusting the waistband length*

## Repositioning the Modular Weight Adjustment System

The Raider features a modular weight adjustment system that has three position settings: Toward the front, closer to the waistband (figure 12); towards the back, closer to the bladder (figure 13); or in between (figure 14).



*Figure 12 - Weight system set to the forward position*



*Figure 13 - Weight system set to the rear position*



*Figure 14 - Weight system set to the middle position*

Each weight module is attached to the harness with two stainless steel nut and bolt combinations. If desired, the weight module can easily be remounted onto one of the other two grommet attachment points by performing the following procedure:

1. Remove both weight pouches by pulling forward on the red handles. Disconnect the chest strap buckle, shoulder strap buckles, waist strap buckle, and waistband. Lay the BC on a table with the inside facing upward. Slide waistband from waistband guide. Unclip the 1" (2.54cm) bladder retainer buckles.
2. To remove the bolts which fasten each section to the rear panel, apply a medium size Phillips screwdriver to loosen and remove each bolt, while holding the nut secure with a 3/8" open end wrench or socket (figure 15).
3. Reposition each section behind the rear panel so that the grommet holes are aligned with the same adjustment points on either side (figure 16). Reinstall both bolts and nuts to securely fasten each section in place.
4. Reinstall the waistband and reconnect the shoulder buckles. Reinstall the weight pouches. Don the BC over your exposure suit to check for comfort and weight module position. Desired position is such that the weight pouch handles are easily grasped at your side or slightly forward.



**CAUTION: In the rear position, under certain conditions, you may not be able to reinstall the weight pouch underwater once removed. PLEASE CHECK YOUR ABILITY TO ACCESS YOUR WEIGHT POUCH AFTER YOU HAVE ADJUSTED THE SYSTEM.**



*Figure 15 - Remove both bolts using a Phillips screwdriver and 3/8" nutdriver or wrench*



*Figure 16 - Reposition weight module and align grommet holes.*

### **Optional Extension Kit**

There is an optional extension kit (figure 17) that allows you to extend the weight system an additional 3"/7.62cm forward. The part number for this kit is 427061. Installation instructions are included in the kit.



*Figure 17 - Optional extension kit (screwdrivers not included)*

## Adjusting the Chest Strap

The chest strap fits across your sternum and keeps the two shoulders from slipping to the sides, ensuring a comfortable and secure fit. Before donning the BC, loosen and disconnect the chest strap. After donning the BC, connect the chest strap and tighten by pulling on the free ends of the straps. The chest strap should feel comfortable across the chest; it should not be overtightened so that it feels restrictive. Once the shoulder straps are in position, adjust the shoulder strap length by pulling down on the adjustment D-rings until the BC fits comfortably.

The chest strap also has two vertical positions. To adjust, slide strap (up or down) across the small "bumps" (a) on the strap guides (b) and tighten by pulling the buckle end of the strap.

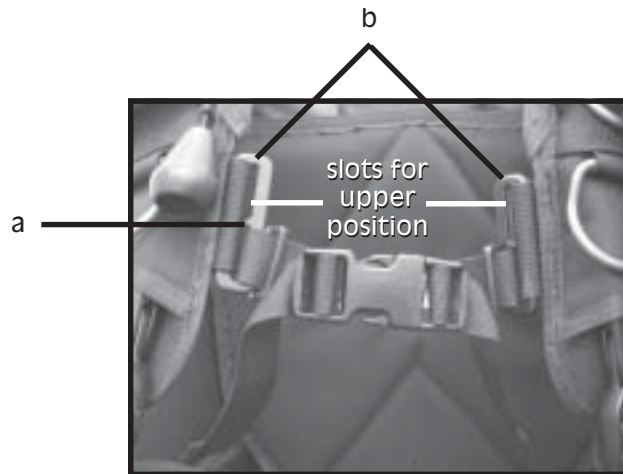


Figure 18 - Chest strap set to the lower position

## Adjustable Shoulder Metal D-rings

Your Raider BC is equipped with an adjustable shoulder D ring at each shoulder. To adjust, open the hook & loop inflator retainer to expose the cam lock buckle. Lift the buckle with your finger and slide the buckle up or down along the web strap to the desired position (figure 19). Once position is confirmed push cam lock buckle down until it locks. Confirm that the buckle is locked by pulling on the metal - D ring. Once completed, reattach the hook and loop inflator retainer.

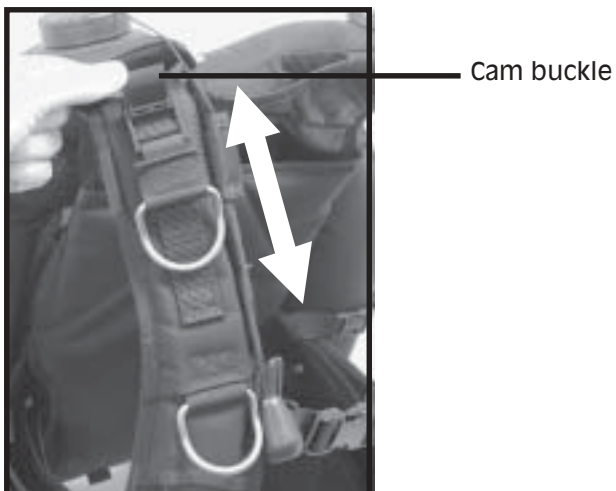


Figure 19 - Positioning the D-ring

## Carrying and Positioning Handle

Your Raider BC features a carrying handle, which may also be used as a BC positioning strap when mounting your Raider to your cylinder. This feature allows you to place the Raider in the exact same position each time you attach it to your cylinder(s).

### ***For positioning on a single cylinder***

Find the desired position of your Raider BC relative to the top of the tank. Once this is confirmed, adjust the carrying handle so that the rubber portion of the handle rests at the top of the tank (figure 20).

*Note: The handle will support the weight of the BC as well as the weight in the non-releasable weight pockets.*

### ***For positioning on twin cylinders using a twin manifold system***

Find the desired position of your Raider BC relative to the top of turn wheel on your manifold. Once this is confirmed, adjust the carrying handle so that the rubber portion of the handle rests at the top of the turn wheel.



*Figure 20 - Adjusting the carry handle*

## Weight Integration Features

The Raider features a built-in weight holster system which can be used to either supplement or replace a conventional weight belt. This unique and patented feature allows you to quickly remove and jettison either one or both weight pouches in the event of an emergency, thereby maintaining better control over your rate of ascent. These weight pouches can also be easily reloaded into their respective holsters while you are wearing the BC. This makes the Raider much easier to don than other BC's that must be fully loaded with weight prior to donning.

It is very important to read the following instructions, and become thoroughly familiar with the correct methods for installing and releasing weight before you dive with it.

### **Weight Holster System - Setup & Installation**

The weight holster system features two interchangeable weight pouches that can be filled with either block weights or "soft weight" (pouches containing lead shot), in increments of 2kgs/4 lbs. or less. The Raider weight pouches can each hold a maximum of 7.2 kg/16 lbs (14.5kg/32lbs total).

To fill the weight pouches, it is necessary to first remove them from their holsters. To remove them, firmly pull the red release handle toward the center of the waistband.

The weight pouches are specially pre-formed to fit the contour of your waist. Do not attempt to bend or straighten a pre-formed pouch.

Lift up each pouch's hook and loop flap, and lay it back over the handle. While holding the pouch fully open, insert the weight and then close the flap. When each pouch has been loaded with weight, firmly run your hand over the flaps to seal the hook and loop securely in place.

When installing weight, it is important to give consideration to balance, and to shifting of weight that may occur if the weight compartments inside each pouch are partially filled. In order to minimize weight shifting, you may make use of the single weight placement strap located inside the weight pouch (instructions included with the BC. Also take note of the proper weight position graphic sewn inside the weight pouch. Always ensure that the weight is divided equally between the two pouches for optimum balance in the water. You may otherwise experience a tendency to roll to one side if one pouch is more heavily loaded than the other. If the amount of weight that is needed does not completely fill each pouch, arrange the weight within each compartment according the illustration below (figure 21).

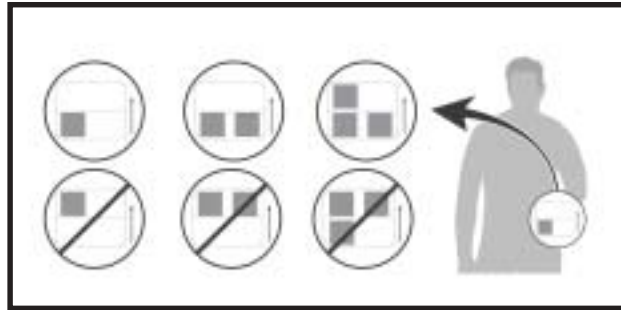


Figure 21 - Weight arrangement  
(Note: This diagram is also sewn on the inside flap of the weight pouch)

Experiment with different sizes of weight until you arrive at the configuration that best suits your personal preference and provides maximum comfort.

## Weight Pouch Installation

The weight pouches can be installed while you are wearing the BC. In fact, Aqua Lung/SeaQuest strongly recommends that you do not attempt to don your BC when it is fully loaded with weight and attached to a cylinder. You may otherwise risk injury, due to muscle strain or a temporary loss of balance.

To install either weight pouch, lift up on the front lower edge of the pocket lobe (figure 22a). With the pouch's smooth panel facing outward (figure 22b), slide the pouch into place until the pouch flap touches the front edge of the weight holster. With pocket lobe still lifted up, fold the retaining flap down over the loop and firmly run your hand over the flap to securely seal the hook and loop (figure 23a). Confirm that the hook on the back side of the pocket (figure 22b) is attached to the loop on the weight handle webbing. When the weight pouch is properly installed, it should look like figure 24.



**WARNING: Before every dive, it is important to make sure the hook and loop flap of each weight holster is securely closed, in order to prevent the weight pouch from falling out. Involuntary release of both weight pouches underwater can cause a sudden increase in buoyancy and rapid ascent, and could lead to serious injury or death due to arterial gas embolism, decompression sickness, or drowning.**

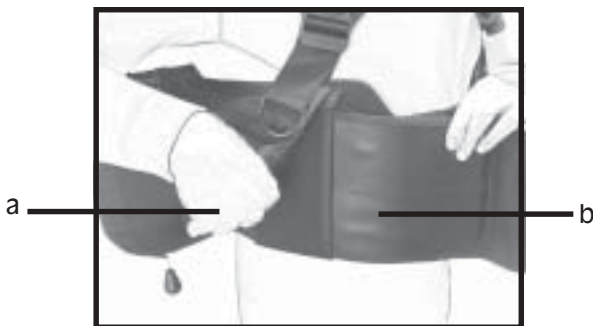


Figure 22- Lift up on pocket lobe and insert weight pouch

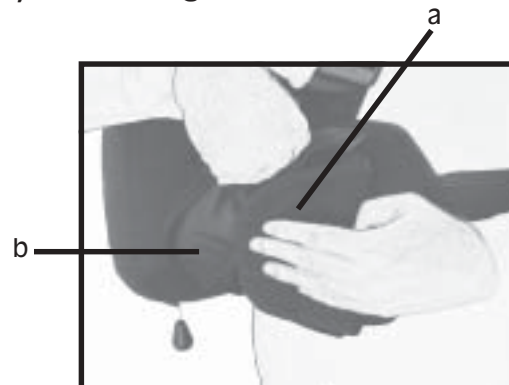


Figure 23 - Secure weight pouch flap

## Releasing the Weight Pouches

Unlike a weight belt, which has only one release mechanism, each weight pouch is connected to the BC independently of the other and must be released accordingly. This provides you with the option of being able to jettison one pouch at a time, and thereby maintain better control of your ascent rate in an emergency.

In the event that you need to jettison weight, simply pull the release handle of each pouch towards the center of the waistband (figure 24). When the pouch is completely disengaged from its holster, hold it out and away from your body before dropping it.

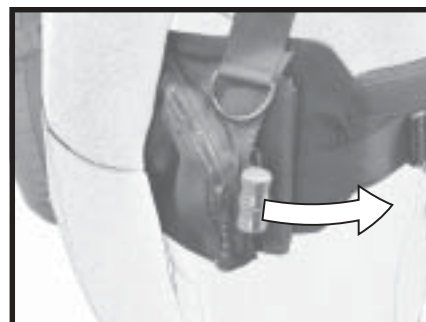


Figure 24 - Properly installed weight pouch



**WARNING: Ensure that your weight pouches are not obstructed by any straps, lines, etc. DO NOT add weight to the BC's accessory pockets, as this may interfere with the removal of the pouches in an emergency. Failure to ditch weight in an emergency may lead to serious injury or death due to drowning.**



**WARNING: To avoid injuring other divers, always look below you before dropping weight.**

## Non-Releasable Weight

To supplement the releasable weight you carry in the weight pouches or on your weight belt, the Raider is also designed to carry up to 10lbs/4.5kg of non-releasable weight in two fixed pockets (maximum 5lbs./2.2kg. each). These are located on the rear of the BC and are mounted around a single cylinder with an adjustable / buckled webbing band (figure 25).

*Note: Non-releasable pockets should be removed for use with twin cylinders.*

To install the weight, disconnect the buckle on the pocket flap. Insert the weight and reconnect the buckle.

This weight is non-releasable! It must not be used as your primary source of ballast. After filling the non-releasable pockets with weight, it is extremely important to check your buoyancy in the water while wearing the BC attached to a fully charged cylinder. While standing in chest deep water, deflate the BC completely and check to ensure that you can easily achieve positive buoyancy by jettisoning your releasable weight.



Figure 25 - Non-releasable weight pouches



**WARNING: The non-releasable pockets are intended strictly for containing non-release weight, used in addition to releasable weight. Do not fill either compartment with weight unless you are certain you can achieve positive buoyancy at depth by releasing your weight pouches or weight belt while your BC is completely deflated.**

## Power Inflator Operation

### Inflation Methods

#### Oral Inflation

To orally inflate your BC, place your lips on the oral inflator mouthpiece (figure 26b) and exhale a small amount of air into the mouthpiece. This will purge any water that may still be in the housing. While continuing to exhale into the mouthpiece, depress the oral inflator button (26a) to inflate the BC. Immediately after exhaling, release the oral inflator button to prevent air from escaping.

#### Power Inflation

Make sure the low pressure inflator hose is properly connect (see page 2). To inflate your BC with low pressure air, depress the power inflator button (26c). Do not hold the inflator button depressed continuously underwater, as this could cause you to become excessively buoyant. Instead, depress the button in short bursts until you become neutrally buoyant.



**WARNING: Do not rely on the power inflator as the only means to inflate your BC. It is important to practice the technique for orally inflating your BC so that you are prepared for any type of malfunction or out of air situation that could render the power inflator inoperable. You may otherwise be unable to achieve positive buoyancy in an emergency, which could lead to serious injury or death.**

### Deflation Methods

Throughout the course of a dive, it will be necessary to release air from the BC using one of the three methods described in the following instructions. Each method uses a valve that is in a different location. The method you choose at any time may depend on whether you are making your initial descent feet-first, head-first, or maintaining neutral buoyancy underwater. Always remember to utilize the valve that is at the highest point on the bladder, depending on your position in the water.



**WARNING: Whenever you ascend, whether intentionally or accidentally, you must simultaneously vent air from the BC as needed to maintain buoyancy control. If air is allowed to expand inside the BC unchecked, you may experience a rapid, uncontrolled ascent, which could lead to serious injury or death if not immediately corrected, due to arterial gas embolism, decompression sickness, or drowning. To regain buoyancy control during an uncontrolled ascent, you must continuously exhaust air from the BC until you have stopped ascending.**



Figure 26 - Powerline Inflator

### ***Deflation via the Oral Inflator***

Air can be vented through the inflator by holding the inflator mouthpiece (26b) above your head and depressing the oral inflator button (26a). This method can be used for making an initial feet-first descent, but is not very useful while you are in a facedown swimming position.

*NOTE: Holding the oral inflator button depressed while the BC is deflated may allow water and debris to enter the air bladder.*

### ***Deflation via the Dual Exhaust Valve***

Inside the power inflator's corrugated hose is a cable that attaches the power inflator to the dual valve at the top of the airway assembly (figure 26d). You can vent air from the BC by gently tugging straight down on the power inflator.

This exhaust valve provides an effective and convenient way to vent air from the BC while in either an upright or facedown swimming position. It also functions as an overpressure relief (OPR) valve that will open automatically to relieve air pressure inside the bladder when it reaches approximately 2.5 psi over ambient. This feature is very critical for preventing stress or damage to the BC's bladder.

### ***Upper right shoulder and lower dump valves/over pressure relief (OPR) valves***

In addition to the overpressure relief valve that is integrated into the dual valve, the Raider also has three redundant overpressure relief valves that are located on the right shoulder (figure 27) and on the lower rear portions of the air bladder (figure 28). The primary function of these valves is to relieve excess air pressure inside the bladder, but it can also be opened manually by pulling on the pull-ball and cord assembly to quickly dump air.

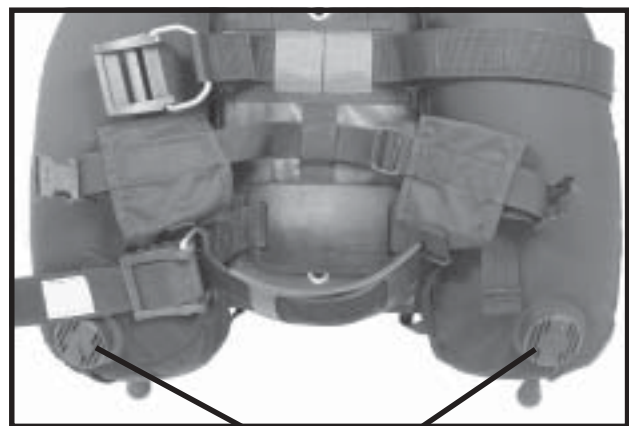
These valves are most useful for emptying the bladder of air as quickly as possible while making a head-first descent, or swimming in a facedown position.

Right shoulder dump valve



Figure 27

Figure 28



Lower Dump Valves



**CAUTION: The proper function of either overpressure relief valve is vital to prevent damage to the BC bladder. Unauthorized service or tampering may render these valves inoperable, and could cause the bladder to leak or burst.**

## Pre-Dive Inspection

Before each use, the BC must be given a thorough visual inspection and functional test. NEVER dive with a BC that shows signs of damage to its bladder or valves until it has received a complete inspection and service from an authorized Aqua Lung/SeaQuest dealer.

### Inspection Checklist:

1. Connect the power inflator to a clean air source, via the LP quick disconnect hose. Depress and release the inflator button intermittently to ensure that the airflow is unobstructed, and that the airflow stops completely when the button is released.
2. Manually operate the lower overpressure relief (OPR) valves by pulling on the attached ball and cord to release air from inside the BC, and then fully inflate the BC until the OPR valves open. Examine the operation of the OPR valves by repeatedly inflating the BC to ensure that they open to relieve excess pressure, yet close immediately afterward to allow the bladder to remain taut and fully inflated.
3. Check the function of the oral inflator button, dual exhaust valve, and overpressure relief/manual dump valve (see Deflation Methods) to ensure a rapid and unobstructed exhaust from each valve. Fully inflate the BC once again, and disconnect the Power Inflator from the air source to listen closely for any leakage.



**CAUTION: If any leakage can be heard, or if the bladder begins to deflate within 5-10 minutes, DO NOT attempt to use the BC until it has received service from an authorized Aqua Lung/SeaQuest dealer..**

4. Make a final check of the cylinder band's tension to ensure that it has not loosened due to stretching. Retighten if necessary.
5. Before entering the water, check both weight modules pouches to ensure that they are correctly fastened to the BC. (See Setup & Installation.)

## Post Dive Care & Maintenance

The following preventative maintenance must be performed to extend the life of the BC:

1. Avoid prolonged exposure to direct sunlight and extreme heat. Nylon fabric can quickly fade when exposed to the sun's ultraviolet rays, and extreme heat may damage the welded seams of the BC's bladder.
2. Avoid repeated or prolonged use in heavily chlorinated water, which can cause the BC fabric to discolor and decay prematurely.
3. Do not allow the BC to chafe against any sharp objects or rough surfaces that could abrade or puncture the bladder. Do not set or drop heavy objects such as block weights on the BC.
4. Avoid any contact with oil, gasoline, aerosols, or chemical solvents.

To preserve the life of the bladder, thoroughly rinse it inside and out with fresh water after every day of use, using the following procedure:

1. Pressurize the power inflator with low pressure air via the LP hose.
2. Using a garden hose, direct water through the oral inflator to flush the interior of the bladder, and then thoroughly rinse the exterior of the BC.

*NOTE: Before rinsing, ensure that the power inflator is pressurized with air. This will prevent debris and contaminants from entering the valve mechanism if the inflator button is accidentally depressed.*

3. Completely drain the bladder of water, either through the oral inflator or through the OPR valve, being careful to avoid operating the inflator.

- Inflate the BC, and allow it to dry inside and out. Then store it partially inflated, away from direct sunlight, and in a clean, dry area. Do not store the BC in an enclosed space where temperatures may fall below 0°F (-18°C) or rise above 120°F (49°C).



**CAUTION: DO NOT attempt to perform any disassembly or service of your BC. Service requiring disassembly must only be performed by a factory trained Aqua Lung/SeaQuest technician.**

## Inspection & Service

- It cannot be assumed that the BC 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, as well as bladder seam degradation.
- The Raider BC should be inspected on an annual basis at an authorized Aqua Lung/SeaQuest dealer.
- Standard overhaul replacement parts for the Powerline Inflator should be changed annually by a trained technician at an authorized Aqua Lung/SeaQuest dealer.

## Optional Accessory Kits

### 22kg / 50 lbs. Redundant bladder kit (part no. 427060)

This is a **BACK UP** bladder designed to be used in case the primary bladder loses the ability to hold air; it is not designed to provide additional buoyancy. The kit includes a polyurethane bladder, Powerline inflator, LP inflator hose, caps, and gasket (figure 29). The Powerline Inflator that comes with the kit is attached to the right shoulder (figure 30). Possible uses may include extended range cave diving or wreck diving. Detailed installation instructions are included in the kit.



*Figure 29 - Redundant bladder kit  
(includes LP hose not pictured)*



*Figure 30 - Raider with  
redundant bladder installed  
(notice dual power inflators)*

### Replacement bladder (part no. 427058)

The Raider has a double bladder design, which means there is an air bladder inside of an outer nylon shell. If your bladder ever needs to be replaced, this can easily be done by unscrewing all the hardware from the bladder, unzipping the nylon shell, and removing the polyurethane air bladder. Detailed instructions come with the kit.

*Figure 31 - Replacement bladder*



### Optional knife

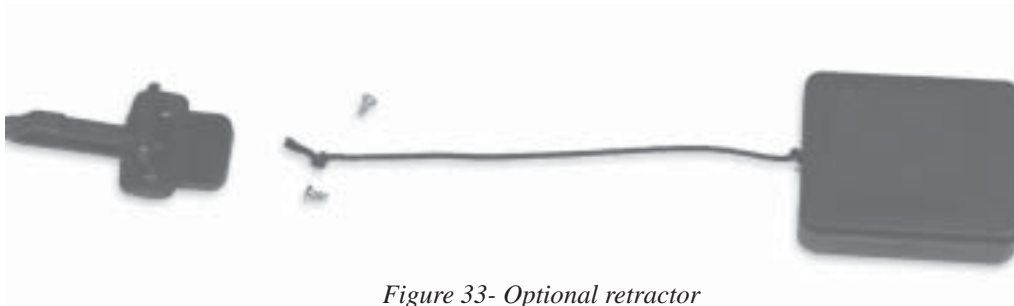
Your Raider BC has been fitted with 3 grommet mounting points for use with a dive knife. This feature allows for you to position your dive knife several different ways. Please see your mounting instructions with your Squeeze lock or Razor back knives.

*Figure 32 - Optional knife attachment*



### Optional retractor

Your Raider BC has been fitted with two retractor mounting points (left and right side). Please review your mounting instructions with your retractor.



*Figure 33- Optional retractor*

---

## Optional crotch strap kit (part no. 427038)

The Raider has three attachment points (webbing loops) for an adjustable crotch strap. The rear attachment point is located below the back pad. The two front attachment points are located on the waistband.

## Warranty

SeaQuest buoyancy compensators and power inflators are warranted to be free of defects in materials and/or workmanship to the original owner for the life of the product.

This warranty originates from the date of consumer purchase. Keep a copy of the original purchase receipt with this manual. The warranty is limited and subject to the restrictions given below.

The warranty is void if your buoyancy compensator and power inflator was purchased from anyone other than an authorized Aqua Lung/SeaQuest retailer.

Your SeaQuest buoyancy compensator and power inflator must be inspected and serviced annually, or more frequently with heavy use, by a qualified Aqua Lung/SeaQuest repair facility or by Aqua Lung America, Inc. The annual servicing shall be performed within 6 weeks before or after the anniversary date of your purchase or last servicing. Failure to do so will void the warranty.

The annual inspection/service charge will be paid by the owner of the product. The fee may include cost of shipping, labor and replacement parts not covered under the warranty, and may vary with different service facilities.

The warranty does not cover charges for labor or damage to the product(s) resulting from improper use, improper maintenance, normal wear and tear, neglect of care, alteration, or unauthorized repair. This warranty does not cover the low pressure hose. This warranty will automatically be void if proper preventative maintenance procedures have not been followed as outlined in the manual.

This warranty will cover complete damages to the product in a prorated fashion, taking into account the past usage of the product before occurrence of the product fault.



**RAIDER**  
Buoyancy Compensator

OWNER'S MANUAL



**seaQuest**<sup>®</sup>

2340 Cousteau Court  
Vista, California 92083