

instruction manual  
apollo 4.0 ex dry suit  
apollo 4.0 ex dry suit **Ultra**

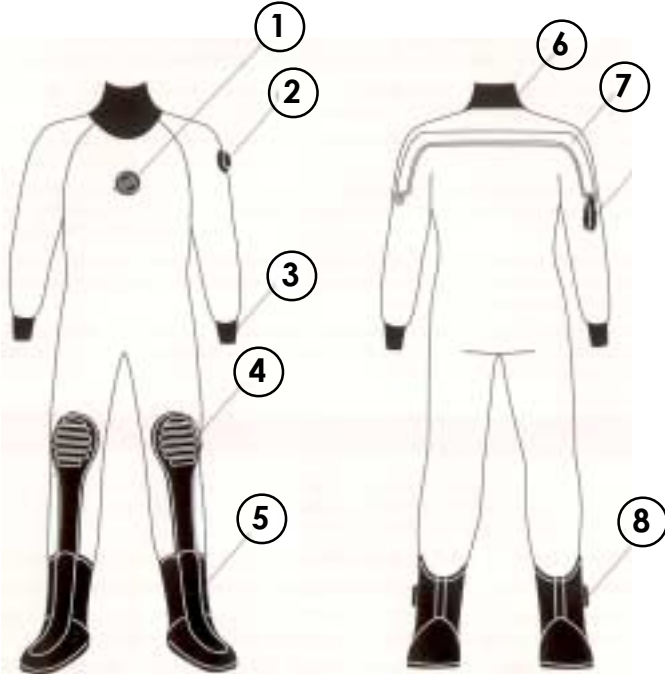


apollo

## Introduction

Congratulations on your Apollo dry suit purchase.

The Apollo dry suit has been crafted using the finest materials, hardware, and state-of-the-art technology. The suit's flexible material gives a stylish look and incorporates painstaking seam sealing to prevent leakage. Our patented valve system is the best available and will help make every dive safe, easy, and more comfortable.



- Read the full instruction manual **including insert** carefully until you fully understand it's contents.
- Do not use this product if you have not obtained a C-Card (see DANGER for details).
- The valve system is designed exclusively for use in diving. Do not use it for any other purpose.
- Keep this essential reference item in a safe and accessible place.
- Ask your local dive professional for advice on any item you are unsure about.

Items with the following headings describe scuba diving techniques and how to handle diving equipment. These sections must be completely understood, so be sure to read them with special care.

**! DANGER** Failure to obey the instructions under this heading may lead to accidents which result in serious injury or death

**! WARNING** Failure to obey the instructions under this heading may lead indirectly to accidents which result in serious injury, death, and /or serious damage to equipment

**! CAUTION** Failure to obey the instructions under this heading may lead to minor accident and/or minor damage to equipment.

## Dry Suit Parts

**1 Inlet Valve** The inlet valve is an important device that allows you to add a layer of air to suit. A layer of air between your body and the suit is essential for optimum warmth and comfort.

**2 Super EX Shoulder Valve** Shoulder valve provides the option of manual or automatic exhaust. This device is important for maintaining proper air pressure inside the drysuit. There are two ways to set air pressure when using the super ex valve. You can select auto or manual setting on the dial. Under auto setting, when air pressure inside the suit rises to a certain level, excess air is discharged from the suit automatically. When set at manual, the diver can make the decision whether to adjust air pressure with the push of a button. However, even when set for manual, if the pressure inside suit rises excessively, air will be discharged automatically for the diver's safety. The unique mechanism of the super ex valve allows for exceedingly smooth air exhaust. It is also designed to prevent water leakage into the suit. Designed for in field cleaning and basic maintenance by owner[see insert -side A].

**3 Wrist Latex Seals** Each seal has molded rings to aid in proper trimming. Trim slowly and carefully. Take care not to over cut the seal. Excessive trimming will cause the seal not to work. Gradually trim the seal down until it is very snug but not hindering proper circulation. For optimum results allow seals to stretch prior to final trim. Gently pull seal over a small soup can or similar width object and leave overnight.

**4 Knee Pads** are coated with latex and sewn onto suit rather than into for increased protection and integrity.

**5 5 mm boots with tennis shoe sole** The ex drysuit includes a full 5 mm boot to ensure maximum warmth and comfort. The tennis shoe sole helps protect your feet from sand, rocks, and debris.

**6 Latex Neck Seals** The neck seal also has molded rings to aid in proper trimming. It is best to trim slowly and carefully. Take care not to trim your suit too far down. Excessive trimming will cause the seal not to work. Gradually trim the seal down until very snug but not hindering circulation. For optimum results allow seal to stretch prior to final trim. Gently pull seal over a small coffee can or similar width object; leave overnight.

**7 YKK zipper with pull** **! CAUTION**

- Do not use in water temperatures below 39° F or -5° C as the excessive cold will cause the PVC to stiffen and become misshapen. As a result the waterproofing capability will be diminished.
- Before opening and closing the zipper, use water or a brush to completely remove any substances (sand, mud, etc) adhering to zippers interior and exterior.
- The zipper pull should be held in a horizontal position and moved in the direction appropriate to open or close. Operating the zipper pull form vertical position may result in damage or zipper not closing properly, diminishing the effectiveness of seal and will damage the zipper itself.
- Wax pencil is provided to maintain zipper track

## Dry Suit Parts (continued)

- 8 EX foot valves** The foot valve like the super ex shoulder valve is important for maintaining the proper air pressure inside the suit. Air can collect in the boot area which can cause feet to float up or possibly cause diver to become accidentally inverted. This problem is difficult to correct in conventional suits; even for the seasoned dry suit diver. To combat this many divers will release more air than necessary from upper exhaust valves and/or wear ankle weights. The Apollo dry suit includes foot valves to automatically release air as needed. Cumbersome ankle weights are no longer needed and the diver has far better control over body positioning. Designed for in field cleaning and basic maintenance by owner [see insert -side A].

Additional features of the ex drysuit: Microcell neoprene for maximum flexibility, comfort, and warmth • seams are blind stitched and glued for double protection against leakage • integrated suspenders increase comfort during use as well as between dives • extended sleeves to fully cover wrist area and add warmth • drainage holes in neck area neoprene to allow drainage

4.0 EX drysuit **Ultra**: includes all the great features noted above plus a trio of key accessories to further customize the fit and comfort of your suit.



Every body is different. Fluctuations in body weight as well as body positioning can cause even the best suit seals to leak. Bio-seals for the wrist and neck ensure a leak free fit regardless of the situation. The patented bio-seal is very flexible and adheres extremely well to skin as well as latex and neoprene seals. The material is latex free which helps divers that are allergic or prone to neck rash.

Clean bio-seals with warm fresh water. Allow to air dry completely before storing in air tight bottle.

**! WARNING** Skin and bio-seal oils can cause early deterioration of your suits latex seals. Rinse your latex seals with fresh water after each days use to minimize this effect.

Ultra package also includes our save-a-neck hangar with molded conical neck to increase the life of seal and suit.

**! DANGER** Do not use a damaged or improperly assembled dry suit. Check material, suit, boots, and valves for any sign of damage or improper assembly before each dive. Failure to do so may result in leaking and bodily injury.

## PUTTING ON YOUR DRYSUIT

**Step 1** Completely open the zipper and put the suit on feet first. It is helpful to be seated at this point. Make sure that your body is centered between the suspender straps.

**Step 2** Grasp sides of suit and pull up to your waist. Verify that material of legs has been pulled up rather than just stretched into position. Take care that your undergarment does not bunch up while pulling the suit up to your waist.

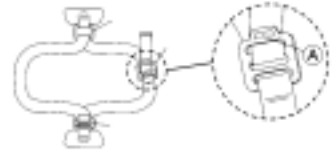
## Putting on your drysuit (continued)

Microcell neoprene material is extremely versatile and you will find it provides sufficient warmth for some milder environments. We strongly advise the use of appropriate undergarments when using suit.



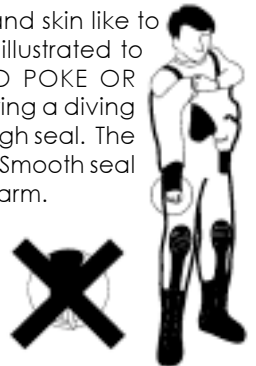
Undergarments (not included) increase insulation and are produced in a variety of style, material, and weight. It is important to select a material with properties to wick away perspiration that may occur during use. Foot straps are also helpful. An undergarment should be comfortable and suitable for your current diving environment.

**Step 3** Place the suspender with buckle over shoulder and adjust to fit. The D-ring on back of suit provides additional adjustment. Just lift up buckle section A and pull on the belt.



**Step 4** Pull the suit up to your chest and slide one arm through. The latex wrist seal is smooth and skin like to increase effectiveness. Cup hands as illustrated to avoid damage. TAKE CARE NOT TO POKE OR SCRATCH WITH NAILS OR JEWELRY. Applying a diving powder can aid with slipping hand through seal. The latex seal will adhere closely to your skin. Smooth seal over your wrist joint. Repeat with other arm.

**Ultra** When using the optional wrist bio-seals; gently pull latex back and place a bio-seal on each wrist. Lift latex slightly and position over bio-seal as if it were your skin.



**Step 5** Gently grasp sides of neck seal taking care not damage with nails. Pull latex seal outward and then quickly over your head. Remove any hair that may become caught under the latex seal. Smooth seal over your neck. **Ultra** When using the optional neck bio-seal; pull latex back and place bio-seal on neck. Lift latex slightly and position over bio-seal as if it were your skin. Clean all bio-seals and latex suit seals after each dive day to extend product life.



**Step 6** Stretch out your arms horizontally and have a dive buddy pull the zipper completely closed.

TAKE CARE NOT TO GET HAIR OR INNER WEAR CAUGHT IN TRACK. **NEVER ATTEMPT TO CLOSE ZIPPER YOURSELF. Any caught inner wear or hair should be carefully remove before closing zipper.**

**Step 7** Always confirm that the portion of valve attached to the suit is not loose before entering the water. After donning suit always double check that valves are operating properly before entering water.

To remove dry-suit, reverse the steps above.

## Check operation of valves before diving!

Valves operation checks should be performed with dry suit on and zipper closed.

## Connecting LP Hose to air source

Connect the dry suit LP hose (included) to the regulators 1st stage LP port. Verify that no dirt, sand, or debris is on o-ring during installation.



**⚠ WARNING**  
Improperly connecting the LP hose to the 1st stage LP port could result in a serious accident to the port itself and / or the hose port screw.

## Chest Inlet Valve

**Step 1** Connect the Inlet valve

Hold inlet valve to steady for hose attachment

1. Pull back the LP hose ring as illustrated
2. Slide LP hose onto valve and release ring to establish connection. DO NOT ALLOW IT TO BECOME ENTANGLED WITH OTHER HOSES.

**Step 2** Check operation before entering water

1. Slide the inlet cap towards hose. Verify that this action results in air being supplied to your dry suit. Also make sure that when cap is released the air ceases to flow into suit.

### ⚠ CAUTION

If a descent is continued without supply of air from the inlet valve, the outside pressure of the suit will become higher than internal pressure, resulting in squeeze conditions.

1. Slide back LP Hose Ring



2. Release LP Hose Ring



## Shoulder Exhaust Valve

### ⚠ CAUTION

The shoulder valve is structured to prevent water leakage as a result of squeeze conditions. However, you should not continue to use under extreme squeeze conditions as it may negatively effect the valves ability to operate properly.

Always check the operation of exhaust valves prior to entering water. A minimal amount of air is needed to test shoulder valve. At this point you should still have some air in your suit. Add air as needed to properly test exhaust valves.

1. Use the dial to select automatic exhaust setting.
2. Bend down or otherwise move in a manner that raises the suits internal pressure. You should hear the release (discharge) of air from suit.
3. Use the dial to select manual exhaust. Push center button as illustrated.
4. While pressing button; move in a manner that raises suits internal pressure. You should hear the discharge of air .

**PUSH TO OPEN (AIR IN)**



**RELEASE TO CLOSE (STOP AIRFLOW)**



**Auto Exhaust**

**Manual Exhaust**



Discharge of air in suit

## Foot Exhaust Valves

1. Verify that parts 1-3 are properly installed in base (located in ankle of boot) prior to entering the water.
2. Turn Lock cap clockwise until you hear it click into place.

### ⚠ CAUTION

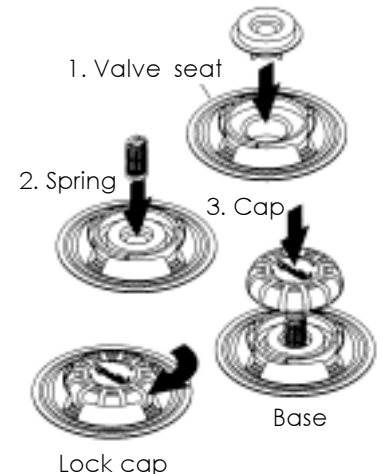
If valve is not operating properly then you will need to work air up to shoulder exhaust to discharge. Attention should be paid to body position to avoid accidental inversion.

**Foot Valve Deactivation** Some divers may prefer not to use foot valves. Simply remove cap and place a \*rubber stopper over spring. Replace cap and lock back in place.

**⚠ CAUTION** Pay attention to body positioning. Valves will not release air when deactivated.

**⚠ DANGER** Attempting to adjust or remove stopper while in water will cause valve to leak.

\* Apollo HP Diaphragm (1st stage regulator part) works great!

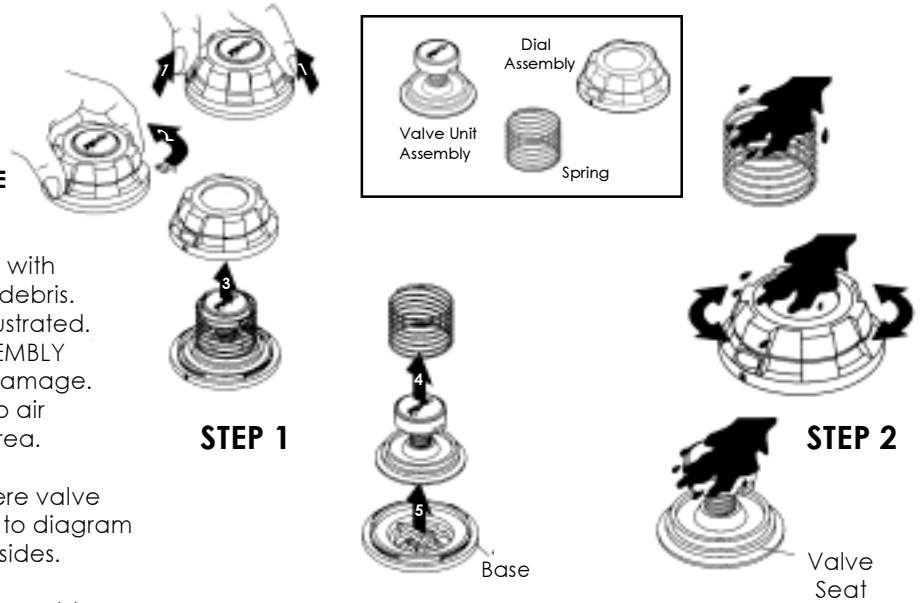


**Valve use and maintenance** **CAUTION** Before diving, disassemble the shoulder and foot valves. Verify that there is no dirt, salt, sand, or other debris present. Wash the valve(s) if necessary. Use of valve with debris present may lead to improper operation and / or leakage. Apollo will not be held responsible for any damage or injury caused by improper owner or shop maintenance.

## Super EX Shoulder Valve

### Step 1 disassembly

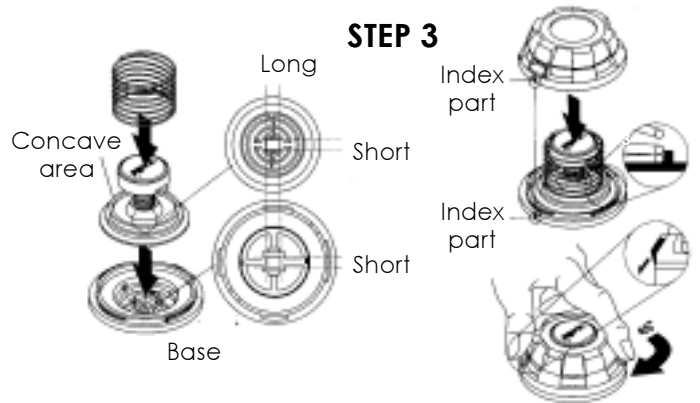
1. Pull up on lock buttons, as illustrated.
2. Turn dial assembly counterclockwise by 45°.
3. Remove the spring.
5. Remove the valve assembly. **DO NOT REMOVE THE BASE FROM SUIT!**



- ### Step 2 wash and clean
- Rinse each of the parts with water to remove any dirt, salt, sand, or other debris. Rinse cover assembly while moving dial as illustrated.
- DO NOT PULL THE VALVE SEAT OUT OF THE ASSEMBLY. Check to confirm that there are no holes or damage.
  - After rinsing DO NOT WIPE THE PARTS. Leave to air dry out of sunlight in a shady well ventilated area.

### Step 3 reassembly

1. Attach valve assembly to base. The area where valve assembly attaches to base is rectangular. Refer to diagram to insure accurate placement of long and short sides.
2. Slide auto spring onto valve as illustrated.
3. Line up the index parts of the base and dial assembly. It is not possible to reassemble if index part is not properly placed. Make sure that bottom of the spring is properly set in the concave area of valve unit and place the dial assembly over the spring.
4. Push the dial assembly firmly down onto the base. Make sure there are no gaps between the two. Then, hold the base still while turning the dial assembly clockwise by 45°.
5. Continue to turn until you hear assembly click into place.
5. Make sure the valve lock buttons are down and secured.



### CAUTION

- If ex valve locks are not secured in down position then dial may detach and cause severe leaking and sinking.
- Make sure foot valve cap is secure. A loose cap may detach and cause severe leaking and sinking.
- Do not apply silicone or rust proofing agents to valve parts. This will inhibit debris build-up and cause leakage.

## Foot Valve

### Step 1 disassembly

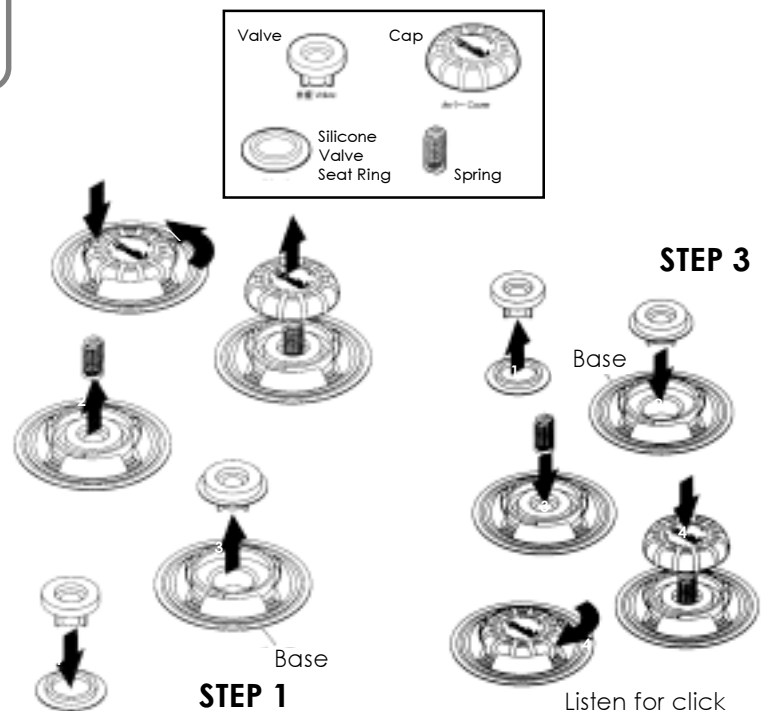
1. Turn the cover counterclockwise while pushing down on the cover lock spring tab.
2. Remove the release spring
3. Remove the valve seat assembly
4. Remove the valve seat from silicone valve seat ring. DO NOT PULL ON THE SILICONE VALVE SEAT RING. CHECK TO MAKE SURE THERE ARE NOT HOLES ARE DAMAGE TO THE ASSEMBLY. DO NOT REMOVE THE BASE FROM THE BOOT.

### Step 2 wash and dry valve (not pictured)

Rinse each disassembled part with water to remove any salt, sand, threadlike substances, and debris. DO NOT WIPE PARTS. Leave to air dry in shady well ventilated area.

### Step 3 reassembly

1. Insert the valve seat into the silicone valve seat ring
2. Insert the silicone valve seat ring and valve seat together as one unit into the base.
3. Insert spring into the central opening.
4. Turn the cover clockwise until it clicks into place.



Insert - Side A

Listen for click

## Considerations & Cautions when diving - Read completely before using suit.

### **⚠ DANGER**

- Absolutely do not use suit for buoyancy control (BC), as it is extremely dangerous.
- In cases where air supply controls cease to function properly, for example in a free flow situation, either disconnect the LP hose from suits inlet valve or simply pull open your neck/wrist seals to discharge excess air. To help prevent this type of emergency situation, be sure to take sufficient care of the suit after use and take the suit and valves to your local dealer for annual service.

### **⚠ WARNING**

- 1. Direct skin contact with suit may result in skin damage for those with allergies caused by chafing, static electricity, and rubbing against fibrous materials such as rubber and synthetic materials. Should this occur, remove suit immediately.
- 2. Solvents used in the production of the drysuit may cause skin damage and breathing problems. In case of breathing problems, remove suit immediately and move to an area that allows you to breathe fresh air.
- In the event of adverse reaction (WARNINGS 1 & 2 above). Consult with a medical doctor and follow his/her recommendations.
- Do not use additional heat producing equipment, such as body warmers or disposable body warmers as this will result in burns.
- When ascending to surface, position body with shoulders facing up to allow optimum function relief valves. Release additional air from the suit as needed to maintain a suitable speed. Take special care in shallower water as ascent speed will increase at a quicker pace as depth decreases.

### **⚠ CAUTION**

- As you submerge you will feel a squeezing sensation caused by increased water pressure. Relieve squeeze by adding a layer of air to the suit with the inlet valve.
- Do not dive into water with exhaust on manual setting and suit full of air. You will be unable to bend arms for access the exhaust valve.
- Do not dive into the water with air in the suit as the sudden pressure may cause the zipper to open up and is extremely dangerous.

Apollo Sports shall bear no responsibility regarding accident, injury, leaking, breakage, or damage incurred during diving due to failure to observe all recommendations in this six page manual [including insert].

## CARE AND STORAGE AFTER USE

Before you have opened zipper and removed suit for day; the entire suit and all components should be thoroughly rinsed. Timely removal of any salt, sand, dirt, or similar debris is essential to the performance and life of your suit.

### Valve / Zipper/Drying

Step 1 You should still be wearing suit with zipper closed at this point. Lock the shoulder valve on manual. Fill suit with air (using inlet valve) while simultaneously discharging any air and residual water in the valve.

Step 2 Once you have removed suit you should remove and thoroughly rinse the shoulder and foot valves

Step 3 Wash the internal and external areas of zipper with tap water and remove any debris with a nylon bristle type brush or similar implement. Using the paraffin wax crayon (provided) carefully slide it the zipper track twice paying special attention to the circled area as illustrated.

Step 4 Hang suit with zipper open to dry. Take care to use a proper hanger as described in Long Term Storage (1).

### Short Term Storage

Allow entire suit to dry thoroughly. Prepare to fold suit with the waterproof zipper open. Do not place anything of weight on top of suit during storage. Follow illustration for proper folding method.

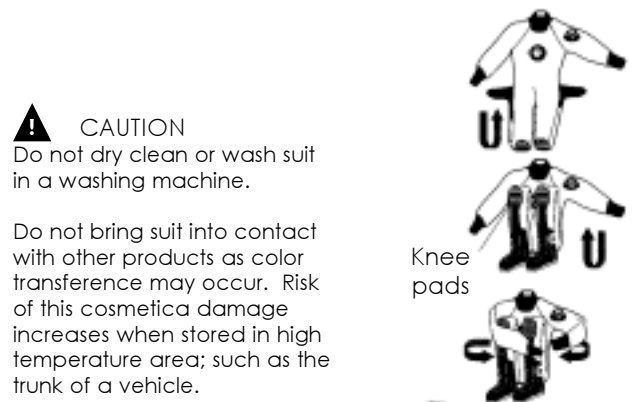
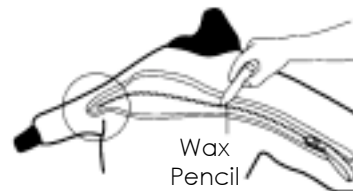
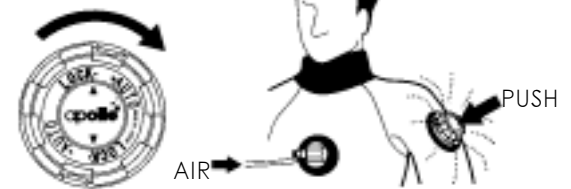
1. Fold back boots then pull up so knee pads touch chest.
2. Fold arms around front as if clasping knee area.
3. Valves should remain attached during storage.
4. Store in a shady well ventilated area out of sunlight.
5. Take care not to allow any other equipment to be placed on top of the dry suit during storage or transport.

### Long Term Storage

Allow entire suit to dry thoroughly. Hang with zipper open.

1. Hanger chosen for this purpose should provide ample support of shoulders and zipper to avoid damage to material or zipper. Apollo's Save-A-Neck Hangar is best.
2. Boots should touch the floor to avoid excessive drag.
3. Valves should remain attached during storage.
4. Store in a shady well ventilated area out of sunlight.

Manual Exhaust



**⚠ CAUTION**  
Do not dry clean or wash suit in a washing machine.

Do not bring suit into contact with other products as color transference may occur. Risk of this cosmetic damage increases when stored in high temperature area; such as the trunk of a vehicle.