



# **BioDry Suit**

**owner's  
guide**



Pay special attention to items marked with this **Warning** symbol.

**⚠ WARNING: DO NOT use the BioDry Suit unless, or until, you have received proper training in Dry Suit diving and have thoroughly practiced all skills, including emergency skills, in a controlled environment, while under the direct supervision of a diving instructor certified by an industry recognized training agency to instruct divers in the proper use of Dry Suits.**

**Although handling of Emergency Situations is extremely important to a dry suit diver, it is not presented within this product manual.**

**The content of this manual is not intended as 'diver training' material, or as a substitute for the specialized training required for diving with a Dry Suit.**

**Oceanic advocates proper training for dry suit diving 'prior to using' a BioDry Suit.**

**Read And Understand This Owner's Guide Thoroughly Before Using the BioDry Suit.**

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## SPECIFICATIONS

- Shell material - BioFlex®
- Seat/Thigh Pad material - Cordura®
- Wrist/Ankle Protector material - Cordura®
- Neck/Wrist Seal material - Dipped Latex
- Boot material - Vulcanized Rubber, Twill Backing, Deck Sole
- Zipper - heavy duty gas/water tight
- Exhaust Valve Overpressure Relief setting - 20 Mbar

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## TRADEMARK NOTICE

Oceanic, the Oceanic logo, BioDry, the BioDry logo, and BioFlex are all registered and unregistered trademarks of Oceanic. All rights are reserved. Cordura is a registered trademark of Dupont.

## PATENT NOTICE

U.S. Patents have been issued, or applied for, to protect the following design features: BioFlex (U.S. Patent No. 5,403,123 and EURO Patent No. 0581524A1), and Gas Impermeable Laminate (U.S. Patent No. 5,693,412).

## LIMITED WARRANTY

Oceanic guarantees, to the original purchaser only, that the BioDry Suit will be free of defects in materials and/or craftsmanship under normal recreational scuba use for Lifetime (except Neck and Wrist Seals\*, and Zipper\*\*), provided proper care and maintenance are performed as described within the instructional materials. Should your BioDry Suit prove to be defective for any reason (other than those listed in the limitations section below), it will be repaired or replaced (at Oceanic's discretion) free of charge excluding shipping and handling charges.

\* Neck and Wrist Seals are covered for 6 months from date of purchase

\*\* Zippers are covered for 90 days from date of purchase

This Warranty will be considered void if the Registration Card is not filled out completely at the time of purchase and mailed to Oceanic within 30 days of purchase. This Warranty is non-transferrable and applies to the original purchaser only. All correspondence concerning this Warranty must be accompanied by a copy of the original sales receipt and a copy of the owner's portion of the Warranty Registration Card.

### **Statement of Limitations - General:**

**Warranty does not cover damage from accident, abuse, tampering, lack of proper care and maintenance, or improper use of the BioDry Suit.** Modifications or repair by anyone other than an Oceanic Sales and Service Center authorized to service the BioDry will void the Warranty. Oceanic will not be responsible for recovery or replacement of the product in the event of loss or theft. Oceanic, its distributors, and retailers make no warranties, either expressed or implied, with respect to this product or its instructional materials except those stated in the preceding paragraphs.

**In consideration of the sale of the BioDry to you, you agree and understand that in no event will Oceanic, its distributors or retailers, be held liable for any personal injuries resulting from its operation, or for any other damages whether direct, indirect, incidental, or consequential even if Oceanic is advised of such damages.**

Some states do not allow the exclusion or limitation of implied warranties or liabilities for incidental or consequential damages, so the above limitation may not apply to you.

Warranty does not extend to damage due to accident, abuse, modification, or tampering.

# INTRODUCTION

## **THANK YOU for choosing an Oceanic BioDry Suit !**

This Owner's Guide describes the maintenance, operation, and use of your BioDry Suit. The initial time that you invest becoming acquainted with your new dry suit will be returned as you enjoy your underwater activities.

By following the instructions in this guide, you will understand how to prepare your BioDry Suit for use, how to don and remove it, how to inflate and deflate it, and how to maintain and store it.

Although information relating to diving with a dry suit, buoyancy, and emergency situations is provided, it is not intended as instructional material or as a substitute for specialized training in diving with a dry suit.

Be sure to read through the complete Owner's Guide before preparing your BioDry Suit for that first dry dive.

## **DRY SUIT GUIDELINES**

Oceanic along with other manufacturers of dry suits have adopted and endorsed the following guidelines:

- Complete a dry suit diving course from a qualified instructor and stay current.
- Use a BC (buoyancy compensator) for surface flotation and backup.
- Know your equipment and emergency procedures.
- Practice your dry suit skills under controlled conditions until they become second nature.
- Dive with a buddy who understands your dry suit system.
- Use the correct amount of insulation for the water temperature in which you are diving and your exercise rate.
- Do not weight yourself heavier than neutral buoyancy with an empty tank. Your weighting should allow you to make a safety stop at 10 feet (3 meters) upon completion of your dive with 500 psi (40 BAR) or less air in your tank.
- Check your Valves, Zipper, and Seals before each dive.
- Perform preventive maintenance and repairs on your Suit and Valves regularly, or have them serviced by a qualified person.
- Know your limitations and DO NOT exceed them.

## NECK AND WRIST SEALS

Your BioDry Suit has been fitted with standard size latex Seals that correspond to the size of the Suit. If you are new to wearing a Dry Suit with latex Seals, it may feel uncomfortable when initially worn. It should fit snugly, but not be too tight. Try wearing the Seals for some time to determine the 'comfort' factor. Also, Latex has a tendency to relax after use.

 **WARNING: Extremely tight Seals can restrict the flow of blood, possibly causing serious injury or death.**

If necessary, the Seals can be trimmed to enlarge the openings. Remember that once a Seal has been trimmed it cannot be made smaller.

### TRIMMING A SEAL:

- Insert a smooth can or bottle in the Seal(s) to be cut and allow them to remain there for several days to relax the Seal(s).
- Remove the can or bottle and powder the Seals with talcum powder.
- Try the Seals on and trim only if necessary.
- Use long /sharp scissors to make the cuts.
- Cut evenly just above the first Molding Ring.
- Only trim one Ring from the Seal at a time, trying it on after each cut.
- Make as few cuts as possible, leaving at least 4 Rings on each Seal.
- Avoid leaving any jagged edges that could cause the Seal to split.

## LP INFLATOR HOSE

- Connect the low pressure (LP) Inflator Hose to a low pressure Port of your Regulator First Stage.
- The Suit's Power Inflator Valve rotates 360 degrees which allows routing of the Hose under either arm.

## PRE DIVE PREPARATION

Prior to putting your BioDry Suit on:

- Check that latex Neck and Wrist Seals are free from nicks, cracking, or any sign of deterioration. Also, that they are not sticky (due to exposure to excessive heat or chemicals).
- Lubricate the Neck and Wrist Seals with either pure talcum powder, or a mild solution of soap or shampoo (5 parts water to 1 part soap).



**CAUTION: Do not use scented talcum powder. The oils may cause damage to the latex Seals.**

- Check that the Teeth of the Zipper are clear of any debris and that the Zipper operates smoothly. Do not use excess force when opening and closing it.
- To lubricate the Zipper, close it and apply commercially available bees-wax or Zip Slip, or a light film of silicon grease to the outside of the Teeth only.



**CAUTION: Never use aerosol lubricants. They may cause damage to the fabric of the Suit.**

- Inspect the entire Suit for any cuts, tears, or other damage that would affect its integrity.
- Check Inflator Valve operation by connecting an LP Inflator Hose to the Quick Disconnect Fitting and depressing the Button on the Valve.
- To check operation of the Adjustable Exhaust Valve, close the Zipper completely and block the Neck and Wrist Seals with smooth cylindrical containers. Close the Adjustable Exhaust Valve by turning the Knob clockwise. Inflate the Suit, then depress the Button of the Exhaust Valve.
- To check the Automatic Exhaust feature, turn the Exhaust Valve Adjustment Knob counter clockwise 1/2 turn, and inflate the Suit until air vents through the Valve.



**CAUTION: DO NOT continue inflation if the Valve displays any indication of being stuck in the closed position, unable to relieve pressure.**

## DRESSING

The BioDry Suit has little inherent Insulation. Primary Thermal Protection (underwear) should be worn in an amount that will keep you comfortable throughout the dive. In addition to water temperature and duration of the dive, your physical condition and anticipated activity rate should be taken into consideration to avoid thermal hazards.



**CAUTION: To help avoid overheating prior to water entry, Oceanic recommends preparing and setting up all of your equipment prior to putting on your Thermal Wear and BioDry Suit.**

- Remove any items such as rings, watches, earrings, and other jewelry that could damage the latex Seals.
- Open the Zipper completely and fold the Suit open. Use care not to get sand or debris in the Zipper.
- While sitting down, put your feet into the Suit.
- As you stand up, ease the Suit up your legs ensuring there is no slack material along the length of each leg.
- Pull the Suit snugly up into your crotch.
- Put one arm through its Sleeve of the Suit and ease your hand through the Wrist Seal. DO NOT put pressure on the Seal with your finger nails. Repeat for the other arm.
- Adjust the Wrist Seals so they lay flat against your wrists in a comfortable position.
- Pull the Suit up your torso as much as possible.
- Insert both hands into the top opening of the Neck Seal, and simultaneously spread the opening as you pull the Seal down over your head. Avoid putting pressure on the Seal with your fingernails.
- Adjust the Neck Seal so it lays flat against your neck in a comfortable position low on your neck. DO NOT turn the top edge of the Seal inward.
- To close the Zipper, extend your arms outward and curved slightly forward at shoulder level and have your buddy close the Zipper completely using a steady even pull while ensuring that your Underwear does not get caught in the Teeth.

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- Vent any excess air from the Suit by inserting two fingers of each hand between the Neck Seal and your neck and crouching down.
- After your buddy assists you in putting on your Scuba assembly, route the Dry Suit's LP Inflator Hose under your arm and connect the Quick Disconnect to the Power Inflator Valve located on your chest.
- Test operation of the Power Inflator Valve by pressing the Inflator Button in allowing air flow from the tank into the Suit. Turn the Adjustable Exhaust Valve to ensure it adjusts without restriction, then test the unit by depressing the Valve Button to vent air from the Suit.

## OPERATION AND USE



**WARNING: Your BC should be used for surface flotation. On the surface, your Dry Suit should only be used for backup flotation in the event of emergency. Always wear a BC with the BioDry Suit.**

- Prior to water entry, vent all air from the BioDry Suit and ensure that you are properly weighted for the dive.
- Check that you are just slightly negative at the surface with a full tank. Your weighting should allow you to make a safety stop at 10 feet (3 meters) upon completion of your dive with 500 psi (40 BAR), or less, air in your tank.
- With no air in the Suit it will tend to cling to your body. However, once you are underwater you will be inflating the BioDry Suit to maintain neutral buoyancy.



**WARNING: DO NOT attempt to use both the BioDry Suit and the BC for controlling buoyancy underwater. Doing so could result in an uncontrolled ascent. Use the BC as a backup for the BioDry Suit.**

- Start your descent foot first by fully deflating your BC.
- As your depth increases, add small amounts of air each time to your Suit by momentarily depressing the Button on the Power Inflator to maintain a comfortable descent rate until reaching your dive depth.
- To vent air from the Suit's Adjustable Exhaust Valve, lift your left elbow so the Valve is higher than the body of the Suit, or if necessary, depress the Button on the Exhaust.

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- Once at depth, adjust the amount and distribution of air in the Suit to maintain comfortable neutral buoyancy.
- Horizontal positioning with the head, torso, and feet at the same level affords the least amount of lateral effort.

**⚠ WARNING: As your depth decreases during a multi level dive, or during your ascent to the surface, the air in the BioDry Suit will expand creating positive buoyancy that must be controlled.**

- To maintain neutral buoyancy while ascending, vent air from the Exhaust Valve by lifting your left arm, or depress the Button on the Exhaust Valve.

**⚠ WARNING: Maintain neutral buoyancy during the ascent, and do not exceed the maximum ascent rate recommended by your dry suit training.**

**Oceanic recommends a safety stop at 10-15 feet (3-5 meters) prior to surfacing from each dive.**

- On the surface, vent all air from your BioDry Suit and inflate your BC to achieve comfortable positive buoyancy.

**Refer to page 13 for Emergency Situations.**

## UNDRESSING

- Disconnect the LP Inflator Hose from the Power Inflator on your Dry Suit and remove your Scuba assembly with the assistance of your buddy.
- Remove all accessory equipment, such as weight belt, ankle weights, hood, gloves, etc.
- Rinse any sand or debris off the BioDry Suit, paying particular attention to the Zipper area.
- With your arms stretched forward, have your buddy open the Zipper completely using a steady even pull.
- Insert both hands into the top opening of the Neck Seal, and simultaneously spread the opening as you drop your head down and out of the opening while simultaneously lifting up on the Neck Seal. Avoid putting pressure on the Seal with your fingernails.

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- To remove a Wrist Seal, insert two fingers between the Seal and your wrist (with your nails against your wrists) until your fingers are past the seal.
- To avoid putting undue stress on the Wrist Seal, hold the Sleeve material between your fingers and thumb as you simultaneously pull your hand out of the Seal opening.
- Lift your arm up and out of the Sleeve.
- Repeat the previous three steps with the other wrist.
- Using care not to get sand or debris on the Zipper and Seals, slide the Suit down until it is below your crotch, then sit down to remove your legs and feet.

## CARE AND MAINTENANCE

### Cleaning and Storage:

- As soon as possible after diving, thoroughly rinse the outside of the BioDry Suit and flush the Inflator and Exhaust Valves with running fresh-water.
- Carefully sponge the Neck and Wrist Seals with a mild solution of soapy water and rinse thoroughly.



**CAUTION: Any contamination due to exposure to petroleum products, paraffin, or other solvents may affect the latex Seals or the butyl membrane of the Suit, and must be washed off immediately.**

- Ensure that the Zipper is clean and free of sand or debris. If necessary, clean with a soft tooth brush and a mild solution of soapy water.
- Close the Zipper and lubricate the outside of the Teeth with beeswax or Zip Slip.
- After rinsing, blow the Inflator and Exhaust Valves dry with low pressure air and hang the Suit on a wide, padded hanger to dry naturally with the Zipper open.



**CAUTION: DO NOT use heat to dry the Suit, or hang the Suit in direct sunlight.**

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- Once the Suit is thoroughly dry inside and out, dust the Neck and Wrist Seals with unscented talcum powder.
- Store the Suit by hanging it on a wide padded hanger, in a cool dry location away from electric motors or other ozone producing devices that can adversely affect the latex Seals.
- If folding the Suit for storage, ensure that the Zipper is open and will be on the outside and protected from damage and contamination.
- Periodically lubricate the Power Inflator and Adjustable Exhaust Valves with small amounts of silicone spray.

**⚠ WARNING: DO NOT disassemble or attempt to repair the Inflator or Exhaust Valves. Doing so could cause them to malfunction resulting in serious injury or death. It will also void the warranty.**

### **Repairs and Service:**

- In the event that your BioDry Suit requires any form of repair or service, return it to your local Authorized Oceanic Dealer who will arrange for the appropriate repair.
- Provide the Dealer with a copy of the original sales receipt and your copy of the Warranty registration card.

**⚠ CAUTION: Attempts to make temporary repairs in the field that alter the Suit may void the limited Warranty.**

Inspection and service of the Suit and Valves should be conducted annually by Oceanic. More frequent inspection is suggested, if you use the Suit often. Costs of inspection and service are not covered by the limited warranty.



# EMERGENCY SITUATIONS

The following describes some of the possible indications and causes that may result in Emergency Situations.

**Management of the Emergency Situations should be applied in accordance with your formal training, practice, and experience with dry suit diving.**

## INDICATIONS OF EMERGENCIES

### Leaking Inflator Valve:

- Indicated by air leakage at the Power Inflator Valve.

### Inflator Valve Stuck (open):

- Indicated by air continuing to flow into the Suit after release of the power inflator button.

### Inflator Valve Stuck (closed):

- Indicated by air not flowing into the Suit.

### Leaking Exhaust Valve:

- Indicated by water leakage into the Suit at the Exhaust Valve.

### Exhaust Valve Stuck (open):

- Indicated by a continuous flow of air out of the Valve, or by water entering the Suit through the Valve.

### Exhaust Valve Stuck (closed):

- Indicated when air cannot be vented out of the Valve.

### Flooding of the Suit:

- Indicated when air is not retained in the Suit and entrance of a large quantity of water into the Suit (possibly a Zipper failure or large puncture in the Suit)

### Uncontrollable Descent:

- Indicated by the inability to slow a very rapid Descent (cannot establish positive buoyancy). Possibly a flooded Suit.

### Air Trapped in Feet of the Suit:

- Indicated by ascending slowly feet first or an inability to easily turn to an upright position.

### Uncontrollable Ascent:

- Indicated by ascending much faster than 60 fpm (18 mpm).

## WARNINGS:

The BioDry Suit is intended for use by recreational divers who have successfully completed a nationally recognized course in scuba diving, and diving with a dry suit.

It must not be used by untrained persons who may not have knowledge of the potential risks and hazards of scuba diving, and diving with a dry suit.

You must obtain scuba certification, and specialized training in diving with a dry suit before using the BioDry Suit if you have not already done so.

It is **NOT** for use by military and commercial divers.

As with all underwater life support equipment, improper maintenance, use or misuse of this product can cause serious injury or death.

Conduct your dives in such a manner so as to insure that you continuously check the Suit's integrity.

If you do not fully understand how to use this BioDry Suit, or if you have any questions, you should seek instruction in its use from your Authorized Oceanic Dealer before you utilize this product.

## **RESPONSIBLE DRY SUIT DIVING**

- **Always Plan Each Dive**
- **Always Limit Your Dive to the Level of Your Training and Experience**
- **Always Make Your Deepest Dive First**
- **Always Make The Deepest Part of Every Dive First**
- **Check Your Dry Suit Often During the Dive**
- **Do A Safety Stop On Every Dive**
- **Allow Adequate Surface Interval Between Each Dive**
- **Allow Adequate Surface Interval Between Each Day Of Diving (12 Hours)**





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