



# REGULATOR USER MANUAL



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### 1. WARNING'S, TRADEMARK & COPYRIGHT

#### **WARNING**

*Warnings are flagged regularly throughout this user manual. Warnings should be read and understood as they indicate information that if ignored, avoided or not corrected, could lead to serious injury or death. Please understand and accept our duty to warn.*

#### **TRADEMARKS**

The Oceanpro wordmark, Logo and subsequent product names in commercial use registered or unregistered are trademarks of Australian Underwater Products Pty. Ltd.

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## **2. IMPORTANT WARNINGS**

### **WARNING**

*Please ensure the contents of this manual is read and understood prior to use of your Oceanpro regulator and ensure you maintain this manual in your possession for the lifetime of your Regulator. Important to note is that this manual does not replace a mandatory SCUBA diving certification.*

*Read the Users Guide to get a complete understanding of how any of the Oceanpro range of regulators are to be used and to know their limitations. If there is any doubt or concerns in regards to the correct operation/use of your Oceanpro regulator, you must consult your authorized Oceanpro dealer.*

*Before each dive an inspection should be made of the condition of the regulator and a check of its performance prior to commencing the dive is recommended. If the regulators performance is questionable, do not use.*

### **WARNING**

*Training in SCUBA Diving is mandatory. Without the appropriate level of SCUBA diving training from a Globally recognised certification agency, the use of SCUBA diving equipment is inherently dangerous and can cause serious injury or death. This regulator MUST NOT be used by an untrained person.*

### **WARNING**

*If you do not fully understand the set-up or functionality of your Oceanpro regulator DO NOT use the regulator. Seek the assistance of an Authorised Oceanpro Dealer before use.*

*[www.oceanprosports.com/dealers](http://www.oceanprosports.com/dealers)*

### **WARNING**

*DO NOT attempt to alter, disassemble, tamper with or perform any type of service on your Regulator. Only authorised Oceanpro service technicians, utilising genuine Oceanpro parts can maintain and service this product. Any attempt to do so yourself could result in product malfunction and subsequent injury or death void your warranty.*

### **WARNING**

*This product is designed to operate under pressure that can vary from high, intermediate to low. DO NOT attempt to remove in part or in full, any component of this regulator while pressurised.*

### **WARNING**

*DO NOT attempt to carry, lift or secure in transit your SCUBA system by the Yoke knob, Hose(s) or any other component of this Regulator. Doing so can cause damage to critical components of the regulator and/or cylinder tank valve causing subsequent malfunction during use.*

### **3. CERTIFICATION & CONTROL**

All Oceanpro products are manufactured to the highest quality standards. The Oceanpro regulator manufacturing facility meets and exceeds all quality assurance requirement based on the new PPE ISO9001 audit.

The PPE is subject to the conformity to type based on quality assurance of the production process EU Regulation 2016/425 Module D under surveillance of the notified body SGS United Kingdom Ltd, Notified Body No. 0120

Product sold within certain regions, such as the European Union (EU), are required to meet standards in accordance with the manufacturing Directive 89/686/ECC. CE Certification is not a requirement in Australia. Oceanpro regulators do not hold CE Certification. Oceanpro regulators are designed and manufactured within the guidelines of the CE requirements of EN250, or EN13949.

#### **WARNING**

*This Regulator forms part of the SCUBA system, by way of connection to a cylinder containing compressed air. Compressed air used in cylinders and subsequently this regulator, must meet the requirements of the following standards in Australia, USA and Europe:*

*Australia - Occupational Diving – AS 2299.1 - 2007*

*Australia - Recreational Diving at a Work Place – Code of Practice (QLD only)*

*Europe – AN 12021 Annex A*

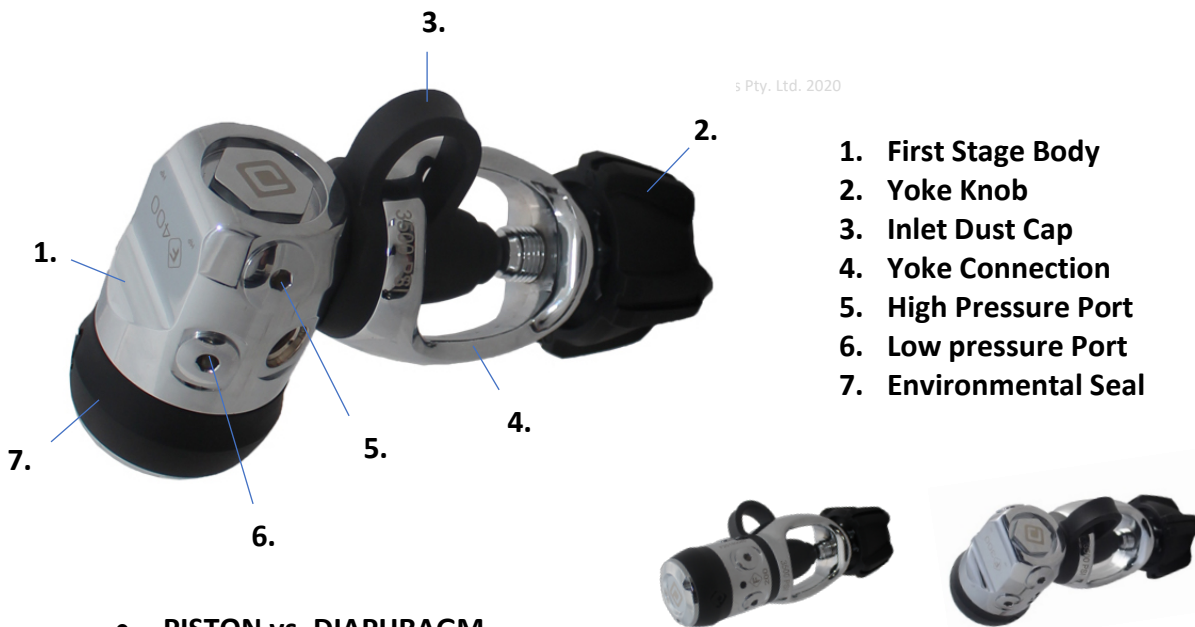
*USA – Grade E*

### **4. UNDERSTANDING YOUR REGULATOR SYSTEM**

A regulator (first and second stage) is the essential part of a SCUBA system that enables the “regulation” of high pressure compressed air that is contained in the diving cylinder into a lower ambient pressure supply that is breathable whilst diving. For most divers, a basic regulator will do, as recreational diving is the main focus. However, if you are technical diving, or have dive preferences outside the norm, you should consider equipment that is a bit more specialised. It is also important to consider that you may “grow in to” the type of diving you do. Scuba equipment is more affordable than ever and many times the Oceanpro Regulator with extra features may not be all that more expensive than one without.

#### **FIRST STAGE REGULATOR**

The 1st stage, as the name suggest, is the first point of contact with the High Pressure cylinder and is the pressure-reducing mechanism bringing high-pressure air down a lower pressure. The 1st Stage work with a piston or diaphragm mechanical design. On the 1st Stage there are high pressure ports and low pressure ports to accommodate gauges, transmitters, 2nd stage breathing regulators, BCD inflator hoses, Drysuit hoses, etc



- **PISTON vs. DIAPHRAGM**

In simple terms, this addresses how the 1st stage functions. As a general rule this does not create a noticeable effect on performance when diving common diving environments. It has more of an impact on the simplicity of servicing and maintaining the regulator, which is why many rental regs are basic unbalanced piston regs. In a piston reg, there is a piston on a spring which essentially opens and closes the pressure from the tank. In some regulators, there is an additional spring system that works against the main piston spring system. In a diaphragm 1st stage, there is an internal diaphragm. This typically adds parts to a 1st stage.

- **BALANCED vs. UNBALANCED**

All regulators initially were unbalanced, but with engineering and design evolution, many regulators are now “balanced”. What this means is that within the 1st stage, the high pressure chamber and low pressure chamber are balanced against each other, making a “lower” tank breathe just as easily as a “full” tank. Balanced regulators will also breathe more effectively at depth than unbalanced regulators, but these noticeable benefits are typically outside the limits of recreational divers.

- **ENVIRONMENTAL SEAL**

An environmental seal can be found on selected models of Oceanpro 1st stage. It does just what the name implies, sealing the chamber of the 1st stage from the environment, denying water entry where it would otherwise go. By denying the water entry into that chamber, there is less chance of any suspended particles coming to rest on the inside of the regulator. Suspended particles can be left saturated with salt water leading to the potential of internal corrosion.

### **WARNING**

*An environmentally sealed Regulator DOES NOT replace or limit the requirement for proper maintenance and servicing of your equipment. Normal care, maintenance and service is mandatory, as described in this manual.*

## **SECOND STAGE REGULATOR**

The second stage, is fed an intermediate pressure via the low pressure hose that joins the first and second stages together. It reduces and delivers lower pressure air to the diver via a demand valve and diaphragm to balance air with ambient pressure. Second Stages can vary in design and feature set including venturi assisted breathing and dynamic adjustment allowing user changeable breathing efforts and performance.



- **DYNAMIC ADJUSTMENT / INHALATION CONTROL**

Dynamic adjustment knobs can be found on the side of the selected Oceanpro second stages. These essentially control the “cracking effort” of a regulator, and the ease of breathing. Some users like to turn this down to “feel” their breathing more. Others, like to have a greater free flow during diving. Bear in mind that this adjustment does not affect how quickly you breathe through a tank, or at least not measurably. If diving in a heavy current, this can help avoid free flow if the current is pushing against the purge cover of the second stage.

- **PNEUMATICALLY BALANCED**

Selected second stages in the Oceanpro range, feature what is referred to as Pneumatic Balancing. Essentially, this means that some of the intermediate pressure from the hose is diverted to a chamber where it can “push back” against the pressure from the hose/first stage. This allows the design to use a very lightweight spring, meaning less breathing effort when getting the piston in the second stage to open with an inhalation

- **DIVE, PRE-DIVE / VENTURI SWITCH**

Selected Oceanpro regulators come with a “dive” and “pre-dive” switch, or a venturi switch. This knob alters the airflow inside the regulator, making breathing easier or more difficult essentially giving the diver the ability to regulate “cracking effort”. When you inhale normally, the diaphragm on the second stage flexes toward you, initiating the airflow into the regulator. The same air you are breathing creates a vacuum, helping to maintain the diaphragm flexed toward you. That force required to hold the diaphragm flexed and keep the valve open is partly supplied by your inhalation, and partly by the Venturi Effect of the fast-flowing air. With the Venturi valve, there is less “cracking effort” to begin the air flow, meaning the diver only has to slightly inhale to begin air flow. Have the Venturi switch “closed” or set to “pre-dive” is particularly useful when on the surface of the water, and the mouthpiece points toward the surface. Often the water pressure will be enough to make your regulator free-flow. Having the regulator set to “pre-dive” helps prevent this.

### **OCTOPUS (OCCY) REGULATOR**

Mandatory to carry in all levels of diving, the Octopus Regulator (Occy) is an auxiliary second stage with a longer hose, fitted to the same first stage as the primary second stage regulator. The Occy, most often yellow in colour for quick visual location, is designed in case of a primary malfunction emergency, not only for the diver wearing the SCUBA system, but also the “buddy” of the diver. Rarely used, the Occy fitted to the SCUBA system is often a simple demand valve design, with basic features, that is easy to maintain and service, but reliable when required.

#### **WARNING**

*The correct use of an Octopus Regulator (Occy) requires proper training. Without the appropriate level of training from a Globally recognised certification agency, the use of an Occy by you and/or in an “air sharing” scenario is inherently dangerous and can cause serious injury or death. Whilst not often used, it is essential to maintain and service your Occy to the standards of all primary second stage regulators, to ensure proper function in an emergency situation.*





## 5. PRE & POST DIVE USE

### • PRE-DIVE CHECKS

Before connecting the first stage to the cylinder tank valve you should slowly turn the valve to the open position for a short period to clear any potential contaminants from the valve surfaces.

#### **WARNING**

*When opening/purging a tank valve, ALWAYS face valve opening AWAY from your body and the bodies of others. ALWAYS open the cylinder valve very slowly.*

Prior to connecting the regulator to a cylinder, you must inspect your regulator for signs of defect or damage and that it is free from any sand, dirt or debris.

For yoke connection check that your O-ring is in place and in good condition on tank valve.

For DIN connection check O-ring on the DIN retainer of Regulator is in place and in good condition.



Visually inspect all hoses and accessories to the regulator to ensure all fittings are tight and secure and that there are no visual signs of damage to hoses. Slide back any hose protector sleeves to inspect and confirm there are no signs of damage to these areas of the hoses.

#### **WARNING**

*Never attempt to connect and/or adapt in anyway a low pressure component to any high pressure port on the regulator first stage. Doing so could cause major malfunction and lead to injury or death.*

Inspect primary and octopus mouthpieces to ensure they are securely fastened to the second stage Regulator body and that they are free from any signs of cuts or damage.

### • SET UP / MOUNTING

For Oceanpro Yoke regulator configurations, partially loosen the Yoke Knob / Screw and remove the dust cap from its “fixed” position to a “free” position. Mate the sealing surface of the regulator neatly with the pre-inspected O-ring seal on the tank valve. Ensure hose routing is correct and that your primary and octopus regulators are on the right hand side.







Secure the regulator to tank valve firmly by hand only, whilst holding the regulator in-line and in position with the other. Once secure slowly open valve to prime the regulator with gas, listening for any sign of air leakage.

#### **WARNING**

*When opening your tank valve to prime to breathing gas, the contents (pressure) gauge MUST ALWAYS face away from your body and the bodies of others. ALWAYS open the cylinder valve very slowly.*

For Oceanpro Din regulator configurations, remove the dust cap from its “fixed” position to a “free” position. Position the threaded Din inlet into the Din tank valve, ensure hose routing is correct and that your primary and octopus regulators are on the right hand side. Thread the Din wheel slowly to avoid any potential cross thread and secure the regulator firmly, by hand only. Once secure slowly open valve to prime the regulator with gas, listening for any sign of air leakage.



#### **WARNING**

*When opening your tank valve to prime to breathing gas, the contents (pressure) gauge MUST ALWAYS face away from your body and the bodies of others. ALWAYS open the cylinder valve very slowly.*

Once the valve is fully open, check the contents gauge for cylinder fill level, making note of the reading. Shut the valve to the off position and monitor the pressure gauge, there should be no change in needle position on the gauge. Open the valve fully again and turn back one quarter turn in the “ready to dive” position. Test the second stage(s) for signs of performance issue by purging the regulator second stage(s) via depression of the purge covers. Once done, complete several full breathing cycles to ensure proper function of the regulator. Inhale and exhale slowly (as per your training) from the regulator, noting there should be no notable resistance to breathing normally.



Perform a physical inflation / deflation test of any accessories connected to the regulator to, such as your BCD inflator, to ensure full and complete operation of the SCUBA system.

Once you have finished this process you should not hear any sign of leakage and are ready to dive according to your level or training, issued by your certifying agency.

### **WARNING**

*If at any point during your leak and performance issue testings the regulator fails to comply DO NOT dive. Diving with SCUBA system that has failed any aspect of your Pre-Dive checks could lead to serious injury or death.. DO NOT attempt to alter, disassemble, tamper with or perform any type of service on your Regulator. Only authorised Oceanpro service technicians, utilising genuine Oceanpro parts can maintain and service this product.*

- **AFTER DIVING**

As an important matter of best practice, your regulator must be rinsed with fresh water after each use and dried properly in a ventilated place away from heat and sunlight before storage.

If possible, leave the regulator pressurised on the tank and soak the regulator thoroughly for a minimum of 30 minutes. This will help minimise any contaminant ingress into the regulator system. If a cylinder is unavailable, soak the regulator in fresh water, ensuring the inlet dust cap is secure, as described below.

To remove your regulator from the SCUBA system, turn the cylinder valve to the closed position and de-pressurised air from the system via both second stages by depressing the purge cover.

During de-pressurisation, monitor carefully the pressure gauge, ensuring that it drops quickly to a reading of Zero (0). Once at Zero and air has fully expelled via the second stages, it is safe to remove your first stage from the cylinder. For Oceanpro Yoke configurations, turn the Yoke Knob counter clockwise and remove from the cylinder valve. Immediately dry and replace the inlet dust cap back into a fixed position, to eliminate any change of water entry into the first stage. Note that soaking of your regulator in clean fresh water for a minimum of 30 minutes is now possible.



For Oceanpro DIN configurations, slowly turn the DIN wheel counter clockwise and remove from inside the cylinder valve. Immediately dry and replace the inlet dust cap back into a fixed position, to eliminate any change of water entry into the first stage. Note that soaking of your regulator in clean fresh water for a minimum of 30 minutes is now possible.

#### **WARNING**

*Proper use and care for your regulator is essential for maintaining the high performance standards set forth in the product design. Failing to comply with the guidelines set forth in the manual, may void in part or in full your regulators Warranty period.*

## **6. NITROX - (Enriched Air Nitrox)**

Nitrox or Enriched Air Nitrox (EAN) refers to a gas mixture composed of nitrogen and oxygen. This includes atmospheric air, which is approximately 79% nitrogen, 21% oxygen. Any gas mixture with an Oxygen content greater than 21% is considered enriched and must be used under the Nitrox training guidelines of your Certification Agency. The benefit of SCUBA diving with Nitrox is a reduced partial pressure of nitrogen, meaning a reduction in nitrogen uptake in the body's tissues, thereby extending the practicable underwater dive time by reducing the decompression requirement and/or reducing the risk of decompression sickness. All Oceanpro regulators are Nitrox ready from factory as standard, in that they can safely deliver air with Oxygen mixes consisting of up to 40% of the blend.



#### **WARNING**

*Whilst your Oceanpro regulator is built Nitrox compatible to 40%, DO NOT dive with oxygen enriched air mixes (Nitrox), unless you hold the suitable training certification from a globally recognised and accredited training agency. Diving Nitrox, without this training could lead to serious injury or death as varying depth and time limits apply.*

O<sub>2</sub> is combustible, therefore build and material specifications are required for regulators when using greater than 40% O<sub>2</sub> blends. Your Oceanpro regulator IS NOT built for this purpose and should never be used with Nitrox mixes greater than 40%. Regulators using greater than 40% O<sub>2</sub> blends have different servicing requirements and ALL related accessories must be cleaned for oxygen exposure. This involves special cleaning and the use of oxygen safe service spares, and oxygen compatible lubricants. Only specialist service centres with specific oxygen clean facilities and equipment can carry out this service.

## 7. COLD WATER DIVING

**WARNING:**

*In temperatures below 10°C (50°F) regulators can experience freezing and if frozen in the open position can cause uncontrollable loss of gas. SCUBA diving in cold water below 10°C (50°F), requires specialist equipment and training. Training must be undertaken with a nationally recognised and accredited SCUBA training organisation. Diving in cold water environments without appropriate training can lead to serious injury or death.*

When a regulator operates and the gas flows through it, there is a natural chilling effect as the gas experiences a rapid drop in pressure. In cold water environments, the gas can become much colder than the surrounding water and can compromise regulator performance, primarily from the formation of ice inside the regulator.

When trained appropriately, as a matter of best practice avoid excessive testing of regulators on the surface, especially via the purge button, as this can cause significant temperature drop in the first and second stages potentially leading moisture to freeze.

When trained appropriately, as a matter of best practice avoid breathing from or exhaling through your regulators whilst on the surface to eliminate the potential of exhaled moisture freezing on the second stage components.

When trained appropriately, make plans to reduce the load on your first stage by avoiding excessive breathing and collectively inflating your BCD, Wing, Drysuit or accessories whilst inhaling through the regulator.

**WARNING:**

*The details and information in this manual DO NOT replace certification from a recognised and accredited SCUBA training agency. Reading this DOES NOT replace your strict requirement for training and certification.*

## 8. CARE & MAINTAINENCE

Your Oceanpro regulator is a vital life support component of the SCUBA system and therefore must be treated with the appropriate Care and Maintenance routines after every use in either salt or chlorinated water, to ensure effective safe performance between dive and service intervals.

Immediately after diving leave the regulator pressurised on the tank and soak the regulator thoroughly in clean fresh water for a minimum of 30 minutes.

If you are unable to clean your regulator disconnected from the tank, make sure the inlet dust cap is dry. Dry the water off with a small blast air from the tank or alternatively, towel dry the surface of the inlet dust cap.

**WARNING:**

*You MUST securely fasten the dust cap in the fixed position onto the regulator to avoid water ingress into the first stage regulator. Failing to do so may require your regulator to be fully service prior to the normal service interval outside of any and all warranty coverage.*

While your reg is soaking, gently work any Venturi Switch and Dynamic Adjustment Knob back and forth to loosen anything particulate or salt build up. As a matter of best practice do not push the purge button, to avoid the potential for water ingress into the regulator system.



Temporarily pull back hose protectors, run a gentle stream of water over the hoses along with the first and second stages to get rid of any remaining particles that may be trapped throughout any areas of the regulator.

Let the Regulator dry thoroughly before storing taking particular note of doing so in a ventilated place away from heat and sunlight as this has the potential to damage and effect critical parts.

Oceanpro recommends the use of a deluxe regulator bag when storing your regulator to protect from dust particles and/or potential impact. Ensure hoses are not “kinked” in anyway during storage.



## **9. REPAIRS, INSPECTION & SERVICE**

**WARNING**

*DO NOT attempt to alter, disassemble, tamper with or perform any type of service on your Regulator. Only authorised Oceanpro service technicians, utilising genuine Oceanpro parts can maintain and service this product. Any attempt to do so yourself could result in product malfunction and subsequent injury or death and void product warranty.*

If at any time your Oceanpro regulator shows significant signs of wear or damage, or appears to have performance issue, please contact and return your regulator to your nearest authorised Oceanpro service centre for inspection and /or service.

<https://www.oceanprosports.com/dealers/>



It is the minimum requirement of Oceanpro that an Annual Service of your regulator, commencing 12 months from your date of purchase, is undertaken by an authorised Oceanpro service technician.

Frequency of use, variations on diving condition and the degree of regular care and maintenance can all have an effect on the frequency at which that your Oceanpro regulator may require service. The regularity of service, is at the sole discretion of the owner, but as a rule the minimum recommendations are as follows:

Diving type:	Number of dives per year :	Recommendation:
Recreational	< 100	12 monthly annual service
Recreational	> 100	Service after 100 dives, prior to use
Recreational	Stored for > 6 months	Inspection & Service if required
Dive Professional	Regardless of use	6 monthly service
Training / Rental	Regardless of use	6 monthly service
Training / Rental	Stored for > 2 months	Inspection & Service if required

## 10. WARRANTY

### • PRODUCT WARRANTY

Oceanpro offers warranty for all Oceanpro product purchased from an authorised reseller or online from [www.oceanprosports.com](http://www.oceanprosports.com). Warranty coverage will only apply to products accompanied by proof of purchase.

Oceanpro warrants that it will fix, repair or replace any defective product described above at no cost to the consumer other than the expense of the consumer returning any defective product to their nearest Authorised Dealer. Products may also be returned directly to Oceanpro. After service, the product will then be returned to the Authorised Dealer for collection, or to the Consumer at no cost, with the balance of the applicable warranty intact.

*Please note that this warranty is offered in addition to any other rights that the consumer may have under Australian Consumer Law (ACL). Additionally, failure to register eligible product does not diminish the consumers warranty rights.*

All Oceanpro Hardware, comprising Regulators, Octopus Regulators (Octo's), Buoyancy Compensators (BC's) and Analogue Gauges, when purchased online or from an Authorised Dealer, are provided with a 1 year Warranty. This 1 year warranty will cover against any defects in materials, workmanship and performance to product specifications.

Oceanpro offers a Warranty Upgrade to our Limited Lifetime Warranty which includes access to the exclusive Parts for Life program.





## **Conditions for Hardware Warranty Upgrade**

1. The product details must be registered with Oceanpro within 30 days of purchase. This registration should be completed On-Line, by you or the Dealer. Note that it is the consumers responsibility to ensure that the product is registered.
2. The product must only be used as intended for normal recreational purposes.
3. All products must be serviced annually by an authorised Ocean Pro Technician. This warranty upgrade is null and void if such regular annual service is not performed.
4. For Oceanpro Regulators and Occy's, Oceanpro and your authorised Oceanpro Dealer will provide all overhaul service parts at no charge. Any parts required other than overhaul service parts are the responsibility of the owner of the product serviced.
5. All labour fees included in annual service are the responsibility of the owner of the product serviced.
6. This warranty shall be void if the equipment has been tampered with by a person (or persons) not authorised by Oceanpro to perform such service.
7. The warranty is non-transferable and extends to the original purchaser only.
8. Normal wear and tear as determined by age and usage is excluded from the Oceanpro Limited Lifetime Warranty.
9. To maintain this Limited Lifetime Warranty, you must show proof of purchase and proof of authorised annual service.

## **How to Claim for Warranty**

If a warranty claim is necessary, the best option is to contact your Authorised Oceanpro Dealer for information on how to return your product. A Return Authority number will be assigned to the item being returned and can be quoted as a reference to track the status of the item.

## **What Costs are involved for a Warranty Service**

Oceanpro warrants that it will fix, repair or replace any defective product described above at no cost to the consumer other than the expense of the consumer returning any defective product. After service, the product will then be returned to the Consumer at no cost, with the balance of the applicable warranty intact.

If you did not purchase your product from an Authorised Dealer or on online through [www.oceanprosports.com](http://www.oceanprosports.com), a service charge will be levied if service is required.

You can alternatively return it to the original point of purchase for service. Please also see Liability under the ACL: the potential for confusion.