

SEALEGS®

ELECTRIC

OWNER'S MANUAL – 7.5m Electric



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1. INTRODUCTION

ABOUT THIS MANUAL

This manual has been compiled to help an owner safely operate and maintain their Sealegs Craft. Please read this manual carefully to become familiar with the craft before use.

This manual is designed to comply with the Recreational Craft Directive (RCD) and should not be perceived as an exhaustive guide to the vessel. This manual is to be read in conjunction with regional regulations required for local operation, the OEM manuals supplied for specific products (e.g. outboard, electronics, steering), and additional craft safety training course materials.

Please keep all manuals in a secure place and hand over to the new owner if the craft is sold.

Explanation of Symbols and Labels

The craft and this manual show symbols which advise the owner/operator and crew of imperative safety precautions to follow when operating and/or servicing equipment. The following descriptions are used. They should be respected at all times.

	Danger Denotes an extreme intrinsic hazard exists which would result in high probability of death or irreparable injury if proper precautions are not taken.
	Warning Denotes a hazard exists which can result in injury or death if proper precautions are not taken.
	Caution Denotes a reminder of safety practices or directs attention to unsafe practices which could result in personal injury or damage to the craft or components.
	Information Denotes useful or important facts or suggestions that can greatly enhance safety and efficiency of operations.

The following additional symbols may be found on fittings and components on board the craft. They should be respected at all times.



2. BEFORE OPERATING THE CRAFT

BEFORE USE OF THE CRAFT

Before using a Sealegs Craft it is important the operator familiarises themselves with its operation and safe use. If the operator is unfamiliar with this type of craft, for comfort and safety, ensure they obtain handling and operating experience before assuming command of the craft. It is strongly recommended that:

- The operator fully reads this manual, and understands the craft's operation, maintenance and safe use. A manual however is not a replacement for experience and common sense.
- A complete detailed visual check of the craft is made before initial use, and before each subsequent journey.
- All safety and emergency equipment is checked and confirmed to be correctly located on board (including appropriate lifejackets for all users, and ensuring the craft has a full emergency kit including flares and first aid kit on board), and all operators and passengers of the craft know how to operate this safety equipment.

If the craft is being used for the first time, the following should also be checked:

- If an anchor is included with the craft, then the anchor should be checked that it is attached correctly to the rope and chain, and attached securely to the craft.
- That the tube pump is assembled, and operation understood.



The operator should be familiar with the location and functionality of the controls and all safety and emergency equipment before operating the craft on the land or water.

Outboard Run-in Times

Some outboard engines require a run-in period. The separate outboard owner's manuals included in the document pack should be consulted for detailed instructions on the operation and maintenance of the outboard fitted to the craft.



Please refer to the outboard manual for specific run-in details for the type of outboard fitted. For example, there is a 10-hour run-in period for the Yamaha outboards.

Responsibility

It is the craft owner/ operator's responsibility to:

- Know the limitations of the craft.
- Follow the rules of the road.
- Keep a sharp lookout for people and objects in the water.
- Ensure that the anticipated wind and sea conditions will correspond to the design category of the craft and that the operator and crew are able to handle the craft in these conditions.
- Never operate when under the influence of drugs or alcohol.
- Always be aware of the crew/ passenger's safety.
- Ensure all crew receive suitable training, particularly with regards to location and operation of safety equipment.
- Reduce speed when there is limited visibility, rough water, people in the water nearby, crafts or structures.
- Ensure the craft is properly always maintained.
- Have the craft inspected by qualified personnel at regular intervals and whenever a cause for concern is raised.
- Ensure compliance with all legislation in place in the area of operation. These may include requirements for the carriage of life saving equipment, licensing of the helmsman and respect for the environment.

The owner and users of the craft are responsible for determining its suitability for any and all selected uses, and assumes all risks in connection therewith when used, including the safety of persons and property, and only operating the craft under safe conditions. It is recommended all users undergo a marine safety course before going to sea.

Seaworthiness and Crew Ability

Regardless of the craft's seaworthiness and its certified RCD design category, protection from freak sea and wind conditions cannot be guaranteed. The ability, experience and fitness of the crew should therefore be taken into consideration before making any voyage.

As a minimum, ensure that the anticipated wind and sea conditions will correspond to the design category of the craft and that the crew are able to handle the craft in these conditions.



Any craft, no matter how strong it may be, can be severely damaged by misuse.



Always maintain the craft properly. Make allowances for and ensure necessary maintenance is performed to allow for the deterioration that will occur over time as a result of use or misuse of the craft.

Craft Warning and Caution Labels

Before operating the craft, ensure the crew have read and understood all labels affixed to the craft.



Do not remove or obstruct any safety label. Replace any label which becomes illegible.

U.S. COAST GUARD
MAXIMUM CAPACITIES

8 PERSONS OR 1160 LBS

2260 LBS PERSONS, MOTORS, GEAR
200 H.P. MOTOR



WARNING

INCORRECT OPERATION MAY CAUSE DEATH

- This craft does not have emergency brakes
Ensure a safety runoff path is always available
- Drive straight up and down slopes, not across
- Drive slowly when turning

0001-212 Rev A



WARNING

RISK OF WATER INGRESS

- **SEACOCKS** should be **OPENED** whenever at risk of green water ingress, or when draining craft
- **SEACOCKS** should be **CLOSED** whenever afloat or refloating craft, unless at risk of flooding

0001-213 Rev A



WARNING

MAINTENANCE

- **FUEL** leaks may cause serious injury or death from fire or explosion. Inspect complete fuel system and fittings at least annually
- **BATTERY** must be disconnected before working on electrical system
- **FUEL TANK AND HYDRAULIC TANK** located under floor. Check with the manufacturer before drilling
- **HYDRAULIC SERVICING** may only be performed by a qualified hydraulics engineer

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WATERTIGHT CLOSURE(S)

Keep shut when underway

0001-554 Rev A

WARNING

BEFORE LAUNCHING

- **SAFETY AND MAINTENANCE** checks must be undertaken before commencing each journey
- **LAUNCH** or retrieve only in conditions or terrain suitable for a car towing the same sized boat

OPERATION

- **DO NOT** operate unless conditions and user capabilities allow safe operation
- **DO NOT** operate inboard engine more than 10 minutes (30 minutes with XRT) within 1 hour period
- **DO NOT** raise or lower the front wheel unless the steering is in the straight ahead position
- **DO NOT** leave anchored/moored boat unattended

WHEN OPERATING

- **PASSENGERS** must always be aware of driver intentions and be secure using two hand holds
- **SUDDEN STARTS/STOPS** should be avoided
- **REDUCE SPEED** before attempting a sharp turn
- **VISIBILITY** from the seated position is limited. A standing position may be necessary to maintain a lookout as required by USGC Navigation rules. Avoid serious injury or death from collisions
- **WHEELS** and legs must be clear of obstructions
- **APPROVED TOWING, WINCH AND LIFT POINTS** must only be used when installed and as detailed in the user manual
- **DESIGNED** and warranted for recreational use only
- **SINGLE-HANDED USE** requires a re-boarding device be deployed

AFTER EACH USE

- **BATTERY ISOLATOR** switch turned OFF
- **TRANSOM DRAIN PLUG** removed and bilge drained
- **WASH** all external components with fresh water
- **STORE** craft under cover when not in use

0001-484 Rev A

WARNING



PROPELLER RISK AVOID SERIOUS INJURY

- **SWIMMING OR BOARDING** must only be performed with both engines switched OFF

INCORRECT OPERATION CAN BE DANGEROUS. REFER TO WARNING NOTICES ON CONSOLE

- **DO NOT** use this craft unless the operator has read the user manual
- **DO NOT** raise or lower wheels without ensuring they are clear of people or obstructions
- **DO NOT** exceed the maximum specified payload and ensure that all loaded items are secure
- **DO NOT** sit on transom when moving
- **DO NOT** sit on the wheels
- **DO NOT** stand on moving wheels
- **DO NOT** stand on the wheels on water
- **DO NOT** sit on inflatable tubes when exceeding 10kph (6mph) on water or when travelling on land
- **DO NOT** raise or lower using davit lift points with persons onboard
- **DO NOT** use illegally on public roads

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WARNING

IN CASE OF FIRE

- **EXTINGUISHER DISCHARGE OPENING BELOW**
- **DO NOT** open or remove inboard engine seat top
- **SHUT DOWN** inboard engine and blower
- **DISCHARGE** the entire contents of portable fire extinguisher immediately and continuously through fire port

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CAUTION

PERFORM SAFETY CHECKS BEFORE EACH USE

- **OPERATOR** has read user manual before use
- **APPROVED FLOTATION** safety device must be worn correctly by each person
- **STEERING** operates smoothly and correctly
- **BATTERY** adequately charged and cable terminals are clean and tight
- **EMERGENCY GEAR** onboard, including fire extinguisher, paddles, anchor and rope, user manual, signalling device, marine radio, tool kit
- **LIGHTS AND ELECTRONICS** operate correctly
- **TIRES, RIMS AND WHEEL NUTS** visually inspected
- **HYDRAULIC COMPONENTS** and attachment/pivot points checked and secure
- **TRANSOM DRAIN PLUG** securely in place
- **BILGE PUMP** operation checked and filter cleaned
- **FUEL FILTER** checked for contamination, fuel bulbs primed and fuel system checked for leaks
- **INBOARD ENGINE AND OUTBOARD ENGINE** checked for oil and serviced as per manufacturer recommendations

WARNING

- **DO NOT** operate with incorrect tube pressures
- **CHECK** that each separate tube chamber pressure is at 0.14 BAR (2psi) before each use
- **OPERATING** with incorrect tube pressures will damage tubes and void warranty
- **AMBIENT AIR TEMPERATURE** and direct sunlight will affect tube pressures – check tube pressures when conditions change
- **DO NOT** use handholds or bimini attachment points for towing, lifting or pulling

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WARNING

INCORRECT OPERATION CAN BE DANGEROUS

- **DO NOT** operate unless you have read the user manual
- **DO NOT** exceed maximum on-water or on-land capabilities of this craft or its operator
- **DO NOT** operate outside of the maximum conditions:
 - Maximum Sea State 5
 - Maximum wave height of 4metres (12ft)
 - Maximum wind speed of
 - Beaufort 8 (74kph or 46mph)
- **DO NOT** use illegally on public roads

GASOLINE VAPOURS CAN EXPLODE

- **BEFORE STARTING** operate the inboard engine blowers for a minimum of 4 minutes
- **CHECK** inboard engine compartment for gas vapours

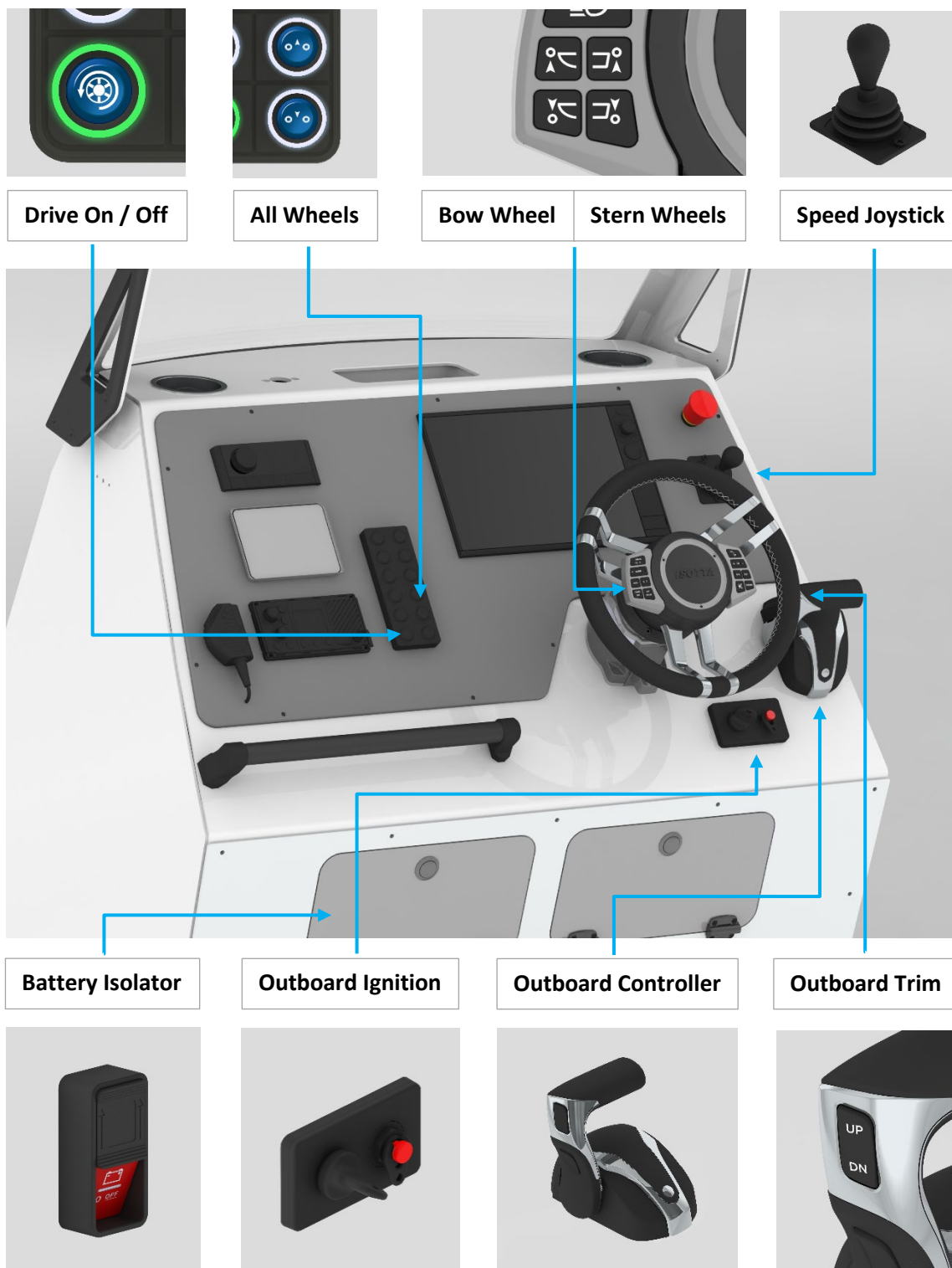
PERFORM SAFETY CHECKS BEFORE COMMENCING JOURNEY

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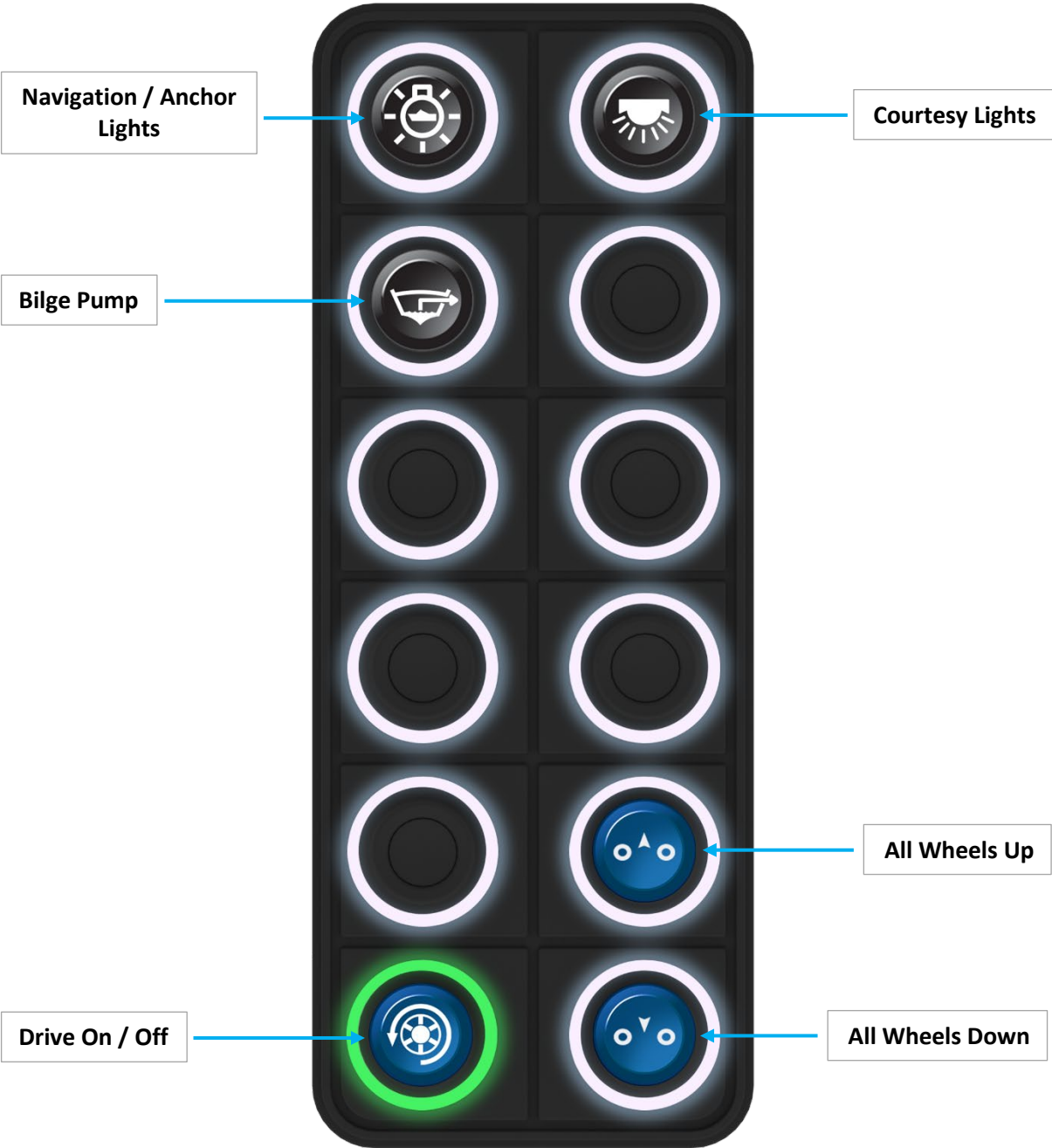
3. OPERATING THE CRAFT

This craft will provide hours of enjoyment when used and cared for in accordance with these instructions. Please take the time to learn to operate the craft correctly and safely.

The Console – 7.5m Rib



Keypad Symbol Index - Standard



Keypad Symbol Index – Additional Options



Underwater Lights



Social Strip Light



Flood Lights



Anchor Up



Anchor Down



Bait Tank



Generic Accessory



Wash Down



Light Bar



Amber Beacon



Indicator Arrow



Hazard Lights



WARNING

If a button on the keypad flashes red, it means there is a fault with that circuit. Hold down for 5 seconds or until red light stops flashing to reset the circuit. Try the circuit again and if it starts flashing red again, it means there is a blown fuse or software issue. In this instance, please contact your nearest service technician.

OPERATIONAL INTRODUCTION

The following sections provide more detail on how to operate the craft on the land, launching, on the water, and returning to land ready for storage.

A Sealegs has two propulsion systems – one for land, and one for sea. On water, the outboard engine(s) provides the power to propel the craft. On land, the electric drive system provides the power to drive the craft, and to raise and lower the legs. The main controls to operate the craft are located on the console, as detailed on the previous page.

On water, the **Outboard Controller** with integrated trim switches controls the outboard(s). The steering wheel is used to steer the craft on the water.

On land, the electric drive system provides the power for the wheels. Once the electric drive system is running, the forward and reverse speed of the craft is controlled by the **Speed Joystick**. Pushing the joystick forward moves the craft forward, and pulling the joystick backwards reverses the craft. Returning the joystick to the centre positions halts the craft. The steering wheel steers the craft on land.

The electric drive system provides the power to raise and lower the legs. This is performed using the **Bow Wheel** and **Stern Wheels** buttons on the steering wheel, or the **All Wheels Up** and **All Wheels Down** buttons on the console.

For safety, the **All Wheels Up** function is only available while the craft is in the water.



Sealegs Crafts are not road legal and should not be driven on public roads.

BEFORE EACH JOURNEY

Safety checks must be undertaken before each journey.

Recommended Safety Equipment



The sea can be unpredictable. Be prepared by carrying the following equipment, as a minimum, always.

- Appropriate lifejackets or buoyancy aid suitable for each person.
- Appropriate weatherproof clothing.
- Compass and Charts.
- Anchor and line.
- At least two warps. 5
- Sealegs Electric long-term storage
- To minimise the effect of any parasitic draws on the electrical system. It is recommended to disconnect the drive battery if the craft is to be left unused for an extended period. *Disconnecting the Drive Battery* on page 5-8.
- It is recommended to charge the drive battery to 50% before disconnecting the battery to limit calendric aging. Battery voltage should be checked every six months and the battery recharged to 50% if the voltage drops below 44V.
- Anchoring, Mooring and Towing on page 4-3
- Distress flares.
- Kill Cord.
- VHF radio and/or appropriate communications devices on board.
- Binoculars.
- Knife in protective sheath.
- Drinking water.
- First aid kit including compress and thermal blanket.
- Bucket.

A life raft may be stowed in the forward cockpit, fixed to the installed tie-down eye fittings.

Passengers and Crew

- Ensure the person operating the craft has read and understood this manual, and understands the local rules and regulations regarding craft use.
- Familiarise each person on board with the safety equipment available on the craft.

Craft Visual Check

Before each journey conduct a visual check to ensure the craft is in good order, paying particular attention to the following:

- **Fuel:** fuel tank full, fuel filter checked for contamination, and fuel lines checked visually for leaks. Ensure there is sufficient fuel for the anticipated journey, including a margin for contingencies.
- *See Fuel System on page 4-5 and Petrol and Oils on page 5-1.*
- **Engines:** outboard engine(s) checked for oil, and serviced as per the manufacturer recommendations. Inspect exhaust system for leaks or vapours.
See Petrol and Oils on page 5-1.
- **Wheel Motors:** inspection of wheel motors for damage.
See Electric Wheel Motors on page 5-7.
- **Tyres:** pressure checked, and the rims and wheel nuts inspected.
See Tyres and Rims on page 5-2.
- **Inflatable tubes:** inspected and pressure checked. *See Tube Maintenance on page 5-3.*
- **Steering:** confirm smooth operation, and associated linkages visually checked.
See Steering System on page 5-5.
- **Battery:** charged and cable terminals clean and tight.
See Electrical System and Battery Maintenance on page 5-7.
- **Hydraulics:** operation checked, attachment/pivot points checked and secure, and all hydraulic lines and fittings checked visually for leaks.
See Sealegs Hydraulic System on page 5-6.
- **Outboard Ignition kill switch:** outboard ignition safety bungee cord fitted and operational.
- **Navigation:** lights and electronics operate correctly, and navigation charts are available.
- **Bilge pump:** operation checked, and filter cleaned, transom drain plug securely in place.
See Bilge Pumps on page 5-11.
- **Scuppers/ Seacock:** check operation of scuppers and seacocks. When on water perform a visual check for leaks.
See Through Hull Fittings on page 5-13.
- **Fire safety equipment:** fire equipment checked. *See Fire Fighting Equipment on page 4-6.*

For more information on the items above see *Section 5, Care and Maintenance*.



If the craft is fitted with a folding or removable windscreen, this must be securely raised and fixed in place when operating the craft to avoid exposing sharp edges on the windscreen frame.



If a fuel leak or fumes are detected, do not start the engine. Ensure all crew leave the craft and have a qualified person repair the fault as soon as possible

Weather and Water Conditions

- Always check the local maritime weather and water conditions before commencing any journey.
- The ability, experience and fitness of the crew must be taken into consideration before making any voyage.
- As a minimum, ensure that the anticipated wind and sea conditions are within the capability of the craft and that the crew are able to handle the craft in these conditions.

DRIVING THE CRAFT ON LAND

Starting the Electric Drive System

- Slide the protective cover down and press the **Master Switch** to the 'On' position. The Master Switch can be found in the glovebox on the left of the console.



Master Switch 'OFF'



Master Switch 'ON'

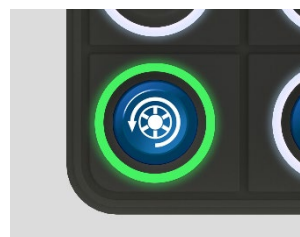
- Ensure that the **Speed Joystick** is in the neutral position, to ensure the craft doesn't move forward until you are ready once started.
- Turn the **Outboard Ignition Key** clockwise to the ignition position.
- Press the Blue **Drive ON/OFF Button** to start the Drive Battery.
- The **Drive ON/OFF button** will slowly flash green as the system completes the start-up checks. When the button is solid green, the system is active. The operator can now drive the craft, and raise / lower the craft.
- The **Drive ON/OFF button** will quickly flash green when the system is ready but the ready-to-drive conditions have not been met. Check the outboard ignition key has been set to the ignition position and check the emergency stop button is disengaged.



Inboard Speed Joystick



Outboard Ignition key



Drive ON/OFF Button

Steering, Acceleration and Deceleration

- To move the craft forward on land, gently push the **Speed Joystick** on the console forward. The further the lever is pushed, the greater the acceleration.
- Return the **Speed Joystick** to the central neutral position to stop.
- To reverse the craft, gently pull the **Speed Joystick** backwards.
- Steer the craft left and right using the console steering wheel.
- Greater control can be achieved by moving the joystick in small increments.



Do not use the craft on slopes greater than 1:4
Do not drive the craft across slopes.
Do not park the craft on a slope.
Do not use the craft unless a safety runoff path is available.



The legs must be straight and fully extended when driving or raising and lowering the craft on land. Driving when the legs are not fully extended may cause excessive load and damage. This is not covered under warranty.



As with any moving vehicle, appropriate care must be taken when driving the craft. The craft has a maximum speed of approximately 7km/h on land; however reduce to a safe speed to suit the conditions and terrain.

Terrain

Sealegs 7.5m models are fitted with AWD operation which engages all 3 wheels, and generally provides more traction compared to standard rear-wheel drive. Sealegs fitted with AWD are designed to operate in terrain similar to where a 4WD car would be able to operate. That is softer or steeper land than normal, or with gravel, but the surface being generally free of rocks and potholes.



Driving a Sealegs over rocks, potholes, curbs or similar obstructions is not recommended. Operating a craft in this way will shorten the life of the wheel motors, and excessive abuse will cause failure. This is not covered under warranty.



Avoid driving across a transverse incline. Do not attempt to drive up or down slopes of greater than 14 degrees. Ensure a sufficient safety run-off path is always available.

To get out of difficult terrain, under-wheel traction aids such as 'Max Trax' can be used to gain extra traction. For soft surfaces reducing the tyre pressure can also help to increase traction. Tyre pressure should not normally be reduced below the minimum operating pressure of 18psi (1.24bar). Ensure tyres are returned to a normal operating pressure as soon as possible.

DRIVING INTO THE WATER

When moving the Sealegs Craft from land to sea, the objective is to achieve a smooth transition of power from the wheels to the outboard. While the process may appear involved at first, with practice launching will become easier.

The craft is first driven slowly into the water using the wheels. Once water depth is sufficient to cover the propeller the outboard is started, while still driving on the wheels. As the craft begins to float and the wheels leave the seabed, more power is applied to the outboard to take control of the craft. Once the craft is safely floating under control of the outboard motor, the wheels can be stopped and raised out of the water, the drive system switched off and the craft can be powered away using the outboard.



Always ensure a smooth approach path. That is a clear pathway, free from people, potholes and obstacles. If the approach path is unknown extra care and caution must be taken. Ensure an extremely slow approach, ideally less than 2 km/hr.



It is recommended that a calm, flat beach be used initially until the operator gains confidence entering and exiting the water. The operator may then wish to progress to more difficult conditions.



Double check the transom drain plug is in place before entering the water.

Note that the craft can be driven slowly in the water using the outboard while the legs are still down in the water, although obviously doing so with any speed will cause excess water to be splashed around the craft.

To minimise any risk of the craft being pushed out of control by adverse sea conditions when launching, it is normally more important that the craft be brought under safe control of the outboard power before the operator concentrates on raising the wheels. Please note however that when the bow wheel is down, craft steering control can be dramatically affected, especially in areas where a strong tidal flow is present.

Entering the Water

- Line up a smooth approach path to the water and slowly drive the craft into the water, controlling the craft speed using the **Speed Joystick**.
- Prepare the outboard for starting by lowering the outboard into the water using the **Outboard Trim** buttons on the **Outboard Throttle**. As a general guide, on a flat sandy beach or ramp set the trim to approximately 70%. On a rocky launch area, the outboard can be trimmed out higher to help protect the lower part of the outboard (skeg).
- Confirm the **Outboard Throttle** is set in the neutral position. For safety reasons, having the outboard set to any position other than neutral will prevent the outboard from starting.
- Once the outboard propeller is fully submerged and in sufficient water depth, turn the **Outboard Ignition Key** to start the outboard and set the **Outboard Throttle** to a low comfortable speed. Note this should be done before the craft begins to float.
- Take control of the craft with the outboard as soon as possible. Once the water reaches sufficient depth the craft will begin to float like a traditional craft, and the wheels will break contact with the seabed. At this point the craft is controlled by the outboard. Gently increase the **Outboard Throttle** power so the craft moves forward and is under safe control.

Lifting the Legs

- Once the craft motion is safely controlled by the outboard, stop the wheels by returning the **Speed Joystick** to the neutral position.
- Press the **Bow WHEELS UP Button** to raise the front wheel and leg out of the water. The button can be found on the left hand side of the steering wheel controls. Hold the button until the leg is fully raised and the confirmation 'beep' sound is heard.
- Repeat the process with the **Stern WHEELS UP Button**.
- **All WHEELS UP Button** can also be used if the correct conditions are met. If they are not, the all wheels up button will flash orange when pressed.
- Once both front and rear legs are fully raised, the Electric Drive System can be turned off by pressing the Blue **Drive ON/OFF Button**.



Outboard Trim



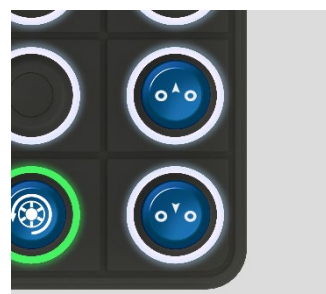
Outboard Throttle



Outboard Ignition key



Bow / Stern Wheels Buttons



All Wheels Up / Down Buttons

- Set **Outboard Trim** to 0% (on gauge).

OPERATION ON THE WATER

When operating on the water, the following should be noted:

- It is expected the operator takes all reasonable care on the water, including respect for local laws and regulations.
- Incorrect operation of the craft on the water can result in serious injury or death, so it is recommended the operator undertake independent training on the safe use of watercraft.
- Ensure all crew are informed about the crafts behaviour. Before conducting any rapid acceleration or high-speed manoeuvres, passengers must be warned to sit and hold on.
- The helmsman may have to take sharp avoiding action at any time. Passengers should therefore be seated and holding on when underway.
- Periodic inspection of the propeller for excessive wear or damage is recommended in order to maintain peak performance and to maximise the longevity of the engine.



Seaways are infinitely variable, and all crafts can meet conditions that will challenge the crafts handling characteristics and/or the helmsman's ability. Always proceed with a margin for error. Avoid making sharp turns at speed, particularly in a short seaway.



Incorrect operation on the water can result in serious injury or death.



It is strongly recommended that helmsmen receive adequate training in craft handling before setting to sea for the first time.



Be aware that factors such as altitude, temperature, load, and bottom growth may affect performance.

Visibility from Main Steering Position

The international regulations for preventing collisions at sea (COLREGS) and the rules of the road require that a proper lookout be always maintained, with observance of right of way. Make sure no other vessels are in the path before proceeding.

For the safety of those on and around the craft, ensure clear visibility is always maintained. Care must be taken as operator vision from the helm can be obstructed by high trim angles of the craft and other factors caused by one or more of the following conditions:

- Propulsion Engine Trim Angles
- Loading and Load Distribution
- Speed
- Rapid Acceleration
- Transition from Displacement to Planing
- Sea Conditions
- Rain and Spray
- Darkness and Fog
- Persons or movable gear in operator's field of vision.

Using the Outboard and Trim

Refer to the separate outboard manual for proper use and operation of the outboard. Become familiar with the outboard and trim operation in calm, controlled conditions before venturing into open sea or operating at speed.

The correct trim angle setting for the outboard will depend on the craft speed and environmental conditions. Setting the **Outboard Trim** on the **Outboard Throttle** adjusts the angle the craft rides through the water. Trimming in (bringing the propeller closer to the transom) pushes the bow down and raises the transom. Trimming out raises the bow and lowers the stern. Trimming out too far can lift the bow too high out of the water, while trimming too far in will push the bow into the water. A 'neutral' trim will flatten out the hull. Excessive trimming either direction can significantly alter the handling of the craft.

One method of setting trim in calm water is to trim the engine all the way in and start trimming up slowly. The craft speed will increase as the most efficient trim angle is found. If the craft porpoises (regular bow up and down motion not caused by waves), speed starts to decrease or cavitation occurs (free air around the propeller causing a change in propeller speed), then this indicates the outboard has been trimmed out too far.

In choppy waters, bringing the trim in to flatten the angle of the hull can sometimes provide a more controlled and comfortable ride. If adverse conditions occur, reduce throttle and/or adjust the trim to maintain control.

Navigation Lights

Night crafting requires running lights. The craft is fitted with navigation lights port and starboard (on the console, or on the cabin as appropriate), and a steaming light on top of the ski pole. The running/ navigation lights are controlled on the console.



Check proper operation of navigation lights before heading out for all navigation lights.

Risk of Loss of Stability

This craft has been tested in a wide variety of sea and load conditions and no dangerous handling characteristics have been discovered during normal operation. However, the helmsman should be aware that no high-speed craft can be guaranteed to handle safely in all conditions. Sea and climate can combine to create unique conditions. The helmsman should drive the craft according to the conditions, always keeping full control of the craft's motions with a margin of safety in hand.

It is strongly recommended that users undergo training in the safe operation of high-speed craft before using this craft.



The craft should never carry more than the recommended load; The load should be suitably distributed, bearing in mind that stability is most significantly reduced by any weight added high up in the craft.



Stability can also be adversely affected by sloshing fluid. Bilge water should be kept to a minimum. If the craft should become swamped, do not undertake high speed manoeuvres until the water has been cleared.



Loose equipment can cause damage to the craft and affect stability. Ensure all loose equipment is properly stowed before setting out.



The stability of this craft is significantly reduced at speeds above displacement speed.



Stability may be reduced when towing or lifting heavy weights using a davit or boom.



Breaking waves are a serious stability hazard.



This craft may be entirely clear of the water for short periods of time in normal operation (i.e., become airborne).

Risk of Flooding



The following opening are marked “WATERTIGHT OPENING – KEEP SHUT WHEN UNDERWAY” and care should be taken to observe this warning:

- Transom Platform Hatches
- Console Access
- Deck Locker Hatch.



In rough weather, hatches, lockers and companionway/doorways should be closed to minimise the risk of water ingress.



Care should be taken to ensure the cockpit drains are not blocked and that the cockpit can drain freely.



Ensure limber holes are clear.



Check the functionality of bilge pumps regularly and clear debris from their inlets.

Protection from Falling Overboard

Care must be taken to prevent passengers and crew from falling overboard on both land and sea.

On this craft, the working deck area is defined as the forward deck, around the console and seating deck aft. Areas outside of this working area should only be used whilst the leaving or arriving at a mooring or whilst the craft is not underway.



This craft can operate at high speed and with great acceleration. All crew should be seated and holding the rigid handles provided at all times when underway. Accelerating or turning with crew standing is very likely to result in man-overboard.



A re-boarding device should be deployed whenever the craft is used singlehandedly. A boarding ladder may be useful for this purpose.



Most slips and falls occur during boarding and disembarking. Be aware that wet decks can be slippery. Wear slip resistant footwear at all times.

In the event of a member of the crew falling overboard, they should be recovered with assistance and pulled up over the side of the craft.

EXITING THE WATER

Exiting the water and returning to land is essentially the reverse of driving into the water. The objective is a smooth transition of craft control from the outboard engine on water to the Electric Drive System on land. This is achieved by starting the Electric Drive System and lowering the wheels whilst slowly approaching shore, then smoothly transitioning power from the outboard to the wheels.



Always ensure a smooth approach path. That is a clear pathway free from deep potholes and large obstacles. If the approach path is unknown extra care and caution must be taken. Ensure an extremely slow approach, ideally less than 1 knot.



It is recommended that a calm, flat beach be used initially until the operator gains confidence entering and exiting the water. The operator may then wish to progress to more difficult terrain.



Ensure the craft is only operating at slow speed when lowering the wheels into water as the drag created during this process will impact craft control and stability. Note that when the bow wheel is down craft steering control can be dramatically affected, especially in areas where a strong tidal flow is present.

Preparing to Exit the Water

- Choose a smooth and comfortable approach path and reduce outboard speed as the landing area is approached. Craft speed on approach should not exceed 5 knots.
- Use the **Outboard Trim** buttons to set outboard trim to 70% (on gauge).
- Press the Blue **Drive ON/OFF Button** to start the Electric Drive System. *See Starting the Electric Drive System on page 3-8.*
- Once near shore, lower the wheels. If a depth sounder is fitted, a reading of 1m may be useful guide. Press and hold the **Stern Wheels Down** button to lower the rear wheels. This can be found on the left side of the steering wheel. Leave the button depressed until the legs are in the fully lowered position and the confirmation 'beep' is heard.



Outboard Trim

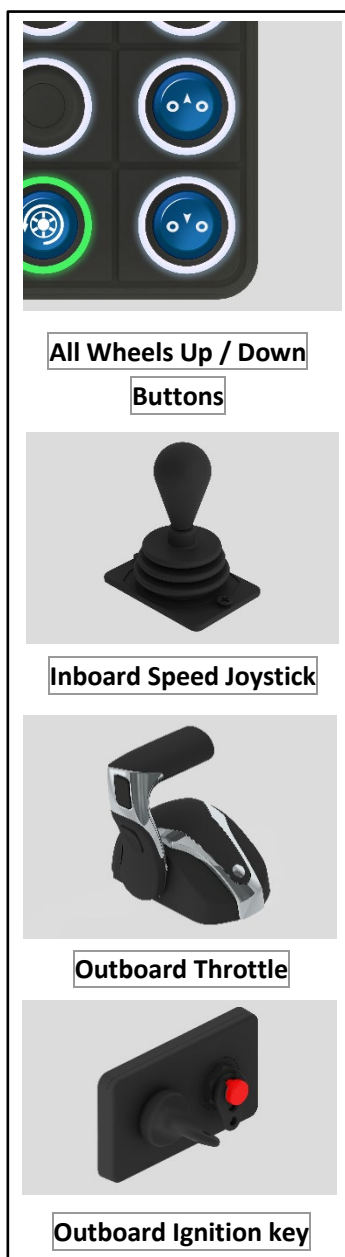


Bow / Stern Wheel Buttons

- Once the rear legs are lowered, push and hold the **Bow Wheel Down** button to lower the front wheel until it is fully lowered and the confirmation 'beep' has sounded.
- **All Wheels Down** can also be used if certain conditions are met. If these conditions are not met the button will flash orange when pressed.
- Drive the craft towards the land with both the outboard and Electric Drive System running. Note the outboard power may need to be increased to allow for the extra drag of the wheels.

Exiting the Water

- To help ensure a smooth transition to land, ensure the wheels are slowly turning by pushing the **Speed Joystick** partially forward, ready for contact with the seabed.
- As the craft comes into shore and the water level drops, the wheels will contact the seabed and the craft will stop floating. Use the **Speed Joystick** and steering wheel to ensure the craft is under control of the wheel system, and drive towards shore.
- Once under control of the wheel system, the outboard can be stopped. Set the **Outboard Throttle** to 'Neutral' and switch the **Outboard Ignition Key** to 'Off'. This should be completed before the outboard propeller is out of the water.
- Use the **Speed Joystick** to increase the land speed if required, and drive the craft carefully and safely onto land.



The legs must be straight and fully extended when driving the craft on land. Driving when the legs are not fully extended may cause excessive load and damage. This is not covered under warranty.

Turning off the Electric Drive System

- Drive the craft on land as required. *See Driving the Craft on Land on page 3-8*
- Return the **Speed Joystick** to the 'Neutral' position to stop the craft.
- Press the **Drive ON/OFF Button** which will begin the automatic drive system shutdown sequence.
- Return the **Outboard Ignition Key** to the off position.

LOWERING THE CRAFT ON LAND

The following section describes how to lower the Sealegs on land. This may be useful to assist people boarding the craft, or when leaving the craft unattended for any length of time.



Care must be taken when raising or lowering the legs on land, as damage to the hull and outboard can occur if not performed carefully or on an appropriate soft surface.



Raising and lowering legs on land requires the front wheel to be straight. Raising or lowering the front wheel on land whilst the steering is turned right or left may cause excessive load damage. This is not covered under warranty.



Once lowered onto the ground, the craft may tilt suddenly to either the left or the right if the rear wheels are fully retracted.

Lowering the craft on Land

- Ensure the ground that the craft will be lowered onto is flat and soft (preferably sand or grass). Alternatively ensure there is sufficient protection under the craft to prevent damage to areas where the hull contacts the ground.
- Ensure the Electric Drive System is running. See *Starting the Electric Drive System* on page 3-8.
- **Ensure the front wheel is straight.** Failing to do so may cause permanent damage to the front leg.
- Ensure the outboard engine is fully raised using the **Outboard Trim** switch.
- Alternate between raising the front and rear legs to bring the craft down to the ground in a controlled and level manner. Continue until the hull is resting level on the ground. Leave the rear wheels in contact with the ground for stability.



Note the craft may lunge forward as the rear legs are raised. Ensure there is sufficient room around the craft to allow for this movement.

4. OPERATIONAL OPTIONS

BRAKING & ABS (AUTOMATIC BRAKING SYSTEM)

Sealegs Crafts are braked while the **Speed Joystick** is in the central 'neutral' position.

The ABS (Automatic Braking System) will automatically apply the park brake when the drive system is off, or the joystick is in neutral. This means that the craft will not free-wheel or roll when turned off.



Emergency Stop Switch

Sealegs Electric craft include a red emergency stop switch. This switch is for the unlikely event of a system failure which causes a runaway scenario or loss of speed control. This switch is not intended for normal use and should only be used in emergencies.

Pushing this switch down firmly until it locks will instantly disable drive power and simultaneously engage the brakes. To allow the drive system to be re-enabled the switch needs to be rotated clockwise until it pops back to its normal position.

Using the brakes while the craft is underway causes wear to the braking system. After five applications of the brakes while underway, the craft must be taken to an authorised Sealegs servicing agent where they shall be inspected to ensure safe braking performance.

	The Emergency stop button will cause the brakes to be fully engaged and the craft will come to an immediate stop.
	- Do not use the craft on slopes greater than 1:5. - Do not drive the craft across slopes. - Do not park the craft on a slope. - Do not use the craft unless a safety runoff path is available.

AFTER EACH JOURNEY

After each journey, the following steps should be performed:

- Ensure the **Master Switch** is turned to the 'Off' position.



Master Switch 'ON'



Master Switch 'OFF'

- Run fresh water through the outboard motor. Consult the outboard manual for more detail.
- Open all seacock valves and drainage bungs to drain any water from the craft.
- Wash down the craft with fresh water, taking care to remove all salt, sand and debris. Do not clean the craft with solvents or any other chemicals. Solvents or petrol can damage inflatable tube material, or other components of the craft. Any accidental spills must be removed immediately with soapy water. Close all seacock valves and drainage bungs once all residual water has finished draining.
- Craft should be allowed to dry after washing and before storage. Lifting cushions and squabs to allow airflow across all painted surfaces.

Leaving and Securing the Craft

Removing the **Outboard Ignition Key** will help secure the craft; the Drive system will be unable to start. Ensure the **Master Switch** is 'Off' when leaving the craft.

If the craft is going to be unused or stored, ensure the craft is fully clean, drained of water, dried and stored out of the water:

- It is recommended that the hatches be opened, and the seat squabs (if fitted) be removed to assist air flow.
- It is highly recommended that the craft be stored under a permanent covering such as a craft shed or garage, which shall provide full protection from sun, UV, rain, snow, and sand and/or salt spray.
- If it is impossible to store the craft undercover, consider using a full-length material cover available from Sealegs. Ensure the craft is dry before covering, and periodically

remove the cover to ventilate the craft. This will help alleviate condensation build-up and minimise mould/mildew growth.

- Lubricate and protect moving parts of the craft with light machine oil or similar.



Failure to follow the recommended storage procedures will severely reduce the life and appearance of the fitments and finishes.



Do not leave the craft in the water overnight. The craft is not designed to be left in the water for extended periods. The craft should be stored on land overnight.

Sealegs Electric long-term storage

To minimise the effect of any parasitic draws on the electrical system. It is recommended to disconnect the drive battery if the craft is to be left unused for an extended period. *Disconnecting the Drive Battery* on page 5-8.

It is recommended to charge the drive battery to 50% before disconnecting the battery to limit calendric aging. Battery voltage should be checked every six months and the battery recharged to 50% if the voltage drops below 44V.

ANCHORING, MOORING AND TOWING

Care must be taken when anchoring, mooring or towing the craft. It is the operator's responsibility to ensure that mooring and towing lines, anchors and chains are adequate for the vessel's intended use. Owners should also consider what action will be necessary when securing a tow line on board.

Only the points of the craft detailed below should be used for attaching. Never use fittings such as handles or bimini mount points for anything other than their intended purpose.



Front Cleat



Towing point



Tie-down Point

The crafts are not for accommodation or sleeping. The cockpit area should not be fully enclosed.

Towing

A towing point is fitted to the bow of the craft on the rigid hull under the hydraulic wheel. No other fitting should be used to tow the craft.



The breaking strength of lines / chains should not exceed 80% of the breaking strength of the strong point to which it is attached.



Always tow or be towed at slow speed. Never exceed the hull speed of a displacement craft when towing or being towed.



A tow line should always be made fast in a way that it can be released when under load.

Mooring

When moored, the seacocks must be in the closed position. *See Through Hull Fittings on page 5-13.*



Do not leave the craft moored unattended. The craft is not designed to be left in the water for extended periods. The craft should be stored on land overnight.



When refloating via the incoming tide (when the legs are either in the up or down position) ensure the seacocks are closed to avoid water ingress via the scuppers.

Trailing

When transporting the craft on a trailer:

- Secure the craft by the front towing point and the front tie-down point, using separate strops or chains.
- Tie the rear of the craft to the installed eyelets using strops of sufficient break strength rating. Do not tie strops on or around the steering rams, leg rams or hydraulic hoses.
- Observe any specific outboard trailering settings (e.g. engaging the outboard trailering bracket).
- Ensure the trailer is operated within local authority regulations.



Always check local authority regulations when trailering. Some regions may require the tubes to be deflated to keep within local maximum trailer width requirements.

Trucking

When transporting the craft on a flatbed truck or similar, secure the craft by the front towing/ tie down points, and tie the rear of the craft using strops of sufficient break strength rating.

Ensure the craft is lowered onto the hull and sufficiently stropped to the truck in case there is any movement of the legs during transit. The use of a wooden cradle should be considered if the journey will be long or arduous. *See also Trailering above.*

FUEL SYSTEM

The fuel filler is on the starboard side of the transom.

It is recommended that the craft should be refuelled at a petrol station on land to avoid the potential of spilling fuel overboard into the environment. Splashing water over surfaces around the filler cap may prevent spilled fuel from adhering to the deck surface.



Fuel Filler

Unscrewing the protective fuel cover will reveal the fuel fill opening. Carefully add fuel, taking care not to splash any fuel. Ensure the appropriate fuel is used for the fitted outboard (see *Petrol Requirements on page 5-1*). Do not fill the tank to its maximum; allow room for expansion. Close the fuel cap firmly, but do not over-tighten as this may damage the seals and fittings.



Petrol is extremely flammable and highly explosive under certain conditions. Improper handling of fuel could result in property damage, serious injury or death.



Never smoke when refuelling, or inspecting or working with the fuel system.

Priming the Fuel System

Should the fuel system be starved of fuel, it may be necessary to re-prime the system. Use the primer bulb(s) located inside the outboard sock(s) to prime the outboard engine(s). This is located at the transom, use the bulge in the sock(s) to locate the primer bulb(s).



Fuel Primer Bulb(s)

Single outboard crafts have one primer bulb and twin outboard crafts have one for each outboard.

	To avoid fuel spillage, it is recommended that care is taken not to overfill the fuel tank. Clean up any spilt fuel immediately.
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	Fuel is considered chemical waste. Keep an absorbing cloth close by when filling tanks.
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FIRE FIGHTING EQUIPMENT

It is recommended that a 1 kg powder fire extinguisher (of minimum rating 1A:10B: E) be carried on board at all times.

Console Fire Port Location and Operation

The console has an extinguisher discharge opening in the front storage compartment. In the unlikely event of a console fire, the drive system should be stopped immediately using the **Drive On/Off Button**. Turn the **Master Switch** off, push the fire extinguisher through the fire port opening and activate.



	It is the responsibility of the craft owner/operator to: • Check equipment at intervals as stated on equipment. • Replace any extinguisher used with one of same rating. • Inform all crew about the location and operation of all fire fighting devices.
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Risk of Fire

To help reduce the risks of fire:

- Never obstruct portable extinguishers in lockers.
- Never obstruct safety controls (shut off valves, switches).
- Never smoke while handling fuel.
- Never use gas lights in craft.
- Never modify the craft's systems (especially fuel systems).
- Never fill any fuel tank whilst machinery is running.
- The bilge system should be kept clean, and regularly checked for oil and fuel contamination. *See also Bilge Pumps on page 5-11.*
- Take care not to damage fuel lines, and check the condition of fuel lines regularly.



Do not smoke or use an open flame when filling with fuel, if the fuel tank cap is removed, when working on the fuel system or in the engine bay.



Never use a flame to check for leaks.



Inspect the fuel system for leakage regularly. Hoses in the fuel system must be inspected at least annually and replaced if any deterioration or opening is found. If fuel leakage is present, have the system repaired before further use. System repairs should only be made by competent personnel.



All components that burn fuel require an air supply. Ensure all air intakes are clear before fuel burning components are running.

BATTERY OPERATION

A dedicated house/start/power steering battery system is fitted to the craft, the following items are installed:

- Three 12V lead-acid batteries, one in the transom port side and two in the console.
- The **Master Switch** is mounted on the inside of the glovebox that is on the port side of the console.

Normal Use

- Turn the **Master Switch** to the 'On' position. The craft is now ready for operation.

Emergency Starting

- If the outboard motor(s) won't start, then turn on the 'Emergency battery combine switch' to connect all 12V batteries in parallel and then start the engine.

Battery Charging

Battery charging is achieved using the supplied Sealegs Electric charger. The Sealegs Electric charger will provide power to the 48V Lithium drive battery, as well as the house, start and power steering batteries.

- Use the charging port located in the port side glove box to keep the battery in a charged condition. Batteries will self-discharge over time and allowing the battery to deeply discharge may significantly shorten the battery life.
- When charging for long periods of time, ensure the main battery switch is in the off position.



Master Switch 'ON'



Master Switch 'OFF'



Sealegs Electric Charger

	Lithium Batteries cannot be charged below zero degrees Celsius. To avoid damage to the battery pack, the Sealegs Electric Amphibious system will not enable the battery charger if the battery is below zero degrees Celsius.
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Charging Port

5. CARE AND MAINTENANCE

To ensure safe and reliable operation and to prolong the life of the Sealegs Craft, periodic care and maintenance must be undertaken. Even if this work is not performed directly by the craft owner it is recommended this section be read for an understanding of the requirements.

Always use trained and competent personnel for maintenance, fixing or modifications. Sealegs cannot be held responsible for repairs or modifications not undertaken or approved by them.



Always maintain the craft properly. Make allowances for and ensure necessary maintenance is performed to allow for deterioration that will occur over time as a result of use or misuse of the craft.



Modifications that may affect the safety characteristics of the craft must be assessed, executed and documented by competent people.



Note that any change in the disposition of the masses aboard the craft may significantly affect the stability, trim and performance of the craft.



Attention is drawn to the completion process whereby structural items, for example steering consoles, seats and superstructures are installed by parties other than the manufacturer of the craft. These items should be installed comply with the relevant clauses of ISO 6185-4 so it can be ensured that any such installations do not invalidate the original assessment.

PETROL AND OILS

The craft's permanently installed petrol fuel system components include a fixed 180 litre (48 US Gallon) fuel tank located under the floor, with a fuel filler point on the starboard side of the transom.

Petrol Requirements

As a general guide, the following are octane ratings for some common outboards fitted to Sealegs crafts. These are provided for basic guidance only, and the included manufacturer's outboard manual should be consulted to confirm all fuel requirements. An anti-syphon valve is also fitted to the system.

- Yamaha 200HP and 225HP outboards require 91 regular octane fuel. Please confirm with the separate Yamaha outboard documentation.

	The above is given as a basic guide only. Please refer to the outboard manuals for respective petrol specifications. Failure to follow the manufacturer's recommendations could result in catastrophic failure and may void the manufacturer's warranty.
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	To avoid fuel spillage, it is recommended that care is taken not to overfill the fuel tank. Any fuel spilled should be cleaned away promptly and safely.
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	The use of ethanol-based fuel is not recommended.
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TYRES AND RIMS

Tyres must be kept inflated above 18 psi (1.24bar), with recommended pressure not to exceed 22 psi (1.52bar). On soft surfaces (e.g. soft sand) better traction may be obtained by reducing tyre pressure to the lower end of the operating range.

The wheel rims are affixed to studs with wheel nuts. These should be inspected periodically, with the wheel nuts checked with a torque wrench and set as follows:

- Front and Rear wheels 70Nm

Note that excessive tightening without using a calibrated torque wrench could cause the hub bolts to fail. Tightening with a torque wrench is strongly recommended.

HULL AND FITTINGS

The hull and fittings should be inspected periodically for any signs of damage, leakage or loose fitment. This includes areas such as tie points and handles, console and engine box mountings, through-hull fittings such as drainage scuppers/ seacocks and bungs, and areas such as upholstery and windscreen mounts. Any loose or leaking fittings should be rectified.

OUTBOARD MAINTENANCE



Please consult the separate outboard owner's manuals included in the document pack for detailed instructions on the operation and maintenance of the outboard fitted to the craft.

Ensure the manufacturer recommendations for maintenance are undertaken by competent service technicians.

If the craft is being stored for an extended period of time, consider performing the 'winterising' function of the outboard if required. Consult the separate outboard documentation for details.

If the outboard fails to start, check that the outboard controller is in the 'Neutral' position.



If a fuel leak or fumes are detected, do not start the engine. Ensure all crew leave the craft and have a qualified person repair the fault as soon as possible.



Controls installed with the motor must have a start-in-gear protection device. It is the owner's responsibility to ensure this is so, should the engine or its controls be repaired/replaced.



So as to avoid high-speed moving parts, never run a motor with the cover removed.

TUBE MAINTENANCE

Tube Pressure

Tube pressure will decrease in storage and vary with ambient temperature. Tube pressure must be checked before each journey. Natural expansion may also occur in sunny conditions or in hot climates, so tube pressure should be periodically checked in these conditions to prevent excess pressure build-up.

The recommended tube pressure is 2 psi (0.14 bar). Do not use compressed air for inflating. Do not operate outside the safe working pressure of 2 psi to 3 psi (0.14 to 0.20 bar).

There are six individual air chambers in the craft. The tubes are inflated one compartment at a time using the tube pump provided. If all chambers are fully deflated, it is preferred to inflate the aft chamber, followed by the middle chamber, and finally the bow chamber.

To inflate one chamber, ensure the area around the valve cap is clean and free from dust and sand. Remove the valve cap from the valve by turning the cap anti-clockwise and pulling out. Connect the pump hose into the valve by pushing the hose end into the valve opening and turning clockwise to lock the hose in place, ready to inflate the tube.



Tube Inflation Valves

Inflate the tube until it is firm to touch. A tube pressure gauge is included to check the pressure is within the safe operating range. The gauge is connected in the same manner as the pump hose end as above.

If the tube is over inflated, then air should be vented. To do this remove the valve cap and depress the plunger to release air to make small reductions in compartment pressure. If the tube is left over inflated the tube will tend to “ping” or fail to act as a dampening device when pounding into a sea. If the tube is under inflated, it will tend to flap or flog; under no circumstances allow the tube to drag in the water when it is shuddering or flogging as this can significantly damage the tube.

Remember to always install the valve cap after using the valve. Push the cap into the valve opening and turn clockwise until it locks firmly in place.

Tube Cleaning

It is important to wash the craft down after use with soapy water or ORCA® Nautical Finish to remove salt deposits and any sand or grit that may become lodged and cause abrasion, especially around the tube ends and deck joins. To avoid mildew build-up, occasional cleaning with diluted bleach (hypochlorite) is suggested. Finishing products, such as silicones or similar are not recommended.

Checks should also be made for any signs of abrasion and repairs made as required. If the outer coating is damaged in such a way that the nylon fabric is exposed a patch is necessary.

The adhesives used in the tubes of these crafts will show some darkening with age. This is quite normal and not harmful.

Suspected Tube Leaks

As described above, tube pressure may vary due to ambient temperature conditions, and will slowly lose pressure over time. Tubes may lose pressure over a 24hr period. If excessive pressure loss is suspected, the following may be checked:

- Cover the tube with a soapy water solution. Bubbles in the soap (as compared to foaming) will appear around the area of any leaks or perforations, indicating a minor repair may be required.
- Remove the valve protection cap, and place soapy water in the valve. Depress the valve plunger to clean any dirt or grit that may be trapped in the valve seal.

While puncture repair kits are available and may be useful in emergency situations, it is recommended that any non-emergency tube repairs be undertaken by qualified tube personnel.



Certain liquids can be detrimental to the tube material. Rinse off immediately if any liquid other than water comes into contact with the tubes.

HYDRAULICS

The visible hydraulic hoses and fittings should be regularly checked for signs of leakage and excess wear and tear. If hydraulic oil is discovered in the bilge or any other hydraulic leaks are discovered, then this should be reported to an Authorised Sealegs Reseller immediately before further use.



Any signs of hydraulic fluid leaks should be investigated by an Authorised Sealegs Reseller immediately. It may be dangerous to operate the craft in that condition, so the craft must be inspected before further use.



Hydraulic oil when under pressure can be extremely dangerous. A small leak when under pressure can cause great damage. Ensure hydraulic servicing is only undertaken by qualified personnel.

Steering System

The craft is fitted with a hydraulic steering system. The outboard steering ram located at the transom and the front wheel steering ram are connected by flexible hoses to the steering wheel helm station at the console. The hydraulic circuit is 'closed' and is without a separate reservoir. Should there be any slow leaks, 'notchy' or clicking noises, the steering will become difficult to operate. The craft should never be used in such a condition. Have an experienced marine engineer bleed and refill the system.



Refer to the separate steering manufacturer's documentation for information pertaining to the steering gear.



All components of the steering system must undergo periodic inspection and maintenance to ensure safe operating conditions. Refer to the Scheduled Maintenance section of this manual for further details.



Failure of the steering system will cause loss of control of your craft. Any change in steering such as looseness, tightness, binding etc. must be checked immediately by a qualified person.



A kill-cord is provided at the helm so the engine will cut-out when pulled. The helmsman should connect him/herself to the kill-cord when the engine is running.

If the steering is not centred with the front wheel/outboard, a steering bypass valve (labelled inside the console beside the DC box) may be opened, the steering re-aligned, and the valve closed. Note it is important that the valve is fully closed, but not as tight as to damage the valve. If in doubt, see an Authorised Sealegs Reseller.

Sealegs Hydraulic System

A Sealegs craft is fitted with a hydraulic wheel and leg lift system powered by the Electric Drive system. The Sealegs hydraulic lift system has no user serviceable parts. This hydraulic system is a sealed system and should only be serviced by authorised personnel. Incorrect maintenance can have a catastrophic impact on the vessel. DO NOT attempt to fill the hydraulic tank yourself. The introduction of contaminants to the hydraulic system may cause serious damage and is not covered by the manufacturer's warranty.



The Sealegs hydraulic system must only be serviced by an Authorised Sealegs Reseller. Incorrect maintenance may make craft operation unsafe and may void the manufacturer's warranty.

FIRE FIGHTING EQUIPMENT MAINTENANCE

The fire extinguisher should be checked regularly. See also *Fire Fighting Equipment* on page 4-6. Check equipment at intervals as stated on equipment and replace any extinguisher with one of same rating or higher.

ELECTRICAL SYSTEM AND BATTERY MAINTENANCE

Safe Operation of Electrical Systems

- Check battery and charging system condition before going to sea. Use the console gauges and check voltage levels after turning on the Electric Drive system.
- Disconnect the battery when the craft is in winter storage (cold weather areas) or long-term storage.
- Check the function of navigation lights before embarking on night passages and carry replacement bulbs for all navigation lights.
- Never modify the craft's electrical system or relevant drawings; installation, alterations and maintenance should only be performed by a competent marine electrical technician.
- Never leave the craft unattended with the electrical system energised (with the exception of the automatic 24hr bilge pump, fire protection or alarm circuits).



Petrol vapour can explode. Only fit ignition protected marine parts to replace such items as starters, distributors, alternators, generators etc.



Do not use jump leads in the petrol engine/tank space or carry out any activity that could generate sparks.



Never install or replace electrical appliances or devices with components exceeding the rated current amperage of the circuit. Never alter or modify the rated current amperage of over-current protection devices.



When charging and connecting/disconnecting a battery ensure that no water or metallic objects can inadvertently come into contact with the terminals. Protective terminal covers such as rubber boots on electrical connections must be in place at all times except when servicing equipment.

Electric Wheel Motors

The electric wheel motors are sealed units which are not user serviceable. These should only be serviced by authorised Sealegs service personnel. These motors are driven by sensitive high-power electronics which could be damaged by improper service procedures.

Before use, a visual inspection of the wheel motors is required to ensure there is no damage that may cause the wheel motor to mechanically fail or leak. The wheel motors have a dull grey marine coating that should not have any deep scratches or chips.

BATTERY MAINTENANCE

- Check the battery and charging system condition before going to sea, and regularly when stored.
- Ensure the **Main Battery Switch** is turned off when leaving the craft.
- The battery on the craft must be inspected periodically for any signs of corrosion or deterioration. Keep batteries clean and dry.
- Batteries will self-discharge over time and allowing the battery to deeply discharge may significantly shorten the battery life. Use the Sealegs Electric charger to keep the battery in a charged condition.

12V Battery Disconnection and Removal

To remove the battery cables:

- Turn off all items drawing power from the battery.
- Turn the **Main Battery Switch** to the off position.
- Ensure the Sealegs Electric charger is disconnected.
- Remove the negative cable first, then the positive cable. To replace the cables first replace the positive cable, then the negative cable.

	Ensure the battery space is always well ventilated.
	When charging and connecting/disconnecting a battery ensure that no water or metallic objects can inadvertently come into contact with the terminals.
	Do not disconnect the batteries while the engine is running; alternator and wiring damage could occur.

Disconnecting the Drive Battery

Disconnecting the drive battery should be done if any service work is to be undertaken on the Sealegs Electric amphibious system, or if the craft is going to be put into long term storage.

To disconnect the Drive battery:

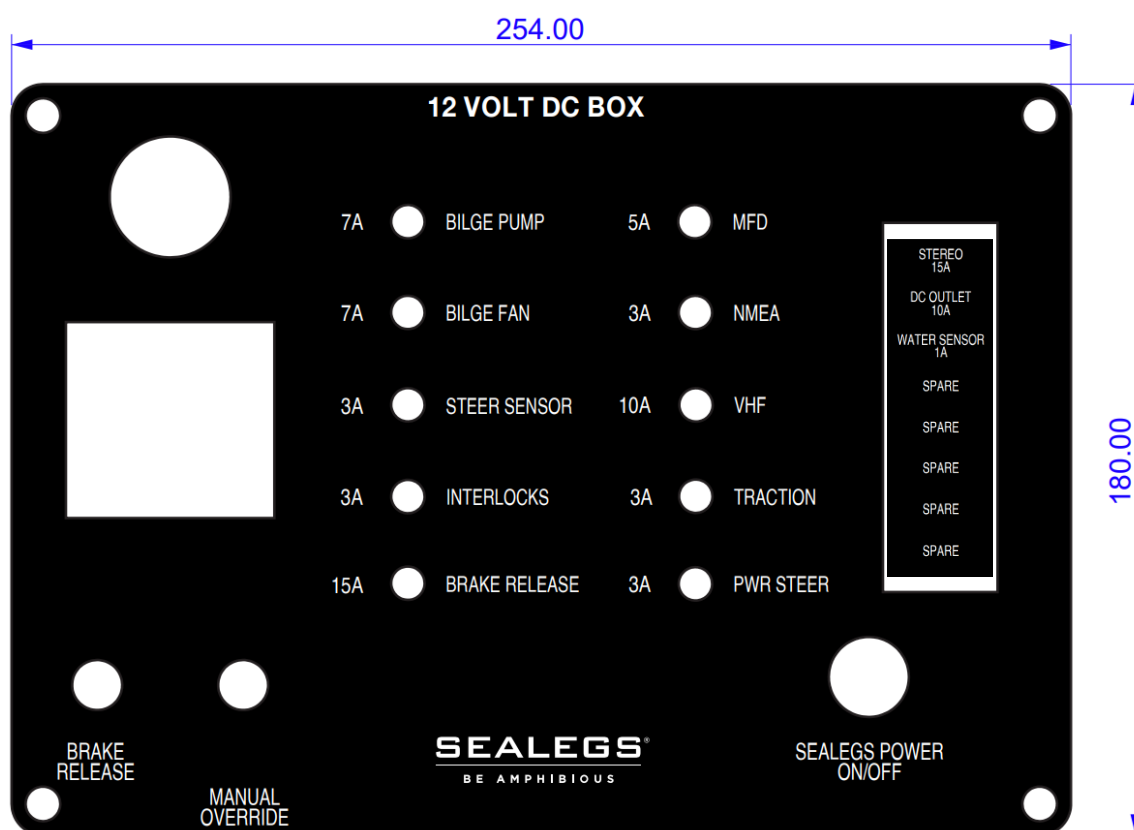
- Turn off all craft systems by setting the master and combine switched to “Off”.
- Ensure the Sealegs Electric charger is disconnected.
- Open the Drive Battery inspection hatch.
- Remove the negative cable first, then the positive cable. To replace the cables first replace the positive cable, then the negative cable.

ELECTRICAL SYSTEM DESCRIPTION

The craft is not fitted with any AC electrical power. The DC system power sources are as follows:

Circuit	Voltage / Rating	Battery Location	Battery Cut-off Switch Location
House Systems	12V, 115AH	Inside front console locker	Main Battery Switch - Port Glove Box in console
Power Steering Battery	12V, 90AH	Inside front console locker	Main Battery Switch - Port Glove Box in console
Outboard starter battery	12V, 750CCA	Port transom hatch	Main Battery Switch - Port Glove Box in console
Drive Battery	48V, 144AH	Inside console, not user serviceable	Main Battery Switch - Port Glove Box in console

The main DC Box is located inside the console. The box contains circuit breakers as indicated by the label on the DC box:



Note that some accessories, such as the VHF radio may also have individual inline fuses as recommended by their manufacturer.

ELECTRICAL SYSTEM MAINTENANCE

- Always disconnect power sources and shut off battery switches, breakers, and/or pull fuses before checking electrical wiring or connectors.
- Check all wiring insulation for signs of fraying or chafing. Check all wiring for proper support.
- Check all terminals for corrosion; corroded terminals and connectors should be replaced or thoroughly cleaned. Tighten terminals securely and spray them with light marine preservative oil or similar.



Work on electrical wiring can create shock hazards or sparks.



Never work on the electrical installation while the system is energised.



To prevent arcing or damage to the alternator, always disconnect battery cables before doing any work on the engine's electrical system.

BILGE - BILGE PUMPS, BUNGS, SCUPPERS AND SEACOCKS

Access to the bilge (and access to the bilge pumps and lower seacocks) does through the pod access hatches.

Periodically inspect the bilge for any contamination, including signs of oil or other foreign objects.

Bilge Pumps

The automatic bilge pump operates by an electrical sensor. The pump can also be manually operated using the **Bilge Pump** switch located on the console.

The bilge pumps fitted are as follows:

Pump Model	Capacity (l/min)	Type	Pump & Suction Point Location	Access
Rule 1100AM	69.3	Automatic Electric	Bilge sump at aft end inside pod	Centre Access Hatch
Wale Gusher Titan	90 (1 Stroke/sec)	Manual	Bilge sump at aft end inside pod	Stbd Access Hatch



Inside Pod Centre Access Hatch

The bilge should always be checked after launch. A small amount of water in the bilge is normal. Large amounts of water or any signs of fuel or oil should be immediately investigated. Never pump fuel or oil overboard when the craft is in the water.

Check the functionality of the rule pump regularly and clear any debris from the inlet filter. Release the supporting arm by unscrewing the black retaining knob. Unclip the pump from the mounting/filter by depressing the two blue push-releases on the pump. After inspecting and cleaning, reseal the pump, ensuring the pump is correctly held in the pump's own retaining clips, before the additional support arm is refitted and retaining knob secured.



Automatic pump with locking arm

It is recommended that a bailer/bucket is also carried aboard for emergency bailing purposes. Ensure the bailer is protected against accidental loss.



The automatic bilge pump is not designed for damage control.

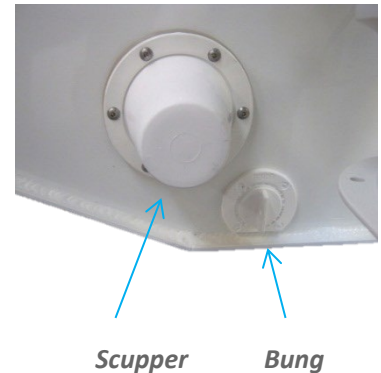


Never use flammable solvents (e.g., kerosene) for bilge cleaning, however oily it becomes.

Through Hull Fittings

Through-hull fittings in this craft are as described below.

Opening	Location	Recommended position	Condition
Bung	Aft face of pod	Closed	Whenever afloat
		Open	When draining on land after use
Upper Scuppers	Aft face of transom	Automatic	All Conditions
Lower Scuppers/ Seacocks	Aft face of pod/inside the pod access hatch	Closed	Whenever afloat, unless at risk of green water ingress to craft. When re-floating craft via incoming tide.
		Open	When draining or storing on land after use. Whenever afloat while at risk of green water ingress to craft.



Seacocks shown



Seacocks shown

The lower scuppers fitted to the pod are controlled by seacocks fitted in the bilge. As a general guide:

- Seacocks should be opened whenever there is risk of green water ingress, or when the craft is being cleaned or drained.
- Seacocks should be closed whenever afloat or re-floating the craft, unless there is risk of flooding.

SCHEDULED MAINTENANCE

Routine inspection and maintenance is an essential activity to prolong the life of the Sealegs Craft, outboard motor, and accessories, as well as being important for crew safety. The service schedule

is determined by the frequency of use, application, and the environment in which the craft operates.

The Sealegs service schedule consists of a 1st Service, an Annual Service, and an Internal Hose Replacement. A service placard is placed inside the door of the console, and is used to track the next scheduled service.

	Craft used in commercial or other high usage applications will require more frequent inspections and maintenance. Adjust the schedule for operating and environmental conditions.
	It is highly recommended that only Authorised Sealegs Resellers undertake craft maintenance. Please consult the warranty document for more details. <i>See Sealegs Warranty on page 8-1.</i>
	Please consult the separate outboard owner's manual for maintenance information on the outboard engine fitted to the craft. <i>See Outboard Maintenance on page 5-3.</i>

SERVICE SCHEDULE SUMMARY

The following tables show the required checks for the Sealegs Service Schedule

Craft Owners Name:		
Date:	Craft Number:	Technician:

Service Interval Table

Service Type	Year	Outboard Hour Intervals
1 st SERVICE	1	50
ANNUAL SERVICE	2	100
ANNUAL SERVICE	3	100
ANNUAL SERVICE	4	100
INTERNAL HOSE REPLACEMENT	4	Additional every 4 years irrespective of hours.
ANNUAL SERVICE	5	100
ANNUAL SERVICE	6	100
ANNUAL SERVICE	7	100
ANNUAL SERVICE	8	100
INTERNAL HOSE REPLACEMENT	8	Additional every 4 years irrespective of hours.
ANNUAL SERVICE	9	100
ANNUAL SERVICE	10	100
ANNUAL SERVICE	11	100
ANNUAL SERVICE	12	100
INTERNAL HOSE REPLACEMENT	12	Additional every 4 years irrespective of hours.

The following tables provide guidelines for inspection and maintenance. Additional copies for each service may be obtained from the Sealegs Service Centre.

General	1 S T	A N N U A L	Reference	Comments	Complete ✓
NOTE: 'I' = INSPECT FOR WEAR/DAMAGE/LEAKES 'R' = REPLACE ITEM 'C' = CHECK SPEC/COMPLETE TASK					
Complete any required Product Updates	C	C			
Service Placard fitted and completed	C	C			
Note emergency brake events	C	C		Number on Counter	
General Items	1 S T	A N N U A L	Reference	Comments	Complete ✓
Hatches	I	I			
Stickers and labels (Operational/Safety)	I	I	SB-02-030A		
Seats and upholstery	I	I			
Paintwork	I	I			
Deck grip	I	I			
Hull and Pontoons	1 S T	A N N U A L	Reference	Comments	Complete ✓
Perform tube pressure test	C	C			
Tubes or pontoons	I	I			

Attachments and fittings	I	I			
Bimini/Clears and attachments	I	I			
Hull and chine's	I	I			
Head light condition and mounting	I	I			
Clean between mount flange & pontoon	I	I			
Flush hull, ensure no debris in bilge	I	I			
Bow	1 S T	A N N U A L	Reference	Comments	Complete ✓
Tyre pressure and wheel assembly	I	I			
Fork, Fork Pivot and Stop Pad	I	I			
Inspect fork pivot O Ring	I	I			
Steering pivot, link arm & rod end	I	I			
Steering ram and mounting	I	I			
2WD Sealegs System	1 S T	A N N U A L	Reference	Comments	Complete ✓
Wheel nuts and studs	I	I			
Hub, Axle and bearings	I	I			
AWD Sealegs System	1 S T	A N N U A L	Reference	Comments	Complete ✓
Front wheel drive hub and studs	I	I			

Front drive motor and mounting	I	I			
T13 –T14 external cables	C	C			
Hose routing and guides	I	I			
Lift ram fittings, body and shaft					
Bulkhead fittings					
Bow Bracket fasteners					
Trunion bolts/pivot bushes		I	SB-12-100A		
Hoses L1 – L2					
External steering hoses and fittings	I	I	SB-05-030A, SB-05-031A		
Yoke pivot pin and retainers	I	I	SB-05-030A, SB-05-031A		
Fork pivot end float (all models)	C	C	SB-05-010A,SB-05-040A		
REMOVE AND GREASE					
Yoke pivot pin			SB-05-030A, SB-05-031A		
Front fork pivot		I	SB-05-030A,SB-05-031A		
Yoke insert block and ram pivot pin		I	SB-05-030A,SB-05-031A		
Steering pivot, link arm and rod end		I			
Stern	1 S T	A N N U A L	Reference	Comments	Complete ✓
Tyre pressure and wheel assembly	C	C			
Rear wheel drive hubs and studs	I	I			
Rear drive motors and mounting	I	I			
Rear legs and stop pads	I	I			
Transducer mounting	I	I			
Scuppers	I	I			

Transom drain plug	I	I			
Ski Hoop and attachments	I	I			
L9-L12 hoses and fittings	I	C	SB-12-011A		
L9-12 hose routing.	I	C			
Upper ram pivot		I	SB-12-110A, SB-12-111A		
Lower ram pivot		C			
Leg pivot		C			
Electric Lift Pump	1 S T	A N N U A L	Reference	Comments	Complete ✓
Hydraulic Oil					
Check level	C	C			
Hydraulic Oil		R			
Oil filter		R			
Wiring and connections	I	I			
Inspect for leaks/corrosion/wear	I	I			
Console	1 S T	A N N U A L	Reference	Comments	Complete ✓
Fire extinguisher	I	I	SB-08-010A		
Battery box and bracket	I	I			
DC Box and bracket	I	I			
Console mounting	I	I			
Fitments and accessories	I	I			
Dash and fittings	I	I			

Internal cable and hose mounting		I			
Steering	1 S T	A N N U A L	Reference	Comments	Complete ✓
TEST FUNCTION					
Helm/ Helm oil level	I	I	SB-01-010A, SB-09-011B SB-09-012A		
Power steering unit (if equipped)		I			
Bypass valve		I	SB-09-013B		
Alignment	C	C	SB-09-013B		
Outboard steering ram and cables	I	I	SB-09-010A		
Electrical	1 S T	A N N U A L	Reference	Comments	Complete ✓
Navigation lights	I	I			
Electronic accessories	I	I			
Battery Charging system	I	I			
Bilge pump manual and auto function	I	I			
12V socket	I	I			
Winch	I	I			
DC power box and circuit breakers	I	I			
Master switch and cables	I	I			
Fuel Level Gauge/s	I	I			
Bilge fan (If fitted)	I	I			

Fuel System	1 S T	A N N U A L	Reference	Comments	Complete ✓
Electric fuel pump	I	I			
Fuel lines and connections		I			
Fuel tank and sender		I	SB-11-010A		
Fuel filter/s		I			
Auxiliary fuel tank mounting (if fitted)		I			
Hydraulics	1 S T	A N N U A L	Reference	Comments	Complete ✓
Lift hoses L3 – L8, L14 –L16		I	SB-12-010A, SB-12-011A		
Lift Valve assembly/solenoids		I	SB-12-050A		
Test Function	1 S T	A N N U A L	Reference	Comments	Complete ✓
Warning lights		C			
All-Wheel Drive		C			
Leg up/down alarm		C	SB-12-070		
Lift circuit relief setting		C	RF-20-050A		
Check leg interference up and down	C	C			
Front raise time	C	C	RF-20-050A		
Front lower time	C	C	RF-20-050A		

Rear raise time	C	C	RF-20-050A		
Rear lower time	C	C	RF-20-050A		
Average wheel rpm forward	C	C	RF-20-050A		
Average wheel rpm reverse	C	C	RF-20-050A		
Test Drive on land	C	C			
Emergency Brake	C	C			
Transmission brake time (2 sec)	C	C			
Max land speed forward and reverse	C	C			

6. ENVIRONMENTAL AWARENESS

Sealegs encourages owners to respect others and the environment when using their Sealegs craft.

In many regions of the world there are also strictly enforced regulations regarding environmental protection. It is the responsibility of the owner/operator to be aware of applicable regulations and to ensure compliance with them.

TREAD LIGHTLY

Sealegs is an official partner of Tread Lightly!®, a non-profit organization with a mission to promote responsible outdoor recreation through ethics, education and stewardship. Some principles include:

Travel Responsibly on land by staying on designated pathways, trails and areas. Go over, not around, obstacles to avoid widening the trails. Cross streams only at designated fords. When possible, avoid wet, muddy trails. On water, stay on designated waterways and launch your watercraft in designated areas.

Respect the Rights of Others including private property owners, all recreational trail users, campers and others so they can enjoy their recreational activities undisturbed. Leave gates as you found them. Yield right of way to those passing you or going uphill. On water, respect anglers, swimmers, skiers, crafters, divers and those on or near shore.

Educate Yourself prior to your trip by obtaining travel maps and regulations. Plan for your trip, take recreation skills classes and know how to operate your equipment safely.

Avoid Sensitive Areas on land such as meadows, lakeshores, wetlands and streams. Stay on designated routes. This protects wildlife habitats and sensitive soils from damage. Don't disturb historical, archaeological or paleontological sites. On water, avoid operating your watercraft in shallow waters or near shorelines at high speeds.

Do Your Part by modelling appropriate behaviour, leaving the area better than you found it, properly disposing of waste, minimizing the use of fire, avoiding the spread of invasive species and repairing degraded areas.

For more information, visit <http://www.treadlightly.org>

LEAKAGE OF PETROCHEMICALS

Be aware of the risk of leaking oils and fuels. Always investigate the source of any oil leaks as soon as possible. Dispose of recovered spilt oil correctly and have oil-absorbing cloths or rolls on board. Never dispose of any oil, paint or other chemical that is potentially harmful to the environment.



Any oil must be treated as chemical waste.

HOUSEHOLD WASTE, BLACK AND GREY WATER

Be conscious of any waste created while on board. Dispose of any waste responsibly. Always retain household waste until it can be properly disposed of ashore.



The discharge of effluent into navigable waters is forbidden by law in many areas. If such discharge causes a film or sheen upon or a discolouration of the surface of the water or causes a sludge or emulsion beneath the surface of the water, violators may be subject to a penalty. It is the responsibility of the craft user to ensure that they are aware of legislation regarding discharge.



Keep bilges clean to avoid automatic bilge pumps discharging illegal effluent.



When at sea for periods longer than space allows on-board storage of waste, only jettison organic waste.

NOISE

Never make excessive noise. Most people take to the water for relaxation, which is ruined by noise. Avoid running the engine unnecessarily, or at engine speeds higher than necessary.

WASH/ WAVES

Adapt your speed to the water in which you are navigating. Consider the comfort and safety of other crafts around you.



Be aware that in some areas speed restrictions are in place to avoid erosion of banks/ coastline.

7. SEALEGS OWNER FREQUENTLY ASKED QUESTIONS

Following are answers to some questions that have been asked by Sealegs owners.

Q. What options do I have if I get stuck in difficult terrain?

A. To get out of difficult terrain, traction aids can be used, and the tyre pressure reduced to gain the required traction. *See Terrain on page 3-9.*

Q. What is the best way to store the craft — wheels up or down?

A. Up or down is acceptable. Should the crafts be stored with the wheels down, it is advisable to lightly coat the exposed lift cylinder rods with a lightweight protective oil e.g., machine oil, Inox, fish oil, or similar (as is recommended with many parts of the craft that may suffer from not having regular usage). If the craft is stored with the legs down, it is also recommended to trim the outboard up to help minimise damage to the outboard skeg should the craft suffer a hydraulic issue and lower onto the hull.

Q. Can the craft be moved on a truck or transporter?

A. Yes, however extra care should be taken. It is recommended that the craft be placed in a cradle and strapped down against this cradle and the transporter to prevent any movement. The hydraulic system of the legs and the hydraulic braking of the wheels should not be relied upon for transporting; a cradle will assist with this. *See Trucking on page 4-5*

Q. Are there any special concerns about freezing weather?

A. Yes, oils and fluids and other functions of the craft are not designed to store or operate in freezing conditions, and extra care must be taken with batteries and other parts. This craft therefore should not be stored or used in environments that are at or below 0°C / 32°F.

Q. Why can't the craft be moored continuously in the water?

A. Essentially Sealegs crafts are designed as 'day crafts', with the addition of the wheels to assist in the launching and retrieving for easy storing on land when not in use. Therefore, the craft has not been designed with anti-fouling and extra electrolysis protection required of a craft designed to be moored; any craft will quickly deteriorate without this extra protection. RIB tubes may prematurely wear if subjected to continuous abrasion when tied up. Being an open craft, other risks include exposure to rainwater or other environmental events, and with the automatic bilge pump draining the battery to the point of failure. Any craft left moored will degrade considerably quicker if left exposed to the elements, e.g., sun, rain, and salt water. It is therefore a condition of warranty that the craft is not to be left unattended in the water for any extended period of time. *See*

Sealegs Electric long-term storage

To minimise the effect of any parasitic draws on the electrical system. It is recommended to disconnect the drive battery if the craft is to be left unused for an extended period.

Disconnecting the Drive Battery on page 5-8.

It is recommended to charge the drive battery to 50% before disconnecting the battery to limit calendric aging. Battery voltage should be checked every six months and the battery recharged to 50% if the voltage drops below 44V.

Anchoring, Mooring and Towing on page 4-3.

Q. When does the hydraulic system need to be serviced and is there a filter to change?

A. Hydraulic servicing is not the same as internal combustion engine servicing. It is easy to think of it the same way, but this has the potential to create unnecessary work and cost. Consult the Maintenance section of this manual for a summary of the requirements.

Q. Does the outboard engine charge the batteries while operating?

A. The outboard engine will charge the 12V house and start batteries but will not charge the drive battery. The drive battery must be charged using the Sealegs Electric charger. Depending on the model outboard fitted, a battery voltage reading is normally obtainable from the outboard gauge set. *See on page 5-7*

Q. A button on my keypad is blinking red, what does this mean?

A. If a keypad button flashes red, it means there is a fault with that circuit. Hold down for 5 seconds or until red light stops flashing to reset the circuit. Try the circuit again and if it starts flashing red again, it means there is a blown fuse or software issue. *See Appendix A – Fault Codes* for how to read a fault code from the blinking red light. If the fault persists, please contact your nearest service technician.

8. SEALEGS WARRANTY

We at Sealegs trust the purchase of your craft will bring many years of enjoyable and dependable service.

Introduction

Subject to the terms and conditions detailed below, Sealegs International Ltd warrants the Sealegs Craft to be free from defects in material or workmanship for the defined warranty period, and will, at its option, repair or replace defective parts on return of the craft to the premises of an Authorised Sealegs Reseller.

This warranty applies to new Sealegs Crafts purchased from an Authorised Sealegs Reseller.

By using the Sealegs Craft, the owner and operator understands and agree to undertake all instructions in the Sealegs Craft Owner's Manual and agrees to all warranty and liability terms and conditions contained in this warranty.

Warranty Period

Sealegs warrants Sealegs branded components from the date of purchase for a period of:

- 5 consecutive years for normal personal recreational use. (excl. paint refer to page 8-2).
- 2 consecutive years for commercial, or any other use. (excl. paint refer to page 8-2).

The product is deemed to be used for commercial purposes when used in connection with any work or employment that generates or contributes towards income during any part of the warranty period.

Normal recreational use is defined as not more than 100 annual return trips with not more than 100 annual outboard hours, and not more than 20 annual land operation hours. Greater annual usage than this is not covered by the Sealegs recreational warranty.

Items Included Under This Warranty

The Sealegs Craft covered under the warranty includes the following:

- Sealegs hull and associated hull components.
- Sealegs hydraulic system and associated components.
- Sealegs Electric Amphibious system and associated components.
- Inflatable Tubes

Other non-Sealegs branded peripheral components are covered under their separate manufacturer's warranty. These include (but are not limited to):

- Outboard engine and associated branded peripherals.
- Electronic peripherals, including VHF, navigational and entertainment units.
- Vinyl Wrap (if applicable).

This warranty is limited to repair, or at Sealegs option, replacement of parts suffering from any of the defects described above during the warranty period. The judgment of Sealegs is final concerning the extent of items covered under warranty.

Paint and Powdercoat

- 2 consecutive years for normal personal recreational use.
- 1 year for commercial, or any other use.

Warranty Exclusions

The following are not warranted under any circumstances:

- Replacement of parts due to normal wear and tear.
- Routine maintenance parts and services, including but not limited to, maintenance requirements, oil and lubrication, replacement of fuses or bulbs, linkage adjustments, filters and spark plugs, tyres, and other consumable items.
- Damage caused by not following procedures and recommendations in the Sealegs Owner's Manual.
- Degradation of surface paint or coating from the effect of wear and tear, oxidation and degradation caused by salt water, fresh water, fuel, electrical currents and dissimilar metals, or as a result of damage from impact, abrasion or chemical spillage.
- Operating the craft beyond the certified conditions as detailed in the Sealegs Owner's Manual. Sealegs crafts are certified to operate Category C Offshore conditions, in winds up to force 6 (Beaufort scale) and the associated wave heights (significant wave heights up to and including 2m/7ft). Such conditions may be encountered on inshore voyages.
- Damage caused by improper or lack of maintenance, winterization or storage.
- Damage caused by abuse, impact, accident, misuse, abnormal use or strain, neglect, racing, improper operation, or operation not in accordance with the recommended procedures described in the Sealegs Owner's Manual.
- Damage or cosmetic changes due to exposure to the atmospheric or environmental conditions, including mould or marine organisms, or outside galvanic activity.
- Damage resulting from tears, punctures, abrasions, abuse, external damage, accident, submersion, water ingestion or contamination, fire, theft, vandalism, or any act of God.

Additionally:

- The owner of the craft is expected to ensure the craft is properly operated and maintained as detailed in the Sealegs Owner's Manual, and to take all reasonable precautions to avoid or

minimise loss, damage or liability. Sealegs may require proof of maintenance before authorizing warranty support.

- The owner and user of the craft is responsible for determining its suitability for all selected uses and assumes all risks in connection therewith when used, including the safety of persons and property, and only operating the craft under normal safe conditions.
- The owner acknowledges that the craft is to be stored completely under cover when not in operational use, and normal winterisation practices of the region must be undertaken.
- Sealegs may deem warranty to be void due to improper repairs or maintenance, or removal or modification parts, or use of parts or accessories not supplied by Sealegs, which in Sealegs reasonable opinion affects the serviceability or reliability of the craft or caused a specific failure.
- Sealegs does not assume responsibility for losses or damage from shipping in connection with repairs or warranty work.
- Sealegs reserves the right to enhance, modify or change product or specifications from time to time, without any obligation to alter previously manufactured craft.

Obtaining Warranty Coverage

The owner must notify Sealegs or an Authorised Sealegs Reseller within 7 days of the appearance of a defect. In order to have any defect corrected, the owner of the craft must first contact via email, mail or fax *written* notification to either:

The authorised reseller from which the craft was purchased, or;
Sealegs International Ltd.

P.O. Box 303-221 North Harbour, Auckland

Phone: +64 9 414 5542 Fax: +64 9 414 5546 Email: service@sealegs.com

Either Sealegs International Ltd or an Authorised Sealegs Reseller will then advise the owner what to do. When requested, the owner must return the Sealegs craft, including any defective part therein, to the nearest Authorised Sealegs Reseller promptly, and within the warranty period. The expenses of transporting the craft to and from Authorised Sealegs Reseller for warranty service are to be borne by the owner. The owner must provide the Authorised Sealegs Reseller with reasonable opportunity to repair the defect.

Once the warranty claim has been accepted by Sealegs, the repair or replacement of parts will be done without charge for parts and labour, at the recommended Authorised Sealegs Reseller's premises.

Sealegs responsibility is limited to making the required repairs or replacements of parts with new or Sealegs re-manufactured or reconditioned parts. All parts replaced under this warranty become the property of Sealegs.

In the event that warranty service is required outside of the region from where the craft was purchased, the owner is responsible for any additional charges in obtaining the warranty service due to but not limited to, freight, insurance, taxes, fees, import duties, and any and all other financial charges required to interact with the nearest Authorised Sealegs Reseller.

Transfer

On the transfer of ownership of a craft, any remaining warranty period may also be transferred to the new owner provided that the former or new owner promptly contacts Sealegs, and the craft has only previously been used for recreational use and will only be used for recreational use during the remainder of the warranty period.

It is the responsibility of the new owner to ensure the previous owner has fully maintained and operated the craft in accordance with this warranty document.

Limitations of Liability

Sealegs obligations and liability are limited to, at its sole discretion, repairing or replacing parts of the Craft found to be defective in material or workmanship, in the judgment of Sealegs. In all cases Sealegs judgement will be final.

The warranty described in this document shall be in lieu of any other warranty, express or implied including, but not limited to, any implied warranty of merchantability or fitness for a particular purpose. The parties agree that the owner's sole exclusive remedy against Sealegs shall be repair or replacement as provided herein, and the owner agrees that no other remedy shall be available, including any claims for incidental, consequential, direct, indirect or other damages of any kind, including but not limited to, expense for transporting product to and from Service Centre, freight, travel expenses (including alternate loan product), craft retrieval (including water charges, slip or dock fees, trailer or towing, storage), telecommunication charges, rental or hire charges of any kind, lost profits or sales, or any other incidental or consequential losses that may be incurred.

Sealegs is not responsible or liable for personal injury in connection with the use of this product.

SOME REGIONS OR JURISDICTIONS DO NOT ALLOW FOR THE DISCLAIMERS, LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, OR OTHER EXCLUSIONS IDENTIFIED IN THIS DOCUMENT. AS A RESULT, THEY MAY NOT APPLY TO YOU. THIS EXPRESS WARRANTY GIVES YOU SPECIFIC RIGHTS, AND YOU MAY ALSO HAVE OTHER LEGAL RIGHTS WHICH MAY VARY FROM REGION TO REGION.

No other person or entity is authorized to make representation or warranty regarding Sealegs products other than detailed in this document, and if made, shall not be enforceable against Sealegs.

9. CE & UKCA DECLARATION 7.5M RIB

Declaration of Conformity of Recreational Craft with the Design, Construction and Noise Emission requirements of Directive 2013/53/EU

Name of manufacturer: SEALEGS International Ltd

Address: 16B Parkhead Place

Town: Auckland **Post Code:** 0632 **Country:** New Zealand

Name of Authorised Representative (if applicable): _____

Address: _____

Town: _____ **Post Code:** _____ **Country:** _____

Module used for design & construction assessment: ☐ A ☒ A1 ☐ B+C ☐ B+D ☐ B+E ☐ B+F ☐ G ☐ H ☐ PCA

Notified Body for design and construction assessment (if applicable): ID number: 2810

Name: HPi Verification Services (Ireland) Ltd

Address: Clonross

Town: Dunshaughlin **Post Code:** A85 XN59 **Country:** Ireland

Report/Certificate Ref. No: HPiVS-IR1016-062-I-01-00 **Date (y/m/d):** 2022/04/17

Module used for noise assessment: ☐ A ☒ A1 ☐ G ☐ H ☐ PCA

Notified Body for noise emission assessment (if applicable): ID number: _____

Name: Various engine options/certifiers

Address: #N/A

Town: #N/A **Post Code:** #N/A **Country:** #N/A

Report/Certificate Ref. No: _____ **Date (y/m/d):** _____

Other Community Directives applied: _____

Watercraft Identification Number:

NZ	-	SLG	76XXX	X	X	XX
----	---	-----	-------	---	---	----

Brand name of the craft: _____

Model or Type: 7E Amphibious RIB

Type of construction: ☐ rigid ☒ inflatable ☐ rigid inflatable (RIB)

Type of Hull: ☒ monohull ☐ multihull

Hull Construction Material: ☒ aluminium, aluminium alloys ☐ moulded fibre reinforced plastic
☐ steel, steel alloys ☐ wood
☐ other (specify): _____

Recreational Craft:
Design categories related to the maximum recommended number of persons:

Design Category	Number of persons	Maximum Load (kg)
A		
B		
C	8	738
D		

Length of hull LH 7.55m

Beam of hull BMAX 2.71m

Draught TMAX 1.00m

Deck: ☐ fully enclosed
☐ partially enclosed
☒ open

Type of Main Propulsion: ☐ sails, Reference sail area As: 0.0m²
☐ Human propulsion
☒ Engine/motor propulsion
☐ other (specify): _____

Type of Engine: ☐ internal combustion, diesel (CI)
☒ internal combustion, petrol (SI)
☐ internal combustion, LPG/CNG
☐ electric
☐ other (specify): _____

Installed Propulsion Type: ☒ outboard
☐ inboard with shaft line
☐ z or sterndrive
☐ pod drive
☐ sail drive
☐ other (specify): _____

Integral exhaust propulsion ☒ Yes ☐ No ☐ N/A

Engine power: Max. Recommended 147 kW

No. of propulsion engines 1

Max. recommended engine mass 227 kg

This declaration of conformity is issued under the sole responsibility of the boat manufacturer. I declare on behalf of the craft manufacturer that the recreational craft mentioned above fulfills the requirements in Article 4 (1) and Annex I of Directive 2013/53/EU.

Name & function: David McKee Wright CEO **Signature:** _____
(identification of the person empowered to sign on behalf of the manufacturer or his authorised representative) (or an equivalent marking)

Date & place of issue (dd/mm/yyyy): 09/05/2023

CEproof Technical Software

Essential Requirements (ref. relevant article in Annex IA & IC of the Directive)	Harmonised standards Full Application	Harmonised standards Partial application See technical file	Other reference documents Full Application	Other reference documents Partial application See technical file	Other proof of conformity See technical file	Specify the harmonised standards or other reference documents used
General requirements (2)	X					EN ISO 8666:2018/A11:2021
Watercraft Identification Number - WIN (2.1)	X					EN ISO 10087:2022
Builder's Plate (2.2)			X			EN ISO 14945:2021
Protection from falling overboard & means of reboarding (2.3)	X					EN ISO 15085:2003+A2:2018
Visibility from the main steering position (2.4)	X					EN ISO 11591:2019
Owner's manual (2.5)			X			EN ISO 10240:2020
Integrity and structural requirements (3)						
Structure (3.1)					X	EN ISO 6185-3
Stability and freeboard (3.2)	X					EN ISO 6185-3:2018
Buoyancy and floatation (3.3)	X					
Openings in hull, deck and superstructure (3.4)	X					EN ISO 12216:2018
	X					EN ISO 9093:2021
Flooding (3.5)	X					EN ISO 6185-3:2018
						No QD or WT recesses
Manufacturer's maximum recommended load (3.6)			X			EN ISO 14946:2021
Liferaft stowage (3.7)						N/A - only required for Type VIII RIBs
Escape (3.8)						N/A - no enclosed accommodation
Anchoring, mooring and towing (3.9)	X					EN ISO 15084:2018
Handling characteristics (4)	X					EN ISO 11592-1:2016 Determination of max. power rating Part 1: Craft with a length of hull < 8m EN ISO 6185-3:2018 Inflatable boats with hull length < 8 m with a motor ≥ 15 kW
Engines and engine spaces (5.1)						
Inboard engine (5.1.1)						N/A - outboard only
Ventilation (5.1.2)	X				X	EN ISO 11105:2020
Exposed parts (5.1.3)					X	No applicable standard
Outboard engine starting (5.1.4)	X					EN ISO 11547:2018
Personal watercraft running without driver (5.1.5)						N/A - not a PWC
Tiller-controlled outboard propulsion engines (5.1.6)					X	N/A - outboard is not controlled directly by its tiller
Fuel system (5.2)						
General - fuel system (5.2.1)	X					EN ISO 10088:2017
Fuel tanks (5.2.2)	X					EN ISO 21487:2018
Electrical systems (5.3)	X					EN ISO 10133:2017 Small craft - Electrical systems - Extra-low-voltage d.c. installations ISO TS 12635:2021 Lithium Ion Batteries
						N/A - No AC electrics
						N/A - No electric propulsion
Steering systems (5.4)						
General - steering system (5.4.1)	X					Annex II component, CE marked. See OEM declaration
Emergency arrangements (5.4.2)						N/A - outboard engine (RCD Annex 1 ER 5.4.2)
Gas systems (5.5)						N/A - no LPG system fitted
Fire protection (5.6)	X					EN ISO 9094:2017
Navigation lights (5.7)	X					EN ISO 16180:2018
Discharge prevention (5.8)						N/A - no heads onboard
						N/A - no oily engine space
Annex I.B - Exhaust Emissions	X					2013/53/EU [RCD II]
Annex I.C - Noise Emissions	X					Engine manufacturer's certificate/declaration

CEproof Technical Software

Declaration of Conformity of Recreational Craft with the Design, Construction and Noise Emission requirements of the Recreational Craft Regulations 2017 as amended

Name of manufacturer: SEALEGS International Ltd
Address: 16B Parkhead Place
Town: Auckland **Post Code:** 0632 **Country:** New Zealand

Name of Authorised Representative (if applicable): _____
Address: _____
Town: _____ **Post Code:** _____ **Country:** _____

Module used for design & construction assessment: ☐ A ☒ A1 ☐ B+C ☐ B+D ☐ B+E ☐ B+F ☐ G ☐ H ☐ PCA

Approved Body for design and construction assessment (if applicable): ID number: 1521
Name: HPI Verification Services Ltd
Address: The Manor House, Howbery Business Park
Town: Wallingford **Post Code:** OX10 8BA **Country:** United Kingdom
Approved Body certificate number: HPIUK-R1016-062-I-01-00 **Date:** 17/04/2022

Module used for noise assessment: ☐ A ☒ A1 ☐ G ☐ H ☐ PCA
Approved Body for noise emission assessment (if applicable): ID number: _____
Name: Various engine options/certifiers
Address: #N/A
Town: #N/A **Post Code:** #N/A **Country:** #N/A
Approved Body certificate number: _____ **Date:** _____

Other Regulations applied: _____

Watercraft Identification Number:

NZ	-	SLG	76XXX	X	X	XX
----	---	-----	-------	---	---	----

Brand name of the craft: _____ **Model or Type:** 7E Amphibious RIB

Type of construction: ☐ rigid ☒ inflatable ☒ rigid inflatable (RIB)
Type of Hull: ☒ monohull ☐ multihull
Hull Construction Material: ☒ aluminium, aluminium alloys ☐ moulded fibre reinforced plastic
☐ steel, steel alloys ☐ wood
☐ other (specify): _____

Recreational Craft: Design categories related to the maximum recommended number of persons:

Design Category	Number of persons	Maximum Load (kg)
A		
B		
C	8	738
D		

Type of Engine: ☐ internal combustion, diesel (CI)
☒ internal combustion, petrol (SI)
☐ internal combustion, LPG/CNG
☐ electric
☐ other (specify): _____

Installed Propulsion Type: ☒ outboard
☐ inboard with shaft line
☐ z or sterndrive
☐ pod drive
☐ sail drive
☐ other (specify): _____

Integral exhaust propulsion ☒ Yes ☐ No ☐ N/A

Engine power: Max. Recommended 147 kW

No. of propulsion engines 1
Max. recommended engine mass 227 kg

Deck: ☐ fully enclosed
☐ partially enclosed
☒ open

This declaration of conformity is issued under the sole responsibility of the boat manufacturer. I declare on behalf of the craft manufacturer that the recreational craft mentioned above fulfills the requirements in Article 4 (1) and Schedule I of the Recreational Craft Regulations 2017 as amended.

Name & function: David McKee Wright CEO **Signature:** _____
(identification of the person empowered to sign on behalf of the manufacturer or his authorised representative) (or an equivalent marking)

Date & place of issue (dd/mm/yyyy): 09/05/2023

Essential Requirements (ref. relevant article in Schedule IA & IC of the Regulation)	Designated standards Full Application	Designated standards Partial application See technical file	Other reference documents Full Application	Other reference documents Partial application See technical file	Other proof of conformity See technical file	Designated standards or other reference documents used
General requirements (2)	X					BS EN ISO 8666:2020/A11:2021
Watercraft Identification Number - WIN (2.1)	X					BS EN ISO 10087:2022
Builder's Plate (2.2)	X					BS EN ISO 14945:2004
Protection from falling overboard & means of reboarding (2.3)	X					BS EN ISO 15085:2003+A2:2018
Visibility from the main steering position (2.4)	X					BS EN ISO 11591:2019
Owner's manual (2.5)			X			BS EN ISO 10240:2020
Integrity and structural requirements (3)						
Structure (3.1)					X	EN ISO 6185-3
Stability and freeboard (3.2)	X					BS EN ISO 6185-3:2018
Buoyancy and floatation (3.3)	X					BS EN ISO 12216:2018
Openings in hull, deck and superstructure (3.4)	X					BS EN ISO 9090:2021
Flooding (3.5)	X					BS EN ISO 6185-3:2018
						No QD or WT recesses
Manufacturer's maximum recommended load (3.6)	X					BS EN ISO 14946:2018+A1(2005)
Liferaft stowage (3.7)						N/A - only required for Type VIII RIBs
Escape (3.8)						N/A - no enclosed accommodation
Anchoring, mooring and towing (3.9)	X					BS EN ISO 15084:2018
Handling characteristics (4)	X					EN ISO 11592-1:2016 Determination of max. power rating Part 1: Craft with a length of hull < 8m EN ISO 6185-3:2018 Inflatable boats with hull length < 8 m with a motor ≥ 15 kW
Engines and engine spaces (5.1)						
Inboard engine (5.1.1)						N/A - outboard only
Ventilation (5.1.2)	X				X	BS EN ISO 11105:2020
Exposed parts (5.1.3)					X	No applicable standard
Outboard engine starting (5.1.4)	X					BS EN ISO 11547:2018
Personal watercraft running without driver (5.1.5)						N/A - not a PWC
Tiller-controlled outboard propulsion engines (5.1.6)					X	N/A - outboard is not controlled directly by its tiller
Fuel system (5.2)						
General - fuel system (5.2.1)	X					BS EN ISO 10088:2017
Fuel tanks (5.2.2)	X					BS EN ISO 21487:2018
Electrical systems (5.3)	X					EN ISO 10133:2017 Small craft - Electrical systems Extra-low-voltage d.c. installations ISO TS 12635:2021 Lithium Ion Batteries
						N/A - No AC electrics
						N/A - No electric propulsion
Steering systems (5.4)						
General - steering system (5.4.1)	X					Annex II component, CE marked. See OEM declaration
Emergency arrangements (5.4.2)						N/A - outboard engine (RCD Annex 1 ER 5.4.2)
Gas systems (5.5)						N/A - no LPG system fitted
Fire protection (5.6)	X					BS EN ISO 9094:2017
Navigation lights (5.7)	X					BS EN ISO 16180:2018
Discharge prevention (5.8)						N/A - no heads onboard
						N/A - no oily engine space
Schedule I.B - Exhaust Emissions	X					2013/53/EU [RCD II]
Schedule I.C - Noise Emissions	X					Engine manufacturer's certificate/declaration



Examination Report - Stability

This is to certify that the product listed below conforms to the requirements of the
Recreational Craft & Personal Watercraft Directive
2013/53/EU: Module A1 - Annex 1, Essential Requirements 3.2 & 3.3

Certificate Number HPIVS-IR1016-062-I-01-00
Date of Issue 17-Apr-2023

Manufacturer SEALEGS International Ltd
2 Parkhead Place
Auckland
632
New Zealand

Watercraft Model 7E Amphibious RIB

Description Rigid Inflatable, Recreational RIB - Motor - Outboard

Design Category C No of hulls: 1
Length (m) Max. (L_{MAX}): 7.61 Hull (L_H): 7.55
Beam (m) Max. (B_{MAX}): 2.71 Hull (B_H): 2.71

Maximum Load (m_L) (kg) 864 (including fluids)

Builder's Plate	Category	People	Mass (kg)
	C	8	738

Displacement (kg) Light Craft Condition (m_{LC}): 1748 (excl. engine)
Maximum Load Condition (m_{LDC}): 2839

Max. Engine Mass (kg) 227

Check this certificate is genuine



Quality Director

Technical Director

An INAB accredited Inspection Body no. 9033.

This certificate is supported by a report bearing the same certificate number.

This certificate is the property of HPI Verification Services (Ireland) Ltd. & may not be amended or issued to others.

The manufacturer must inform HPI Verification Services (Ireland) Ltd. of any changes that affect any of the assessed Essential Requirements. Failure to do this will invalidate the Certificate.

The applied conformity assessment module requires the client to affix HPI Verification Service's *Notified Body* identification number (2810) on the product.



EU Notified Body No. 2810

Company registered in Ireland #577786

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Tel +353 (0)1 8017008

Email enquiries@eucertification.com

Web www.eucertification.com

HPI Verification Services (Ireland) Ltd.

Cionross
Dunshaughlin, Co. Meath
A85 XN59, Ireland



Examination Report - Stability

This is to certify that the product listed below conforms to the requirements of the
Recreational Craft (Safety) Regulations 2017
SI 2017 no. 737 as amended: Module A1 - Schedule 1, Essential Requirements 3.2 & 3.3

Certificate Number HPIUK-R1016-062-I-01-00
Date of Issue 17-Apr-2023
Manufacturer SEALEGS International Ltd
2 Parkhead Place
Auckland
632
New Zealand

Watercraft Model 7E Amphibious RIB

Description Rigid Inflatable, Recreational RIB - Motor - Outboard
Design Category C No of hulls: 1
Length (m) Max. (L_{MAX}): 7.61 Hull (L_H): 7.55
Beam (m) Max. (B_{MAX}): 2.71 Hull (B_H): 2.71
Maximum Load (kg) 864 (including fluids)
Builder's Plate

Category	People	Mass (kg)
C	8	738

Displacement (kg)

Light Craft Condition (m _{LC}):	1748	(excl. engine)
Max.Load Condition (m _{LC}):	2839	

Maximum Engine Mass (kg) 227

Check this certificate is genuine



Quality Director

Technical Director

A UKAS accredited Inspection Body no. 0328.

This certificate is supported by a report bearing the same certificate number.

This certificate is the property of HPiVS Ltd. & may not be amended or issued to others.

The manufacturer must inform HPiVS Ltd. of any changes that affect any of the assessed Essential Requirements.

Failure to do this will invalidate the Certificate.

The applied conformity assessment module requires the client to affix HPiVS Approved Body identification number (1521) on the product.



UK Approved Body No. 1521

Company registered in England #7217086

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Tel +44 1491 822818

Email enquiries@hpivs.com

Web www.hpivs.com

HPi Verification Services Ltd.

The Manor House
Howbery Park, Wallingford
OX10 8BA, United Kingdom

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11. APPENDIX A – FAULT CODES

FAULT CODE BLINK BEHAVIOUR

In a fault condition detected by the on-board computers, the ring around the Drive System On/Off button will flash red, accompanied by an audible set of beeps from the warning buzzer.

1. Count number of slow red blinks (0.5s on, 0.5s off) to get fault **code**. Fault **code** ranges from 1-15.
2. Wait 1.5s
3. Count number of fast red blinks (0.1s on, 0.25s off) to get fault **subcode**. Fault **subcode** range depends of the fault **code**.
4. Wait 3.0s
5. Repeat

FAULT CODE LIST

Once a fault code and subcode have been acquired, consult the table below for fault description.

Enum name	Code	Subcodes	Description
FCCANWatchdogTimeout	1		No communication heard from remote CAN device within expected timeframe
		1	Dashboard keypad
		2	Steering wheel keypad
FCSensorUnderrange	2		HFX input (digital or analogue) is below expected voltage (unlikely with all these digital inputs)
		1	Charger connected signal (HFX input 1)
		2	Water sensor signal (HFX input 2)
		3	RBS status signal (HFX input 3)
		12	Hydraulic pressure switch signal (HFX input 12)
FCSensorOverrange	3		HFX input (digital or analogue) is above expected voltage
		(see FCSensorUnderrange)	
FCSensorOvercurrent	4		HFX input (digital or analogue) is feeding excessive current
		(see FCSensorUnderrange)	
FCExcessiveFollowingError	5		Not used on this craft type
FCActuatorShortToBattery	6		HFX output has short circuit to positive voltage rail
		1	HFX 2A Output 1
		2	HFX 2A Output 2
		3	HFX 2A Output 3
		4	HFX 2A Output 4
		5	HFX 2A Output 5
		6	HFX 2A Output 6
		7	HFX 2A Output 7
		8	HFX 2A Output 8
		9	HFX 2A Output 9
		10	HFX 2A Output 10
		11	HFX 2A Output 11
		12	HFX 2A Output 12

		13	HFX 2A Output 13
		14	HFX 2A Output 14
		15	HFX 2A Output 15
		16	HFX 2A Output 16
		17	HFX 4A Output 1
		18	HFX 4A Output 2
		19	HFX 4A Output 3
		20	HFX 4A Output 4
		21	HFX 4A Output 5
		22	HFX 4A Output 6
		23	HFX 4A Output 7
		24	HFX 4A Output 8
FCActuatorOpenCircuit	7		HFX output is drawing below expected current when turned on
			(see FCActuatorShortToBattery)
FCActuatorOvercurrent	8		HFX output is drawing excessive current when turned on
			(see FCActuatorShortToBattery)
FCActuatorPWMDriver LossOfControl	9		HFX output cannot control current when in PWM mode (unlikely with digital outputs)
			(see FCActuatorShortToBattery)
FCHFXControllerFault	10		HFX hardware or software fault – see HFX manual
		1	Voltage high
		2	Voltage low
		3	Sensor supply #1 over voltage
		4	Sensor supply #1 under voltage
		5	Sensor supply #2 over voltage
		6	Sensor supply #2 under voltage
		7	Sensor supplies both out of range
		8	Consult Sealegs Authorised Service Personnel
		9	Consult Sealegs Authorised Service Personnel
		10	Consult Sealegs Authorised Service Personnel
		11	Consult Sealegs Authorised Service Personnel
		12	Consult Sealegs Authorised Service Personnel
		13	Consult Sealegs Authorised Service Personnel
		14	Consult Sealegs Authorised Service Personnel
		15	Consult Sealegs Authorised Service Personnel
		16	Consult Sealegs Authorised Service Personnel
		17	CAN1 Tx failure
		18	CAN2 Tx failure
		19	CAN3 Tx failure
		20	CAN1 Rx failure
		21	CAN2 Rx failure
		22	CAN3 Rx failure
		23	Consult Sealegs Authorised Service Personnel
		24	Consult Sealegs Authorised Service Personnel
		25	Consult Sealegs Authorised Service Personnel
		26	Consult Sealegs Authorised Service Personnel
		27	Consult Sealegs Authorised Service Personnel
		28	Consult Sealegs Authorised Service Personnel
		29	Consult Sealegs Authorised Service Personnel
		30	Consult Sealegs Authorised Service Personnel
		31	Consult Sealegs Authorised Service Personnel
		32	Consult Sealegs Authorised Service Personnel

		33	Consult Sealegs Authorised Service Personnel
		34	Consult Sealegs Authorised Service Personnel
FCHydraulicsFault	11		
		1	Leg movement timeout (didn't see pressure switch activate when using all wheels up/down)
		2	Hydraulic pressure switch stuck on (pressure switch already activated before starting pump when using all wheels up/down)
FCBMSFault	12		
		1	BMS timed out when starting
		2	BMS timed out when stopping
FCPortDriveFault	13		
		1	Drive stuck in pre-op (not entering operational state)
		2	Precharge timeout (did not reach expected capacitor voltage within expected timeframe)
		3	No CAN communication
		0	Consult Sealegs Authorised Service Personnel
FCStarboardDriveFault	14		
			(see FCPortDriveFault)
FCBowDriveFault	15		
			(see FCPortDriveFault)

SEALEGS®

BE AMPHIBIOUS

LESS HASSLE
MORE FUN