



HORIZON
ALUMINIUM BOATS

OWNERS & MAINTENANCE MANUAL



Building Dreams Since 1992

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Introduction

Congratulations on purchasing your new Horizon boat. Horizon Boats is a family run company and has a proud tradition on building quality aluminium boats for the novice and expert alike. This manual has been designed to assist in the correct operation and care of your new Horizon boat. We ask that you please read through completely, as this manual is our suggested do's and don'ts for care and operations of your new vessel, to make your boating experience as pleasurable and safe as possible for many years to come.

Introductory Warning Statement:

This manual has been prepared to assist you in the operation and care of your new boat. We strongly recommend that you read it thoroughly and follow the instructions provided as well as the accessory instruction sheets included with your boats. Please note that some of the information within this manual may not be applicable to your area of boating. Please check with your dealer or boating authority for a brochure on local boating rules and regulations. We recommend you always practice safe boating practices.

We also recommend that you take the time to complete and return the warranty papers that came with your boats, motor and any auxiliary equipment fitted to your boat to ensure you are registered with the appropriate companies as an owner of their equipment. In addition to these warranty cards there will be operating manuals associated with the engine, trailer and electronic equipment. Even if you believe you are competent with this equipment, we strongly recommend you read these manuals as they contain warnings and concise instructions on the best way to operate each item. It is very important that you read the engine manual very carefully as modern engines are now largely electronically controlled and have warning and fail safe devices fitted should a problem arise. You should clearly understand how these functions and what the various alarms systems mean. If you experience any difficulties, please contact your Horizon Boat Dealer for assistance.

A Day on the Water

1. The success of any boating trip is dependent on the level of preparation before you leave. This includes safety equipment, weather forecast and sufficient fuel. As such, we recommend that you perform the following steps.
2. Make certain that you have received a full explanation and applicable demonstrations of your vessels systems from the dealer before taking delivery of your boat.
3. Read this manual thoroughly, paying particular attention to the subjects of fuelling, loading limits, launching, and docking, recommendations for safety, maintenance and warranty.
4. Participate in a safe boating course in your area.
5. Before attempting your first launch, it is a good idea to get an understanding of your new package, find a suitable location and practice backing the trailer. When ever you are backing up, be sure to have a look out to help direct you. Make sure the outboard is raised to clear obstacles, and the bungs are tightly in place as failure to install the bungs securely will result in the boat filling with water when launched.
6. Before commissioning a new boat, do not plan an extensive trip until you have has a shakedown cruise to make sure all equipment is functioning properly and you are familiar with the boats operation. If you experience any problems consult your Horizon Boats dealer.
7. Ensure all potential operators and passengers on board are familiar with the operations and systems of the boat.

Safety First – Mandatory Equipment

All states have a list of mandatory safety equipment that is required to be carried on the boat. There are different requirements for inshore and off shore operations. Many dealer packages this with the boat at the time of purchases. It is important that you obtain a copy of the regulations in your state to ensure that you comply. Look after your safety equipment, store it carefully in the boat and regularly check it is all in good condition. Be sure to read the accompanying instructions and ensure you clearly understand how to use everything – particularly life jackets (personal flotation devices). Please also monitor expiry dates on items such as flares, fire extinguishers etc.

Mandatory Safety Equipment can include:

- One approved Personal Flotation Device (PFD) of a suitable size is required for each person aboard the boat. Always ensure children wear PFD's. Always check PFD's for fit and performance in the water, and never hesitate to have all persons wear them whenever circumstances cause the slightest doubt about safety or where local boating regulations stipulate their use.
- Distress flares
- EPIRB
- Suitable Anchor with suitable length rope, shackles and chain
- Fire Extinguisher
- Torch or signalling device
- V-Sheet
- Marine Radio
- Bilge Pump
- First Aid Kit
- Paddles
- Bucket
- Rope

Planning your Trip

The safety and success of any boat trip is dependent on the level of preparation before you leave. When planning your voyage, it is important that you consider the following:

- Check the latest weather forecast (get regular updates).
- Before Departing, advise someone responsible of your boating plans and intended route. Be sure to give them a good description of your vessel. If the plan changes during the voyage, notify them immediately. These precautions will enable them to tell rescue organisations where to search and the type of boat to look for if you fail to return. Also be sure to always report in when you return.
- Check your marine radio is working properly. Do not head Offshore without a marine radio. Do not rely on mobile phones for distress communications at sea as there is normally no reception.
- Familiarise yourself with the positions of the navigational aids and hazards you are likely to encounter.
- Be certain any operator has not been or is not consuming alcoholic beverages / or non prescribed drugs.
- Know the limits of your boat. Although conditions may seem fine, it is important to be aware of your boats limitations. Not all

Fuelling Your Boat

Ensure that you have enough fuel for the duration of time you intend being out, plus 50% in reserve. Your engine will use more fuel in rough conditions so calculate your fuel usage based on the worst conditions you will encounter. Spare fuel should be carried in an approved container. When fuelling the vessel take care not to overfill, as fuel spillage can affect paintwork.

Underfloor Fuel Tank

- Prior to fuelling always ensure all electrical equipment is turned off and that there are no spark causing items nearby.
- The fuel tank can be filled via the through hull fitting. The fuel tank is fitted with two breathers to allow the tank to fill at a reasonable rate. Keeps the fuel nozzle in contact with the fitting whilst filling to avoid possible static sparking. Replace the cap once the tank is full. DO not overfill the tank, allowing for thermal expansion of the fuel on very hot days.
- When filling the tank from empty make a note of how many litres are in the tanks before the gauge registers moves from empty. Also record how many litres are in the tank at the halfway point. This will help you more accurately in planning your trips and knowing your trip capacity.
- Always clean up and fuel spillage. Spilt fuel can damage your boat and be hazards.
- Spare fuel should be carried in an approved container. And kept in a safe place.
- It is recommended that you fuel up your boat on your way to the water, not on your way home or before you store your boat as fuel can go off.

Portable Fuel Tank

- Prior to fuelling always ensure all electrical equipment is turned off and that there are no spark causing items nearby.
- Remove the portable tank from the boat before filling.
- Your outboard may require a petrol/oil mix, follow the engine manual instructions for the correct mixture.
- Do not overfill the tank, allowing for thermal expansion of the fuel on very hot days.
- Ensure any fuel spillage is cleaned from the tank before securing it back in the boat.
- Check for any vent screws on the portable tank which must be open during the engines operation.

Warning: Do not use fuels that incorporate any form of alcohol or alcohol derivatives as it destroys marine fuel systems hoses and components which could lead to hazardous leaks, fire or explosion.

Warning: The flotation material used in your Horizon Boat can be affected by petrol and petroleum based product. If a petroleum-based product is split inside your boat, check the condition of the flotation material prior to your next trip.

Owners

Loading Your Boat

When loading your boat, it is important that the weight is distributed evenly. Too much weight in one area of the boat can impact the boat's performance in the water and affect its safety. It is important therefore to take care when placing items such as cooler boxes, portable fuel tanks, water jugs etc to help create more desirable running attitude. This also applies to the location of passengers, with a shift in passenger weight altering the planning angle of the hull. It is important therefore that passengers never change seat locations while the boat is moving.

Important: Your boat will have a compliance plate that shows the maximum load capacity. This should NEVER be exceeded.

Trailer Your Boat On The Road

Before using your trailer for the first time familiarise yourself with the trailer's owner's manual. A trailer with skids is recommended for aluminium boats as they allow an equal distribution of the boat's weight on the trailer. Preventative maintenance is an important part of trailer care and longevity.

- Ensure that you are familiar with and comply with the towing regulations in your state.
- Be sure to check the trailer is safely connected to the car, check the coupling, safety chain and lights. It is always a good idea to double check these items.
- Towing a boat can change the behaviour of the way your vehicle handles. Take care when towing that you keep a safe following distance from the vehicle in front of you and allow for additional braking distance.
- Ensure that the trailer and boat do not exceed the towing capacity of the vehicle.
- The boat should be secured to the trailer by a cable from the bow eye to the winch. A safety chain should also be used from the bow eye to the winch stand or trailer tongue. The stern of the boat should also be tied down to the trailer using suitable tie down straps. There are normally supplied when you purchase that boat.
- All loose items in the boat should be securely fast so they do not shift whilst underway.
- Always carry a spare wheel and tyre and the necessary tools to change them.
- Check tail lights and indicator singles work when attached to the towing vehicle.
- It is recommended that you use a motor support bracket.

IMPORTANT: DO not use your boat as a trailer. Do not carry excess weight in the boat while Trailering or travelling.

Launching And Retrieving Your Boat

- Practice before you go – avoid unnecessary frustration by practicing how to back your trailer before you arrive at the ramp. Once you are comfortable doing this, the boat ramp experience can become a smooth part of your day on water. Always have someone keep watch when reversing.
- Pre launch preparation – check that the bungs are fitted to the boat!
- Launching your boat – before descending the ramp disconnect the trailer lights to avoid the chance of blowing out the lights when the trailer is submerged. Ensure that the boat is firmly attached to the trailer.
- Tie a bowline to the bow of the boat and keep hold of this, while you launch the boat.
- Have your passengers get on board once the boat is launched.
- Starting the engine – Before starting the engine, ensure that the engine is in neutral and there are no fuel leaks.
- Retrieving the boat – When returning to the ramp, have a plan as to who is going to hold the boat and who is going to get the towing vehicle. Ensure that the person holding the boat is capable of doing so in the prevailing conditions.
- Checks before heading home – remove the bungs; ensure that boat is secured to the trailer/vehicle in the same manner as directed above.
- Owners

On the Water Manoeuvring the boat

- When first driving the boat, practice manoeuvring at slow speed to get used to the way the boat handles. A boat does not have brakes. To stop the boat, allow the boat to slow down to under 10km/h. putting the engine in reverse and slowly increasing power will stop the boats forward movement.
- Remember, all boats steer by the stern. Although many boats have a steering wheel like a car, they handle quite differently. While a car steers from the front, a boats steers from the rear. While a car sits directly on a hard surface like the road and is not as adversely affected by weight, a boat sits on the water – a soft surface, and weight distribution is important because it affects the boats “attitude” or the way it sits in the water.
- Weight in a boat should be kept as low as possible as to not impact the stability of the boat.
- Be attentive to your surroundings when driving your boat. You need to keep a watchful eye for other craft, swimmers and divers. The wake left by your boat can impact other craft. Smaller craft can even capsize as a result of the wake from another boat. You may be responsible for any damage caused by the wake of your boat.
- It is highly recommended that you do an accredited course on safe boating, this is normally part of the many boat licensing courses that are available. These accredited courses will teach you the “rules of the road” when at sea as well as many other helpful and safe practices to make your boating experience safe and enjoyable.
- Keep an alert look out. Serious accidents have resulted from failure to do so.

IMPORTANT: There is a risk of falling or being thrown out of the boat if standing or moving while the boat is in motion. People should not stand or kneel or change position if the boat is in motion. If someone must stand whilst the boat is underway, avoid speed changes that could cause the standing person to lose balance.

The following are helpful things to remember for your boating trip.

The Ramp

- Before making your way down the ramp make sure the bungs are in the rope is off and all equipment is placed in the boat safely
- Be polite to other boaties, you may never know when you will need their help.
- Launching
- Maintain a firm grip on the bowline, once the boat is launched load your passengers after the engine has started. Park the trailer in a sensible and considerate location.

Tools and Spares

- You should always carry appropriate tools and spares in case of a breakdown.

Emergencies

- Always carry the correct safety equipment in accordance with your State or Territory, so if something goes wrong you still have options.
- Being able to inform someone on shore will greatly improve your chances of solving and boating problems. We recommend a marine radio.

After your day out

- After being in saltwater or fresh water, always wash your boat and equipment with fresh water (not bore water).
- It is also a wise idea to flush your engine out, and give your trailer and wheels a good wash.
- Also remember salt can damage electrical components on your boat.

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- Also remember salt can damage electrical components on your boat.

What is Corrosion/Oxidation

Corrosion is something we have all experienced through out our lifetime; it is simply metal naturally changing. It's a similar process, which we see when Iron rusts, one of the minerals which make up iron is a brownish-red powder and in time and subject to the elements it wants to return to its natural state, thus rust, this also applies to Aluminium.

When Aluminium is exposed to air, a thin oxidized film forms on the surface protecting the metal from corrosion.

Causes of Bubbling / Flaking Paint

Aluminium Corrosion or Oxidation

Corrosion is commonly used to describe what happens when a boat paint's bubbles or flakes off, however this is rarely the case. Oxidization is normally the cause of most paint problems.

Electrolysis

Presence of stray current in the hull is the main cause of electrolysis, normally originating from the engine or electrical wiring in the boat. Other origins are external wiring leaks, such as electric winch mounted on the boat trailer or a boat marina.

All aluminium contains a small percentage of dissimilar metals in its manufacture, when stray currents runs through the boat it will find these dissimilar areas first and attach dissimilar metals and fittings. This reaction causes paint to start bubbling and flake. In unpainted boats the results of the reaction consist of a white powdery substance, if left for long periods of time, the alloy will corrode badly.

Important Points:

- When storing your boat for a period of time disconnect the battery.
- Keep your boat dry and clean
- Never wash your boat with detergents which are caustic or acid based.
- Always rinse your boat with fresh water only after each use.
- When conducting regular maintenance checks, check the engine earth wiring and sacrificial anodes are in good condition.

Craft Care

To maintain your boats in tip top shape always wash your boat off with fresh water after use, this will help to remove the salt, oil, and dirt from the hull.

Cleaning your boat

The following items which are left on your boat may cause corrosion, discolouration and stains – wash them off as soon as possible:

- Seawater
- Dust, iron powder from factories, chemical substances such as acids, alkalis, cola, tar etc
- Bird droppings insect's carcasses, dried old bait, sap etc.
- Fuel spills.
- Lead sinkers and steel hooks can react with alloy. Always remove and loose sinkers and hooks from the floor of your boat

Do not use the following to clean your boat as they can react with the alloy and paint.

- Carbon tetrachloride
- Nail polish remover
- Petrol
- Acetone
- Bore Water

Washing

After every use spray your boat with fresh water (not bore water) to remove the salt and dust. Next using ample fresh water and a sponge or soft car washing brush, wash the boat from top to bottom. This will clean away all the chemicals which are contained in the dirt and dust that is picked up from the road and the prolonged exposure to dried salts from seawater can damage the paint coating and aluminium of your boat.

Important information regarding your Horizon Boat

In order to discourage saltwater oxidation in the hull of your boat, it is recommended that you flush the hull out twice a year with fresh water.

What to do if you find water in your hull?

It is recommended that after every use you check your boat hull for water in the bilge. Any excess water should be drained from the hull using the bungs.

If there is a continuation of the water build up, it will require an inspection of the hull by your nearest authorised Horizon dealer.

Cleaning & Repairs

- Waxes and some other polishes containing highly abrasive compounds should not be used. Such waxes or polishes are harmful to the lustre of the painted surface as they remove part of the film of the painted coating.
- Touching up the paintwork is important, Deep scratches left untreated can result in blistering around the effected area, so ensure any touch ups seal the exposed aluminium.
- Before and additional welding is conducted on the boat, the fuel tank and line must be removed.

Touch Ups

All Painted Horizon Boats are painted with 2 – Pak automotive quality paints. Deep scratches left untreated can result in blistering around the effected area, so ensure any touch ups seal exposed aluminium.

Storage

When storing your boat for any length of time you must ensure the following:

- Do not store your boat under a tarp as some contain chemicals, which may react with the aluminium or paintwork, only use proper boat covers.
- Always ensure that the bungs are removed and the jockey well is fully extended, to ensure the boat is angled so the water can drain freely out of the boat.
- Batteries should never be connected or left in the boat, if the boat will be stored for a great length of time. Batteries, which may leak or give off acid vapour or uncontrolled electrical currents, can increase your boats susceptibility to electrolysis.

Boat Handling

For a boat to perform right it comes down to how well the skipper handles the boat, where the passengers are placed, how many of them there are and how the motor's controls are used.

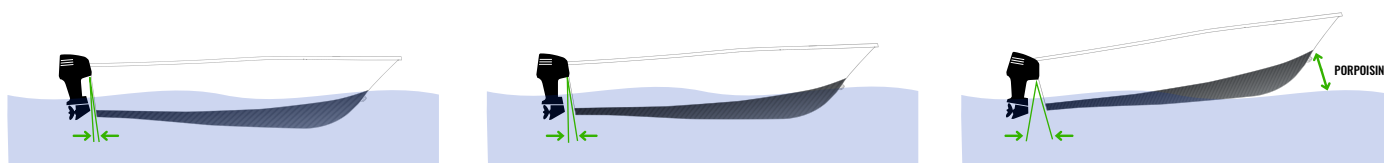
The most critical key to the boats performance of any small vessel are categorised by the boats stability and trim.

Stability

Your boats seaworthiness can depend on how much load you put in your boat and where you place it.

Trim

Trim is the balance of the boat in a fore and aft direction and is crucial to the boats behaviour at sea. The position of the boats load, the tilt of the motors leg and the boats speed can all influence trim.



- Incorrect trim will cause the boat to “Plow” which means the bow of the boat is too low in the water.
- Incorrect trim will cause the boat to “Porpoise” which means the bow of the boat will slap the water.

All this can be fixed by making a slight trim adjustment. Adjustments should be made to both speed and trim in adverse weather conditions. CORRECT TRIM GIVES MAXIMUM “PERFORMANCE”

Trailers

Having a problem with trailer can take a lot of the fun out of boating. Badly adjusted, they can cause long-term damage to boats, unseized and badly set up; they can be dangerous on the road.

Hints for towing

1. Make sure the boat is tied down to the trailer, but not over tight
2. Use a motor support bracket
3. A long trailer, giving extra distance between the boat's bow and the tow hitch, allows less weight on the draw bar for good towing, a longer trailer will give you extra benefit of easier reversing.
4. Do not overload the boat and trailer. If unsure of the total weight of loaded trailer, take it to a public weighbridge and obtain a weighbridge certificate a small charge will be applicable.
5. Ensure the trailer is registered to carry the combined weight of your boat and gear (many not are). The tare weight is subtracted from the aggregate weight on the trailer registration and then the difference is the amount the boat and gear can weigh. The weight of the trailer and boat must not exceed the towing capacity of your vehicle. Remembering if overloaded, your vehicle will be unstable and your insurance may be invalid.