



KINGFISHER

WELDED SPORTFISHING BOATS



OWNER'S MANUAL

COASTAL ■ MULTI-SPECIES ■ SPORT ■ RIVER JET



OWNER'S MANUAL

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Welcome to the KingFisher Family!

Congratulations on the purchase of your new KingFisher boat. KingFisher incorporates the latest innovations in aluminum boat manufacturing. Almost 60 years of research, manufacturing experience, and listening to our customers has produced the boat you own today. You can be assured that your new KingFisher will provide you with years of worry free operation and enjoyment. With superior styling and performance, KingFisher is leading the industry in quality and design.

Thank you for choosing KingFisher.

Section 1 - Introduction

By reading this manual carefully you will learn how to care for your boat, and what your responsibilities are as the boat's operator. Your KingFisher boat has a limited Lifetime Warranty which is printed at the back of this manual for reference.

Please take the time to complete and submit the Warranty Registration. You may also complete the warranty registration online at www.kingfisherboats.com. Failure to submit the registration or neglect or improper care of your boat may void the warranty. The best way to protect your new KingFisher is to carry out regular maintenance and inspect your boat regularly as recommended in this guide.

This manual refers to the other manuals that come with your boat's equipment and accessories. It is essential that you read all of these manuals and become familiar with the care, maintenance, and safe operation of all the equipment aboard your boat. KingFisher wants you to get the most out of your boating experience, and to come home safely every time. If you are missing any manuals, see your KingFisher dealer or equipment retailer for a replacement.

In Section 7 of this manual you will find a place to record such information as your engine and boat serial numbers, and your dealership contact information. Keep this information with your boat for easy reference by yourself or qualified service personnel.

If you have any questions about your boat consult your KingFisher Dealer. If you have any questions about your regional and federal boating regulations, contact the local Transport Canada Office of Boating Safety or Canadian Coast Guard, Fisheries and Oceans Office.

Before you go boating it is wise to read your boat Owner's Manual and go through the pre-trip safety checklist found in Section 3. Ensuring that your boat is in perfect working order before beginning a voyage will allow you to get the most enjoyment out of your boat every time you use it.

Section 2 - Safety Information

Pre-trip Safety Checklist

1. Ensure that you are familiar with all applicable boating regulations. These can be obtained from Transport Canada Office of Boating Safety or your local Coast Guard.
2. Ensure that your boat insurance and vessel license are complete and up to date
3. Check your on-board safety equipment:
 - Ensure your boat has paddles on board.
 - Ensure you have a class 5BC Fire extinguisher in good working condition on board.
 - Ensure that you boat has a container for bailing.
 - Ensure you have a watertight flashlight on board in good working condition.
 - Ensure your vessel has Type A, B, or C flares on board and that they are not expired. (Vessels less than 6m must carry 3, and vessels over 6m must carry 6)
 - Ensure you have a buoyant heaving line on board at least 15m in length.
 - Ensure the horn works.
 - Check all lights and make sure they work.
 - Check your radio, cell phone and / or signaling device.
 - Check your bilge pump.
 - Ensure that every passenger has a properly fitting personal floatation device that is Transport Canada Approved.
4. Check all seats and ensure they are firmly attached.
5. Check the battery and electrical system for damage or corrosion.
6. Check the steering for smooth operation through the full range of travel.
7. Ensure that all loose items are safely and securely stowed.
8. Check for any damage to the boat.
9. Check that the hull drain plugs are in place.
10. Check engine fluid levels.
11. Check your capacity rating and ensure your boat is not overloaded or overpowered.
12. Check bilge for water, fuel and oil.
13. If your boat is equipped with an inboard motor you must run your blower for 4 minutes prior to starting the engine.
14. Ensure you have a container to collect any garbage.
15. Check the weather report.
16. Leave an itinerary of your trip or "Float Plan" with someone on shore and have them contact local Search and Rescue if you don't return at the appointed time.

- 17. Always have someone along who can operate the boat if you become incapacitated.
- 18. Make sure you & your guests are wearing approved personal floatation devices.
- 19. Instruct your guests on safety procedures and equipment on board.

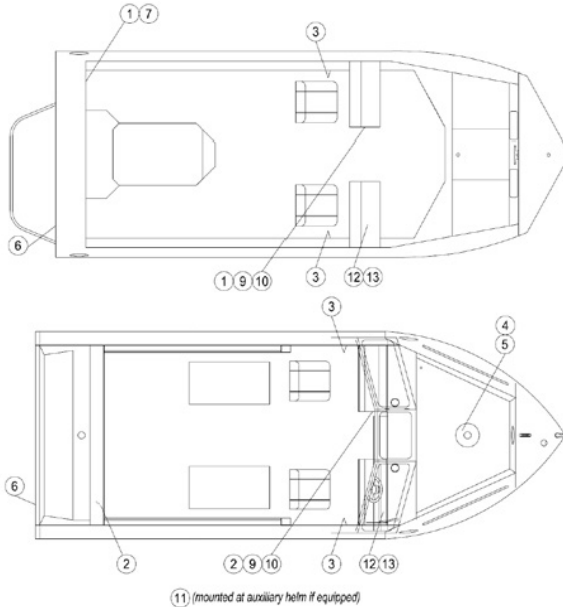
Important Labels and Warnings

General Information

Your boat is supplied with a number of identification and warning labels. These labels are intended to inform and protect the boat operator and passengers. Should any of these labels be damaged or lost they should be replaced immediately. Failure to comply with the warnings can result in severe injury or death. Should you need replacement warning labels, conformity/capacity labels or instruction labels contact your dealership. Each label carries a KingFisher part number for easy identification.

Label Location Maps

Note that not all labels appear or are required on all boats. If you are uncertain if your boat is missing a label, please contact your dealership immediately.



Warning Decals

1

WARNING		CAUTION
<p>Gasoline vapor can explode. Before starting engine, operate the blower for 4 minutes in each engine compartment bilge for gasoline vapors</p> <p>Avoid serious injury or death from fire or explosion resulting from leaking fuel. Inspect fuel system for leaks at least once a year.</p> <p>To avoid serious injury or death, do not use or try to access boarding ladder, swim platform or splash well when engines are running.</p>	<p>Carbon Monoxide (CO) is produced by all gasoline engine and generator sets. To avoid injury or death from (CO), always run bilge blowers while boat is idling and provide adequate ventilation to cabin or covered areas on boat.</p> <p>If CO poisoning is suspected:</p> <ul style="list-style-type: none"> - Shut down engine(s) and generators - Move victim(s) to fresh air - Contact Medical Help - Investigate source of CO and take corrective action 	<p>Operation of auxiliary engine and main engine concurrently may result in engine damage. Please consult owners manual on operation of fuel quick disconnect system.</p>

2

WARNING		CAUTION
<p>Avoid serious injury or death from fire or explosion resulting from leaking fuel. Inspect fuel system for leaks at least once a year.</p> <p>To avoid serious injury or death, do not use or try to access boarding ladder, swim platform or splash well when engines are running.</p>	<p>Carbon Monoxide (CO) is produced by all gasoline engine and generator sets. To avoid injury or death from (CO), always provide adequate ventilation to cabin or covered areas on boat.</p> <p>If CO poisoning is suspected:</p> <ul style="list-style-type: none"> - Shut down engine(s) and generators - Move victim(s) to fresh air - Contact Medical Help - Investigate source of CO and take corrective action 	<p>Operation of auxiliary engine and main engine concurrently may result in engine damage. Please consult owners manual on operation of fuel quick disconnect system.</p>

3

WARNING

AVOID SERIOUS INJURY OR DEATH. UNEXPECTED SEAT ROTATION MAY CAUSE EJECTION OF OCCUPANT. LOCK SWIVEL WHEN SPEED EXCEEDS 5MPH

4

WARNING

AVOID SERIOUS INJURY OR DEATH. SEAT LOCATION NOT INTENDED FOR USE AT SPEEDS EXCEEDING 5MPH

5

WARNING

AVOID SERIOUS INJURY OR DEATH. DISLOGGED SEAT MAY STRIKE OCCUPANT OR CAUSE LOSS OF BOAT CONTROL. SECURE UNOCCUPIED SEAT.

6

WARNING

To avoid serious injury or death, do not use or try to access boarding ladder or swim platform when engines are running

7

DANGER

Clean Out

To avoid serious injury, do not remove impeller clean out while engine is running or while boat is beached. Ensure that the clean out is closed and securely latched, and that the retaining pin and clip are in place before operating the boat.

Retaining Pin

8

CAUTION

Waterlight Closure
Keep shut while under way.

9

Transport Canada	Transports Canada	Canada
REMARKS BY FAIR TESTER: LOAD* - CHARGE: _____ lbs NO. 400 PDYQ	OCCUPANTS: _____ # POWER - PUISSANCE: _____ HP	MODEL-MODELE: _____
BUILDER - CONSTRUCTEUR: WESTWIND GROUP CORP. (OBS)		NO. 400 PDYQ

THE MANUFACTURER CERTIFIES THAT THIS PRODUCT COMPLIES WITH THE PLANS/LE PLAN ET LES RÈGLEMENTS DE LA CONSTRUCTION CANADIENNE POUR LES VÉHICULES À MOTEUR QUI SONT EN VIGUEUR À LA DATE DE LA CONSTRUCTION. LE FABRICANT CERTIFIE QUE CE PRODUIT EST CONFORME AUX EXIGENCES RELATIVES AUX ÉMISSEMENTS DE POLLUANTS DE LA NORME DE CONSTRUCTION DES VÉHICULES À MOTEUR.

#9 Capacity label vessels less than 6m (19'8") length

10

Transport Canada	Transports Canada	Canada
BUILDER - CONSTRUCTEUR: WESTWIND GROUP CORP.	MODEL-MODELE: _____	NO. 400 PDYQ

THE MANUFACTURER CERTIFIES THAT THIS PRODUCT COMPLIES WITH THE PLANS/LE PLAN ET LES RÈGLEMENTS DE LA CONSTRUCTION CANADIENNE POUR LES VÉHICULES À MOTEUR QUI SONT EN VIGUEUR À LA DATE DE LA CONSTRUCTION. LE FABRICANT CERTIFIE QUE CE PRODUIT EST CONFORME AUX EXIGENCES RELATIVES AUX ÉMISSEMENTS DE POLLUANTS DE LA NORME DE CONSTRUCTION DES VÉHICULES À MOTEUR.

#10 Conformity label - vessels over 6m (19'8") length

11

WARNING

Visibility from this helm station is limited. Avoid serious injury or death from collisions. Maintain lookout as required by "Rules of the Road", Read Owners Manual.

(if equipped with auxiliary helm station)

12

WARNING

Visibility from the seated position at this helm station is limited. Avoid serious injury or death from collisions. Operation from a standing position may be necessary to maintain a lookout as required by USCG Navigational Rules. Read Owners Manual.

(most models not applicable)

13

WARNING

Use correct hydraulic power steering fluid to avoid irreparable damage and loss of steering causing injury or death. Mercury Verado use SAE 9W-30 Synthetic. Uflex/Teleflex use 15 Grade Oil / ISO VG15.

Capacity / Conformity Label Information

Every vessel is supplied with a label indicating that it conforms to related federal requirements as of the date of manufacture. Vessels over 6 m (19' 8") in length are required to display a Conformity Label (# 10).

Vessels less than 6m (19' 8") in length require a Capacity Label (# 9) showing the maximum carrying capacity, maximum passenger load, and maximum rated horsepower on their capacity labels. The number of passengers your boat is safely equipped to carry is clearly stated on the capacity label. Regulations require that each person have a seating place.

If you find that your capacity or conformity label is missing, it can be replaced by your KingFisher dealer. When contacting the dealer please supply the Hull Identification Number (HIN) recorded in Section 6.



WARNING: SEVERE INJURY OR DEATH MAY RESULT IF THE MAXIMUM CAPACITIES DISPLAYED ON THE CONFORMITY LABEL ARE IGNORED.

Guests and operators aboard your boat must be aware of the following:

Carbon Monoxide is deadly. Never run the engine of your boat in an enclosed space.

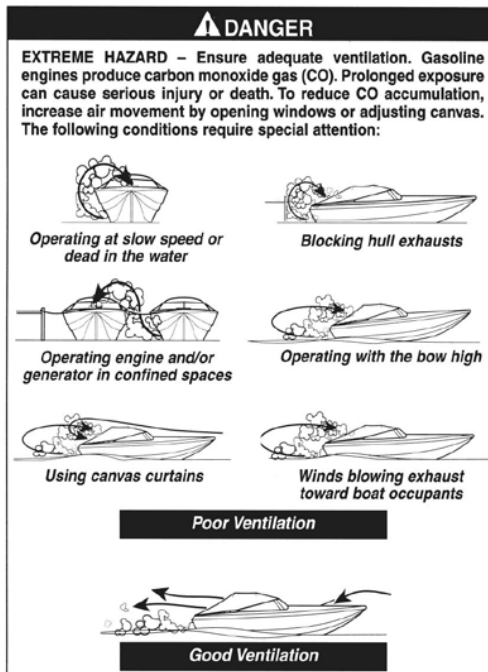


DANGER: Carbon Monoxide (CO) is a poisonous gas that is colorless, odorless and about the same weight as air. It will distribute itself throughout spaces of the boat in dangerous concentrations if proper ventilation is not provided. A person breathing these fumes will become seriously ill. Direct and prolonged exposure will cause brain damage and death. Always run the bilge blower whenever the engine is idling. Opening windows or hatches may improve ventilation. Never operate the engine when either a sloper top or camper top is installed. Never use a charcoal grill or any open flame cooking or heating device in an enclosed space. Carbon Monoxide may also enter your boat from nearby sources such as neighboring boat engine or generator exhaust. Always ensure adequate ventilation. A Carbon Monoxide detector is an excellent way of preventing Carbon Monoxide related illness or death.

Common Symptoms of Carbon Monoxide Poisoning

1. Watering and itchy eyes
2. Flushed appearance
3. Inattentiveness and inability to think clearly
4. Ringing in the ears
5. Tightness in the chest
6. Headache and/or throbbing temples
7. Drowsiness and fatigue
8. Incoherence
9. Nausea and/or vomiting
10. Dizziness
11. Collapse
12. Convulsions

IMPORTANT: If you suspect someone is suffering from CO poisoning move the person to fresh air, administer oxygen if available, and contact medical assistance. If the victim is not breathing administer CPR until help arrives.



Section 3 – Operator and Passenger Safety

Who may operate the boat

The safe use and operation of this boat is dependent upon the use of proper operating techniques, as well as common sense, good judgment, and expertise. For boat operators, Proof of Competency is compulsory throughout Canada for all persons born after 1983. For persons born before 1983 Proof of Competency is required after August 2009. KingFisher strongly recommends reading the most recent edition of Transport Canada's Safe Boating Guide. Marine safety and boat handling courses are available throughout Canada and are also strongly recommended. Every operator should know the basics of marine navigation and boat handling. It is vital that the rules of the road and proper respect for others using the waterways be observed at all times.

Operator's Responsibilities

As mentioned previously, it is the operator's responsibility to operate the boat safely in accordance with the law, common sense and good judgment. The Operator bears responsibility for the safety of the boat's passengers and others that may be in the immediate vicinity affected by the operation of the boat. In Canada, it is compulsory to license your boat. Registering your KingFisher boat is not necessary. Insurance, while not required everywhere, is also important to have.

The operator also has a responsibility to operate and maintain the boat and its equipment in accordance with the manufacturer's instructions. Failure to do so may result in damage to the boat or its equipment or void the warranty. Consult the owner's manuals supplied with the boat's installed equipment (such as the engine, etc) for correct maintenance and operating procedures. Your KingFisher Boat requires a modest amount of maintenance in order to provide many years of enjoyment. See Section 5 for detailed maintenance requirements and instructions. Everyone who operates the boat must read this manual and understand their responsibilities.

Approved personal floatation devices of the appropriate size must be worn at all times by persons aboard the boat while it is in the water.

To avoid serious injury or death, turn off the engines while any passengers are entering or leaving the water, or anyone is swimming in the vicinity of the boat.

Always operate your boat at a safe speed for weather conditions. Slow down during periods of restricted visibility, choppy water and high winds. Failure to do so may result in serious injury or death.

Do not operate the boat if any object is obstructing the line of sight forward of the steering station. Doing so may result in damage to the boat, severe injury, or death.

Gasoline vapors are explosive. Always be careful when filling the fuel tank to avoid spilling fuel in the boat and in the water around the boat. Extinguish all smoking material and open flame while refueling or while within 15m of a refueling site. For safety, all passengers should leave the boat while it is being fuelled. Avoid static electricity discharges and do not operate a cell phone while fueling.

Before embarking on a boating trip, perform an inspection of all vital components of the boat and all safety equipment. Check for water or gasoline in the bilge. If there is gasoline in the bilge, evacuate everyone from the immediate area and contact your local fire department. Never use the bilge pump to pump out even a tiny amount of gasoline or oil from the bilge. Doing so may result in fire or explosion causing severe, permanent injury or death and will cause environmental damage.

Never sit on seat backs or arm rests, and never stand on seats. This can result in persons being ejected from the boat and lead to severe injury or death.

Never consume alcohol and/or recreational drugs during or prior to operating any vessel. It is illegal and could result in legal penalty, serious injury, or death.

Never attempt to modify your vessel's hull or structure without explicit instructions from the manufacturer or your dealership. Doing so may result in catastrophic structural failure that could cause severe injury or death. Modifying your hull will also void the warranty.

Always use handrails or grab handles where provided. Failure to do so may result in a fall causing injury or death.

As the master of your boat, one of your legal responsibilities is to come to the aid of other boaters or persons in the water that are in danger, provided it does not put you or your vessel in danger. Consult the manuals that come with your life saving equipment. When approaching persons in the water, approach as slowly as possible. When in the vicinity of persons in the water, turn off your engine and use the paddles to maneuver. Your boat is not designed to tow other boats. In an emergency, use your bow or transom eyes for towing purposes. Your deck cleats are not designed for towing and can fracture suddenly or pull out of the deck. Towing another vessel at speeds above 5 mph will put an unusually heavy load on your motor, possibly resulting in mechanical damage not covered under warranty.

In the event of engine failure, check all electrical, mechanical and plumbing connections to the engine. Ensure that there is sufficient fuel in the tank, and that there has been no fuel or oil leakage. Attempt to re-start the engine in accordance with the manufacturer's instructions. If the motor will not start wait for it to cool down and try again. If the motor will not start after several attempts, summon assistance. Often an emergency pull-cord is supplied with outboard motors to allow the motor to be started in the event of a dead battery or broken starter motor. Always follow the manufacturer's instructions.

In the event of fire, use your fire extinguisher in accordance with its instructions. All other persons should abandon the boat immediately in the event of fire if it is safe to do so. In the event of loss of steering, throttle or shift control system failure, turn off the engine and summon assistance. Use the paddles to make your way back to shore.



WARNINGS:

- DELIBERATE MISUSE OF YOUR BOAT AND EQUIPMENT CAN VOID YOUR WARRANTIES, AND POTENTIALLY RESULT IN SERIOUS INJURY OR DEATH
- FAILURE TO COMPLY WITH NAVIGATIONAL REGULATIONS AND RESTRICTIONS COULD RESULT IN FINES, SEVERE INJURY OR DEATH
- SEVERE INJURY OR DEATH MAY RESULT IF THE MAXIMUM CAPACITIES DISPLAYED ON THE CONFORMITY LABEL ARE IGNORED.

Section 4 - Boat Characteristics and Operation

Your boat will always turn more aggressively the faster that you are going. Always be aware of your surroundings and give yourself lots of room to maneuver safely. Placing heavy objects over to one side of the boat or very far forward in your boat can result in poor boat performance; in an extreme situation this may include loss of control or capsizing of the boat. Always distribute any cargo evenly around the centre of the passenger carrying area of your boat. If your boat is 20' in length or less, it will have a capacity rating indicated on a label. Do not exceed this carrying capacity.

Safe Operation, Care and Attention

Operating your boat with due care and attention requires that the operator be aware of the surrounding environment at all times.

- A sudden stop or change of direction can cause loss of control of the boat resulting in injury or death.
- Operate the boat defensively at all speeds and keep a safe distance from people, objects, and other watercraft.
- Following directly behind other boats or operating the boat in an erratic manner can lead to collision, injury and death.
- Operators should reduce speed and exercise extreme caution when operating the boat in shallow areas or where there might be submerged objects.
- Be aware of the weather conditions at all times. If wind and waves begin to rise or visibility begins to deteriorate, return to the dock or boat ramp. Operating the boat in bad weather can lead to injury or death.
- Operators should always ensure that a responsible person on shore knows your boating plans and a description of your boat, so that if you fail to arrive at your destination at the expected time help can be called for in a timely manner.

Night Operation/Anchoring

If your boat is equipped with navigation lights they must be turned on from dusk till dawn. If your boat is equipped with an anchor light, it must be displayed while at anchor during the night in any area that experiences marine traffic. Never operate your boat after dusk unless it is properly equipped with navigation lights.

Stern Drive and Outboard Trimming

If your boat is equipped with power trim, you can change the angle the propeller shaft by adjusting the trim switch. See your engine operating and maintenance manual for an explanation of the handling characteristics caused by trimming your stern drive or outboard.

Your boat is designed for quick acceleration, with a minimum amount of time spent in the transitional bow-up condition. Planing your boat is most easily and quickly accomplished by trimming the stern drive or outboard (if applicable) fully “down” or “in”. However, once on plane, the stern drive or outboard should be trimmed “up” or out a little to avoid “plowing”. Plowing can cause “bow-steering” or “over-steering” and increase fuel consumption. In this condition (plowing), if attempting a turn or encountering diagonal waves, a more abrupt turn than intended may result.

Jet Boat Operation

Anyone intending to operate a jet boat must understand the following warnings and cautions before taking control of the boat.



WARNINGS:

To maintain steerage you must maintain thrust. You will not be able to steer after shutting down the throttle or shutting down the engine. Keep the throttle on if you need to maneuver. Do not travel at high speed toward any object closer than 61m (200ft).

Debris sucked into the jet drive can be shot at very high speed from the jet nozzle. Be sure no one is behind the boat that could be struck with the jet spray. Being struck with debris or jet spray can cause serious injury or death.

Do not attempt any maintenance or adjustment to the engine or jet drive unit while the engine is running. Failure to shut off the engine for maintenance or adjustments may cause injury or death.



CAUTIONS:

Do not operate the boat in debris or weed filled waters. The jet drive may become clogged, causing unexpected loss of steerage and possible damage to the jet drive. When operating the boat in shallow water, the jet drive may be damaged if foreign material is sucked into it. The intake grate is designed to allow small material to safely pass through the jet pump unit, causing only minor wear to the impeller and stator

assemblies. The intake grate stops large items which can cause major pump damage, but enough large items jammed in the grate can cause loss of thrust.

When the intake grate has become plugged with debris, (i.e.: gravel, mud, etc.) KingFisher's EZ - Clean intake will free most obstructions. **Shutting off the engine when using the EZ Clean grate is imperative.** Failure to do so may allow large debris material (i.e.: rocks, etc.) to flow through the jet pump causing severe internal damage.

Operation of EZ - Clean intake grate:

- SHUT OFF THE ENGINE.
- Place foot on EZ - Clean bar located above swim platform and push down hard.
- When releasing the bar, let it snap back to the closed (top) position by itself. (Easing the bar to the top position slowly may cause the intake grate to stick open slightly causing loss of power).

Clearing a Clogged Jet Pump:

If debris or weeds have become clogged inside the jet drive, the foreign material must be completely cleaned out to return the unit to proper running order:

- SHUT OFF THE ENGINE.
- Pull the lanyard, the emergency shutdown switch.
- Remove the key from the ignition switch.
- Clean the entire jet drive system (intake, impeller, nozzle, etc.) of foreign matter.
- If the jet drive system cannot be easily cleared of debris, the boat should be returned to the trailer or boat lift for haul-out before further work is attempted.
- You may need to remove the pump grate from the bottom of the boat to clear the jet drive.
- Some models (American Turbine) have an external clean-out located on top of the pump.

If an object becomes tightly wound around the impeller shaft, it may be necessary to perform the following:

- SHUT OFF THE ENGINE.
- Pull the lanyard disengaging the emergency shutdown switch.
- Remove the key from the ignition switch.
- Remove the spark plugs.
- Put a wrench on the flywheel nut and turn the engine counterclockwise. As you turn the engine have someone slowly pull the object from the impeller shaft as it unwinds.



WARNINGS:

Be sure all of the jet drive components are completely free of debris. Cooling water for the engine is supplied through the jet drive. Loss of engine coolant may cause overheating and damage to the engine.

Jet boats are highly maneuverable. Executing quick turns or stops may eject the driver or passenger from the boat, possibly causing injury or death. Shifting from forward to reverse at high speed may result in the bow diving under the bow wave created. Water could enter the boat from over the bow. If this occurs, all water must be pumped from the bilge before resuming normal operation or the engine may be damaged.

The jet pump on your boat does not have a gearbox. The impeller is always turning, even when the shifter is in neutral. ALWAYS keep hands, feet, hair and clothing away from the jet drive intake and nozzle. Do not attempt any maintenance or adjustments to the engine or jet drive unit while the engine is running. Failure to shut off the engine for maintenance or adjustments may cause injury or death.

Operation of jet drives in dirty or sandy water will require flushing out the engine's cooling system if the engine is not equipped with a closed system. Failure to adequately flush the engine can eventually cause damage or overheating as fine particles accumulate on the engine. Accessory "sand traps" are available to reduce this clogging effect.

Fuel Quick Disconnect System

Your boat may be equipped with an optional quick-disconnect auxiliary engine (kicker) fuel system. The hose should normally be disconnected and the valve closed when not in use. Operation of both the main engine and kicker at the same time may cause damage to the engine(s). Contact your dealer immediately if any sign of leakage is noticed.

Steering and Controls

Your boat will either be equipped with a tiller type engine, mechanical-cable steering, electrical steering, or hydraulic steering.

Special care and attention must be taken when using tiller steering because of the drastic movements that are required to take evasive action in an emergency and the fact that letting go of the tiller can cause the vessel to go off course instantly.

Mechanical cable steering must also be monitored at all times because engine torque can gradually push the mechanism in the steering system over to one side, sending the boat off course.

Hydraulic steering doesn't suffer from the potential problems of torque-steer; it is smoother in operation and requires less effort to turn the wheel. The fluid level must be checked frequently to ensure that the hydraulic system is intact and that there is sufficient fluid in the lines for your steering system to function. It is very important to use

the manufacturer's recommended steering oil type. Steering should only be adjusted by a qualified technician.

Consult your engine and control owners manual for instructions on operating or adjusting your boats throttle and shift controls. Marine engines can only be started with the controls in the "Neutral" position. Always shift your controls to "Neutral" before starting the motor. If you **are** able to start your engine with the shifter in gear, have your KingFisher dealer service the boat **immediately** to correct the problem. Your vessel's controls will also be equipped with a safety lanyard. This lanyard consists of a clip that is attached to your boat's engine controls and a snap-hook that attaches to the operator's clothing. If the operator is ejected from the boat or collapses, the lanyard pulls the clip from the engine controls and shuts off the engine. Before starting the engine ensure that this lanyard is properly in place and the clip fits snugly into its receptacle. For other engine starting instructions consult your engine and controls owner's manuals.

Instruments and Gauges

Your boat may be equipped with an electric fuel gauge, a tachometer and a voltmeter or an electric fuel gauge and a multi-function gauge. Other gauges may be installed by your dealership. For instructions on the use of your multi-function gauge, consult the gauge manufacturer's owners manual. Always be aware of your gauge readings. Low RPMs can mean a fouled prop or jet intake, high RPMs can indicate prop damage or cavitation. Return to your dealership for service if either condition persists. Your voltmeter should read slightly above 12V. If the reading is too high or too low your battery or engine electronics could be damaged. Return to your dealership for service.

Fuel and Oil

Consult your engine manufacturer's owner's manual for the proper type of fuel to use and any appropriate additives. Your 4-stroke engine may either have a wet-sump oil system which means that it has an oil filled crank case, or a dry-sump oil system which means it has an oil tank. Your 2-stroke engine is oil-injected from a tank. In either case, always check your oil before starting the motor. Consult your engine owner's manual for the location of your dipstick, the procedure for checking the oil level, and the correct type of oil to use. Avoid filling your boat's fuel tank to its full capacity and never park your boat with a completely full fuel tank. Fuel expands when the surrounding air temperature increases. This can cause your fuel system to overflow. Spilled fuel creates a fire and explosion hazard, can cause severe irritation to skin, and can damage the paint on your boat. Paint damage due to spilled fuel is not covered by your warranty.

Getting to Know Your Boat

Read all your owners manuals completely. Get to know where each of your switches and circuit breakers are on the dash, and the location of in-line fuses for the bilge pumps and other accessories. Use the various owners manuals provided with your boat and the check-point diagram to learn where your check points are located and what the acceptable levels and conditions are at each point. Get to know where your shut-offs are for power, seawater, and fuel.

Starting your Engine

Consult your engine and control owner's manuals for proper engine starting, break-in, and shut-down procedures.

Learning to Operate Your Boat

Take it easy for the first little while until you know how your boat responds to the throttle, turning and encountering waves. The transition zone between planing and displacement speeds can be abrupt at times. Also, a boat's sensitivity to steering, wave impact and even wind at high speed can be unpredictable, because there is very little of the boat in contact with the water's surface to provide stability and control. Practice docking your boat carefully a few times to get the feel of your boat.

Your Passengers

The operator is responsible for the safety of all passengers. All passengers must be wearing an approved personal floatation device suitable for their weight. All passengers should be familiar with the location and use of all emergency equipment on board.

Boarding the boat

Never attempt to board a boat while the engine is running, whether from the water or from the shore or a dock. When boarding from a dock or the shore, ensure that the boat is secured so that it cannot move away from you while you are boarding. Use a step if necessary to board comfortably. When boarding from the water, use the swim platform and ladder if the boat is equipped with those options. If the boat is not equipped with a swim platform and / or dive ladder, we do not recommend entering the water from the boat or attempting to board the boat from the water.

Stopping

We recommend that operators avoid stopping the boat abruptly because the boats wake can catch up with the boat and lift the rear of the boat suddenly. Slow the boat down gradually prior to stopping, and never use reverse gear as a brake.

Docking

Always enter marinas and dock areas at low speed ~ 5mph (8km/h) or as posted. Approach the dock head-on, turning the steering wheel sharply as you come closer to the dock, bringing the side of the boat you wish to dock on around to face the dock. Put the boat into reverse gear and turn the wheel or tiller in the opposite direction to pull the stern towards the dock, then put the boat in "Neutral". The boat should drift sideways, gently towards the dock. Practice this often, carefully and at low speeds. Take advantage of any assistance you may be offered when docking.

Leaving a Dock

When leaving a dock, check for traffic and start the engine in neutral. Then have a passenger or someone on shore untie the boat and push the boat away from the dock. *Note: Some models of jet propulsion will steer “backward” on typical steering.* Once the boat is clear of the dock by approximately 1m (3 ft) and is clear of any obstructions or other boats, put the boat in gear and proceed with caution at the slowest throttle setting until the boat is into open water.

Beaching

When beaching the boat, it is critical that the motor be turned off and the outboard motor is tilted up so that the propeller does not strike sand or rocks on the beach. When approaching the shore for beaching, slow the boat down so that a sudden stop will not cause jarring to the passengers or damage to the boat. As you approach the beach and the water becomes shallower, turn the motor off, tilt the outboard up fully, and drift onto the beach. If you don't have enough momentum, use the paddles on your boat to assist you. Once on the beach, disembark from the boat over the bow and secure the boat to a fixed object on shore. Take care when in tidal waters that the boat is not beached long enough for the tide to come in and carry your boat away, or for the tide to go out and leave your boat too far from the water to push it.

When you're ready to leave the beach, have your passengers board the boat, untie your boat from shore, and push it into the water. If the bow is wedged onto the beach, moving passengers to the stern of the boat can help. Climb aboard your boat and use the paddles to push the boat the remaining distance off the beach. Do not lower the outboard until there is sufficient water to avoid engine damage.

Post Operation Checks

- After you are finished enjoying your boat for the day return to the dock or boat ramp and turn your motor off.
- Check propeller or impeller for nicks and tangled debris.
- Check the bilge for gasoline and water.
- Remove garbage from the boat.
- Tilt the outboard and trolling motor to the secure traveling position .
- Secure all loose items prior to trailering.
- When the boat is removed from the water:
 - Wash the boat down with fresh water and pull the hull's drain plugs to remove any water from the boat, securely replacing them afterwards.
 - Consult your engine owners manual for special instructions on purging water from your boat's exhaust system and flushing your boat's cooling system.
 - Perform any post operation maintenance specified in your engine owner's manual.

Trailer Checklist

- Refer to local and regional laws to ensure that your trailer complies with regulations
- Check the trailer for any loose fasteners, corrosion or damage.
- Check the tires for proper inflation and wear.
- Check all trailer lights for function.
- Secure the bow of the boat to the trailer with the winch line and safety chain.
- Secure the transom of the boat to the trailer with the supplied tie-downs.
- Check the trailer hitch on your vehicle and make sure that it is the correct size and load rating for the trailer you are towing.
- Take down the fabric top and stow it securely.
- Check your trailer wheel hubs periodically during your trip to ensure that they are not overheating.
- Secure the trailer tongue over the hitch on your vehicle using the release handle and locking pin on the trailer.
- Attach the trailer's break-away chains to your vehicle. Properly secured chains cross over each other.

Trailer your Boat

Your trailer retailer or KingFisher dealership should ensure that your trailer is set up properly for your boat. An improper trailer setup can do cosmetic as well as visible and unseen structural damage to your boat.

Before trailering your boat, become familiar with how your vehicle handle while towing a trailer. Practice making turns and get to know the turning clearance that you will require while towing. Practice backing up with your trailer and get to know how quickly your trailer will respond to small movements of your steering wheel. An empty parking lot is an excellent place to practice.

Launching

When you arrive at the boat ramp, remove the rear tie-downs from your boat and perform all pre-operation checks. Ensure the drain plug is in place. When safe to do so, back your trailer slowly down the ramp until the underside of the boat is touching the water. Stop your vehicle and set the parking brake. Disconnect the trailer safety chain from your boat and let out a few feet of winch line. Ensure you do not let out enough winch line to become tangled on your vehicle or the trailer. Back your trailer down the ramp until the boat is ready to float free. Set your parking brake. Disconnect your winch line from the boat and attach a long mooring line to the bow. Guide your boat off of the trailer and secure it to the shore using the mooring line or have someone on shore hold the line. Park your trailer and vehicle. Board your boat. Ensure that there is enough water under your boat before lowering the motor.

Loading

Tilt your outboard motor into the traveling position. Moor your boat on shore or have someone on shore hold the mooring line. Carefully back your trailer down the ramp

when safe to do so until the trailer bunks are just underwater. Set your parking brake. Guide your boat onto the trailer as squarely between the trailer fenders as possible. Attach the trailer winch line to the bow eye of the boat, detach the mooring line and winch the boat the remainder of the way onto the trailer. Attach the safety chain to the bow eye of the boat. Remove your boat from the water and perform all post operation checks prior to leaving the parking lot. Attach the tie downs to the transom, stow all loose items securely and store the boats fabric top in the down position. Perform all trailer checks.

Section 5 - General Maintenance and Care

Storage

Your boat should be stored in a covered, well ventilated area to prevent fungus, mold and mildew. It is best to store it with a breathable cover over it to prevent corrosion and staining promoted by leaves, tree sap and other debris, and to prevent rainwater from accumulating inside the boat.

Boat Motor

See your engine manufacturer's owner's manual for storage instructions

Fuel System

Prolonged storage of your boat requires adding a fuel stabilizer to the fuel tank and circulating it through the fuel system. Also follow the engine manufacturer's procedures relating to the fuel system of your boat while in storage. The fuel system should not be filled to capacity before storage to prevent fuel expansion from causing a tank-overflow. Always store your boat in a well ventilated area. Unlike a car, your boat is not equipped with a vapor-tight fuel tank.



WARNINGS:

GASOLINE VAPORS CAN EXPLODE IF IGNITED, CAUSING SERIOUS INJURY OR DEATH. INSPECT FUEL SYSTEM FOR LEAKS REGULARLY.
IF YOUR BOAT IS EQUIPPED WITH AN INBOARD MOTOR RUN THE ENGINE ROOM BLOWER FOR 4 MINUTES BEFORE STARTING THE ENGINE.

Battery

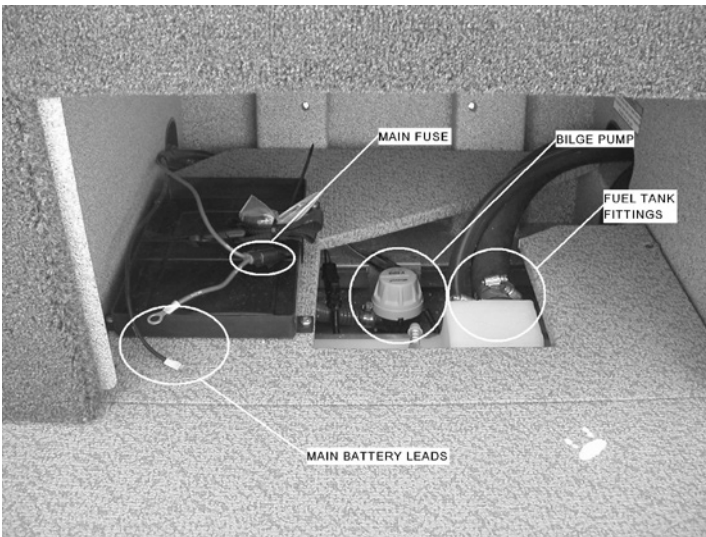
Ensure your battery terminals are free from corrosion and dirt. Inspect the battery for cracks or leakage and ensure the battery area is well ventilated. Sparks, cigarettes, and open flame can lead to a hydrogen explosion. Your battery should be fully charged at all times. During storage it is wise to turn off the main battery switch or disconnect your battery and store it in a cool, dry place. The battery should be fully charged before storage, and its charge should be checked monthly. Batteries can suffer permanent

damage as a result of excessive or prolonged periods of discharge. Use terminal paste to prevent corrosion on the battery terminals and clamps. Allow the battery compartment area to dry completely before storing the boat. Your vessel is designed to use a 12 Volt marine battery. Consult your engine owner's manual, and use the battery recommended by your engine manufacturer.



WARNINGS:

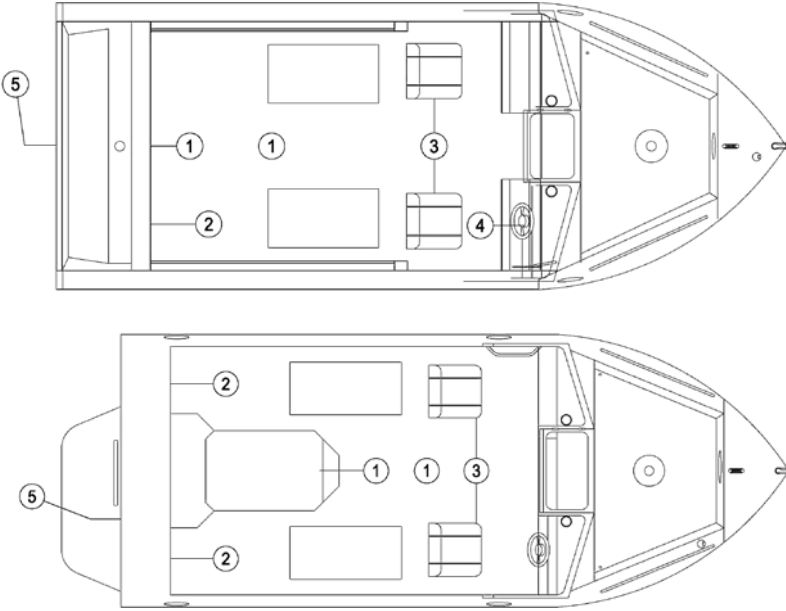
BATTERIES CAN PRODUCE EXPLOSIVE HYDROGEN GAS.
BATTERY EXPLOSION CAN LEAD TO BURNS, INJURY AND DEATH
ALWAYS SERVICE BATTERIES IN A WELL VENTILATED AREA
KEEP AWAY FROM SPARK AND OPEN FLAME



Cleaning

Clean your boat with fresh water. Pull the hull drains and allow the boat to dry thoroughly. Wash your boat with soap and water the way you would wash a car. Clean all surfaces and apply a coat of automotive or marine grade wax protectant. Stains on the aluminum surface can be polished out using automotive polishing compound. Marine growth, barnacles and other debris deposits should be removed from the hull prior to storage. The bare aluminum surfaces on your hull will form a whitish haze over time. This is normal; it is a passive oxide layer that protects your boat from corrosion. Never use a metal brush of any kind on the exterior surface of your boat.

Adjustment and Maintenance



Check points

1. Check fuel system fittings and bilge for fuel and water.
2. Check battery for damage and full charge.
3. Check seats for damage or loose fasteners.
4. Check horn, steering, lights, wipers and bilge pump.
5. Check hull drain plugs.

Periodic Inspection Checklist

- Check entire fuel system for leaks.
- Check all engine mount fasteners for tightness.
- Check all deck fasteners for tightness.
- Inspect hull and motor mounts for cracks and other signs of fatigue such as deep scuffing.
- Check bilge for oil, water and gasoline.
- Check steering lines or cables and shift cables for wear and ease of function.
- Check oil level.
- Test battery.
- Test all switches and accessories.

- Check for burnt out lights.
- Check seat fasteners and swivels for tightness and wear.
- Inspect zinc hull anode if equipped and replace if required.

Inspecting the Fuel System

The fuel system can be accessed through removable panels in the transom and in the deck. Remove the panels and check the fill fitting, the tank fittings and the vent lines at the filler cap and at the tank for signs of leakage. Also check the hoses for signs of wear, chafing and other deterioration. Replace any damaged fuel hoses immediately.

Inspecting the Steering Cable/Hoses

Your boat will come with an owner's manual for the type of steering system that your boat is equipped with. Refer to this manual for information on proper maintenance. Never operate your boat with a damaged or improperly functioning steering system.

Inspecting the Shift Cable/Throttle Cable

Your boat will come with an manual for the type of engine controls fitted. Refer to this manual for information on proper maintenance. Never operate your boat with a damaged or improperly functioning set of controls, cables or linkages.

Inspecting the Circuit-Breakers and Fuses

Your boat is equipped mainly with resettable circuit breakers. These will pop out if overloaded, and can be pushed back in with a fingertip to reset them. There is an in-line fusible link coming off the main battery lead to your distribution panel. It is a Type ATC 30A fuse. Have a spare available in case you need to replace it. Inspect the fuses and the electrical system of your boat monthly. Shut off the main electrical switch by your battery (or disconnect the battery) and inspect the accessories. Trace the circuits and inspect them for chafing and for broken or damaged wires, plugs, switches or connectors. Never bypass a fuse or circuit breaker. If you are unable to find the cause of the blown circuit, have your boat serviced by your dealership.

Winterization and Cold-Weather Maintenance



Caution! Avoid serious damage to engine, water system and heater system. Heater hoses on boats equipped with heater option must be drained after each use in freezing temperatures and as part of annual winterization prior to storage. Failure to do so may void warranty.



With boat in the water or on level ground, open the motor box cover to access the heater hose drains on the Starboard side of the engine.



Remove the two drain caps and observe water draining from the ports into the bilge. As an added measure, it is recommended to blow air through the system to ensure all water is flushed out. When draining stops, reinstall caps and close motor box cover.

Water drained into the bilge should be removed by draining through hull bilge plug or by turning on the bilge pump.

UHMW Hull Option Maintenance



Warning! Avoid serious injury or death or damage to property. UHMW hull option must be checked prior to each use to confirm fastener integrity and security. Loose fasteners must be tightened immediately; damaged fasteners should be replaced. Failure to do so could result in erratic boat handling resulting in damage to person or property.

Section 6 – Troubleshooting

General

Be familiar with all of the manuals provided with your boat. All of your boats mechanical controls, engines, and mechanical and electrical accessories are supplied with manuals describing their operation, care and maintenance. Consult these manuals for all troubleshooting not related to the hull, superstructure or electrical system.

Troubleshooting chart

<u>Symptom</u>	<u>Probable Cause</u>	<u>Corrective Action</u>
Electrical system dead	Battery switch turned off / main fuse blown / battery discharged	Turn main switch on / replace main fuse / inspect electrical system for overload / short circuit / charge or replace battery
Wipers or bilge pump or lights won't work	Blown circuit breaker / fuse / pump plugged or hose disconnected	Inspect component and circuit / have boat serviced
Fuel gauge not functioning	No fuel in tank / loose or disconnected wire/faulty gauge / sender	Fill fuel tank/check sending unit wires / have your dealer service the sending unit or gauge
Tachometer not functioning	Loose wire / faulty sensor / faulty gauge	Check sending unit wires / have your dealer service the ending unit or gauge
Boat performance is poor	Propeller or outboard leg is fouled / boat is overloaded / motor is not trimmed properly /engine problems / hull damage	Turn off engine and inspect prop and motor leg. Check boat capacity label vs. load. Check for water in bilge Adjust trim angle Consult your engine manual Inspect hull bottom for damage
Abnormal amount of water in boat	Boat has a leak / hull drain plug missing	Bail water out / turn bilge pump on/plug leak / insert hull drain plug/ call for help
Motor quits / won't start	Engine problems / dead battery / lanyard removed	Consult engine owner's manual / use paddles / call for help/ replace battery / have boat serviced / reinstall lanyard
Alarm buzzer sounding	Engine problems – low oil or overheating	Turn motor off immediately Consult engine owner's manual Have boat serviced
Boat persistently smells of gasoline	Fuel spilled into bilge / fuel system leak	Check bilge for gasoline / evacuate boat/inspect fuel system for leaks / consult dealership

Section 7 - Consumer and Warranty Information

Important Identification Numbers

The hull identification number is located on the upper starboard (right) corner of the transom of your boat. This number is unique to your boat and can be used by the Coast Guard to trace your vessel. It can also be used by the factory to identify your vessel for service purposes.

(Sample)



Record the hull identification number here:

--	--	--	--	--	--	--	--	--	--	--	--	--

We also recommend you record your Engine Serial Number:

And Trailer Serial Number:

Add any serial numbers from other boat components such as electronic equipment.

Dealer Contact Information

Your KingFisher dealer will be able to handle all warranty claims, repairs and questions you might have about your KingFisher product. Your KingFisher dealer is also able to replace any manuals or warning decals your boat may be missing. Record your dealer contact information for future reference.

Warranty

Your KingFisher boat comes with a warranty registration card. By submitting this card you will be able to receive the best warranty service possible. By registering your boat, your lifetime hull warranty may also be transferable should you decide to sell your boat.

Owner Warranty Program

KingFisher warrants to the original purchaser that any main seam weld (hull side to bottom chine, transom and center keel) on boats manufactured by KingFisher shall be free from structural defects in material and workmanship for the lifetime of the hull*. This Warranty applies to normal, non-commercial use and service, and is subject to all subsequent sections of this document**. KingFisher further warrants that for a period of one year from date of delivery, the interior finishing of each new boat will be free from defects in material and workmanship under normal non-commercial use and service. At no time shall the cost of a warranty repair exceed the current market value of a boat.

*Lifetime refers to a period not to exceed (20) years from the date of manufacture.

Lifetime warranty applies to the original owner of the boat. The lifetime warranty can be transferred to a second owner for a fee of \$750.00. This transfer must be registered at KingFisher upon completion of a warranty registration form. Transfer of warranty must be accompanied by current photos of the front, sides, bottom and serial number of the boat. KingFisher reserves the right to accept or refuse the transfer of warranty at its discretion.

**Commercial Use coverage is limited to major structural defects in the hull for a period of one year from date of delivery. There is no commercial warranty for interior finishing and KingFisher extends no other warranties to boats in commercial service. In addition, commercial coverage is subject to all subsequent sections of this document.

This warranty is valid and enforceable only if the warranty registration card provided at the time of the sale is returned to KingFisher within 15 days of the date of delivery. This warranty applies to and is enforceable only by the original retail purchaser, who has completed and returned the warranty registration card as provided above, when the boat is sold through an authorized KingFisher dealer.

Warranty Coverage

This warranty applies to all welded boats manufactured on or after August 1, 2008.

- A) All parts manufactured by KingFisher.
- B) All workmanship performed by our factory except the installation of component parts not manufactured by KingFisher.

This Warranty does not apply to:

A) Paint peeling, scratches, chips, blistering, flaking, chalking, fading or damage from fuel spills.

B) Corrosion or damage resulting from fuel overfilling, the use or storage of harmful solvents or cleaners, electrolysis caused by reversed polarity connections or inadequate galvanic isolation, improper use of anti-fouling paint, or dissimilar metals.

- C) Damage resulting from unauthorized alterations or modifications to the boat.
- D) Damage caused by commercial use, accident, theft, misuse, abuse, failure to provide reasonable and necessary maintenance, trailer hauling or willful damage.
- E) Component parts not manufactured by our factory may be individually warranted by the respective manufacturer. Applicable warranty policies or statements not delivered with the boat can be requested from our factory.
- F) Engines, out drives, jet drives and propellers (component manufacturer's own warranty).
- G) Furniture upholstery, protective covers, carpet and wood.
- H) Leaking around windshields, latches, hatches and other apertures
- I) Salt water corrosion damage resulting from absence of zinc anodes, cathodic protection devices, improper or unattended storage or moorage.
- J) Damages caused by water freezing or operation in sub zero temperatures.
- K) Damages caused by improper loading, neglect or abandonment, or improper ties to a dock.

Conditions

In order to obtain performance of the obligations under the foregoing warranties, the owner must promptly (in no event later than thirty (30) days after the discovery of the defect) give notice of the defect to the factory. It is then the responsibility of the registered owner to make arrangements with the authorized dealer service center or the factory to take the corrective action and perform the repairs. This has to be done within 15 days of the reported claim. Failure to do so could result in an unsatisfactory resolution or even denial of the warranty claim. KingFisher assumes no responsibility for damage to attached parts or systems if the boat is not removed from service after the initial problem is found. Since this warranty extends only to original retail purchaser, the registered owner must be prepared to present the original sales receipt and show current ownership when submitting a claim. Repairs will be made at our facility without charge to the customer if the repair qualifies for warranty under the guidelines of this program. The responsibility of KingFisher under this warranty program is limited to the repair or replacement of the defective components at its option. It is the responsibility of the registered owner to transport the boat to and from any repair facility for any warranty repairs. The buyer accepts this warranty and the limitations and disclaimers set forth herein as part of the purchase of the KingFisher product or part to which this warranty applies.

Exclusions and implied warranties

Except as otherwise stated herein, KingFisher disclaims liability for any express or implied warranties, including any implied warranties of merchantability or fitness for a particular purpose. The factory disclaims liability for indirect, incidental or consequential damages, which disclaimer applies during and after the warranty period. This warranty is limited to an amount not exceeding the cost of correcting the defects as herein provided and shall not exceed the original retail purchase price paid for the product manufactured by KingFisher. At the expiration of the applicable warranty period all such liability shall terminate. This warranty does not extend to any engine or component installation which requires additional make ready servicing, adjustment or final assembly in preparation by the dealer for the delivery to the original purchaser, any defect due to the negligence of others; failure to operate or maintain the product in accordance with acceptable practices; unreasonable use; damage, accidents, abuse, damage resulting from impact, negligence, alterations, ordinary wear and tear; use of the product for racing purposes; use of performance products (other than those recommended by the factory) that place undue stress on parts such as "jack plates"; modifications of any sort; exceeding horsepower rating and load capacities as indicated on capacity plates fixed to the boat; de-rigging charges, failure to trim boat properly while running, trailering damage, towing behind another boat and other cases of misuse without limit.

Company Policy

No employee or representative is authorized to change this warranty in any way or grant any other warranty.

This warranty gives you specific legal rights, and you may also have other rights, which vary from jurisdiction to jurisdiction.

Design changes

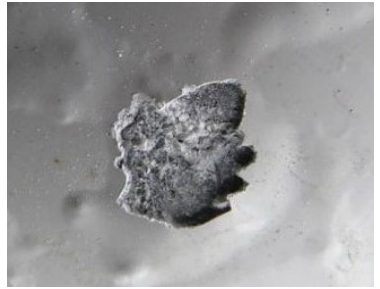
The factory reserves the right to make changes in the design or material of the product without incurring any obligation to incorporate such changes in any product previously manufactured, advertised, or sold.

Corrosion Information | Common Types of Corrosion

Galvanic Corrosion - common type of corrosion caused by dissimilar metals. This can occur for a variety of reasons including dissimilar fittings and fasteners in direct contact with bare aluminum, or even loose items like sinkers and old hooks that find their way into the bilge or an inconspicuous area. These dissimilar metals cause galvanic corrosion when immersed together or while in contact with saltwater, brackish or even contaminated freshwater.



Crevice Corrosion - lack of oxygen can be another reason why aluminum corrodes. Standing saltwater, brackish, and even contaminated freshwater sitting in the hull of your boat over a long period of time can cause tiny areas where the oxide layer slowly gets deteriorated. Not having that natural hard protective coating of oxide will cause the aluminum to become pitted over time and could potentially evolve into microscopic pinholes through the hull.



Electrolysis Corrosion - when an electrical component in either the AC or DC system is incorrectly installed or has an electrical fault which leads to ground. This fault doesn't necessarily need to be on your vessel to cause an issue. It could be located on a neighboring vessel or a boat on the other side of the marina connected to the same AC grounding bus on the marina supplied shore power connection. These faults will turn your boat and every other boat in the marina into a battery, with the saltwater as the conducting electrolyte.



Poultice Corrosion – accumulation of debris can create a highly corrosive condition. Combined with aluminum, this debris creates an acidic solution called aluminum hydroxide that can corrode through the parent metal. These areas tend to seriously aggravate aluminum when there is wet-dry cycling.



Identifying and Managing Corrosion

After every voyage you must pay special attention to the overall cleanliness of your vessel. No different than storing your gear and hanging items to dry, there is a need to clean off the saltwater that has come into contact with your vessel during your outing. A thorough freshwater wash down is an effective way to reduce the risk of corrosion, which could require extra maintenance in the future. Places like under your cutting board, aft helm, and nylon downrigger mounts are examples of points of contact that aren't meant to be watertight and should always be well rinsed with fresh clean water after every use. For best results, an initial quick heavy mist will help loosen the dried salt crystals. Follow this up with a heavy rinse working from the top down, putting extra spray into areas with tight contact points that have little chance of drying up quickly on their own.

Bilge compartments must also be kept as clean as possible by flushing with fresh water every time you return to dock. Make sure all internal drain-ways are free from scum build-up and loose debris. If you notice a white powder forming in crevasses it's a sign this area has been overlooked in previous cleaning attempts. Clean this powder with a stainless tooth brush so the aluminum can once again form a new oxide layer. This type of corrosion will require immediate attention to stop further growth and should not be delayed.

Chipped paint from stones while trailering, or a scratch from a loose deck board, will also have a negative effect when in contact with saltwater. Exposed aluminum in your paint finish will allow moisture in between the paint and hull. This will cause paint to blister and peel. It is important to seal any exposed areas to prevent corrosion forming and spreading.

Blistering and peeling paint around fasteners and fittings or chalky white powder is a sign that galvanic corrosion may be taking place. These are areas not properly rinsed from previous trips or areas where movement of a loosened fastener has allowed water to enter and make contact between the stainless fastener and bare aluminum. This component must be removed and the corrosion must be eliminated by light sanding at a minimum. The affected area will then need to be recoated with matching paint. The component should then be reinstalled using the "**New Component Installation Instruction**" guide.

New Component Installation Instruction

If a fixture or addition to your boat becomes loose, it increases the risk of exposure. Check your fixtures regularly. To safely and effectively install or replace components, follow the below instructions.

1. Place component and hole the markings with a pen



2. Ensure there are no obstructions on the back side of your mounting location before drilling.



3. Drill and deburr holes. Clean up all metal chips and shavings so that none will get trapped in your newly installed component



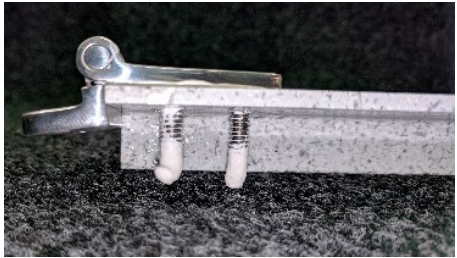
4. Apply a generous amount of sealant such as Sikaflex 291, Loctite UR 3370 or 3M 5200



5. Center the component over pre-drilled holes



6. Heavily coat all fasteners that will be used to hold the component in place.



7. There should be no visible gaps in the sealant when the component is tightened down.



8. A soapy water solution can be used to clean up the remaining excess sealant.



Sacrificial Anodes and Galvanic Protection

Depending on which model and options you have selected your boat may be equipped with sacrificial anodes and a galvanic protection device.

A galvanic isolator is present on all models equipped with a minimum 30A shore power system, and is installed just after the vessel's shore power connection. Signals can pass through this galvanically isolated circuit, but stray currents, such as differences in ground potential or currents induced by AC and DC power are blocked. Sacrificial anodes on your vessel are part of your cathodic protection system. The anode is made from a metal alloy with a more "active" voltage than the surrounding metal it is protecting. The difference in potential between these two metals means that the sacrificial anode material corrodes in preference to the surrounding area it is protecting.

Anodes do require maintenance to keep them at their peak effectiveness. Repeated cleanings throughout the season with a wire brush may be required to remove any buildup that may form.

The anodes on your vessel should be inspected and cleaned every two months. You should change your anodes after it has corroded to half its original size or when you've accumulated twelve months of immersion in saltwater. When anodes are cleaned or replaced, it must also be verified that they have good continuity with the hull. This is an easy step by using a multi-meter set to the ohms scale.

New Sacrificial Anode



Anode Needing Replacement





WARNING

Operating, servicing and maintaining a recreational marine vessel can expose you to chemicals including engine exhaust, carbon monoxide, phthalates, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, service your vessel in a well-ventilated area and wear gloves or wash your hands frequently when servicing this vessel. For more information go to www.P65warnings.ca.gov/marine.

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