TRISTRAM OWNERS MANUAL

TRISTRAM

DISTINGUISHED TRAILER BOATS WWW.TRISTRAM.CO.NZ

WELCOME ABOARD

Congratulations on choosing a Tristram boat. Tristram Marine prides itself on innovation, quality, craftsmanship and being one of New Zealand's leading fiberglass boat manufacturers.

Please take a few minutes to read this manual completely before you use your boat for the first time. This manual is designed to answer most questions you have about features and operation. Please retain it for your future reference.

The team at Tristram Marine want you and your family to feel comfortable with your boat from the very beginning of your experience as a proud Tristram owner.

QUICK REFERENCE DETAILS FOR YOUR TRISTRAM

Boat Model:

Boat Serial Number:

Engine Serial Number:

Trailer Registration:

Trailer Serial Number:

Delivery Date:

PLEASE READ THIS PAGE CAREFULLY

Some information in this manual may not be applicable to your area of boating. Please check with your local boating authority for a brochure on local boating rules and regulations.

Warranty papers will have come with your motor and some of the auxiliary equipment fitted to your boat. Complete and return these now to ensure you are registered with the appropriate companies as an owner of their equipment.

In addition to the warranty cards, there will be operating manuals associated with the engine and electrical equipment; we strongly recommend you read these manuals as they contain warnings and concise instructions on the best ways to operate each item.

It is very important you read the engine manual 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 function and what the various alarm systems mean.

If you experience any difficulties, please contact Tristram Marine for assistance.

WHEN THINGS AREN'T RIGHT

Tristram Marine is a customer service oriented company. It is important to us that your Tristram boat be delivered to you without faults and with all equipment supplied as specified.

If your boat is damaged or faulty in any way, we sincerely apologise for the inconvenience. It is the policy of Tristram Marine to get you back on the water as quickly as possible and with minimal inconvenience to you and your family.

Should you encounter any difficulties, contact Tristram Marine immediately. We will be aware of the appropriate steps to be taken to rectify the matter.

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YOUR TRISTRAM

This manual has been prepared to assist you in the operation and care of your new boat. Please read it thoroughly as the contents can contribute to more effective operation of your boat.

Your boat's construction, including its mechanical and electrical systems (where applicable) was designed to meet safety standards in effect at the time the boat was constructed. All these standards were designed to ensure your safety and the safety of other people, vessels and property around you.

To maintain the integrity and safety of your boat, only qualified people should perform maintenance on, or in any way modify your boat, including the steering system, engine control system, fuel system or electrical system.

OUR RECOMMENDATIONS

We strongly recommend you follow instructions provided in this handbook, the engines owners' manual, and the accessory instruction sheets included with your boat. We also recommend you undertake the following steps:

1. Ensure you receive a full explanation of all systems from Tristram Marine before taking delivery of your boat.

2. Read this manual thoroughly, paying particular attention to the subjects of fuelling, starting, and recommendations for safety and warranty.

3. Ensure all potential operating members of the family and friends are familiar with the operation and systems of your boat.

4. Participate in a safe boating course if available. Visit http://www.boatingeducation.org.nz/ for further details.

Warning

Grossly negligent operation can be a criminal offence. Some examples of actions that may constitute negligent or grossly negligent operations are:

- Operating a boat in a swimming area.
- Operating a boat while under the influence of alcohol or drugs.
- Excessive speed in the vicinity of other boats or in dangerous waters.
- Hazardous water skiing practices.
- Bow riding (foredeck), also riding on seat back, gunwale or transom.

At night, remember to turn on the appropriate running lights and cruise at a reduced speed. Allow plenty of time to avoid dangerous situations.

PREPARATION

Prior to leaving on your first outing (or any outing) there are certain items to check and activities to perform. Familiarise yourself with the boat before launching and consider the suggestions set out on the following pages.

Recommendations for safety

1. One approved Personal Flotation Device (PFD) of suitable size is required for each person aboard the boat. Always ensure children wear PFDs, and regularly check these devices fit appropriately. Never hesitate to have all persons wear lifesaving devices whenever circumstances cause the slightest doubt about safety or were local boating regulations stipulating their use.

2. Do not overload or improperly load your boat. Maintain a clear working area / freeboard at all times. Consider the sea conditions, the duration of the trip, the weather and the experience of the personnel on board. Do not allow any person to ride on parts of the boat not designed for such use. Sitting up on seat backs, bow riding (with the exception of boats that have been specifically designed to safely carry passengers in the bow section) and gunwale riding while underway can be especially hazardous.

3. Understand the meanings of navigation buoys and never moor to one.

4. Be aware of the various distress signals. Slowly raising arms up and down in a boat is a recognised distress signal.

5. Monitor the weather forecast before leaving and during your trip. Consider using www.metservice.co.nz, or the iPhone/Android app ‘MetService Marine’.

6. Be especially attentive in areas where swimmers or divers may be operating.

7. Watch your wake. It might capsize a small craft. You are responsible for damage caused by your wake. Pass through anchorages at a minimum speed and observe speed limits where applicable.

8. Learn and abide by common boating “rules of the road”.

9. Before commencing on an extensive cruise, have current charts of the cruising area on board.

10. Keep an alert lookout. Serious accidents have results from failure in this respect.

11. Always instruct at least one person on board in the fundamentals of boat handling, should you become disabled or fall overboard.

12. Consider what action you would take under various emergency conditions such as a person overboard, fog, fire, a damaged hull or other bad leaks, motor breakdown, severe storm or collision.

13. Keep lifesaving and firefighting equipment in good condition and readily available at all times. Monitor expiry dates also.

14. Have an adequate anchor and sufficient line to guarantee a secure hold in all types of weather and sea conditions.

15. Know your fuel tank capacity and cruising range. Your cruising range can be affected by many things, including weather conditions, mechanical condition of your boat / motor and loading of your boat. If it is necessary to carry additional fuel, do so only in containers approved to carry fuel (per required regulations). It is good practice to allow a 50% margin over and above estimated fuel use.

16. Before departing on a boat trip, advise a responsible friend or relative of your intended route. Be sure to give that person a good description of your boat. Keep them advised of any changes in your cruise plans. 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. Be sure to inform that person upon return to prevent any false alarms about your safety.

Mandatory Equipment

New Zealand has a list of mandatory safety equipment that must be carried on board at all times. You must carry a life jacket or buoyancy aid, which meets NZ Standard for each person on board. Make sure you have the correct size for all your passengers, including children, and ensure they are in good condition.

For more information on New Zealand Marine Safety visit www.nzcoastguard.org.nz.

Practice

Before attempting your first launch, tow the boat to a nearby empty parking lot and practice backing the trailer. Whenever you are backing up, be sure to have a lookout to help direct you.

Make sure the outboard is raised to clear obstacles.

Remember to swing wide when towing around sharp turns to avoid cutting the corner with the trailer.

HANDY TIP

When commissioning a new boat, do not plan an extensive trip until you have had a shakedown cruise to make sure all equipment is functioning properly and you are familiar with the boats operation.

YOUR ENDURO TRAILER

Your Enduro Trailer has been designed and crafted in New Zealand, for New Zealand conditions. For general trailer usage information and for tips of cleaning and maintenance, we recommend you refer to your Enduro Trailer manual.

Trailering Tips

1. Before using the trailer, read the trailer owner's manual thoroughly.

2. Check the trailer's brakes (if fitted) for proper operation prior to departure on each trip.

3. Frequently check the trailers wheel nuts for security.

4. Ensure tyres are properly inflated. Under inflated tyres heat up rapidly and tyre damage is likely to occur.

5. Wheel bearings should be checked at least twice per year and before putting the boat away for any extended period of time. For further information please see your Enduro Trailer manual.

6. Habitually check the wheel hubs whenever you stop for fuel or refreshments. If the hub feels abnormally hot, inspect the bearings before continuing.

7. On extended trips, carrying a spare wheel is advised.

8. Check tail lights and indicators work when attached to the towing vehicle. Some vehicles require heavy duty flasher units to make turn signals work properly.

9. The boat should be fastened to the trailer by a load rated “s” hook from the bow eye to the winch, PLUS a safety chain from the bow eye to the winch stand or trailer tongue. The stern of the boat should be tied down to the trailer. Tie downs are supplied with every Tristram package. The boat transom-to-trailer tie-down straps and winch lines are designed for normal towing conditions on paved roadways and moderately rough secondary roads (at low speeds). They should not be relied upon for any lifting application.

10. Too much or too little tongue weight will cause difficult steering and tow vehicle sway. Generally 5% to 10% of the boat and trailer weight should rest on the tongue.

11. Check the maximum allowable tow ball load on your vehicle.

12. Close all hatches and doors. Store all loose equipment so it cannot slide, fall or blow out. Ensure the canopy / bimini is down and secure and all seating inside the boat is also secured. When possible, use your road cover for long trips.

13. Do not use your boat as a trailer. Do not carry excess weight in the boat while travelling on or off the water.

14. Engage the reverse lock on the trailer hitch. This will lock on the trailer hitch. This will stop the trailer brakes

operating when reversing (when fitted). Remember to disengage the lock when reversing operations are complete.

Launching

Leave your winch safety chain (between boat and trailer) on until you have backed down the ramp, and you are ready to launch.

The ideal launching and retrieving trailer depth is when the rear tail light brackets are just submerged under the water. However, this will depend on the gradient of the boat ramp you are launching from.

Your boat is equipped with one transom drain plug. Make sure this plug is tightly in place before launching. Failure to install the drain plug securely will result in the boat filling with water.

Loading

Fit your safety chain before driving up the ramp. Always secure rear of the boat to the trailer, by way of a suitable ratchet type ‘tiedown’. This will prevent damage to the boat and trailer during transit, or in the event of an accident. Keep tyres fully inflated. Tyres should have maximum pressure displayed. If the instructions are not visible be sure to contact your local tyre shop or Enduro Trailers for reference. A good rule of thumb is to inflate at a pressure between maximum and 5 / 10psi less. This will assist in preventing side wall damage.

Cleaning

Tristram Marine recommend thoroughly hosing your trailer down with fresh water after saltwater usage. We also recommend using the built-in flushing system that we have included as a standard accessory on your trailer.

Flushing Guidance

The longitudinal members on your trailer are fitted with a marine drain plug at the rear end. These drain plugs should only be used when flushing your trailer with fresh water.

TIPS FOR FLUSHING

1. Elevate the front of the trailer higher than the rear and high as practical, without over-extending the thread/travel on your jockey wheel.

2. Insert your rear trailer bungs, then attach a fresh water hose to the hose fitting on the draw bar cross member of the trailer.

3. Fill the trailer with fresh water until excess water flows from either end of the draw bar (this ensures the trailer's longitudinal members are completely full of fresh water).

4. The rear drain plugs should then be removed to allow flushing water to drain.

For further information on cleaning and maintaining your trailer we recommend you refer to your Enduro Trailer manual.

OPERATING

Many people would love to own and use a boat, but are kept away from their dreams by fears they would not be able to launch, operate and retrieve a boat.

This uncertainty is relieved with practice and experience and you will soon gain confidence.

The information provided on the following pages is designed to give you the skills to become a more confident and aware boat operator on protected waters.

Fuelling Procedures

1. If fuelling the boat whilst in the water, be sure it is securely moored to the wharf.

2. Turn off all electrical equipment including the engine, appliances, bilge blower, lights etc.

3. Extinguish all cigarettes, cigars or other items that may produce a spark or flame.

4. Through-deck fittings are provided for fuel tank filling. Remove the cap and insert the fuel supply nozzle, allowing the nozzle to maintain contact with the fitting; this will prevent possible static sparking.

5. When you have finished fuelling, replace the fuel cap and wash off any fuel spillage.

6. Fuel up on your way to the water, not on your way home or before you store your boat.

7. Allow for thermal expansion of the fuel on very hot days. Do not over fill the fuel tank.

There are many different fuel tanks to suit our range of boats. Some tanks are deeper than others. Depending on the fuel tank depth and the length of the fuel sender, the gauge may not

give a true indication of the amount of fuel remaining in the tank when the gauge reads ‘empty’.

The first time a tank is filled, have someone fill the tank slowly while watching the fuel gauge. As soon as the gauge moves (and remains) at the point above “empty” stop filling the tank and note the amount of fuel registered. This is an indication of the fuel reserve in the tank. Never assume there is enough reserve in the tank to get home as the fuel gauge may read differently while at sea due to attitude, lean or list of the boat.

WARNING

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

ENGINE USE

The engine operating and maintenance manual provided with your boat describes pre-start and starting procedures. Modern engines are designed to be started in a particular way. Read the starting procedure for your engine carefully prior to attempting operation.

HANDY TIP FOR YAMAHA 2-STROKE OWNERS

Yamaha NZ & Tristram Marine advise that you should only use Yamalube 2M oil.

Engine Start

1. DO NOT continuously operate the starter for more than 15 seconds at a time.
2. On boats so equipped, check the oil pressure, voltmeter and temperature gauges immediately after the engine starts. Make a visual check to ensure a strong jet of water is squirting from the engine tell tail. Lack of water here may indicate a faulty impeller or a block in the tell tail. Try clearing the outlet with a suitable piece of wire before proceeding, or contact your engine service agent.

BEFORE YOU LEAVE

Providing you have not encountered any problems, you are almost ready to go. (If you did encounter problems, do not attempt to operate your boat until they are corrected). Before you leave, perform the following steps:

1. Check the operation of equipment such as bilge pumps, running lights, radios, etc. Check the steering. Turn the steering wheel to a complete lock, clockwise and anticlockwise, to ensure that there is free movement.
2. Instruct passengers in the use and location of flotation devices.
3. Obtain a reliable weather forecast and plan accordingly for everyone's comfort and safety.
4. Notify a responsible friend or relative of your intended path. Upon your return or a change in your cruise schedule, notify that person again to avoid unnecessary concern.
5. Ensure everyone is either seated or holding on to a grab rail.
6. Be certain any operator has not been or is not consuming alcoholic beverages / or non-prescribed drugs.

With all pre-departure checks now completed, you are ready to leave the wharf.

BASIC MANEUVERING

Remember all boats steer by their stern (the feeling is much like steering your car in reverse). For example, when turning the steering wheel to the left, the stern of the boat will swing to the right as the boat goes into a left turn. This is particularly important to remember when docking, or in close proximity to other boats.

There are no brakes on a boat. Stopping is accomplished by allowing the boat to slow down, (under 10km/h) and putting the engine in reverse. Gently increasing reverse power allows you to stop the boat in a very short distance. A boat does not respond to steering in reverse nearly as well as it does when going forward, so do not expect to accomplish tight turning manoeuvres when backing up.

HANDY TIPS

- Practice docking by using an imaginary wharf.
- Practice stopping and reversing.
- When operating in close proximity to other boats or docking, all manoeuvring should be done at idle speed.
- Proceed with caution in congested areas.
- Gradually increase your speed. Familiarise yourself with the boat before attempting any throttle operation.

Approaching the Wharf

When approaching the wharf, lower your speed within reasonable distance to allow the wake to subside before it reaches other boats, or wharves.

As you get close to the wharf, check for any wind or current action that may affect your manoeuvre, and then make a conservative approach with these factors in mind. Try to use the elements to your advantage. Allow them to carry the boat into the wharf. If there are high winds or strong currents it is best to approach from the lee side (against the wind and current). With a mild current and little or no wind, it is best to approach from the wind side (with the wind and current).

While approaching, ensure all lines are attached to the cleats on the side facing the wharf. Also ensure fenders are lowered on the same side. Be sure to check the fenders are hung at the appropriate height.

Approach at idle RPM at an angle approximately 45 degrees to the wharf. When the bow is within a few meters of the wharf (starboard side) the stern can be brought alongside by turning hard to port. Next, turn to starboard and at idle RPM put the boat into reverse for docking to port. A precaution should be taken not to allow limbs between the boat and wharf.

HANDY TIP

To tie up to a wharf, run the line from the boat around the deck cleat and then back to the boat. This way you can untie the line without jumping from the deck to the wharf and back again. Instead, just cast off one end of the line and bring the whole length back on board.

Leaving the Wharf

Take into account the wind, tide, current and other forces that affect maneuvering when leaving the wharf. Most maneuvering to and from a wharf is best accomplished at idle speeds. Do not forget to release the mooring lines and stow the fenders.

When leaving a wharf on the starboard side and the bow cannot be pushed away from the wharf first observe the following points:

1. Start forward with the steering wheel turned to starboard for one metre.

2. Then shift to reverse with steering full to port.

3. Repeat if necessary to shift the stern far enough away from the wharf to be clear of other boats that may be moored ahead. (Reverse these steps when leaving a wharf located in port.)

ANCHORING

1. Pick a spot where the boat has room to swing around the anchor without hitting other boats or objects.

2. Avoid anchoring in channels or narrows where you may interfere with traffic. You could cause another boat to run aground or you might be run down by a larger craft.

3. Never tie up to or obstruct the view of a buoy. This contravenes marine law.

4. Approach the site slowly; keep the bow into wind or current, whichever is stronger. Drift into position and lower the anchor.

5. If your boat is fitted with a manual capstan, when anchoring lower the anchor and chain from the bow – don't drop or throw it. When the anchor reaches the bottom, drift or reverse slowly until the anchor holds. Feed out line 3 to 6

times the depth of the water. Keep feet and legs clear of the line.

6. Turn the line around the bow cleat and tie a hitch.

7. To raise the anchor, inch forward under power as you take in line. When the line is vertical raise the anchor. If it's not free, tie the line off the cleat and then circle the anchor slowly, keeping the line under strain. Do not attempt to drive off a stuck anchor using your capstan.

8. Don't let the line get close to the propeller.

9. If in the case a Capstan is fitted always start the engine before operating the capstan for retrieval.

BOAT PERFORMANCE

When loading, only take the necessary equipment with you. Keep weight at the lowest level possible and evenly distributed. Weeds, barnacles and other growth will degrade performance. Keep the bottom of the boat clean. When the boats hull has any growth it will slow down greatly and make the boat inefficient.

Running Your Engine

Outboard engines usually deliver the best fuel economy at around 3,500 - 4,500 RPM. So always try and set the boat up at this range when travelling any distance. The amount of load in the boat will also influence fuel economy to a degree, so don't fill the boat up with unnecessary items.

Propeller

Propellers have two basic characteristics, diameter and pitch. Diameter applies to the circle inscribed by the blade tips, measured in inches. Pitch is the theoretical distance (measured in inches) a propeller travels when it has rotated one complete revolution. For example, propellers with a 21 inch pitch, when rotated 360 degrees advances 21 inches through the water.

Replace Damaged Propellers

Propellers should be free from major nicks, excessive pitting and any distortions that alter the original design.

Operating your boat with a damaged propeller may cause the following:

1. Reduced top speed
2. Introduce undesirable handling characteristics
3. Reduce fuel economy

Create unpleasant vibrations leading to increased sound level. Excessive vibrations hasten wear to rotating and reciprocating engine components, which may cause costly damage.

DANGER

Persons in the water can be seriously injured or killed if struck by a rotating propeller. Operate the motor only when an operator is seated securely at the controls. Turn the motor off when swimmers are entering or leaving the boat or in the water near the stern.

Boat Running Attitude

If your boat runs with the bow too high at cruising speeds, observe the following points to achieve a more correct and efficient cruising attitude.

- Move some weight forward in the boat
- Adjust the thrust angle of the engine (reduce the distance between the bottom of the transom and the dive unit). This is commonly referred to as trimming down or in, or applying 'negative trim'. See your engine owner's manual for further trimming instructions.

If your boat runs with the bow too low at cruising speeds (usually indicated by water coming off the hull too far forward and steering difficulty or veering off course). Raise the bow by performing the opposite of the steps above. This is referred to as trimming up or out, or applying 'positive trim'.

For maximum effectiveness when planing, the hull should be at a 3 to 4 (three to four) degree angle to the water.

Steering Wheel Pressure

This pressure, or pull, is corrected by adjusting the trim position of your outboard so the prop shaft is parallel to the surface of the

water. If this is not possible, the trim tab located under the aft end of the anti-ventilation plate can be adjusted by engine service agent.

The trailing edge of the trim tab should be turned in the direction the boat is pulling. Small adjustments should be made until the steering has neutral torque (pull) at the desired speed.

We suggest using your normal cruising speed. When running faster or slower than this speed, a minimal amount of torque will be present.

Passenger and Gear Loading

As passengers occupy different seat positions you will notice the boat's speed change. Passengers must never change seat location while the boat is moving. As this shift in passenger weight alters the planing angle of the hull in much the same manner as though the drive unit angle were changed (trim was altered).

A shift of passenger or gear load forward or aft will often correct minor boat riding deficiencies.

Take care when placing items such as cooler box, water jugs, tackle box, anchor, tools, portable fuel tanks, etc., to help create more desirable running attitudes.

For best boat and motor performance, the boat should be trimmed as described in “Boat Running Attitude” or to suit the prevailing conditions. Passengers and equipment should be distributed in the boat so it is evenly balanced both front and back and side-to-side.

WARNING

There is a risk of falling or ejecting out of the boat if standing or moving while the boat is in motion. If someone must stand while the boat is in motion, avoid speed changes that could cause the standing person to lose balance. Bow riders should not have people in the bow standing or kneeling or changing position while the boat is in motion.

Trim Adjustments

When trimming the engine from a mid-trim position (trim tab in neutral straight fore and aft position), expect the following results:

TRIMMING ENGINE UP (OUT) CHARACTERISTICS:

- Will lift bow of boat, generally increasing top speed.
- Increases clearance over submerged objects (depends on speed / latitude).
- In excess, can cause porpoising and / or ventilation.

TRIMMING ENGINE DOWN (IN) CHARACTERISTICS:

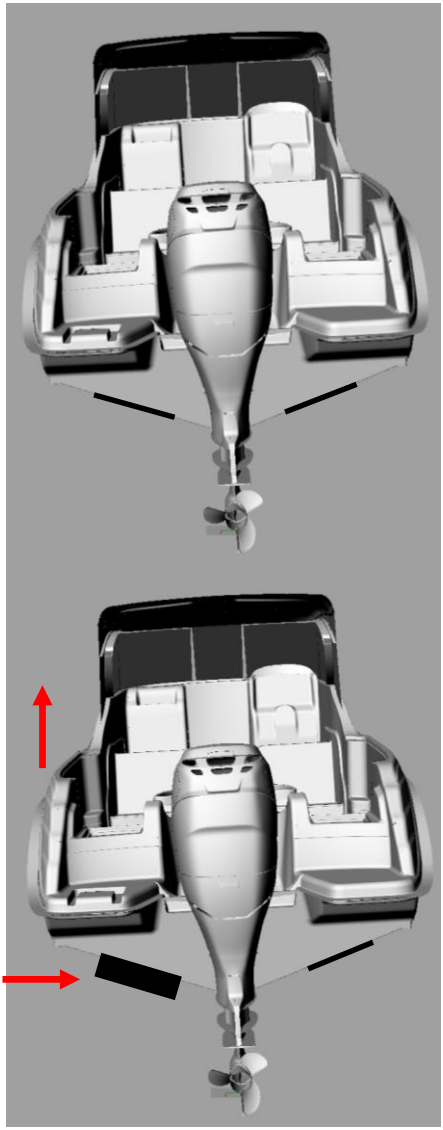
- Will help you get on the plane quicker, particularly with a heavy load.
- Usually improves ride in choppy water.
- In excess, can cause boat to veer to the left or right (bow steer).
- Improves planing speed acceleration (by moving tilt pine one hole closer to the transom).

- The Engine should always be trimmed down (in) whenever getting onto the plane. Once on the plane (18-24km/h) start trimming out your engine to maximize efficiency and ride. See diagrams on next page.

Engine Trim Examples

Trim Tabs Adjustment examples

It is important to recognise that a boat will always lean into the wind. In this case trim tabs should be used to encourage the boat to lean away from the wind. This will provide a softer and dryer ride for passengers. For example, if your boat is listing to port as shown in this image you will need to follow the instructions below:



As this boat is listing to port while underway you want to lower the port side trim tab where the water flow forces the stern upward to level the boat. This situation could be due to side wind direction or balance of loading on Vessel. Trim Tabs can be wired differently but in most cases in this situation you would push the button labeled "Starboard bow down".

INSTRUMENTS, ELECTRONICS & ACCESSORIES

While under way, instruments should be checked frequently for possible indications of trouble.

TACHOMETER

A tachometer is an electrical instrument that indicates engine Revolutions per Minute (RPM). The tachometer is useful for monitoring engine speed to avoid exceeding the maximum RPM rating. In addition, it can be used to detect performance changes by comparing speedometer readings at various RPMs.

Temperature Gauge (If Fitted)

The temperature gauge indicates engine coolant temperature by monitoring a signal from a sending unit installed in the engine water jacket. When the gauge reads in the danger area, shut off the engine and diagnose the problem.

A common cause of overheating is picking up a foreign object in the seawater intake. Usually, raising and lowering the outboard will free it. Backing up in reverse gear, then pulling ahead in forward for 2-3 (two to three) meters is helpful too. Sand drawn in the water intake can also cause overheating. Contact your nearest engine service agent if this occurs.

Oil Pressure Gauge (If Fitted)

The oil pressure gauge indicates engine lubricating oil pressure on all four-stroke and inboard engines. Low oil pressure readings are generally caused by low oil quantity. In any case, immediately shut down the engine and diagnose the problem.

Fuel Gauge (If Fitted)

The fuel gauge indicates fuel level. Since boats are exposed to rough water conditions and varying degrees of trim, fuel gauge readings are often inaccurate. It is always good to keep track of

your running time as a double check against an inaccurate gauge.

Compass (If Fitted)

Many factors affect the operation of your compass, such as local magnetic variation and deviation (induced needle deflection caused by metal components and the operation of electrical equipment aboard your boat).

It is vitally important that your compass has been professionally mounted before using it for serious marine navigation.

Battery

The key to a good marine electrical system is the battery. On some models the condition of the battery can be read on the voltmeter when the ignition switch is in the ON position.

With the engine not running, voltmeter readings in the 11.5 to 12.5 volt range are considered normal. Readings in the 10 to 11.5 volt range indicate a marginal charge condition. Readings below 10 volts indicate a seriously discharged condition.

With the engine running (over 1500 RPM), voltmeter readings of 13 to 14 volts are considered normal. Readings below this

indicate a severely discharged battery or a non-functioning charging system.

Check the battery electrolyte level regularly. Remove caps on the top of the battery if fitted and observe the level of fluid inside. If the zinc plates are exposed, add distilled water until they are covered again. Corroded terminals can impair battery performance and charging ability.

Clean battery terminals with baking soda and water; then coat with a preservative or a light film of grease. Be sure all battery connections are tight. When storing the boat, it is best to remove the battery, give it full charge and store inside away from extreme temperatures.

GENERAL MAINTENANCE AND REPAIRS

In addition to instructions found elsewhere in this manual and in the literature specific to certain components of your boat, the following information is provided for general maintenance and repair.

For specific engine usage, maintenance and repair guidelines refer to the appropriate outboard owners' manual.

Fuel

A common cause of outboard failure is a blockage in the fuel supply, or contaminated fuel. If operating off a carry tank fuel supply and the motor simply sputters out, check two things first.

1. Ensure the tank has not been placed on a section of the hose pinching it closed.

2. If you have the type of tank that requires it, make sure the cap is ventilating properly.

Many models are set up in the factory with a water separator, which takes care of water in the fuel. This can be caused by something as simple as condensation in the tank.

If using carry tanks, familiarise yourself with the position of the small filter fitted to the engine. Cleaning this will often get you underway again.

Because water sinks to the bottom of a fuel tank, placing the carry tank on an angle – or parking the boat on an angle in the case of under floor fuel tanks – causes all the water to collect in the lowest corner of the tank. A siphon pump can then be used to remove all of the water.

Contaminated fuel is rare, but it is advisable to understand its implications.

WARNING

Some engines have front water intakes as well as side intakes. If you are unsure what flushing system your engine allows, contact your nearest engine service agent.

Cabin And Top Side Areas

Check your entire boat from time to time. Check bow rails, ladders, and grab rails for loose screws, breaks, sharp edges, etc., that might be hazardous. Check inventory and inspect life jackets for tears and deterioration. Check signaling equipment. Inspect anchor, mooring and towing lines and repair or replace as required. Do not stow wet lines since mould and mildew may result.

Salt and brackish water are capable of etching and damaging windscreens and windows. Keeping windows clean is the best preventative measure to take. When window cleaning, flush with fresh water only. Exercise caution when cleaning windows because they can scratch easily. We recommend using a product called ‘Rain X’ on your glass. This product will assist in beading water drops off the glass.

NOTE THE FOLLOWING INSTRUCTIONS:

1. Use generous amounts of fresh water (it is often a good idea to add a softening agent such as XT88 or similar to your water) to wash off dust.

2. Use bare hands with plenty of water to dislodge any caked dirt.

3. Use a soft, grit-free cloth or soft clean sponge.

4. Never use glass cleaning solutions or dusters, as they will scratch the surface.

5. Do not use solvents such as acetone, kerosene, benzene, carbon tetrachloride, fire extinguisher fluid, dry cleaning fluid, lacquer, thinner or any type of cleaning product containing these items, since they will attack the surface.

6. When finished, rinse with fresh water and dry with a clean, damp chamois using blotting action.

7. Polish your boat once every 12 months with a marine polish (available in store at Tristram Marine or via our online store).

Stainless Steel

Stainless steel railings and fittings should be cleaned with neutral soap and water. Because irreversible pitting will develop under rust that remains on stainless steel for any period of time, it is best to remove rust spots immediately with chrome cleaner. Then coat the railing or fitting with a good car or boat wax. Never clean with mineral acids or bleaches. Also, do not allow stainless steel to come into continuous contact with iron, steel or other metals which could cause contamination leading to rust or corrosion.

Fabrics

Prior to cleaning any fabric, we suggest testing the cleaning solution on an inconspicuous area.

Vinyl tops and upholstery can be cleaned using a neutral soap and water solution. Vinyl cleaners and conditioners are not advised for use on upholstery. It is advised that no damp wetsuits should be worn while sitting on upholstery seats. Foams can absorb water if in direct contact with damp clothing/ wetsuits.

Mildew can occur if the boat does not have adequate ventilation. Heat alone will not prevent mildew. Always leave your boat in dry areas to avoid any mildew occurring.

Dry cleaning should be considered for interior fabrics other than vinyl.

Instruments And Gauges

When instruments are exposed to a saltwater environment, salt crystals may form on the bezel and plastic covers. These salt crystals should be removed with a soft, damp cloth; never use abrasives or rough, dirty cloths to wipe plastic parts. Neutral household detergents or plastic cleaners can be used to keep the instruments bright and clean.

Trailer

Regular maintenance of your trailer is very important. Enduro Trailers recommend the following:

1. Check tyre pressures and look for signs of damage
2. Clean all lights and reflectors
3. Check all lights are working
4. Check with your local garage to ensure the tow coupling and brake mechanisms are well lubricated
5. Check all tie downs are tight

For further information and specific guidance on cleaning and maintaining your trailer please refer to your Enduro Trailer manual.

Never Use The Following To Clean Your Boat:

1. Petrol
2. Benzine
3. Carbon tetrachloride
4. Acetone
5. Paint thinner
6. Turpentine
7. Lacquer thinner
8. Nail polish remover
9. Abrasive brushes
10. Or any products containing these or similar items.

CAUTION

Do not use petrol or paint thinners to remove road tar or other contamination from the painted surface.

Special Care For Moored Boats

If permanently moored in salt or fresh water, your boat will collect marine growth on the bottom. This will detract from the boats aesthetics and greatly affect its performance. There are two methods of preventing this:

- Periodically haul the boat out of the water and scrub the bottom with a bristle brush and water.
- While not required, it sometimes helps to paint the hull below the waterline with a good grade of antifouling paint. NEVER use red lead or red oxide primers. Also, NEVER use mercury, arsenic or copper-based bottom paints, since these cause electrolysis on some of your boat's metal parts.

When the boat is out of the water, frequently check all metal parts and stray current erosion. Stray current erosion, or electrolysis, can be prevented in several ways. The best is to fit isolator switches and remember to use them. Tristram fits isolator switches as a standard part of the fit up in all models.

NAUTICAL TERMS

Abeam	On either side of the boat
Aft	To the rear, or near the stern
Beam	The width of the hull.
Bilge	The lowest portion inside a boat (in a recreation boat, generally the under deck and lower portion of the engine compartment).
Bow	The forward portion of the boat
Bulkhead	Vertical partition in the boat
Chine	The intersection of the side and bottom of a V-bottom boat
Cleat Deck	**F**itting with arms or horns on which lines may be fastened
Draft Vertical	Distance from the waterline of the boat to the lowest point of the boat
Fathom	A measurement of six feet, generally used to measure water depth
Fender	A protective device (usually made out of a rubber like material) placed between the boat and wharf to prevent abrasion and damage

Freeboard	Vertical distance from the deck to the waterline
Gunwale	The point where the hull and deck meet
Hatch	A covered opening in the deck
Head	Toilet or toilet room
Helm	Steering station
Hull	The basic part of a boat; a watertight vessel that provides buoyancy to float the weight of the craft and its load
Keel	The lowest external portion of the boat.
Knot	Nautical mile per hour; one nautical mile is 6,076 ft.; a land mile is 5,280 ft.
Lee	Opposite side from which the wind blows
Mayday	Internal spoken distress signal for radio telephone communications
Planing	When a hull/boat is travelling over 18-25km/h. (The hull/boat will have a flatter attitude while traveling)
Port	To the left side of the boat (when facing forward)
Porthole	A hinged window in the boat's cabin or hull

Starboard	To the right side of the boat (when facing forward)
Stern	The rear of the boat
Stern Drive	Inboard / outboard propulsion unit
Transom	The vertical part of the stern
Wake	Track or path a boat leaves behind while in motion
Windward	The direction from which the wind is blowing

WARRANTY

Tristram craftsmen take pride in the art of building your boat. Your boat is labelled with the New Zealand Coastguard's seal of approval (The CPC Plate), and has been constructed following not only the rigorous CPC requirements, but by Tristram Marine's stringent manufacturing processes, which is backed up by a five year transferable structural hull warranty – one of the best in the industry.

Tristram Marine's liability for boats of our own manufacture is limited to making good any defects by repairing the same or, at our option, by replacement within a period not exceeding sixty (60) calendar months after the boat has been sold by Tristram Marine, provided that:

Special Provisions

1. The boat must be maintained and used in accordance with the Boat Capacity Plate and Necessary Maintenance Directions in this manual.

2. The boat must not have been altered or operated outside the limits of the design specifications.

3. The boat has not been damaged by neglect, accident, improper use or used for competitive purposes.

4. The warranty does not cover any consequential expenses beyond the warranty repair of the boat itself, e.g. Freighting.

5. Tristram Marine Ltd shall not be liable for consequential loss of any kind arising out of the supply or operation of the boat.

6. Paint is warranted against defective paint or application, NOT against the normal effect of oxidisation and degradation caused by fuel and oxidisation caused by dissimilar metals.

7. The fitting of wedges and anti-ventilation plate foils could void the warranty. (Refer to special provision No. 2)

8. Any work agreed to be repaired by Tristram will be done ex-factory and freighting costs to and from the factory will be the purchaser's responsibility. The warranty does not cover items replaced during normal service and maintenance operations and which are subject to wear. These arrangements apply regardless of any change in ownership during the period covered.

9. Subject to item 10, the above warranty is in lieu of any and all warranties expressed or implied, conferred by statute or otherwise and is the only warranty given by Tristram on the boat or any part thereof. Any warranties under the Sale of Goods Act are expressly excluded.

10. All warranties and conditions implied under the Trade Practices Act, including as to one of merchantable quality, are not excluded by this warranty except that Tristram limits its liability for breach to:

- *The replacement of the boat or products; or*

- *The repair of the boat or products*

11. At Tristram option with all freighting costs to be the purchaser's responsibility.

ENDNOTE

Due to Tristram Marine's ongoing commitment to product improvement, we reserve the right to change, without notice or obligation, the specifications or other information contained in this booklet.

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If you need extra assistance for procedures not explained in this manual please contact Tristram Marine for guidance.

We wish you safe and happy boating in your Tristram.

For more information about Tristram Marine, look to our website www.tristram.co.nz

TRISTRAM
SERVICE DEPARTMENT

TEL: +64 (0) 7 849 5225
TEL: +64 (0) 21 426 660
EMAIL: SERVICE@TRISTRAM.CO.NZ

TRISTRAM
FACTORY & SHOWROOM

TEL: +64 (0) 7 849 5225
TEL: +64 (0) 274 971 764
EMAIL: SALES@TRISTRAM.CO.NZ

ENDURO
TRAILERS

TEL: +64 (0) 7 850 5512
EMAIL: SALES@ENDUROTRAILERS.CO.NZ