YAHOE

PONTOON BOATS

Dear Tahoe Owner,

First and foremost, thank you for choosing Tahoe. We're honored to welcome you to our boating family, and we want you to know how much we appreciate your trust in our company and in the craftsmanship of your new pontoon boat.

At Tahoe Manufacturing, we don't just build boats. We build experiences meant to bring people together, create memories, and make every moment on the water count. Every pontoon that leaves our facility is designed, engineered, and assembled by a team that takes pride in the smallest details. From our welders and riggers to our quality control inspectors, each person who touched your boat is committed to excellence.

We build all of our boats in-house using the highest quality materials and components available in the marine industry today. Our manufacturing process includes multiple quality control checkpoints, and we construct every boat to not only meet but exceed U.S. Coast Guard safety standards. This isn't just about compliance — it's about making sure your time on the water is safe, smooth, and worry-free.

As the original owner, you're backed by our **Ten-Five Above Deck Limited Warranty**, which covers a wide range of issues as outlined in your owner's manual (see page __ for full warranty details). This warranty is one of the most comprehensive in the industry, and it reflects our confidence in the durability and performance of your pontoon.

To ensure your warranty is activated and your ownership is fully registered in our system, **please confirm with your dealer that they've submitted the warranty registration form within 30 days of your purchase**. This is a critical step. Not only to activate your warranty coverage, but also to make sure we can reach you directly in the unlikely event of a safety recall.

In the near future, you will receive a **Customer Satisfaction Survey** from the NMMA (National Marine Manufacturers Association). This is part of our ongoing commitment to accountability and continuous improvement. We encourage you to take a few moments to fill it out, your feedback helps us understand what we're doing well and where we can do better. Every response is reviewed by our team and taken seriously.

Your satisfaction means everything to us. Not just because it's part of doing good business, but because we genuinely care about your experience as a boat owner. We take pride in standing behind our products and supporting every customer with the same care and attention we put into building each boat..

Thank you again for your purchase. We're excited for all the adventures that lie ahead for you on the water, and we're here to support you every step of the way.

Sincerely,

President & CEO
Avalon & Tahoe Manufacturing, Inc.
903 Michigan Ave., Alma, MI 48801
Phone: 800.334.2913 | Fax: 989.463.8226
Email: support@Tahoepontoons.com

PLEAE READ AND RETAIN THIS OWNERS MANUAL.

THIS MANUAL SHOULD BE PROVIDED TO THE OWNER, SUBSEQUENT OWNERS AND ANY OPERATOR OF THE BOAT.

This manual as well as safety labels which may be posted on your boat use the following safety alerts to draw your attention to special safety instructions that should be followed.

⚠ DANGER

DANGER – Immediate hazards which WILL result in severe personal injury or death.

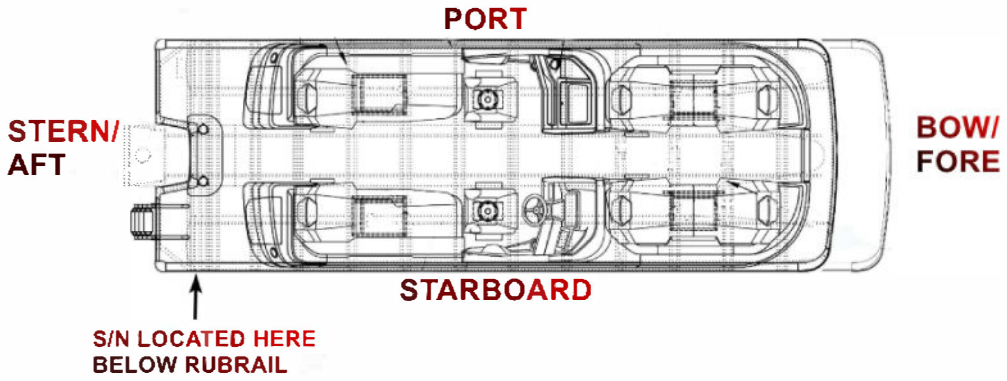
⚠ WARNING

WARNING – Hazards or unsafe practices which COULD result in severe personal injury or death.

⚠ CAUTION

CAUTION – Hazards or unsafe practices which could result in minor injury or property damage.

ABOUT YOUR BOAT



🛥️ Pontoon Boater Checklist

✅ Before You Leave the Dock

- **Inspect the Boat**
  - Check fuel level
  - Check oil level and other fluids
  - Inspect battery charge and connections
  - Test navigation and interior/exterior lights
  - Check bilge pump functionality
  - Look over the bimini top, seats, railings, and fencing for any damage
  - Check the drain plugs
  - Check the steering system
  - Engine (in neutral)
  - Capacity plate (are you overloaded or overpowered)
- **Registration & Documentation**
  - Valid boat registration on board
  - License or boating permit (as required by state law)
  - Owner's manual and insurance info
- **Weather & Navigation**
  - Check local weather forecast
  - Review planned route or destination
  - Load GPS or navigation app
  - Inform someone on land of your plans (float plan)
- **Trailer & Launch Prep** *(if trailering)*
  - Inspect trailer tires, lights, and winch
  - Secure boat properly
  - Bring transom straps and tie-downs
  - Remove trailer safety flags/pins before launch

🚨 Safety Equipment (Required & Recommended)

- **Life Jackets**
  - One U.S. Coast Guard-approved life jacket per person
  - Easily accessible and properly sized
- **Throwable Flotation Device**
  - Type IV cushion or ring buoy
- **Fire Extinguisher**
  - Fully charged and accessible
- **Sound-Producing Device**
  - Horn or whistle
- **Visual Distress Signals**
  - Flares, flags, or lights (required if boating at night or in coastal waters)
- **First Aid Kit**
  - Stocked and waterproofed
- **Anchor and Line**
  - Properly sized for your pontoon
  - Adequate rope or chain
- **Tool Kit & Spare Parts**
  - Multi-tool, duct tape, spare fuses, spark plugs, etc.
- **Emergency Supplies**
  - Paddle or oar
  - Flashlight or spotlight
  - Extra batteries
  - Dry bag with phone charger and cash
  - Sunscreen and bug spray

🧭 While on the Water

- **Follow Navigation Rules**
    - Obey no-wake zones
    - Keep right, yield appropriately
- **Use Common Sense**
    - Stay alert and sober
    - Keep a safe speed
    - Watch for swimmers, kayakers, and wildlife
- **Monitor Fuel**
    - Follow the 1/3 rule: 1/3 out, 1/3 back, 1/3 reserve
- **Keep the Deck Clear**
    - Stow loose gear to prevent trips or overboard loss
- **Respect Others**
    - Minimize music volume near others
    - Avoid large wakes near small boats or docks

🧽 After Boating

- **At the Dock or Ramp**
    - Tie up securely or retrieve boat onto trailer
    - Turn off battery and electronics
    - Raise the motor
    - Drain water from bilge or livewells
    - Log any maintenance issues
- **Clean & Store**
    - Rinse off debris and salt
    - Wipe down seats and flooring
    - Cover boat securely if storing outside
- **Restock Supplies**
    - Refill fuel
    - Restock snacks, drinks, and safety items

Section 1

You and Your Boat

Congratulations on your purchase of a new **Tahoe pontoon**. You've made a significant investment, and it's clear that decision came with careful consideration. We thank you for choosing us, and we're committed to ensuring your ownership experience is everything you expect - and more.

This manual is designed to help you make the most of your time on the water by encouraging thoughtful, responsible operation and proper maintenance of your boat.

Owning a boat is a privilege that comes with important responsibilities - not just to you and your passengers, but also to others who share the water. Safe operation, routine maintenance, and adherence to boating laws don't limit your enjoyment - they enhance it. They help ensure that every outing is safe, smooth, and enjoyable for everyone on board and around you.

Please take time to carefully read this manual, along with any documentation provided by the engine and component manufacturers. Keep it in a convenient place so you can refer to it whenever needed. A little time spent here will pay off in years of worry-free boating.

Welcome aboard.

Safety: Drinking and Operating a Boat

Operating a boat under the influence of alcohol or drugs is one of the most dangerous and irresponsible actions a boater can take. Each year, a significant percentage of fatal boating accidents are directly linked to impaired operation - most often involving alcohol.

The safest and most responsible choice is simple: **don't drink if you're operating the boat**. If alcohol will be part of your outing, arrange for a **designated operator**. This should be someone who remains completely sober and capable of navigating safely.

Operating a boat while impaired is even riskier than driving a car. On the water, sun exposure, wind, vibration, and motion can amplify the effects of alcohol, slowing reaction time, clouding judgment, and reducing coordination.

Both state and federal laws are clear and increasingly strict. In most states, a **blood alcohol concentration (BAC) of 0.08% or higher** is considered legally intoxicated. However, even without a BAC test, an operator may be deemed unfit to operate if their behavior or appearance suggests impairment.

Never allow someone who is visibly intoxicated to take the helm. Doing so puts everyone on board, and others on the water at risk.

Boating is about enjoyment and freedom, but that freedom comes with responsibility. Always stay alert, clear-headed, and in control. It could save lives, including your own.

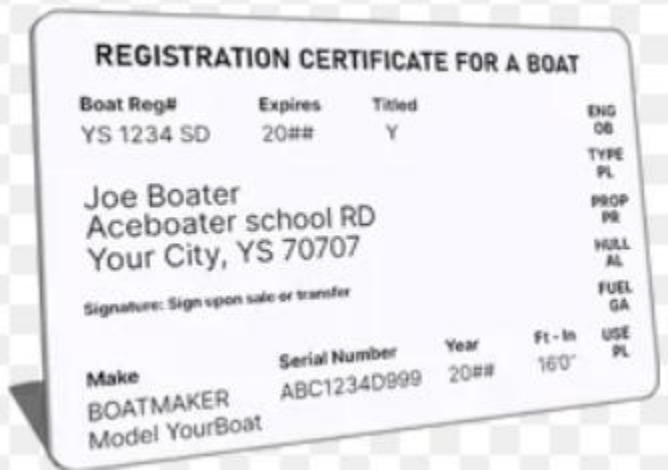
The Preliminaries

Owning a pontoon boat comes with a few important responsibilities before you ever hit the water. Proper documentation, insurance, safety preparation, and boating knowledge lay the foundation for a safe and enjoyable experience.

Registration

Federal law requires that all motorboats be registered. Any vessel not documented by the U.S. Coast Guard must display valid registration numbers, usually issued by your state's designated agency. In a few jurisdictions, the U.S. Coast Guard may handle registration directly.

Your dealer can assist you with registration or direct you to the appropriate resources. Once registered, you will receive a **certificate of registration**, which must be **carried on board** whenever the boat is in use. Display your boat's registration numbers clearly on the hull as required by law.



Insurance

As a boat owner, you are legally responsible for any injuries or property damage caused by your vessel — even if someone else is operating it at the time of an incident. For this reason, it's strongly recommended that you carry:

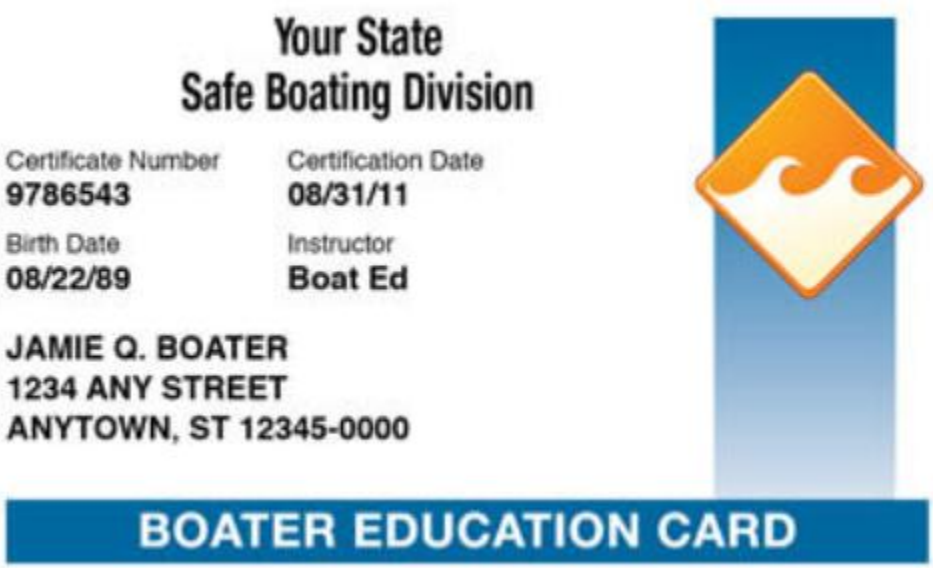
- **Liability insurance** for personal injury and property damage
- **Physical damage insurance** to protect your investment from theft, fire, collision, or other loss

Boating insurance is often customizable and can include towing, accessory coverage, and uninsured boater protection. Speak with your insurance provider to ensure you're adequately covered.

Boating Education

If you're new to boating, enrolling in a boating safety course is one of the best decisions you can make. Organizations like the **U.S. Power Squadrons**, **U.S. Coast Guard Auxiliary**, and the **American Red Cross** offer free or low-cost classes covering boat handling, safety procedures, navigation, and current boating laws.

Even experienced boaters can benefit from a refresher. Regulations evolve, and keeping your knowledge up to date will improve your confidence and safety on the water. For more information, see the resources listed at the back of this manual.



Required Equipment

Federal and state laws require all boats to carry specific safety equipment on board, depending on the boat's length, propulsion type, and intended use. U.S. Coast Guard regulations serve as a baseline, but **state, county, or municipal authorities may have additional requirements**. These requirements apply especially to boats operated on inland or non-federal waters.

Basic required equipment may include:

- U.S. Coast Guard–approved life jackets (one per person)
- Throwable flotation device (Type IV)
- Fire extinguisher(s)
- Visual distress signals
- Sound-producing devices (horn or whistle)

- Navigation lights (if boating at night or in low visibility)

Check with your local and state boating agencies for a complete list of required equipment specific to your area. Keeping your vessel compliant ensures safety and helps avoid fines or violations.

U.S. Coast Guard Requirements for Recreational Boats

For a complete and official reference, we recommend reviewing the U.S. Coast Guard's publication: **"Federal Requirements for Recreational Boats"** — available at most boating retailers or directly from the Coast Guard. Below is a summary of the key federal requirements that apply to most recreational vessels, including pontoon boats.

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1. Personal Flotation Devices (PFDs)

- All PFDs must be:
    - **U.S. Coast Guard–approved**
    - In **good condition**
    - The **correct size** for the intended user
- While not always required to be worn, the Coast Guard strongly recommends wearing PFDs whenever the boat is underway.
- **Minimum requirements:**
    - **Boats under 16 feet** (including kayaks/canoes):
      One Type I, II, III, or V PFD for each person on board.
    - **Boats 16 feet and longer**:
      One Type I, II, III, or V PFD per person, **plus** one **Type IV throwable device** that is immediately accessible.

Note: Type IV throwable devices (e.g., life rings or seat cushions) must be readily available in an emergency.

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2. Visual Distress Signals (VDS)

Applies to boats **16 feet or longer** when used on:

- **Coastal waters**
- **The Great Lakes**

- **Territorial seas**
- **Connected navigable waters**
- **Required VDS types:**
    - **Pyrotechnic signals** (must be Coast Guard–approved and unexpired):
        - Red handheld or aerial flares
        - Orange smoke signals (day use)
        - Launchers for aerial meteors or parachute flares
    - **Non-pyrotechnic options:**
        - Orange distress flag (day use)
        - Electric distress light (night use)

All VDS must be in working condition, readily accessible, and within their service life.

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3. Fire Extinguishers

Required **if your boat has any of the following:**

- Inboard engine
- Closed compartments for portable fuel tanks
- Double bottoms not sealed to the hull
- Closed living spaces or storage areas
- Permanently installed fuel tanks

Types & Requirements:

- **B-1** and **B-II** rated extinguishers (for flammable liquid fires)
    - B-1 examples: 4 lbs CO_2, 2 lbs dry chemical
    - B-II examples: 15 lbs CO_2, 10 lbs dry chemical

Minimum quantities:

- **Boats under 26 ft**: 1 B-1 extinguisher
- **26–40 ft**: 2 B-1s or 1 B-II
- **40–65 ft**: 3 B-1s or 1 B-II and 1 B-1

Extinguishers must be fully charged, accessible, and mounted properly.

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4. Sound Signaling Devices

While **not mandatory** for boats under **12 meters (39.4 feet)** to carry a horn or bell, **sound signals are required** during certain maneuvers:

- When **meeting, crossing, or overtaking** other vessels
- During periods of **reduced visibility** (e.g., fog)

Boats 12 meters or more must carry:

- A **whistle or horn**
- A **bell** (for signaling in fog or emergencies)

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5. Navigation Lights

Navigation lights must be displayed:

- **Between sunset and sunrise**
- During **limited visibility** (fog, rain, haze, etc.)

These lights help communicate your vessel's position, direction, and status to others on the water.

Ensure all navigation lights are functional, correctly installed, and turned on when required.

Additional Safety Information

Emergency Stop Switch (Kill Switch)

If your boat is equipped with a **lanyard-activated emergency stop switch**, also known as a **kill switch**, it's strongly recommended that you use it whenever the engine is running. In the event the operator is thrown overboard or loses control, the lanyard will disengage the engine and prevent the boat from becoming a runaway hazard.

Tip: Make sure the lanyard is long enough to allow normal movement without accidental activation, especially when docking or operating in rough water, high wind, or strong currents.

Recommended Equipment

While federal and state law require only the minimum safety gear, adding extra items can significantly improve your preparedness and safety on the water.

Float Plan

Before heading out, inform a trusted person ashore of your travel plans. This includes:

- Your destination
- Estimated time of return
- Description of your boat
- Names of people on board

If you change your plans mid-trip, let your contact know. And always notify them when you return to avoid unnecessary search and rescue alerts.

Recommended Gear & Spare Parts

Organize your gear by category to make sure you're equipped for everyday cruising and unexpected emergencies.

Basic Gear

Item	**Purpose**
Anchor and anchor line	Holding position in emergencies
Tow line	Assisting or being assisted
2 fenders	Protecting your boat at docks
2 mooring lines	Secure docking
First aid kit	Medical emergencies
Flashlight/searchlight	Low light visibility
Oar or paddle	Manual propulsion
Compass	Navigation backup
Signal flares	Emergency signaling

Item	Purpose
Boathook	Docking and retrieving items
Sunblock	Protection from sun exposure
Sea anchor	Stabilization in open water
	

Tools

Tool	Use
Spark plug wrench	Engine maintenance
Screwdrivers	General adjustments/repairs
Pliers	Versatile repairs
Adjustable wrench	Hardware tightening
Hammer	Emergency fixes
Electrician's tape	Temporary electrical fixes

Tool	Use
Jackknife	General utility

Extended Cruising

Item	Use
Charts of the area	Safe navigation
Parallel rulers	Plotting courses
Dividers	Measuring distances
Rainwear	Weather protection
Flashlight batteries	Replacing spent batteries

Spare Parts

Part	Purpose
Spare bulbs	Navigation light replacement
Fuses	Electrical backup
Extra drain plug	Bilge management
Spare battery	Electrical redundancy
Shear pin (if applicable)	Propeller shaft protection
Spare propeller	In case of damage
Propeller nut and washer	Propeller installation
Lubricating oil	Engine maintenance
Extra spark plugs	Engine performance

Trailering & Transportation

For many boaters, the journey starts **before** reaching the water. A properly selected and well-maintained **trailer** is essential for safe, smooth transportation of your pontoon boat.

Matching the Right Trailer

Selecting the right trailer isn't just a matter of convenience, it's a critical safety consideration. Your trailer must be appropriately rated for your boat's **weight, length, and hull design**.

- **Under-capacity trailers** can be unstable on the road and may suffer from premature tire wear, brake failure, or structural strain.
- **Over-capacity trailers**, particularly those sprung for heavier loads, may transfer excessive stress to lighter boats - especially **aluminum hulls** - potentially causing structural damage over time.

Tip: Always account for the **total weight**, including fuel, gear, batteries, and any additional equipment when assessing trailer capacity.

Routine Trailer Safety Checks

Before each trip, make it a habit to inspect the following:

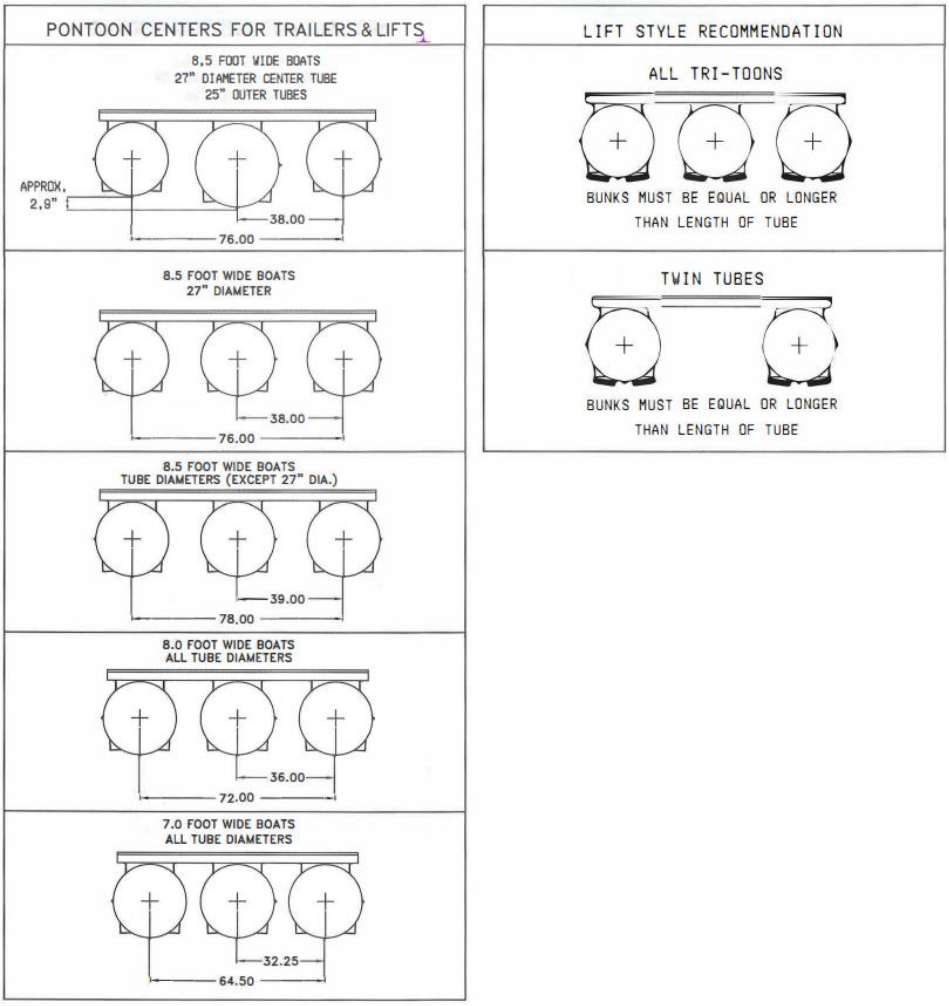
- **Tires**: Check for proper inflation, tread wear, and cracks
- **Lights**: Confirm brake lights, tail lights, and turn signals are working
- **Brakes** (if equipped): Inspect for proper function and wear
- **Winch and strap**: Ensure the winch handle turns smoothly and the strap is secure
- **Tie-downs**: Use strong transom and bow tie-downs to secure the boat
- **Hitch connection**: Verify coupler fit, lock pin, and safety chains are properly connected
- **Wheel bearings**: Grease bearings regularly to avoid overheating and failure

Towing Best Practices

- **Distribute weight evenly** on the trailer
- **Avoid sudden stops or sharp turns** when towing
- **Drive at moderate speeds**, especially in wet or windy conditions
- **Use trailer-rated tires**, not regular automobile tires
- **Carry a spare tire**, jack, and necessary tools for roadside repair

Note: Always consult your vehicle's towing capacity and confirm it is rated to handle your boat and trailer combined weight.

Center points for trailer and lift construction



Secure All Items Before Transport

Before hitting the road, ensure that **everything inside and on your boat is secured**:

- Remove or tie down tables, loose cushions, seat backs, sundeck lids, and tops.
- Use ropes (or straps) and **pad areas where tie-downs contact upholstery or rails** to prevent wear and damage.

- Close and latch all hatches, portlights, and storage compartments.

Important:
Do not tow your boat with mooring or seat covers in place. These covers are not designed for highway speeds and will likely tear or become detached, potentially damaging your boat and other vehicles on the road.

Bimini Tops & Travel Position

If your pontoon is equipped with **travel transport brackets** for the bimini top:

- Fold the top down into the **designated travel position** or **completely lower it**.
- **Secure the top firmly to the wall rails** with straps or rope.
- Ensure all loose canvas (side curtains, aft curtains, etc.) is removed or tied down tightly before transport.

Trailer Load Capacity (GVWR)

Check the **manufacturer's certification label** (typically located on the left forward side of the trailer frame) for:

- **Gross Vehicle Weight Rating (GVWR)** – The **combined** weight of the trailer and its maximum load.
- Ensure your **total load** (including the boat, engine, fuel, and gear) **does not exceed** this rating.

Tongue Weight & Balance

Proper tongue weight ensures stable and safe towing:

- Tongue weight should be **5% to 10%** of the combined boat and trailer weight.
- Too little weight can cause trailer sway. Too much can impair steering.

Most of the boat's weight is in the stern (transom), so the trailer's rear supports must align directly under the transom to prevent hull deformation and poor performance.

⚠ CAUTION

Improper trailer setup can cause hull damage, and, in some cases, could void your boat warranty.

Support and Roller Setup

A poorly set-up trailer can damage your hull — and **may void your warranty**. Follow these guidelines:

- **Aluminum hulls** should sit on **long, straight bunks** or a series of closely spaced **rollers** to distribute weight evenly across cross ribs.
- Avoid single rollers between ribs. Uneven roller height can cause hull warping or a permanent "hook" in the bottom.
- **Side supports** should:
    - Run **parallel to the keel**
    - Support the **aft third of the hull**
    - Extend **slightly past the transom**

⚠ CAUTION

Make sure that the boat is securely fastened to prevent movement between boat and trailer. Do not overload your trailer by putting camping gear or other heavy equipment in the boat.

Road Safety Tips

- **Drive cautiously:** Avoid cutting corners or taking turns too tightly.
- **Reduce speed at railroad crossings, bumps, or steep driveways.**
- **Use the U-bolt** to safely winch the boat onto the trailer.
- **Double-check all connections**: hitch lock pin, safety chains, lights, and brake functionality.

Securing Your Boat with Tie-Downs

Properly securing your boat to the trailer is critical. Securement is not just for preventing damage, but for your safety and the safety of others on the road. Without reliable tie-downs, your boat can shift, bounce, or even fall off during transport. Relying solely on hull supports or the winch line is **not enough**.

Key Tie-Down Areas

Regardless of your trailer's make or model, focus on these **two essential areas** when securing your boat:

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1. Bow Tie-Downs

- Your trailer's **winch stand** typically includes a **bow stop** designed to hold the front of the boat in place.
- The **winch line** should pull the boat forward **snugly against the bow stop**, preventing backward movement.
- In addition to the winch, install a **separate bow tie-down strap** that secures the **front of the boat down to the trailer**. This provides added protection in case the winch fails or during sudden stops.
- Make sure straps or lines **do not pass over sharp edges** that could cause chafing or wear.

Tip: Bow tie-downs should not be loose or flexible. They must prevent both **upward bounce** and **rearward slide**.

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2. Rear (Transom) Tie-Downs

- The boat's **transom must rest securely** on the trailer's rear hull supports.
- Use **dedicated transom tie-downs** to hold the rear of the boat firmly in place. These should prevent any movement while towing.
- Periodically check the straps to ensure:
    - They are **tight and properly tensioned**
    - Locking mechanisms are **secure**
    - There is **no slack or shifting** in the boat during transit

Test by **rocking the boat gently** on the trailer — it should feel solid and immovable. If it shifts or bounces, recheck tie-down positioning and tension.

- The **strength of your rear tie-downs** should be **equal to or greater than the empty weight of the trailer**.

Additional Trailering Tips

- **Never transport heavy gear** (like camping equipment or coolers) inside the boat during towing. This can unbalance the trailer and increase wear on components.
- Regularly inspect tie-downs for:
    - Frayed straps
    - Rusted hooks or buckles
    - Signs of strain or loosening after long trips

Legal Requirements & Trailer Compliance

State laws may vary regarding:

- Brakes
- Trailer lighting
- Safety chains
- Registration and license plates

Make sure your trailer is fully compliant with the laws in your state.
Your trailer dealer can typically guide you through the applicable requirements. If in doubt, contact your local Department of Motor Vehicles (DMV) or highway patrol.

☑ Trailering Checklist

Before towing your boat, take a few minutes to ensure your trailer and load are safe and road-ready. Use the checklist below to minimize risks and protect your equipment.

🔧 Hitch & Coupling

- Coupler, hitch, and hitch ball are the **same size** and properly matched
- **Safety chains** are securely crossed and attached to the tow vehicle
- All **fasteners and hardware** are tight and in good condition

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🚤 Boat & Tie-Downs

- Boat is securely tied to trailer at the **bow and stern**

- **Winch line is tight**, but not used as a tie-down
- All **loose items** inside the boat are secured or stowed
- **Mooring cover is removed** before transport
- If extra gear is being carried in the boat, it is properly **secured**

🔩 **Wheels, Tires & Bearings**

- **Wheel lug nuts** are tight to spec
- **Wheel bearings** are greased, adjusted, and in good condition
- **Tires are properly inflated** and show no signs of wear or cracking
- Load is within the trailer's **maximum rated capacity (GVWR)**

💡 **Trailer Systems**

- All **lights** (brake, turn, and running) are working
- **Trailer brakes** are functioning and adjusted correctly
- **License plate** is attached and visible

⚙️ **Outboard Engine (If Equipped)**

- Engine is **securely fastened** to prevent tilt or turn from road shock
- **Do not rely** on the boat's steering system for engine restraint
- Lower unit is **tilted up** for road clearance if needed
- A **motor support bracket** is used to reduce strain on the transom

📏 Tahoe Pontoon Lift Recommendations

Proper lifting practices are essential to protect your Tahoe pontoon during storage, maintenance, or transport. Using the wrong lift configuration or poor contact points can cause permanent hull damage, void your warranty, and impair boat performance. The following guidelines help ensure your lift setup is safe, effective, and compliant with Tahoe standards.

⚖️ Key Principles

1. Distribute Weight Evenly

- Your boat's hull is designed for weight to be supported across multiple cross ribs — not in isolated areas.
- Lifts **must support the hull evenly** to prevent deformation, sagging, or "hooking."

✅ Recommended Lift Setup

🔩 Bunk Placement

- Use **full-length, straight bunks** that run **longitudinally** along the hull.
- Bunks should be:
  - Wide enough to **distribute weight across multiple crossmembers**
  - Covered with carpet or non-marring materials
  - Adjusted to make **full contact with the hull**, especially under the pontoons

🎯 Transom Alignment

- Ensure **rear bunks or lift supports are directly under the transom**.
- This is critical, as most of the boat's weight is in the stern (due to the engine and fuel tank).
- Unsupported transoms may lead to permanent hull distortion.

🚫 What to Avoid

- **Do not use single point or narrow lifts** (e.g., center-point lifts) on aluminum hulls — they risk warping or crushing the pontoon tubes.
- **Avoid any lift system** that uses:
  - Single rollers under crossmembers
  - Spaced or floating roller setups
  - V-block or cradle-style lifts not designed for pontoons

❗ Tip: Uneven or misaligned support points can cause permanent creasing or structural damage. This is not covered under warranty.

📏 Lift Compatibility Checklist

Before installing or selecting a lift:

Checkpoint	Recommendation
Bunk orientation	Parallel to keel and equal to or longer than the tube

Checkpoint	Recommendation
Rear support	Aligned directly beneath the transom
Side guides (if used)	Must not press on exterior fencing or railing
Material contact	Padded or carpeted bunks to prevent metal-on-metal abrasion
Hull spacing	Match pontoon tube spacing exactly — no inward/outward push
Load balance	Boat sits level on lift, fore-aft and side-to-side

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💡 Pro Tips for Lift Use

- **Inspect your lift annually** for alignment, pad condition, and structural integrity.
- When storing long-term:
  - Remove excess weight from the boat (coolers, gear, batteries)
  - Cover the boat properly, but avoid using travel covers while lifted
- During storm season, **verify lift cable integrity and weight limits**

📦 Triple Tube & Saltwater Considerations

⚙️ Triple-Tube Boats

- Use lifts with three support arms or custom center bunks for the center tube.
- Avoid unsupported middle tubes — they can bow under weight.

🌊 Saltwater Use

- Rinse lift pads and hull contact areas after each use.
- Watch for corrosion on lift hardware and clean regularly.

🛟 Seasonal & Long-Term Storage Tips

- Remove loose gear, coolers, and batteries during extended storage.
- Avoid using mooring or seat covers during lifting.
- Inspect lift hardware annually (pulleys, pads, cables).
- Use weather-rated covers designed for storage (not transport).

📏 For recommended center points please see the trailer and lift diagram in the ***TRAILERING AND TRANSPORTATION*** section

Launching Your Boat

Every trailer boater eventually develops a routine that works best for them, but when you're starting out, following a proven process can make your first launches smooth and stress-free. Use the steps below as a guide until you find your rhythm.

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1. Assess the Ramp

Before positioning your vehicle:

- Inspect the **ramp surface** for firmness, slope, and traction.
- Ensure the ramp is **wide and deep enough** for your trailer and boat.
- Be cautious of **slippery ramps** (especially concrete ones when wet).
- Use **wheel chocks** on steep or slick surfaces to prevent rollback.

Tip: Always walk the ramp first if you're unfamiliar with the location — especially if it's an unimproved or gravel ramp.

Safety Tip: Always ensure the **drain plug is installed and secure** before launching to prevent flooding.

---

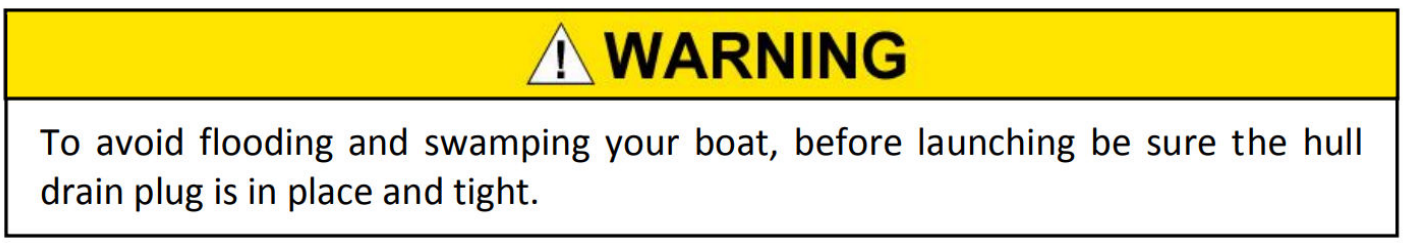
2. Position Your Trailer

- Back your trailer toward the ramp **slowly and straight**.
- Have a spotter guide you from the side of the ramp if available.
- A useful steering technique: hold the steering wheel at **6 o'clock** with one hand.
    - Move your hand right to turn the trailer right, left to go left.
- Stop when the rear of the trailer is a few feet from the water's edge.
- Shift the tow vehicle into **Park**, set the **parking brake**, and place **wheel chocks** under the front tires.

---

3. Prepare for Launch

- **Attach a bow line** to your boat so you maintain control during launch.
- **Remove all tie-down straps**, except the winch line.
- **Tilt up the outboard or stern drive** lower unit to avoid damage.
- If your trailer has a **tilt-bed mechanism**, unlock it now.



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4. Launching the Boat

- Remove the wheel chocks and **release the parking brake**.
- Slowly back the trailer into the water, stopping when the boat just begins to float.
    - Avoid submerging the trailer wheels if possible to prevent bearing wear.
- Set the parking brake again, shift into Park, and replace the wheel chocks.
- **Unlock the winch** and gently **push the boat off** the trailer while holding the bow line securely.

Safety Note: Ensure someone has a firm grip on the bow line before the boat enters the water.

---

5. Final Steps at the Ramp

- Detach the winch hook from the bow eye, **retract the winch line**, and lock it in place.
- **Walk the boat** away from the ramp using the bow line to clear space for others.
- Return to your tow vehicle, **remove wheel chocks**, and park the vehicle and trailer in the designated area.

⚠ WARNING

To avoid injury if the winch line or hook gives way, stand to one side when winching the boat onto your trailer.

Loading the Boat

To retrieve and load your boat back onto the trailer, simply **reverse the above steps**.

Before loading:
Inspect the trailer bunks or rollers. **Remove any sand or debris** to prevent abrasion to the boat hull during transport.

Loading & Capacities

Proper loading, weight distribution, and safe boarding are essential to safe, efficient boating. Overloading or improper weight placement can compromise performance, safety, and even void your boat's warranty.

⚖️ Capacity Ratings & Legal Limits

All recreational boats under 20 feet built after 1972 are required to display a **Capacity Plate** near the helm. This plate specifies:

- **Maximum number of passengers**
- **Maximum allowable weight** (passengers + gear)
- **Maximum horsepower** (for outboard models)

Do not exceed any of these ratings. Overloading can cause the boat to become unstable, sluggish, or prone to swamping — especially in rough water or adverse conditions.

- If your boat has **fewer usable seats** than the plate's rating, **reduce the passenger count accordingly.**
- Remember: Overloading is illegal in most states and may void your **warranty** or result in **fines**.

⚠️ Powering & Overpowering

Never equip your boat with an engine that exceeds the **recommended horsepower** on the capacity plate.

- Overpowering can make the vessel unstable, particularly during turns or at high speeds.
- It may increase the risk of **capsizing** or **loss of control**.

🧍 Boarding Procedures

- **Never jump into the boat from the dock.**
- **Do not carry gear** while boarding, leave items on the dock and board with free hands, load gear **after boarding** to avoid unbalancing the boat or risking injury.
- Always **step near the centerline** of the boat to maintain stability.

🧳 Stowage & Gear Management

Good stowage keeps passengers safe and gear protected. Use common sense and keep frequently needed items accessible.

Essentials to keep ready:

- Fire extinguisher (mounted and within reach)
- Throwable flotation device (e.g., seat cushion or ring buoy)
- First aid kit
- Visual distress signals
- Anchor and line

Items to stow securely:

- Tackle boxes, watersports gear, diving equipment
- Perishable food, electronics, matches — store in **dry bags or waterproof containers**
- Loose items, keep clear of walkways to avoid tripping or injury

---

👥 Passenger Safety Instructions

As the operator, **you are legally responsible** for the safety and behavior of your passengers.

1. Life Jackets (PFDs)

- A **Coast Guard–approved PFD** must be on board for **each person**.
- Instruct passengers on **how to wear them properly**.
- Strongly recommended: Everyone wears a PFD at all times.
- **Required**: Small children and non-swimmers must wear PFDs **while underway**.

2. Proper Seating

- Passengers must remain **seated in designated seats** before and during operation.
- **Prohibited seating while underway**:
    - Seat backs
    - Gunwales
    - Bow or transom edges
    - Elevated fishing seats (except at idle speed)

- Proper seating ensures **weight is balanced** across the boat and helps prevent capsizing or loss of control.

3. Unobstructed Visibility

- The operator is responsible for **maintaining a clear view** ahead and around the boat.
- Do not allow passengers, cargo, or elevated seats to **block forward visibility**, especially at planing speeds.

4. Designated Backup Operator

- At least one passenger should be familiar with **basic operation** of the boat.
- In case the operator becomes incapacitated, this person should know how to:
    - Steer and control the throttle
    - Use the radio or mobile phone
    - Safely return to shore or signal for help

Before Starting the Engine

Before turning the key, take a moment to go through this pre-start checklist. These steps help ensure safe operation, reduce wear on your equipment, and minimize the risk of mechanical failure or fire.

✅ **Pre-Start Checklist**

1. **Review the General Pre-Launch Checklist**
    - Refer to the full checklist on **Page 1** to confirm that your boat and trailer systems are ready for operation.
2. **Inspect the Engine Compartment**
    - Check for **water or fuel leaks**
    - Confirm all **hose connections are secure**
    - Verify **engine oil** or **crankcase oil** level is within the recommended range (if applicable)
3. **Ventilate with the Bilge Blower** *(for inboard/outboard engines)*
    - Operate the **bilge blower for at least 4 minutes** before starting the engine
    - This helps expel **gasoline vapors** that may have built up in the engine compartment
    - **Best practice:** Leave the blower **on while the engine is running**
4. **Run the Bilge Pump** *(if equipped)*

- Turn on the **bilge pump** to remove any standing water
- Let it run until **all water flow stops** through the discharge outlet

5. **Lower the Outdrive or Outboard Motor**
    - Bring the motor or outdrive into the **down (operating) position**
    - **Never run the engine** with the motor tilted up, it may cause **mechanical damage**
6. **Check Gearshift Position**
    - Ensure the **throttle and gearshift are in neutral**
    - The engine will not start, and should not start, if in gear

Operation: Getting Under Way

Getting your pontoon boat underway safely and efficiently starts with good preparation and careful control. The following steps will help you launch smoothly, maintain stability, and operate your vessel responsibly.

✅ **Starting and Departing**

1. **Start the Engine**
    - Follow the engine manufacturer's recommended startup procedure.
2. **Warm Up and Monitor Gauges**
    - Let the engine **idle for a few minutes** to reach proper operating temperature.
    - **Check all gauges**: oil pressure, temperature, voltage, and fuel.
3. **Release Mooring Lines and Depart Slowly**
    - Push off gently from the dock before shifting into gear.
    - **Use low speed and caution** to prevent accidental contact with docks, pilings, or other boats.
4. **Stow Lines and Fenders**
    - Once clear of the dock, **store mooring lines and fenders** properly to avoid tripping or obstruction.

⚖️ **Weight Distribution & Trim**

5. **Balance the Load**

- Distribute weight **evenly throughout the boat**.
- Too much forward weight can affect **handling, stability**, and **freeboard**.
- Reassess balance whenever passengers or gear shift locations.

6. **Adjust Motor Trim for Performance**
   - The **trim angle** of your motor (outboard or outdrive) affects speed, efficiency, and ride quality.
   - Adjust the angle based on boat load and speed:
     - **Trimmed in "down"** (lower unit closer to transom): Helps bow stay down, ideal for rough water or heavy loads.
     - **Trimmed out "up"** (lower unit angled away): Lifts the bow, useful at higher speeds for planing and efficiency.
   - The ideal trim is achieved when the **nose cone just rises** and **cuts cleanly through the water** at full throttle.

🌊 Operating Considerations

7. **Meeting Another Boat Head-On**
   - **Keep right** - the same as with vehicles on a road.
8. **Crossing Waves or Wakes**
   - For waves or wakes **over 2 feet**, slow down and approach at a **45° angle**.
   - Avoid hitting waves head-on at speed, which may cause **deck flooding or wall damage**.

⚠️ **See safety warning on page 24 regarding high waves and pontoon wall integrity.**

⚓ Docking Safely

9. **Understand Pontoon Handling**
   - Pontoon boats have **more momentum** than conventional V-hull boats and will **coast farther** after the throttle is reduced.
   - Begin slowing **well before** reaching the dock or mooring point.
10. **Use Mooring Eyes**
    - Once docked, tie down the boat using the **mooring eyes located at the bow and stern** of each pontoon.

- Secure the lines tightly and consider fender placement to protect the sides of the boat from contact damage.

Suggestions for Your Safety

Your safety (and the safety of your passengers) depends on responsible operation and clear adherence to safety guidelines. The following precautions are essential when your boat is in motion or occupied:

🚧 **Passenger Positioning While Underway**

- **All passengers must remain within the enclosed area of the deck** while the boat is moving.
- Ensure **all gates are fully closed and latched** before operating the boat.
- **Do not allow passengers** to ride or sit on the **forward open deck**, **bow seats**, or **aft sundeck** while the boat is underway.
  - These areas are designed for use **only when the boat is stopped, anchored, or docked** - such as during swimming, fishing, or relaxing.
- Sitting or standing in open or elevated areas while cruising is extremely dangerous and should be strictly prohibited.

🎣 **Special Note for Fishing Models**

- **Bow fishing chairs and low railings** do **not provide sufficient protection** while the boat is moving.
- All passengers should remain **seated within the main area of the boat**, surrounded by **high railings** during travel.
- **Do not occupy fishing seats** while the boat is in motion.
- Following these instructions helps maintain **proper weight distribution** and minimizes the risk of **injury or falling overboard**.

⚠️ **Ignoring this warning may result in serious personal injury.**

🔁 **Important Safety Note for Rear Entry Models**

- **Never use the rear entry gate or swim ladder while the engine is running.**
- Always **turn off the engine** before:

    - Allowing anyone to **swim near the boat**
    - **Entering or exiting** the rear gate
    - Using the **swim ladder**
- **Do not step on the motor pod** under any circumstance.
- Never allow passengers to **stand on the rear platform outside the gate** when the engine is running or the boat is in motion.

⚠️ **Failure to follow these warnings can result in severe injury or death.**

Fueling Safety Procedures

Fueling your boat safely requires full attention and strict adherence to best practices. Fuel vapors are highly flammable, and even small mistakes can lead to serious accidents. Use the following guidelines every time you refuel.

⛽ **Before Fueling**

- **No smoking or open flames** nearby
- **Turn off all electrical systems**, engines, motors, fans, stoves, and lights
- **Secure the vessel**:
    - Close all **doors, hatches, windows, and compartments**
    - Ensure all **passengers disembark**
- **Avoid nighttime fueling** unless the area is well-lit and secure

---

🔄 **During Fueling**

- Keep the **fuel nozzle or spout in direct contact** with the fuel tank opening to prevent static discharge
- **Start fueling slowly** to allow air to vent from the tank and reduce splash risk
- After a few moments, increase the fueling rate cautiously
- **Do not fill the tank completely**, always leave room for fuel expansion
- **For portable tanks**:
    - Remove from the boat and fill on the dock
    - Wipe down any fuel spills before returning the tank onboard

- Keep the vent **closed** until the fuel line is connected
- **Mix fuel and oil** only as per engine manufacturer's instructions

⚠️ **Important**: Fuel vapors are heavier than air and will collect in the lowest parts of the boat. **Ventilation is critical.**

✅ **After Fueling**

- Close the fuel fill cap tightly
- Wipe up any spilled fuel from the deck, nozzle, or tank
- **Open all compartments**, hatches, doors, and ports to ventilate the boat
- Operate the **bilge blower for at least 4 minutes (if available)**
- Use your nose — **if you smell fuel**, do not start the engine

Continue running the blower and investigating the odor.
Check: fuel fill, hoses, bilge, engine compartment for leaks or fuel pooling

- Only start the engine when **no fuel odor** is present
- **Before using any galley appliances or open flames**, do a final fume check

---

📏 **Fuel Planning for Extended Trips**

- Know your **fuel tank capacity** and **cruising range**
- On long voyages, check local marinas or suppliers for **fuel availability**
- Carry additional fuel only in **approved marine containers**, securely stowed

⚠ WARNING

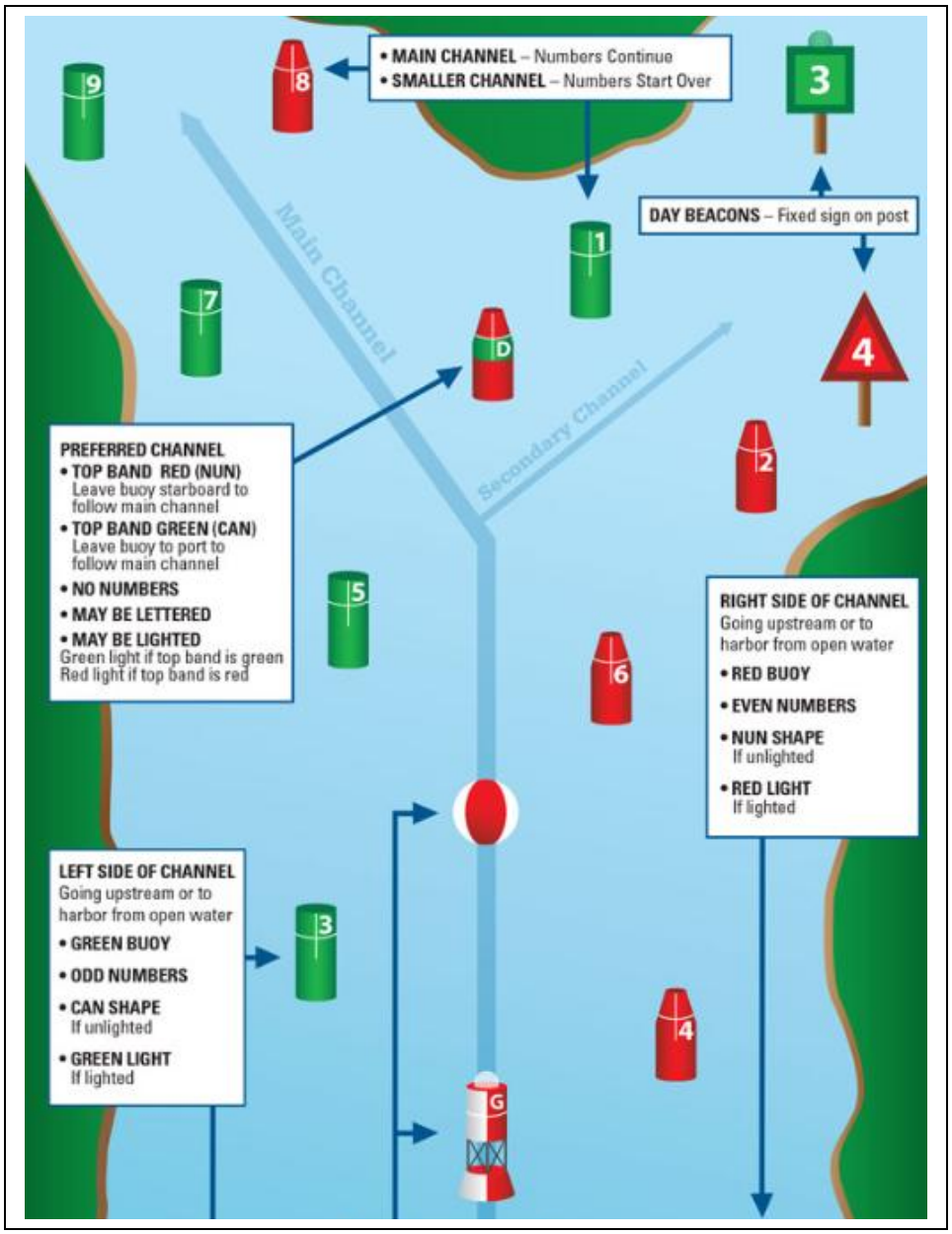
Leaking fuel is a fire and explosion hazard. Inspect system regularly. Examine fuel system for leaks or corrosion at least annually.

Rules of the Road

The **nautical Rules of the Road** are essential for avoiding collisions and maintaining order on the water. These rules determine which vessel has the **right-of-way** in various situations and how to respond when meeting or passing other boats.

⚖️ Right-of-Way Basics

1. **Sailboats vs. Powerboats**
    - **Sailboats under sail alone** have the right-of-way over powerboats in most situations.
    - Powerboats must avoid creating **wakes** that could disrupt sailboats or smaller vessels.
2. **Narrow Channels**
    - **Large vessels restricted to a channel** always have the right-of-way.



    - Powerboats under 65 feet **must not hinder** commercial or deep-draft vessels.
3. **Overtaking**
    - The **vessel being overtaken** has the right-of-way.
    - The **passing boat** must maneuver safely and remain clear.
4. **Head-On Situations**
    - Each boat should **alter course to starboard** (right) and pass port-to-port (left side to left side).
5. **Crossing Paths**
    - The boat on the **right (starboard side)** has the right-of-way.

- The give-way vessel should **slow down** or **change course to pass behind**.

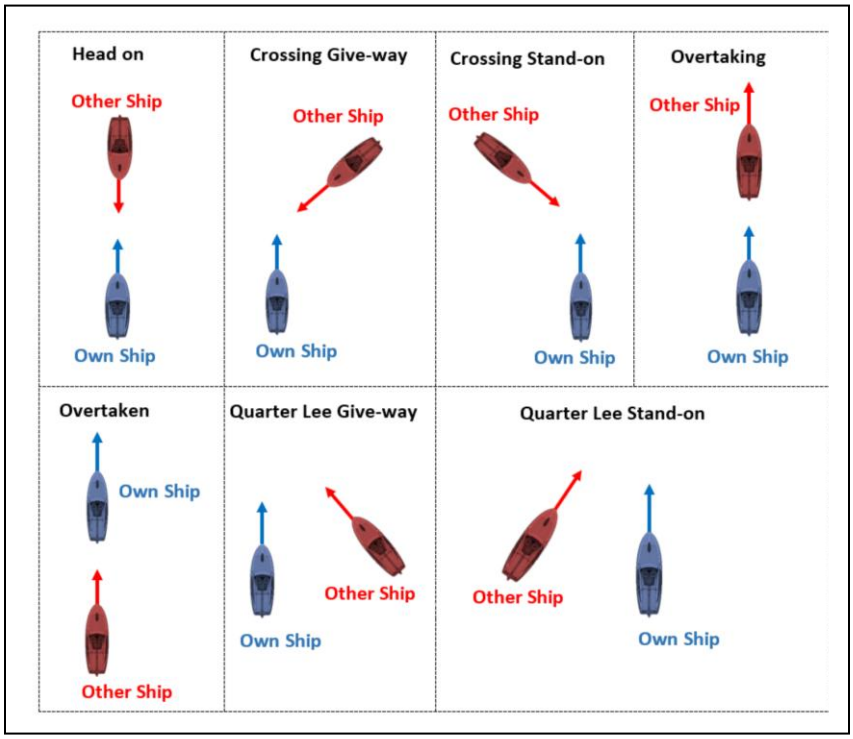
⚠️ **Always operate defensively**. Even if you have the right-of-way, be prepared to yield to avoid an accident.

📢 Whistle Signals

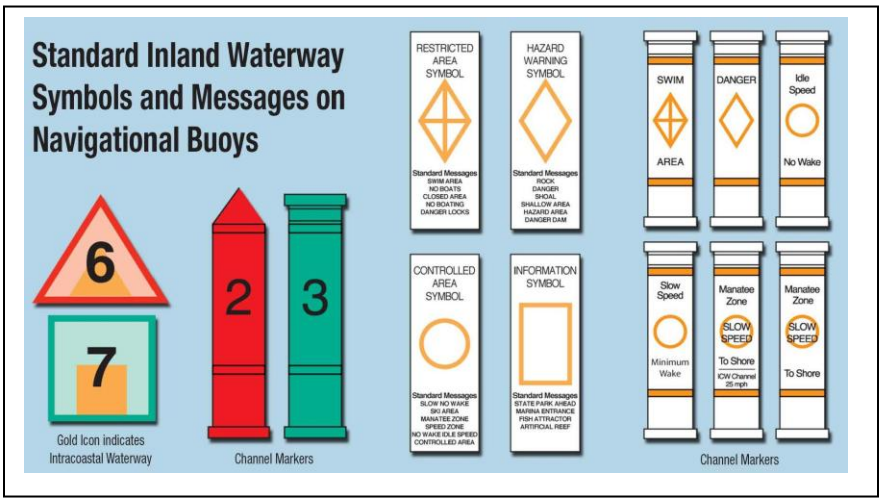
Sound signals are used to communicate intent and prevent collisions:

- **1 short blast** – "I am altering my course to starboard."
- **2 short blasts** – "I am altering my course to port."
- **3 short blasts** – "I am operating in reverse."
- **5 short blasts** – Danger or uncertainty signal (used when intentions are unclear or unsafe)

Use sound signals when meeting, overtaking, or crossing in close quarters — especially in narrow channels or restricted visibility.



🚩 Navigation Aids (Buoys and Markers)

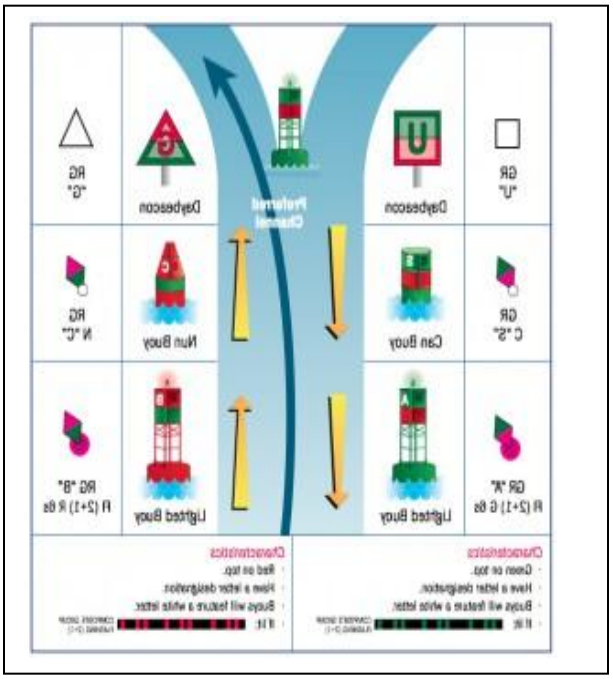


Navigation aids mark **channels, hazards, and navigational rules**. Learn to recognize and respond appropriately:

- **Red buoys ("Nun")** – Keep to your **starboard (right)** when returning from open water ("Red Right Returning").
- **Green buoys ("Can")** – Keep to your **port (left)** when returning.

- **Red and green** – Indicate **channel junctions**; pass on the preferred side (check the top color).
- **Regulatory markers** – Indicate speed zones, no-wake areas, swim zones, or hazards (usually white with orange markings).

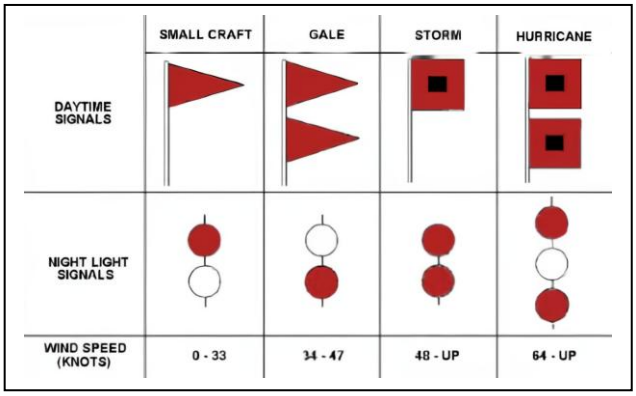
For complete and up-to-date information, consult the **U.S. Coast Guard Aids to Navigation System** guide or call the Boating Safety Hotline at **800-368-5647**.



🌦️ Weather Awareness

Bad weather can turn a day on the water into a dangerous situation. Always:

- **Check local forecasts** before departure
- **Monitor NOAA Weather Radio** at **162 MHz (VHF FM)** during your outing
- Carry a **portable weather radio or marine VHF radio** onboard



Storm signal flags, once common at marinas and Coast Guard stations, are being phased out. If still used locally, they indicate **hazardous wind or wave conditions** — always heed them.

Best advice in questionable weather:
Stay home. Don't take risks.

Operating in Adverse Conditions

Weather, visibility, water depth, and time of day all impact the safety of your operation. The following guidance will help you handle a range of challenging conditions responsibly.

🌩️ In a Storm

If you're caught in a storm, follow these precautions:

1. **Everyone on board must wear a U.S. Coast Guard–approved PFD.**
2. **Secure all loose gear** to prevent injuries or shifting weight.
3. **Reduce speed** to maintain control and reduce the risk of taking on water.
4. **Seat passengers strategically** to maintain balance and stability. Keep weight low and centered, especially in smaller boats.
5. **Seek safe harbor** as soon as possible. If running into waves, approach **at a 45° angle** and proceed slowly to reduce water coming over the bow.
   If waves are from astern, adjust throttle carefully to avoid overtaking the wave ahead or being swamped from behind.
6. **If you lose power**, tilt the outboard or stern drive up to reduce drag. Deploy a **sea anchor** (commercial or improvised, such as a bucket or cooler) from the **bow** to keep the boat headed into waves.
7. **Avoid operating during electrical storms.** Lightning presents extreme danger to open-water craft.

🌫️ In Fog, Mist, Snow, or Heavy Rain

Operating in reduced visibility can be dangerous — especially without electronic navigation tools:

- **Avoid boating in fog** unless absolutely necessary.
- If underway in fog, **sound one prolonged blast every minute** using your horn or whistle.
- Keep **all crew alert as lookouts** and reduce your speed.
- Use a **compass and chart** if GPS or radar are unavailable.
- **Listen for other vessels** and navigation aids emitting fog signals.

❄️ In Cold Weather

Cold conditions increase risk. Take these steps to protect your crew and equipment:

- **Wear multiple thin layers** instead of bulky clothes. Include a **vest-style PFD** for warmth and flotation.
- **Avoid unnecessary exposure** — wind and spray can lead to **frostbite or hypothermia**.
- Do not operate in cold weather unless your boat is equipped with a **cabin, canvas enclosure, or other shelter**.
- Freezing spray can damage equipment, causing **frozen control cables or wipers**.

> **⚠ WARNING**
>
> Falls overboard are doubly dangerous in cold water. PFD's should be worn at all times, and anyone who falls overboard should be retrieved as fast as possible to prevent hypothermia.

💧 In Shallow Water

Boating in shallow or unfamiliar water requires special caution:

- Hazards include **sandbars, stump fields, and submerged debris**.
- Strike any object at speed, and you risk **serious hull, propeller, or steering system damage.** As well you risk potential personal injury.
- Outboards may kick up on impact, potentially causing **engine overspeed** if the ignition is not immediately shut off.
- Even without impact, **weeds, sand, or debris** can clog engine cooling intakes.
- Always consult **charts or local advice** before navigating unfamiliar waters.
- Go slow and use a **lookout at the bow** when operating in shoals.

🌙 At Night

Night boating presents visibility and navigation challenges — proceed with care:

1. **Ensure navigation lights are functioning.** These signal your presence and direction to other vessels.
    - If you see another boat's **red bow light**, yield.
    - If you see **green only**, you may proceed - but still use caution.
2. **Avoid glare.** Onshore lights can obscure markers and other vessels. Protect your night vision.
3. **Do not operate at high speed.** Reduced visibility increases the danger and consequences of collisions.
4. **Use an extra lookout.** Assign a crew member to watch for boats, floating debris, or unlit obstacles.
5. **Protect your night vision.** Avoid looking directly at bright lights, both ashore and onboard.

WATERSPORTS SAFETY

Pontoon boats are excellent platforms for tow sports like **water skiing** and **tubing**. However, these activities come with serious responsibilities. The boat operator is fully responsible for the **safety and conduct** of anyone being towed, just as they are for passengers on board.

🚤 Water Skiing & Tubing Guidelines

- Before towing, always assess the **skier or tuber's experience level**.
- Avoid maneuvers that may increase the risk of falls or injury.
- Skier/tuber needs to be attached by a single line to the eye of the ski tow bar. The line should be centered behind ski tow bar at start of the pull. This equipment is not designed to be pulled from port and starboard sides at the same time.
- Instruct skiers/tubers to avoid **dangerous stunts** or erratic movements.
- All skiers and tubers must wear a **brightly colored ski vest or U.S. Coast Guard–approved PFD**.
- Avoid congested areas, swimming zones, docks, piers, or locations with **underwater hazards**.
- Use **extreme caution in cold water**. Falls overboard can lead to **hypothermia** quickly. PFDs should be worn **at all times**, and anyone who falls in should be retrieved immediately.

👥 Crew Requirements for Tow Sports

Tow sports require **three people**:

1. **Operator** – Controls the vessel and maintains a safe course and speed.
2. **Skier/Tuber** – Communicates using hand signals and follows safety instructions.
3. **Observer** *(backward-facing)* – Relays signals and alerts the operator immediately if the skier/tuber falls.

Most states **require a backward-facing observer** by law. It is the most effective way to ensure the safety of both the skier/tuber and the boat.

🚩 Responding to a Downed Skier or Tuber

- Always return with the **person in the water on the operator's side** for clear visibility.
- **Never reverse** toward someone in the water.
- Do not follow too closely — at 25 mph, a boat can overtake a person 200 feet ahead in **just 5 seconds**.

💡 Water Etiquette & Awareness

- Show **courtesy** to other boaters, especially anglers and those at anchor.
- Avoid sending wakes toward smaller boats, shorelines, or swim areas.
- Operate only in areas **designated for watersports** whenever possible.

⚙️ CTS/HPP Models – Trim & Planing Tips

Tahoe CTS and HPP performance models are engineered for **quick acceleration** and **efficient planing**. For optimal operation:

- Trim the engine **fully "under" or "in/down"** when accelerating from a stop.
- Apply **moderate to maximum throttle** as needed (depending on engine setup and prop).
- Once on plane:
    - Trim the engine **slightly out or "up"** to reduce drag and avoid a **bow-down "plowing" condition**.
    - Plowing reduces efficiency and can cause:
        - **Bow steering or over-steering**

- Difficulty maintaining directional control when crossing wakes

Be especially cautious during turns or when crossing diagonal wakes in this condition — unexpected sharp turns can occur.

> **⚠ WARNING**
>
> Avoid possible serious injury or death. Adjust engine to an intermediate trim position as soon as boat is on plane to avoid possible ejection due to boat spin-out. Do not attempt to turn boat when engine is trimmed extremely under or in.

Safe Operating Speed & General On-Water Practices

⚠️ Safe Operating Speed

The **safe speed** of your boat is not just about going fast — it's about maintaining full control based on current conditions:

- **Maneuvering speed** is the highest speed at which you can safely make sudden turns without risking loss of control. This varies with wind, waves, boat load, and responsiveness.
- Some boats include **posted warnings** about limited maneuverability above certain speeds — these are based on **calm water tests** and should be taken seriously.
- In rough or unpredictable conditions, **reduce speed** to maintain visibility, trim, and directional control.
- In crosswinds or head seas, you may need to maintain a **minimum speed** to:
  - Keep steerage control
  - Prevent taking water over the bow
  - Maintain stability and trim

Caution:
The engine **must be off** whenever anyone is in the water near the stern or propeller. Shifting to neutral is not enough.

⚙️ Trim and Handling Notes

- Once on plane, **adjust the engine to an intermediate trim position** to avoid spin-out or loss of control.

- Avoid turning the boat while the engine is trimmed excessively “in” or “under” — this can result in abrupt or unintended turns, increasing the risk of **ejection** or **capsizing**.

⚠ CAUTION

Avoid prolonged high-speed operation in rough or choppy water. It's like driving a speeding car over rough, rocky roads - uncomfortable and eventually damaging to the vehicle. The intense pounding and vibration could cause loosening or breakage of components and can even result in stress and major damage to the hull itself.

🎣 Fishing Safety & Etiquette

Fishing brings enjoyment, but safety and courtesy come first:

- **You are a skipper before you're a fisherman.** Never leave the helm unattended, even while trolling.
- When fishing in groups (e.g., during a run), it may be difficult to strictly follow navigation rules due to low trolling speeds. **Use common sense and yield when needed.**
- Prevent **tangled lines** and confrontations by respecting space and keeping your wake minimal.
- Secure any **unused gear** to avoid breakage, tangling, or tripping hazards.
- Never anchor in a navigation channel or tie off to a **navigation aid** — both are illegal and dangerous.
- Fishing lines can become **wrapped around your propeller**, causing engine damage. Always shut off the engine before clearing any line from the water.

🏊 Swimming & Diving Safety

- Before swimming or diving:
  - **Anchor the boat securely**
  - **Turn off the engine** completely — neutral is not safe
  - If children remain aboard, **remove the ignition key**
- Assign a **responsible person to stay onboard** while others are in the water
- Equip your boat with a **rigid boarding ladder** located as far from the motor as possible
- Make sure everyone is trained on **safe reboarding procedures**

- Never use the **outboard or stern drive unit** as a step — the sharp edges and potential movement can cause serious injury

> **⚠ WARNING**
>
> To avoid injury from the sharp propeller, the lower unit of the outboard or stern drive should not be used as a boarding aid. The engine must be turned off when anyone is in the water near the stern (near the propeller) including when passengers are boarding from or de-boarding into the water.

⚠️ Diver Awareness

- Boats involved in diving should display:
    - A **rigid blue and white "Alpha" flag** (minimum 1 meter in height) to indicate limited maneuverability
    - In some states, a **red-and-white diver-down flag** is required at the dive site
- Always stay clear of other boats displaying diver flags, and reduce speed when nearby

> **⚠ WARNING**
>
> Never dive from the roof of your boat. Impact with objects underwater can cause injury or death.

⚓ Anchoring Best Practices

Anchoring is vital for safety, rest, or recreation. Done improperly, it can lead to boat damage, injury, or drifting.

Anchor Setup

- Choose an anchor appropriate to the **size and weight of your boat**
- Use line of suitable **diameter and length**; consult your dealer for guidance

Safe Anchoring Tips

1. **Secure the anchor and line** when not in use to avoid shifting damage
2. **Attach the line to a proper fitting**: cleat, bow eye, or Samson post — never a rail or light fixture
3. **Watch your footing** when dropping anchor to avoid entanglement
4. Ensure the anchor is holding:

    - Take **sightings on multiple landmarks**
    - If the anchor is dragging or "plowing," reposition and try again
5. **To retrieve the anchor**:
    - Drive forward slowly until the anchor line is vertical
    - Once the line is straight up and down, the anchor should release
6. **Use two or more anchors** when staying overnight or during storms
    - Choose a **protected area**
    - Leave room for the boat to swing in a full circle with wind changes
7. **Anchor line length**:
    - Use line **7× the depth** of the water in calm conditions
    - In rough weather, increase to **10× the water depth**

Docking & Departing Safely

Whether you're returning from a day on the water or heading out for the first time, **docking and undocking** are critical moments that require attention, precision, and control. This is especially true in tight spaces or crowded marinas.

⚓ Docking for Extended Periods

If you plan to keep your boat docked:

- Use **fenders or bumpers** on both sides of the boat to prevent hull damage from docks, pilings, or other boats.
- Ensure fenders are **adjusted to accommodate wave action and tidal changes**.
- A **cockpit cover** is highly recommended to protect the interior from **rain, debris, and UV damage**.

⬅️ Pulling Away from the Dock

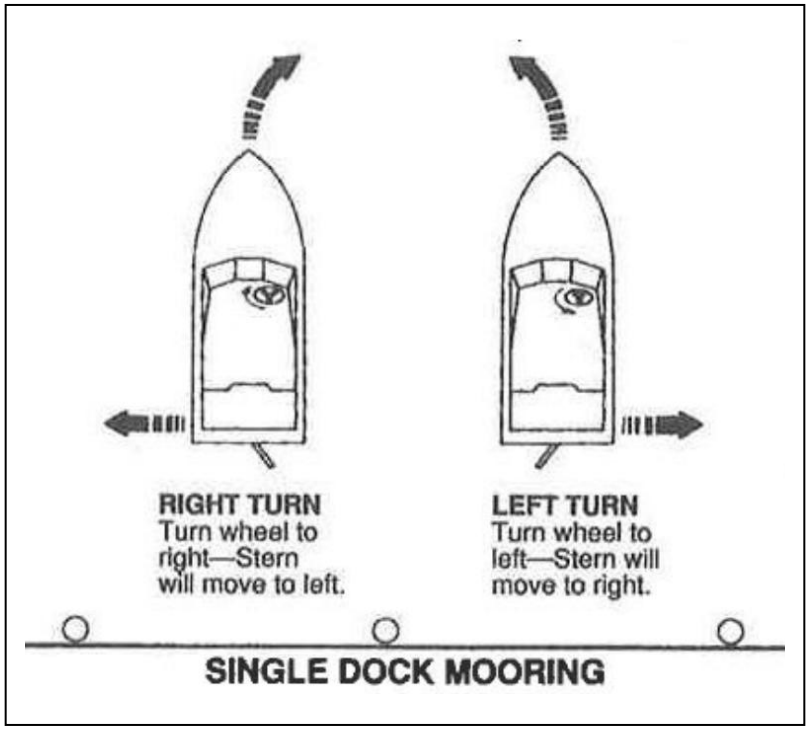
For smaller boats, **manual push-off** with your hands or a short pole is often easiest. When using the engine:

- Operate at **low speed** for better control and reduced wake.
- Be aware of how your **steering inputs move the stern**:

    - Turn wheel **right** = stern moves **left**
    - Turn wheel **left** = stern moves **right**
    - **In reverse**, the stern follows the **direction of the wheel**
- These directional responses can feel **counterintuitive** to first-time boaters — take time to practice in open water.

⚠️ **Always pull away slowly and watch for surrounding boats, swimmers, and underwater obstacles.**

🚤 Docking Procedures



Practicing docking techniques in open water can build skill and confidence before approaching tight slips or piers.

1. Simulate Docking

- Use an imaginary dock to rehearse your approach, speed control, and alignment.

2. Practice Stopping Smoothly

Use this 3-step method:

a. **Reduce speed** well before reaching the dock
b. **Shift to neutral** — let the boat coast gradually
c. **Shift briefly into reverse** to bring the boat to a full stop

🚫 **Never shift into reverse at high speed.**
Doing so may cause the boat to **lurch**, potentially throwing you off balance and **damaging the engine or drive system.**

3. Approach with Caution

- Always dock at **idle speed**
- Stay alert for changing wind or current conditions
- Use **short, controlled throttle bursts** rather than constant acceleration

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🛑 Important Safety Reminders

- **Never dive from the boat's roof**. Submerged hazards can cause serious injury or death.
- **Always be aware of your surroundings** — especially in marinas and public docks with pedestrian or swimmer traffic.
- Use **hand signals or radios** to coordinate with dockhands or crew.
- Keep hands and feet **away from cleats, pilings, and dock edges** to avoid injury during docking.

Returning Home: Post-Use Care

Proper post-use care protects your investment and keeps your boat ready for the next trip. Whether you're trailering home or leaving your boat docked, a few simple steps go a long way.

🚤 **If Trailering Your Boat**

- **Rinse the hull and lower unit** with **fresh water** immediately after use (**especially after saltwater exposure**) to remove dirt, algae, and corrosive residue.
- Flush the **cooling system** of your outboard or stern drive according to the engine manufacturer's instructions.
- Allow the boat to **drain fully** before trailering to avoid excess weight and potential damage during transport.
- Secure the boat using **proper tie-downs** and verify that **lights and safety chains** on the trailer are functioning before leaving.

⚓ **If Docking the Boat**

- **Check and adjust fender placement** to prevent hull contact with the dock or pilings.
- **Leave slack in mooring lines** to accommodate **wave motion and tide fluctuations**.
- **Install a cockpit cover** or mooring cover to:
    - Keep the interior clean and dry
    - Protect upholstery from sun exposure and rain
    - Deter pests and debris accumulation

✅ Taking five minutes to rinse and secure your boat after each use will greatly extend its lifespan and reduce long-term maintenance needs.

Emergencies: What to Do When Things Go Wrong

While most on-water incidents are minor inconveniences, true emergencies **can happen** — and knowing how to react quickly and calmly can make all the difference. Use this guide to prepare for both minor incidents and serious situations aboard your boat or others'.

🚨 General Emergency Awareness

- **Most distress calls involve mechanical issues**, not immediate danger.
- Remain calm and use proper **signaling and communication protocols**.
- Always assume **another boat in distress needs help**, and proceed to assist.

⚖️ **Federal law requires** boaters involved in an accident or witnessing a vessel in distress to **render aid**, provided it does not endanger their own boat or crew.
The **Good Samaritan clause** protects you from civil liability when giving reasonable assistance.

📝 Boating Accident Reporting Requirements

You must file a **Boating Accident Report** with your state boating law enforcement agency if:

1. There is a **fatality** or **probable loss of life**
2. A **person is injured** and requires medical treatment beyond first aid
3. Property damage exceeds **$500**
4. There is a **complete loss of the vessel**

Contact local authorities for help with reporting and next steps.

🆘 Emergency Scenarios & Procedures

🧍 Man Overboard

1. **Turn the wheel immediately** to move the propeller away from the person
2. **Circle back into the wind**, approaching the person slowly
3. **Turn off the engine** when alongside
4. **Throw a ring buoy or extend a paddle/boat hook**
5. **Do not dive in** unless trained in lifesaving
6. **Never restart the engine** until the area is clear

🔥 Fire or Explosion

- Use a **Coast Guard–approved fire extinguisher** (dry chemical or CO_2)
- Know extinguisher operation before an emergency
- **Small fires** (galley, trash, upholstery) can often be controlled
- **Fuel-related fires** require extreme caution — be prepared to abandon ship
- If abandoning:
    - Everyone should wear or carry a **PFD**
    - **Move upwind and far away** from the burning vessel
    - **Floating fuel fires** can spread across the water's surface

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🌊 Capsizing / Swamping / Flooding

- **Stay with the boat** — it's more visible than a person in the water
- **Attempt to right** the boat if possible using lines and leverage
- If flooding:
    - Plug the hole with **rags, clothing, or canvas**
    - **Bail water** continuously using buckets or containers
    - Turn the boat **into waves** and shift weight forward

> **⚠ WARNING**
>
> A pontoon can take water over the bow if improperly loaded, weight is not distributed evenly, it is driven into a large wave at high speed, or if decelerated abruptly. Also see page 11 #8.

⚓ Collisions

- **Check for injuries** and render first aid immediately
- Inspect:
    - **Bilge** and under decks for leaks
    - **Hull** for punctures
    - **Steering and propulsion systems**
- Proceed cautiously to port and have the boat **lifted for a full inspection**

🛟 Towing & Being Towed

- In rough water, avoid throwing the towline directly — use a **weighted light line** to pass it safely
- Alternative method:
    - Use a **fishing rod with a sinker** wrapped in cloth
    - Cast to the other boat, then **splice or tie on the main tow line**

📣 Distress Signaling

Daytime

- Raise and lower both arms
- Use **orange flag**, **smoke flare**, **mirror**, **dye marker**, or loud signals

Nighttime

- Use **flares**, **emergency strobe lights**, **flashlights**, or **lanterns**
- **Parachute flares** are most visible; **railroad flares** are least effective

⚠️ **Conserve distress signals** until help is in sight or nearby

Radio Distress Call (Marine VHF Channel 16)

- Use **"Mayday"** call procedure
- If using a **CB radio**, request assistance from anyone nearby to contact authorities

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🩹 First Aid & Medical Emergencies

Be familiar with basic first aid, including:

- **CPR & mouth-to-mouth** for drowning
- **Pressure and elevation** for bleeding
- **Rewarming** for hypothermia
- **Burn treatment** based on severity

Keep a **first aid kit onboard**, and regularly inspect and replenish it.

✅ Key Emergency Reminders

- Stay **calm**. Panic makes situations worse.
- Review and practice **emergency drills** with your crew
- Know the **location and use** of all safety equipment
- If your boat is a pontoon:
    - Avoid driving into large waves at high speed or stopping abruptly in rough water
    - Maintain **balanced loading** to reduce the risk of water coming over the bow

Exhaust & Cooling System Maintenance

Your boat's exhaust and cooling systems play critical roles in **engine performance and onboard safety**. Regular inspections help prevent costly damage and reduce the risk of dangerous leaks or overheating.

🔘 **Exhaust System: Safety First**

- On **stern drive boats**, periodically inspect the **engine compartment** for signs of **exhaust fumes**.
- Fumes may indicate a **leak in the exhaust system**, which can pose serious **carbon monoxide hazards**.
- Carefully inspect:
    - **Manifolds**
    - **Exhaust hoses**
    - **Connection points**
- If you detect fumes or hear hissing, **shut down the engine immediately** and investigate the source.

⚠️ **Carbon monoxide is odorless and potentially lethal.** Ensure your boat is equipped with a **working CO detector**, especially if it has enclosed areas.

💧 **Cooling System: Leak & Freeze Protection**

- **Water accumulation in the bilge** may be a sign of a leak in the **cooling system** or other components.
- Common sources of leaks include:
    - Cracked **hoses or fittings**
    - **Through-hull flange** leaks
    - Damaged **exhaust bellows or rubber boots** on stern drives

Off-Season Preparation

- Before winter storage, **drain the cooling system** according to the **engine manufacturer's instructions**.
- Failure to do so may result in **freezing and cracking** of engine components — a common and costly off-season mistake.

🛠️ **Routine Inspection Checklist**

- Check exhaust manifolds for rust, cracks, or corrosion
- Inspect rubber hoses for cracks, bulges, or loose clamps
- Look for water or vapor around through-hull fittings
- Examine exhaust bellows for tears or wear
- Verify bilge pump operation in case of leaks
- Drain and winterize cooling system before freezing temps arrive

Troubleshooting Performance Issues

If your boat isn't performing as expected, use this guide to help identify common problems. Many issues stem from load distribution, trim angle, or propeller mismatch. When in doubt, consult your dealer for expert support.

⚠️ **Reminder for Inboard/Outboard Boats:**
Always **run the bilge blower for at least 4 minutes before starting** the engine to clear any gasoline vapors — and **keep it running** while the engine is in operation.

🛠️ **Performance Troubleshooting Guide**

Symptom	Possible Causes
Poor Acceleration	1. Incorrect propeller selection 2. Load too far forward 3. Engine malfunction 4. Motor trim too far in 5. Marine growth on hull/lower unit
Low Top Speed	1. Underpowered 2. Engine malfunction 3. Incorrect propeller selection 4. Motor trim too far out 5. Marine growth on hull/lower unit
Porpoising (bouncing on plane)	1. Motor trim too far out 2. Incorrect propeller 3. Load too heavy in stern 4. Marine growth on hull/lower unit
Vibration or Rough Ride	1. Marine growth on hull/lower unit 2. Weeds on propeller 3. Damaged propeller
Difficulty Getting on Plane	1. Load too heavy in stern 2. Motor trim too far out 3. Poor throttle management
Nose Diving / Bow Too Low	1. Load too far forward 2. Motor trim too far in 3. Overloaded boat
Listing to One Side	1. Uneven load distribution 2. Motor trim too far in
Wandering / Poor Tracking at Speed	1. Light load with loose steering 2. Motor trim too far in 3. Load too far forward
Hooking in Turns (sudden sharp turn)	1. Motor trimmed too far in 2. Load too far forward
Prop Ventilation (engine revs too high)	1. Motor trim too far out 2. Load too far aft

Symptom	Possible Causes
Poor Handling at High Speed	1. Overloaded / bad weight balance 2. Load too far forward 3. Motor trim too far in 4. Overpowered engine
Cavitation or Loss of Thrust	1. Incorrect propeller selection 2. Motor mounted too high on transom 3. Motor trim too far out 4. Overpowered engine 5. Load too far forward 6. Weeds on propeller

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💡 Tips for Prevention

- Check for **marine growth** regularly, especially on the **lower unit and hull**.
- Clean your propeller and remove any **debris or weeds** after each use.
- Regularly inspect the **trim angle**, **propeller condition**, and **load balance**.
- Choose a propeller suited to your **engine power, boat weight, and boating style**.

🔧 Still having trouble?

Contact your dealer for further diagnosis and solutions.

🛠️ Service, Parts, Insurance quotes, Repowering & Warranty Support

All **parts, service, and warranty concerns** for Tahoe pontoons can be handled at any of our **260+ authorized dealerships** across North America.

For your convenience, please note that you will need your boat's DVN number, which is usually located on the starboard side pontoon near the rear on the riser between the tube and chassis.

📍 **Find a Dealer Near You:**

- 🌐 **Tahoe Pontoon Boats – Find a Dealer on our website Tahoepontoons.com**

Your local dealer is your first stop for expert service, parts orders, lift/trailer setup help, and warranty processing.

Section 2

Proper use and Maintenance

When used responsibly and maintained consistently, your boat will provide **years of reliable service** and help keep boating what it should be—**fun, safe, and worry-free**.

Beyond protecting your investment and keeping the boat looking its best, proper upkeep ensures **optimal on-water performance** and reduces costly repairs over time.

🧼 Cleanliness = Performance

A clean boat doesn't just look good—it runs better too. The **first step to maintaining peak performance** is keeping the hull free of buildup, especially **below the waterline**, where scum, algae, and marine growth can:

- Reduce speed and handling responsiveness
- Increase fuel consumption
- Accelerate wear on your motor and systems

🚿 Routine Cleaning Tips

- **After each use** (especially in salt water), **rinse the hull and lower unit** with fresh water.
- Focus on removing any **mud, weeds, or salt deposits**, particularly around:
    - Propeller
    - Water intakes
    - Transom area

If you trailer your boat after each outing, rinsing the **bottom and sides** will help prevent long-term buildup and keep the hull efficient.

🧽 Deep Cleaning: Material-Specific Care

Proper cleaning methods vary based on your boat's construction material:

🧼 Vinyl Flooring Care & Maintenance Guide

Protect your investment and keep your vinyl flooring looking great with the following care routine:

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1. Daily / Regular Cleaning

- Dry Sweep or Vacuum: Use a soft-bristle broom or a vacuum without a beater bar to remove grit, dirt, and sand that can scratch the surface.
- Damp Mop Only: Use a lightly damp microfiber mop with warm water. Do not soak the floor.

💡 **Pro Tip: Dirt and sand act like sandpaper underfoot — sweeping daily can extend your vinyl's life by years.**

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2. Approved Cleaning Solutions

- **Use mild, pH-neutral cleaners.**
    - A few drops of dish soap in warm water works well.
    - Use a vinyl-safe commercial floor cleaner if preferred.

Avoid using:

- ❌ Bleach or ammonia-based cleaners
- ❌ Abrasive powders or pads
- ❌ Steam mops (can damage adhesive and warp planks)
- ❌ Wax (most vinyl is "no-wax" — adding wax will cause buildup and dullness)

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3. Deep Cleaning (Monthly or As Needed)

- Use a dedicated vinyl floor cleaner — we recommend Simple Green.
- Apply with a microfiber mop for best results.
    - Avoid sponge mops, which can push dirt into seams.
- Finish with a clean water rinse to remove any cleaner residue.

🧽💧 Composite Wall Cleaning Practices

- **Fresh Water Hose:** Always start with a thorough rinse using low to moderate pressure to loosen dirt, dust, and salt.
- **Avoid High Pressure:** Like carbon fiber, high-pressure washers can force water into seams or damage surface layers.

- **Mild, pH-Balanced Soap:** Use boat soap or gentle car wash soap. Avoid anything harsh that can attack the gel coat or resin.
- **Soft Applicators:** A microfiber mitt, soft-bristle brush (only for textured areas), or sponge should be used. Hard bristles can scratch or dull the surface.
- **Diluted Vinegar Solution:** For salt stains or light mineral buildup, a 50/50 mix of white vinegar and water works well.
- **Non-Abrasive Cleaner:** For stains (like mildew or rust spots), use a marine-specific cleaner marked "safe for composites."
- **Microfiber Towels:** Prevent water spots by drying immediately with soft towels.
- **Avoid Air Dry in Full Sun:** This helps avoid spotting and any potential UV damage.
- **UV Wax/Sealant:** Composite walls have gel coat or resin outer layers that degrade under UV rays. Apply a wax or polymer sealant designed for fiberglass/composite boats.
- **Frequency:** Reapply every 3-4 months depending on sun exposure and use.
- **No Abrasives:** Steer clear of abrasive pads, polishes, or cleaners that can scratch the surface or wear down protective layers.
- **Mind Seams and Joints:** When cleaning around seams, ensure you don't force water into any openings.
- **Oxidation Removal:** If the surface starts to look chalky (oxidation), you'll need a cleaner wax or a light polishing compound, followed by fresh wax.
- **Professional Re-Coating:** For faded, cracked, or extensively oxidized composites, consider professional re-coating with gel coat repair or refinishing.

🧴 🧽 Carbon Fiber Boat Cleaning Practices

1. Basic Rinse and Dirt Removal

- **Fresh Water Rinse**: Always start with a thorough rinse using fresh water to remove salt, dirt, and debris.
- **Low-Pressure Hose**: Use a hose with moderate pressure. High-pressure washers can damage the resin layer or clear coat.
- **Use pH-neutral Soap**: Choose a mild, non-abrasive soap, preferably one designed for boats or automotive finishes.
- **Soft Sponge or Mitt**: Apply the soap using a microfiber mitt or soft sponge. Avoid stiff brushes that can scratch the surface.

- **No Harsh Chemicals**: Stay away from bleach, ammonia, or acid-based cleaners — they can weaken the resin and dull the finish.
- **Microfiber Towels**: Dry the surface using clean, high-quality microfiber towels to prevent water spots.
- **Air Drying**: If towels are not an option, ensure the boat dries in a shaded area to prevent mineral deposits from water spots.
- **UV Protection**: Carbon fiber is vulnerable to UV damage. Apply a UV-protectant polish or wax made for carbon fiber or marine applications.
- **Polishing Frequency**: Depending on exposure, polish the boat every 2-3 months to maintain a high-gloss finish and protect against fading.
- **Ceramic Coating Option**: For higher durability, consider applying a ceramic coating specifically formulated for carbon fiber surfaces.
- **No Abrasive Pads**: Scouring pads or aggressive rubbing can damage the epoxy or gel coat covering the carbon fiber.
- **Scratch Repair**: Small scratches can often be buffed out with a polishing compound, but deep damage may require professional repair.
- **Frequent Rinsing**: After every use in saltwater, rinse thoroughly to prevent salt buildup that can corrode fittings and degrade protective coatings.
- **Regular Inspections**: Check for cracks, chips, or UV damage regularly. Early detection prevents bigger issues.
- **Professional Detailing**: Once or twice a year, having a professional detail the carbon fiber can extend its life significantly.

Fiberglass Boats

- **Fresh Water Rinse**: Always start with a thorough rinse using fresh water to remove salt, dirt, and debris.
- **Low-Pressure Hose**: Use a hose with moderate pressure. High-pressure washers can damage the resin layer or clear coat.
- **Use pH-neutral Soap**: Choose a mild, non-abrasive soap, preferably one designed for boats or automotive finishes.
- **Soft Sponge or Mitt**: Apply the soap using a microfiber mitt or soft sponge. Avoid stiff brushes that can scratch the surface.
- **No Harsh Chemicals**: Stay away from bleach, ammonia, or acid-based cleaners — they can weaken the resin and dull the finish.

- **Microfiber Towels**: Dry the surface using clean, high-quality microfiber towels to prevent water spots.
- **Air Drying**: If towels are not an option, ensure the boat dries in a shaded area to prevent mineral deposits from water spots.
- **UV Protection**: Fiberglass is vulnerable to UV damage. Apply a UV-protectant polish or wax made for fiberglass or marine applications.
- **Polishing Frequency**: Depending on exposure, polish the boat every 2-3 months to maintain a high-gloss finish and protect against fading.
- **Ceramic Coating Option**: For higher durability, consider applying a ceramic coating specifically formulated for fiberglass surfaces.
- **No Abrasive Pads**: Scouring pads or aggressive rubbing can damage the epoxy or gel coat covering the fiberglass.
- **Scratch Repair**: Small scratches can often be buffed out with a polishing compound, but deep damage may require professional repair.
- **Frequent Rinsing**: After every use in saltwater, rinse thoroughly to prevent salt buildup that can corrode fittings and degrade protective coatings.
- **Regular Inspections**: Check for cracks, chips, or UV damage regularly. Early detection prevents bigger issues.
- **Professional Detailing**: Once or twice a year, having a professional detail the fiberglass can extend its life significantly.

Aluminum Boats

- **Fresh Water Rinse**: Always start with a thorough rinse using fresh water to remove salt, dirt, and debris.
- **Low-Pressure Hose**: Use a hose with moderate pressure. High-pressure washers can damage the paint layer or clear coat.
- **Use aluminum-safe cleaners**: Choose a mild, non-abrasive soap, preferably one designed for aluminum boats or automotive finishes.
- **Soft Sponge or Mitt**: Apply the soap using a microfiber mitt or soft sponge. Avoid stiff brushes that can scratch the surface.
- **No Harsh Chemicals**: Stay away from bleach, ammonia, or acid-based cleaners — they can weaken the paint and dull the finish.
- **Microfiber Towels**: Dry the surface using clean, high-quality microfiber towels to prevent water spots.

- **Air Drying**: If towels are not an option, ensure the boat dries in a shaded area to prevent mineral deposits from water spots.
- **UV Protection**: the paint is vulnerable to UV damage. Apply a UV-protectant polish or wax made for aluminum walls or marine applications.
- **Polishing Frequency**: Depending on exposure, polish the boat every 2-3 months to maintain a high-gloss finish and protect against fading.
- **Ceramic Coating Option**: For higher durability, consider applying a ceramic coating specifically formulated for aluminum wall surfaces.
- **No Abrasive Pads**: Scouring pads or aggressive rubbing can damage the paint covering the aluminum walls.
- **Scratch Repair**: Small scratches can often be buffed out with a polishing compound, but deep damage may require professional repair or wall replacement.
- **Frequent Rinsing**: After every use in saltwater, rinse thoroughly to prevent salt buildup that can corrode fittings and degrade protective coatings.
- **Regular Inspections**: Check for cracks, chips, or UV damage regularly. Early detection prevents bigger issues.
- **Professional Detailing**: Once or twice a year, having a professional detail the walls can extend its life significantly.

Always consult your owner's manual or cleaner manufacturer for material compatibility.

✅ **Maintenance = Reliability**

Regular cleaning is just one part of a broader maintenance routine. Keep the following in mind:

- **Inspect all mechanical systems** regularly (steering, throttle, bilge, etc.)
- Follow **engine service schedules** per the manufacturer's guidelines
- Keep **drain plugs, hoses, and fittings** clear and secure
- Store your boat properly during the off-season, and perform necessary winterization steps

✅ Monthly Boat Maintenance Checklist

Tip: Use this list at the beginning of each month—or after every 20–30 hours of use—for routine upkeep and early issue detection.

🚤 General Inspection

- Walk around the boat to check for visible damage or wear
- Inspect rub rails, cleats, railings, and hardware for looseness
- Look for cracks, blisters, or fading in the gelcoat or aluminum finish
- Confirm that covers (cockpit, bimini, mooring) are secure and free from mildew

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⚙️ Engine & Fuel System

- Check engine oil level and condition (change if dirty or milky)
- Inspect fuel lines and connections for leaks or cracks
- Inspect and tighten clamps on fuel, cooling, and exhaust hoses
- Ensure fuel tank vent is unobstructed
- Check outboard/sterndrive for corrosion or oil leakage

🔋 Electrical System

- Test battery voltage (should read 12.4–12.7V when idle)
- Clean battery terminals and check for corrosion
- Check navigation lights, anchor lights, and cabin lights
- Test bilge pump operation and float switch
- Verify horn and other electrical accessories are working

🧯 Safety Equipment

- Confirm fire extinguisher is charged and accessible
- Inspect all life jackets for wear or mildew
- Make sure throwables, flares, and distress signals are in place and not expired
- Test VHF radio or handheld communication device
- Inspect first aid kit contents and restock if needed

🪼 Hull & Propulsion

- Rinse and inspect hull for marine growth or damage
- Check propeller for dings, cracks, or bent blades
- Inspect trim tabs and hydraulic hoses
- Clean intake grates and check for obstructions
- Lubricate steering components and check responsiveness

⚓ Lines, Anchors & Trailer (if applicable)

- Inspect dock lines, anchor lines, and fenders for fraying or UV damage
- Check anchor, shackle, and chain for rust or wear
- Inspect trailer tires for wear and proper inflation
- Test trailer lights and brake connections
- Grease trailer wheel bearings and inspect winch strap

🗂️ Paperwork & Records

- Review boat registration and insurance for expiration
- Log engine hours, maintenance, and fuel use
- Schedule any needed annual or seasonal service

✅ Pro Tip: Print multiple copies of this list and store them with your boat records or logbook. Keep one onboard and one in your maintenance folder.

Aluminum Hulls: Care, Cleaning, and Protection

Proper maintenance of your aluminum boat preserves both **performance and appearance**, while protecting your investment from corrosion and long-term damage. Below are best practices for cleaning, painting, and corrosion prevention.

🪼 **Cleaning Aluminum Surfaces**

Unpainted (Natural Aluminum)

- Most natural aluminum surfaces are coated with a **clear protective layer** to prevent oxidation.
- Rinse occasionally with **clean water** or a **mild detergent**.
- Avoid harsh chemicals and abrasives, which may damage the protective coating.

Painted Aluminum

- For newly painted surfaces, use **only clean water** during the first several weeks while the paint cures.
- Once cured, clean with **mild soap and water**, and consider applying a **non-abrasive wax or liquid cleaner** for added protection.

Stains, Scum, and Light Corrosion

- Use a **fine rubbing compound**, buffing wheel, or **aluminum-safe metal polish**.
- **Clean marine growth promptly**—removing algae, scum, or buildup is easier before it dries or hardens.
- For areas with persistent growth, consider **antifouling paint** (fiberglass-safe only—see note on copper-based paints below).

🎨 Painting Aluminum Boats

Repainting aluminum requires **special surface prep and compatible products**:

- Follow all **manufacturer instructions** for cleaning, priming, and application.
- **Do not use copper-based paints** — copper reacts with aluminum and can accelerate corrosion.
- Prep surfaces carefully to ensure **paint adhesion**, and only paint in dry, controlled conditions.

🛠️ Repairs

- **Minor dents**: Can often be corrected using a **rubber mallet** or **automotive body tools**.
- **Major issues** — such as:
    - Punctures
    - Skin fractures
    - Loose rivets

- Damaged structural members
  Should be **repaired by your dealer** or an experienced aluminum repair technician with proper tools and knowledge.

⚡ Corrosion & Electrolysis Prevention

While modern construction techniques help reduce corrosion, **galvanic corrosion** (also called **electrolysis**) can still occur:

Common Causes:

- Contact between **dissimilar metals** (e.g., brass and aluminum)
- Electrical current passing through a **shared water path**, especially in **saltwater**

Prevention Tips:

- Use **marine-grade caulking** when installing non-aluminum hardware to isolate metal-to-metal contact.
- **Never use the aluminum hull as a ground** for electrical circuits.
- Ensure all electrical equipment is **fully insulated** from the hull.
- In saltwater, consider installing **zinc anodes** (sacrificial anodes) to redirect electrochemical activity away from critical components.

✅ **Pro Tip:** If storing your boat in water for extended periods, especially in saltwater environments, inspect the hull monthly and address any buildup or early corrosion signs right away.

Saltwater Use: Preparation & Maintenance

Pontoon boats **can be used in saltwater** with proper preparation and care. However, saltwater environments are harsh on aluminum, electrical components, and unprotected surfaces. The following steps are essential to help **preserve your boat's integrity and performance**.

⚙️ PREPARATION FOR SALTWATER USE

1. **Antifouling Paint Application**

- All **submerged portions** of the boat could be coated with **approved aluminum antifouling paint**.
- This paint prevents marine growth and creates a protective barrier between metal surfaces and saltwater.
- Service must be completed by your dealer or a certified marine professional. *(Extra charges apply.)*

2. **Zinc Anodes for Electrolysis Protection**
   - Saltwater may trigger **electrolysis**, which causes metal deterioration due to stray electrical current.
   - In many cases, **zinc anodes** (sacrificial anodes) are recommended to reduce electrochemical damage.
   - Consult your dealer to determine if your boat requires zincs. *(Extra charges apply.)*
3. **Trailer Compatibility**
   - If your trailer uses **bunks**, antifouling paint **could be applied to the bottom of the pontoons** where they contact the bunks.
   - This prevents corrosion caused by trapped salt and moisture between the bunks and pontoons.

🧼 ONGOING MAINTENANCE

1. **Rinse with Freshwater After Each Use**
   - Thoroughly wash down the **entire boat** (top to bottom) after every saltwater outing.
   - Focus on hard-to-reach areas where salt may accumulate, including behind railings, under decks, and inside storage compartments.
   - Let the boat **dry completely** before covering.
2. **Proper Covering Practices**
   - Cover your boat only **when dry** using seat covers or a mooring cover.
   - Humid, salty environments can quickly cause **mildew or mold** if the boat is covered while damp.
3. **Trailer Cleaning**

- If trailered, **flush freshwater between the bunks and pontoons** after every use.
- Remember: this does not eliminate corrosion risk unless antifouling paint has been applied.

4. **Annual Corrosion Inspection**
   - Have your boat inspected **annually** for signs of:
     - **Corrosion**
     - **Pitting**
     - **Electrical deterioration**
   - Pay special attention to **electrical connections**, fittings, and exposed aluminum.

⚠️ **Note**: Tahoe **does not cover corrosion damage** due to saltwater use under warranty.

🏷️ **"Saltwater Series" Boats**

Some dealers may offer boats with **additional saltwater-resistant upgrades** and label them as a **"Saltwater Series."**

- These enhancements **improve durability** but do **not make the boat immune to corrosion**.
- All boats, regardless of package, require the **same preparation and maintenance** outlined above.

🌊 **Important Limitations**

- **Pontoon boats are not intended for open ocean use.**
- Saltwater use should be **limited to protected areas**, such as bays, inlets, and intercoastal waters.
- Do not operate your boat in water conditions that exceed the safety limitations outlined in the **Boating Safety** section of this manual.

⚡ Electrical System Overview

Your boat's electrical system is a **12-volt direct current (DC) system**, similar to that of an automobile. It is designed to support all **factory-installed electrical equipment** safely and efficiently.

🔌 Factory Wiring & Fuses

- The electrical circuits are **fuse-protected** to prevent damage or overload.
- Each fuse is rated to handle the **maximum load** from the factory-installed equipment.
- **Do not exceed the fuse rating** when replacing or modifying circuits.
- Always carry **spare fuses of the correct amperage** onboard.

➕ Adding Electrical Accessories

If you're installing additional equipment such as:

- Bilge pump
- Depth sounder
- Marine radio
- Chartplotter
- Radio direction finder

➡️ You may need to **install a separate fused circuit** directly to the **battery**, not by tapping into existing circuits.

⚠️ **Warning:** Improper wiring can cause fire, electrical shorts, or damage to critical components like the **alternator, voltage regulator**, or **battery**.

Always consult your **dealer or a qualified marine technician** for any custom wiring, service, or upgrades.

🎶 Stereo Operation & Radio Switch

If your boat is equipped with a **dash-mounted "Radio" switch** (marked with a music icon):

- The **Radio Switch must be in the ON position** for the stereo system to function.
- When finished using your stereo, always turn the **Radio Switch to OFF** to prevent battery drain.
- Some stereo models have **background components** (like Bluetooth or memory settings) that draw power **even when the stereo appears off**.

For full stereo functionality and features, refer to your **stereo manufacturer's user manual**.

Wall Care and Maintenance

To maintain the appearance and integrity of your boat's painted walls, follow these guidelines for regular care:

1. Rinse After Each Use

After every outing, thoroughly rinse the boat's walls with fresh water. This removes salt, dirt, and other contaminants that can dull the finish or cause long-term damage. Pay special attention to areas that may trap moisture or residue.

2. Dry Completely

Allow the walls to air dry or gently dry them with a soft microfiber cloth to avoid water spots and streaking.

3. Waxing Schedule

Apply a high-quality marine or automotive-grade wax periodically to protect the painted surfaces from UV rays, oxidation, and environmental wear. Waxing frequency depends on how and where the boat is used:

- **Freshwater, low UV exposure**: Wax every 4–6 months.
- **Freshwater, high UV exposure**: Wax every 2–4 months.
- **Saltwater environments**: Wax every 2–3 months due to higher exposure to corrosive elements.
- **Heavy use or stored outdoors year-round**: Increase frequency to every 1–2 months.

Waxing not only enhances the shine but also adds a protective layer against sun damage and fading.

4. Inspect Regularly

Look for signs of chalking, dullness, or fading. These are indicators that the protective wax layer is breaking down and it's time for reapplication.

5. Avoid Harsh Products

Do not use abrasive pads, bleach, or strong solvents on the painted surfaces. Use only pH-balanced boat soaps and soft sponges to clean walls.

🛋️ Upholstery Care & Maintenance

Your boat's seats and vinyl upholstery are made from marine-grade materials designed to resist the elements. However, **proper care is essential** to maintain appearance, prevent damage, and preserve warranty coverage.

✅ Routine Cleaning

- Use **mild soap and warm water** or a **vinyl-specific cleaner** to clean surfaces.
- Avoid soaking the cushions; always **dry thoroughly** after cleaning.
- **Prop cushions** up when the boat is covered to improve airflow and prevent mildew.
- Apply a **marine-grade mildew repellent** regularly, especially in humid climates.
- Check for and clean off bird droppings, sunscreen spills, food, or beverages **immediately**—these can stain if left untreated

Reminder: Wet vinyl promotes mildew. **Never cover damp upholstery**.

⚠️ ❌ What NOT to Use

Keep your seats safe. Avoid:

🚫 **Bleach, ammonia, or household spray cleaners**

🚫 **Armor All, 409, or multipurpose degreasers**

🚫 **Steel wool or scouring pads**

🚫 **Dry cleaning fluids, lacquer thinner, or solvent-based cleaners**

🚫 **Wax-based products (many contain dyes and solvents that can damage)**

🚫 **Magic Eraser**

These products can **discolor, damage protective coatings**, or cause permanent loss of surface gloss.

🦠 About Pink Staining

"Pink staining" is a known issue across the marine industry, especially with white or light-colored vinyl. It is caused by **fungi (most commonly *Streptoverticillium reticulum*)**, which leaves a **metabolic dye** in the vinyl's pores.

Key facts:

- The vinyl itself does not support mold growth but can **host the stain** if not cleaned regularly.
- The staining is **more common in humid climates** and **poorly ventilated boats**.
- **Rain and humidity** can deposit airborne microorganisms onto seats.
- If vinyl is left dirty or covered while wet, fungi will thrive and may leave **permanent discoloration**.

Pink stains are not typically covered under warranty. Regular cleaning is the best defense.

🧼 Best Practices

- Clean upholstery **after every use** with **soft brush + warm soapy water**
- Clean seats regularly—even when not in use
- Rinse with **freshwater**
- **Dry thoroughly** before replacing covers, never cover wet upholstery
- Store with **good ventilation**
- Keep boat **covered and shaded** when not in use to protect from UV and ozone

---

🌞 Sun, Heat & Ozone Protection

- UV rays and ozone can age and crack marine vinyl over time
- Cover your boat when not in use
- Park in the shade or shaded area when possible
- Avoid exposure to extreme heat when storing or trailering

🛑 Warranty Notes

- **Mildew, pink stains, sun damage, and neglect** are **not covered under warranty**
- Use only **vinyl-approved cleaners** to avoid voiding coverage
- Maintain and clean consistently to retain appearance and warranty eligibility

🪟 Windshields & Clear Plastics Care Guide

Proper care of windshields and clear enclosures will keep your visibility sharp and your boat looking clean and well-kept. Plastics used in marine environments require **special handling** to avoid scratches, yellowing, or damage.

🧼 Cleaning Do's & Don'ts

✅ Do:

- **Rinse first** with clear water to remove grit and dust
- Use a **marine-grade plastic window cleaner** (like Plexus or Novus)
- Wipe with a **clean microfiber or soft cotton cloth**
- Clean frequently to prevent buildup

🚫 Do NOT:

- Use standard glass cleaners like **Windex** — they contain **ammonia**, which can cause haze or cracking
- Wipe when **dry or dusty** — this will scratch the surface
- Use **abrasive pads, polishes, or powdered cleansers**

Scratches and dullness from improper cleaning are **permanent and not covered under warranty**.

🔧 Windshield Mounting & Leak Prevention

- **Inspect mounting bolts** regularly — vibrations can loosen them over time
- If you detect movement, gently **tighten the bolts** to avoid stress fractures
- For leaks:
    1. Identify the leak source
    2. **Dry the area thoroughly**
    3. Seal with **marine-grade rubber sealant**
    4. After curing, **test with a light water spray** and reapply if needed

⚓ Hardware & Fittings Maintenance Guide

The deck hardware on your boat—like cleats, rails, and stanchions—is built to last, but **routine maintenance is essential** to prevent corrosion, preserve appearance, and avoid failure when it matters most.

🧼 Cleaning & Corrosion Prevention

✅ Routine Cleaning:

- Use a **chrome or metal polish** to clean cleats, chocks, and stanchions
- Apply a **marine paste wax** to protect surfaces and maintain luster

🌊 Saltwater Use:

- **Flush hardware with freshwater** after each saltwater outing
- At least once a month, spray all fittings with a **marine corrosion inhibitor**
  (Available at most marine supply stores or through your dealer)

🛠️ Proper Use & Replacement

- **Replace damaged or broken hardware** immediately
  - Use **through-bolting** with a **reinforcing block** beneath the deck or gunwale
- Only use hardware for its **intended purpose**:
  - **Stanchions** are for supporting railings—not for mooring, towing, or securing fenders
  - Use **bow chocks** for anchor lines to prevent stress on cleats or rails
  - Avoid tying **water ski ropes to cleats** that don't allow for a free swing path

Misuse of hardware can result in structural damage or sudden failure under load.

🔍 Rubber & Flexible Components

UV rays and ozone will eventually harden and degrade rubber components like:

- Grommets
- Fuel hoses
- Stern drive boots

- Seals and gaskets

Inspect frequently for:

- **Hardening**
- **Surface cracks**
- **Signs of dry rot or leaks**

➡️ Replace any suspect parts immediately, especially around the **stern drive**, where leakage could lead to **below-deck flooding**.

🔥 Fire Protection & Grill Safety

Fire safety on board is critical. Open flames, fuel vapors, and limited escape routes create a higher risk environment on the water. One of the most overlooked hazards? **Charcoal grills.**

🚫 Charcoal Grills: Use With Extreme Caution

Charcoal grills are **not recommended** for use on boats due to several serious safety risks:

- **Unstable surface**: Waves or sudden movement can tip a grill, spilling **hot coals or starter fluid**.
- **Fire hazard**: Charcoal grills pose an **open flame risk**, especially dangerous in confined areas with flammable materials.
- **Explosion danger**: On **inboard or stern drive boats**, placing a grill near **fuel tank vents** can ignite **gasoline vapors**, leading to a vapor explosion.

🔐 Best Practices

If you choose to use a grill onboard (at your own risk):

- Only use **marine-rated grills** designed for boats
- Mount securely on a **stable, well-ventilated surface**, away from fuel vents and upholstery
- **Never use a grill while underway**
- Always have a **charged marine fire extinguisher** within reach
- **Extinguish completely** before storing

⚠️ **For safety and warranty reasons**, Tahoe strongly discourages the use of charcoal grills on any pontoon boat.

> **⚠ WARNING**
>
> Never use gasoline-type camp stoves aboard a boat. Any gasoline spills could drain unnoticed into the bilges and create a danger of vapor explosion.

🛟 Storing Your Pontoon Boat

Protect your investment with proper seasonal storage.

🌞 Summer Mooring & Protection

✅ **Best Practices:**

- The ideal storage location is **under a boat house or covered slip** to protect from UV exposure and rain.
- Use a **mooring cover** to reduce sun damage and dirt accumulation.

⚠️ **Mooring Cover Reminders:**

- **Not waterproof** – it repels most water but can **collect puddles** in heavy rain.
- **Always remove water** from pooling areas after storms to prevent:
  - Stains
  - Stretching
  - Tearing
- **Mooring covers are vulnerable to high winds.** Secure the boat and cover during storm threats.

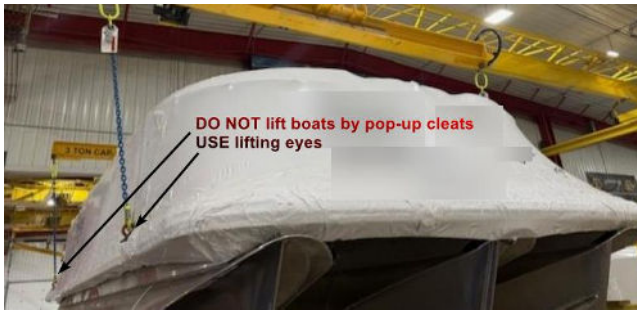
Note: Wind and rain damage are **not covered** under warranty.

💾 **Want a more durable cover?**

- Contact your dealer for info on **custom-made storage covers** from a local canvas supplier, designed to handle heavy rain or debris.

🪝 Lifting & Hoisting

- **Use only the boat's designated lifting eyes.**
- **Do not lift using pop-up cleats** – they are not designed to support the full weight of the boat.
- Always use a **spacer bar** between lift cables to prevent damage to sidewalls.



❄️ Winter Storage

🧊 Covering:

- **Do NOT use your mooring cover for winter storage.** It is not designed to handle:
  - Snow loads
  - Ice accumulation
- For outdoor storage:
  - Use **shrink wrap** with **ventilation**
  - **Check regularly** for ice build-up, which can warp or damage side rails and walls

Indoor storage is ideal whenever possible.

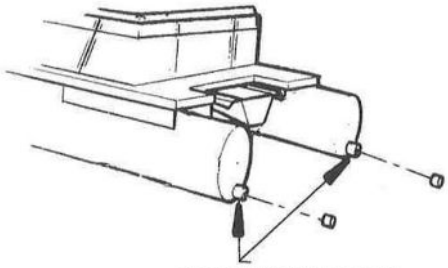
🧱 Trailer-Free Storage: Blocking Instructions

To store your boat off the trailer:

- Use **flat ground**
- Place **wood blocks** under the **bottom keels/baffles**
- Each pontoon must be supported positioned directly beneath a baffle. Baffle locations can be identified by a slight weld seam on the pontoon. Placing blocks outside these areas can lead to dents in the keel or pontoon body

🪛 **Drain Plug Tip**

- **Remove rear drain plugs** before long-term winter storage
- This reduces pressure buildup from temperature changes and prevents potential **vacuum damage** inside the pontoons



LOWER DRAIN PLUGS

🛡️ Mooring Cover Installation Guide

Properly installing your mooring cover will protect your pontoon boat from sun, dirt, and water pooling. Follow these steps to ensure a snug, secure fit.

🧭 **Step-by-Step Instructions**

1. Identify the Front of the Cover

- Locate the **two sewn-in tags** at one end of the cover.
  These tags include:
  - Material type
  - Boat model

    - Date
    - Seamstress name
    - **“Do Not Transport with Cover On”** warning
- This end should be positioned at the **front (bow)** of your boat.

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2. Lay the Cover Out

- Spread the mooring or playpen cover across your boat’s deck, keeping the **tagged end at the bow**.

---

3. Snap the Cover to the Boat

- Begin at **one rear corner** of the boat.
- Attach the cover to the **factory-installed snaps** along the **top outer edge of the walls**.
- Work your way around the boat, ensuring each snap aligns and secures properly.

If a snap is misaligned, you’ll notice immediately—reposition and try again.

- As you reach the **Bimini top**, secure any **Velcro boots** around the frame.

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4. Install Support Poles

- Once the cover is fully snapped in place, begin placing the **support poles** inside the boat.
- Locate the **sewn-in vent pockets** along the centerline of the cover—these are where the poles go.
- **Use straight poles** for the center sections of the boat.

---

5. Rear Sundeck Area (If Equipped)

- In the **rear sundeck area**, switch to the **S-shaped support pole**.
- This pole is designed to **curve around the sundeck structure**.
- Attach the base of this pole to the **snap on the floor near the rear bench**

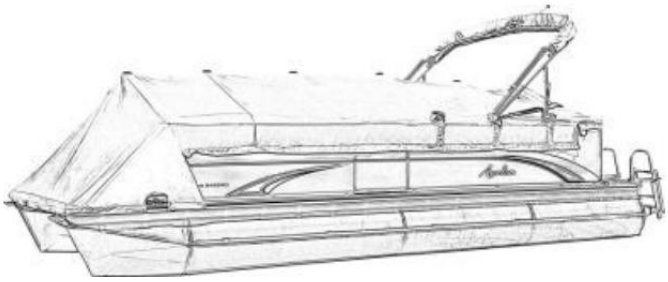
✅ **You're Done!**

- Double-check that:

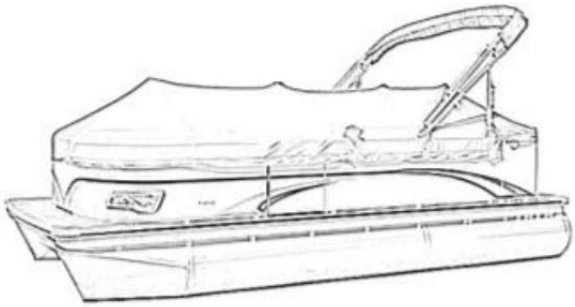
    - All snaps are secure
    - Poles are fully seated
    - The cover is tight but not stretched
- Your boat is now ready for storage.

⚠️ **Important Notes**

- Never use your mooring cover for trailering.
- Remove pooled water after rain to prevent tearing or staining.
- Always install on a **dry boat** to avoid mildew.



Mooring Cover



Playpen Cover

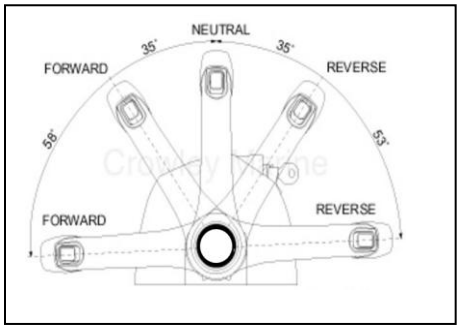
Section 3

⚙️ Propulsion System: Remote Controls

Your boat's remote control system is designed for **smooth, integrated throttle and gear shifting**, typically using a **single-lever** unit installed at the helm.

The remote control unit is supplied by the **motor manufacturer**. For detailed operation instructions, please refer to your **engine owner's manual**.

🕹️ Operation Basics



- The **single-lever control** allows you to shift and throttle with one hand.
- When shifting between **forward and reverse**:
  - Always **pause briefly in neutral**
  - Let the engine return to **idle (500–600 RPM)**
  - This prevents **internal damage** to the gear mechanism

🚨 **Avoid shifting into reverse while moving forward at high speed**, unless in an emergency. Doing so can cause mechanical failure.

🚨 Troubleshooting Safety

- If the remote control system **jams, binds, or becomes unresponsive**:
  - **Turn off the ignition immediately**
  - **Do not force** a stuck lever—this may cause further damage
  - Contact your **dealer or certified technician**

Signs of trouble include **stiff, jerky, or unusually hard lever movement.**

🚫 Cable Care Caution

- Never step on or apply pressure to control cables.
  - This can **bend or kink** the cable, leading to **loss of control.**

🧰 **Monthly Maintenance Checklist**

✅ **Control Head**

- Wipe clean and check for corrosion
- Tighten any **loose screws or brackets**

✅ **Cables**

- Inspect for:
  - Cracks or abrasion on outer sheathing
  - Kinks, bends, or pinches
  - Worn or damaged fittings
  - Signs of corrosion at ends and terminals

✅ **Lubrication**

- Spray cable ends and control mechanism with a **moisture-displacing lubricant**
- If your system uses **quick-disconnect fittings**, inspect **springs and clips** for corrosion

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🔧 **When in doubt, let a pro check it out.**
If anything feels off with the control system, contact your **dealer or marine service professional** before operating the boat again.

⚙️ I/O Stern-Drive Models – Overview & Maintenance

Tahoe proudly offers stern-drive (I/O) models for customers seeking strong performance, power, and versatility. These models are equipped with advanced systems designed for reliability and user comfort.

🚤 **Standard Features Include:**

- **Power trim & tilt system**
- **Electronic ignition**
- **Integrated bilge pump and blower system**

⚠️ **Performance Considerations**

The performance of your stern-drive pontoon may vary based on:

- **Altitude**

- **Ambient temperature and weather**
- **Load and passenger distribution**

➡️ Adjusting the **trim angle** and selecting the **correct propeller** (optional) can improve ride quality and speed.

📖 Engine Operation & Maintenance

Refer to the **engine manufacturer's owner's manual** for:

- **Break-in procedures**
- **Scheduled maintenance intervals**
- **Winterization instructions**
- **Warranty coverage details**

Always follow factory guidelines to ensure optimal performance and preserve engine warranty coverage.

💧 Bilge Pump System

Your stern-drive model is equipped with an **automatic bilge pump** located in the motor pod. Key features include:

- **Float switch activated** — wired directly to the battery
- **Self-priming** and **water-lubricated** pump design
- **Manual override switch** located on the helm instrument panel

⚠️ **IMPORTANT:**

- The bilge pump **should not run continuously**.
- Constant pump activity may indicate a **leak or excessive rainwater**, which can **drain the battery**.
- If the bilge is frequently activating, inspect the boat for water intrusion and cover it properly during storage.

🚨 **Never operate the bilge pump when fuel fumes are present** — risk of fire or explosion.

✅ Pre-Trip Checklist

- Test **bilge pump operation** (manual and float switch)
- Inspect for **fuel fumes** before activating electrical systems

- Check **battery charge**
- Confirm **trim and tilt** are functioning properly
- Verify blower operation if equipped

🔧 Sterndrive & Engine Control Troubleshooting Guide

This guide covers common **remote control system issues** specific to sterndrive-powered pontoons. Always consult your **engine manufacturer's manual** and contact your **dealer** for repair or component replacement. Improper repairs can cause **safety hazards** or breakdowns.

⚠️ General Notes

- For **outboards**: Ensure **push-pull steering cables** move freely throughout the full steering range.
- **Do not tow with the engine bouncing on the tilt lock**—use a motor support bracket or proper bracing.
- If remote controls become stiff or unresponsive, **stop operation immediately** and have the system inspected.

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The performance of your stern-drive pontoon may vary based on:

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- Test **bilge pump operation** (manual and float switch)
- Inspect for **fuel fumes** before activating electrical systems

- Check **battery charge**
- Confirm **trim and tilt** are functioning properly

Verify blower operation if equipped

> **⚠ WARNING**
>
> Consult your dealer about repair or replacement of remote control components. Improperly installed components could cause an accident or breakdown.

⚙ Engine Control: Symptom & Diagnosis Table

Symptom	Possible Cause / Check Points
Engine starter does not engage when lever is in neutral	1. Neutral start switch misadjusted 2. Neutral start switch stuck or malfunctioning 3. Dead battery or loose wiring 4. Safety switch lanyard disconnected
Control becomes stiff, jerky, or erratic	1. Crushed, bent, or kinked cables 2. Corrosion or internal cable blockage 3. Malfunctioning engine shift/throttle linkage 4. Faulty or damaged remote control head 5. Obstructions at throttle or shift connection points
Throttle or shift does not respond to hand lever	1. Cable ends or fittings not securely fastened 2. Wear or backlash in cables from excessive bends 3. Poor system adjustment 4. Engine linkage malfunction
Starter engages in forward or reverse (not in neutral)	1. Neutral start switch misadjusted 2. Neutral start switch stuck in "closed" position 3. Faulty wiring in ignition/start circuit

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🧰 When to Call Your Dealer

- If **cables are binding** or control operation feels abnormal
- If there is any issue with **starter engagement or shifting response**

- If the **neutral safety switch** fails or behaves unpredictably

🚨 Do not operate the boat with a malfunctioning throttle or shift system.
Continuing use can cause **equipment failure** or pose a **safety risk**.

🧭 Steering System Inspection & Safety

Your boat's steering system is critical for safe handling. Take time to understand how it operates and check it regularly to ensure reliable performance on the water.

🔁 Basic Steering Function Test

Before each outing:

1. **Turn the steering wheel fully left to fully right.**
    - Confirm that the **motor or stern drive moves smoothly** in sync with the wheel.
    - There should be **no binding, stiffness, or resistance**.
2. **Check for full range of motion** in both:
    - **Running position**
    - **Full tilt position**
3. Ensure that the **steering cable and its fittings** are **free from obstruction**, including:
    - Fuel lines
    - Throttle/shift cables
    - Electrical wires
    - Stored gear or accessories

🔧 Hardware & Safety Check

- Inspect the **"steering link rod"** connection between the engine and steering system.
- This rod must be fastened with **self-locking nuts**.

⚠️ **Do not replace with standard nuts**, which can loosen from engine vibration and lead to dangerous loss of control.

🧰 Annual Dealer Inspection Recommended

Have a qualified dealer inspect the entire steering system at least **once per year**. This should include:

- **Lubrication** of moving parts
- Check for **excessive play or backlash**
- **Inspection of cables and joints** for wear, corrosion, or fatigue
- **Re-tightening** of critical hardware

Regular checks ensure you maintain **smooth steering** and avoid dangerous mechanical failure on the water.

🛠️ Steering Torque & System Maintenance

Understanding and maintaining your steering system is key to safe and comfortable handling, especially at higher speeds or during plane-off.

🔁 Understanding Steering Torque

Steering torque refers to the noticeable pull on the steering wheel caused by engine and propeller dynamics. This is most common:

- When the boat is **trimming bow-up** (especially during plane-off)
- With the **engine trimmed too high or too low**
- When the **propeller shaft** is not parallel to the water

✅ Solutions:

- **Adjust engine trim** to reduce torque by aligning the **propeller shaft more parallel to the water's surface**
- **Fine-tune the engine trim tab** to counteract wheel pull (refer to your engine owner's manual for guidance)
- **Always maintain a firm grip** on the wheel, especially at higher speeds or during turns

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⚙️ Hydraulic Steering Systems

Some Tahoe models include **hydraulic steering** for smoother, more responsive control.

🔍 Maintenance Tips:

- **Check hydraulic fluid level annually**
- Look for **leaks, unusual resistance, or sluggish turning**
- **Only authorized service personnel** should repair hydraulic systems

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🧰 Steering System Maintenance

To ensure smooth, safe operation:

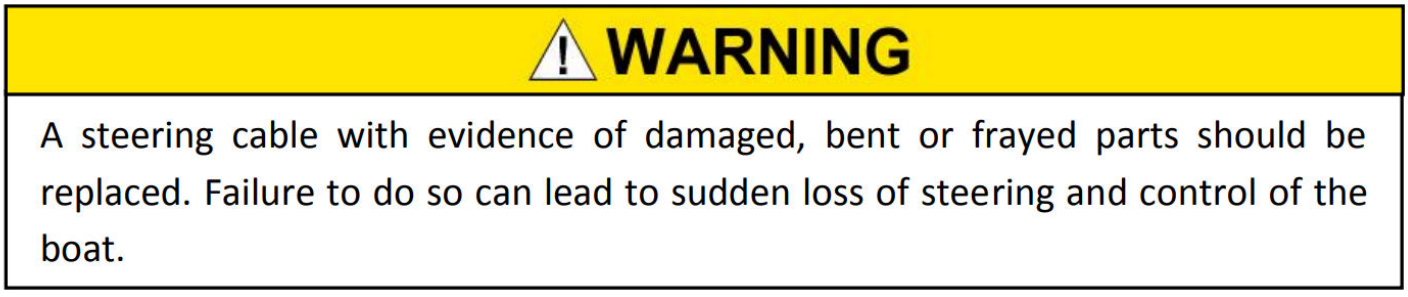
🧴 Lubrication

- Clean and lubricate all moving metal components with **marine-grade grease**
    - **Freshwater use:** every **3 months**
    - **Saltwater use: monthly** and **before off-season storage**

🔎 Inspections

- **Inspect steering wheel**:
    - Tighten if loose
    - Replace if cracked around hub or spokes
- **Check all fittings and cable conduit**:
    - Look for corrosion, wear, or damage
    - Replace components as needed
- For **cable-and-pulley systems**:
    - Ensure cables sit **correctly in pulley grooves**
    - Check for **fraying or damaged insulation**
    - Verify **proper tension** in all cable runs

⚠️ **Safety Reminder:** Any irregular steering behavior—jerky motion, excessive play, or stiffness—should be inspected by a qualified marine technician before operating the boat again.



⚠ WARNING

Repairs to steering system should be done by an authorized dealer only. Improper repair of steering systems can result in a loss of control resulting in injury or death.

Steering System Troubleshooting Guide

For Push-Pull Cable Steering Systems

Proper steering is essential to safe operation. If you experience stiffness, erratic movement, or total loss of steering, use this guide to help diagnose common issues.

⚠️ Steering Feels Stiff, Jerky, or Hard to Operate

Possible Cause	Action
1. Corrosive buildup inside the **motor tilt tube** or cable sleeve	Remove cable, clean tilt tube, lubricate, or replace
2. **Crushed or kinked cable conduit**	Inspect for damage and replace cable if needed
3. **Bent cable ram** at output end	Inspect and replace cable assembly
4. **Friction device over-tightened** at helm	Loosen friction nut to allow smoother movement
5. **Ball and socket joint** at steering link arm not rotating freely	Clean and lubricate or replace joint
6. **Internal corrosion or damage** in cable	Replace cable
7. Boat or engine not properly **trimmed**	Adjust trim angle for better handling
8. **Engine trim tab** loose, damaged, or incorrectly set	Tighten, repair, or readjust
9. **Bent or improperly mounted transom bracket** (outboard only)	Inspect bracket alignment and repair
10. **Bent engine steering link** interfering with engine	Inspect and correct steering linkage interference

Possible Cause	Action
11. **Low hydraulic fluid** (if hydraulic assist is installed)	Check and refill to manufacturer spec

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🌀 Steering Feels Sloppy or Has Excessive Free Play

Possible Cause	Action
1. **Loose or worn transom bracket or cable fittings**	Tighten or replace worn hardware
2. **Worn fasteners** in helm or drive unit	Inspect and replace as needed
3. **Worn push-pull cable**	Replace cable
4. **Improper hydraulic fluid level** (if applicable)	Refill fluid to correct level
5. **Loose steering wheel at helm**	Tighten mounting hardware or replace wheel

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⛔ Steering System Won't Turn at All

Possible Cause	Action
1. **Severe corrosion** at cable output end	Remove and replace steering cable immediately
2. **Mechanical damage** to helm or cable	Inspect helm and cable housing, replace if binding or seized
3. **Ball and socket joint** seized at link arm	Clean, lubricate, or replace

🔥 **WARNING**: If the system does not free easily with cleaning or minor adjustment, **do not force it. Replace the steering cable** immediately to avoid loss of control.

⛽ Fuel System Safety & Maintenance Guide

Proper fuel system maintenance is essential for safety, engine reliability, and performance. Gasoline is highly flammable, and even small leaks can lead to dangerous fume buildup or explosions.

🛠️ Routine Fueling Checklist

Each time you refuel:

- ✅ Inspect **fuel lines, tanks, and fittings** for cracks, leaks, or deterioration
- ✅ Confirm all **connections are tight**

- ✅ Smell for gasoline—**odor alone is not a sign of a leak**
    - Normal Venting Odors
        - In a properly vented system, brief fuel smells might occur, especially after refueling or during hot weather when vapors expand and vent out.
        - This is particularly true for marine fuel systems, which are often designed to release small amounts of vapor.
- ✅ Check **portable fuel tanks**:
    - Look for leaks at seams and caps
    - Ensure tanks sit **flat and secure** on deck
    - **Never rest tanks on fuel lines** or let them move during operation

🔥 **Leaking fuel is a fire hazard.** Shut off engine and ventilate immediately if fuel is detected.

🗓️ Annual System Inspection

At least once per year:

- Conduct a **thorough inspection** of all fuel system components—including areas hidden under decks or panels
- Replace any hoses, clamps, or fittings showing **wear, swelling, or corrosion**
- Inspect **fuel vents, anti-siphon valves, and filters**
- If in doubt, **consult a certified marine technician**

🧳 Fuel Storage: Seasonal Recommendations

If storing with non-alcohol-based fuel:

- Keep tanks **full** to reduce internal air space and **prevent condensation**
- Helps avoid water vapor buildup and fuel degradation

If using ethanol-blended or alcohol-containing fuel:

- **Drain tanks completely** before long-term storage

- Alcohol attracts water from the air and can **separate** from gasoline, leading to:
    - Corrosion
    - Poor performance
    - Fuel system damage

🌬️ Ventilation & Fume Safety

- Always **run the bilge blower** for at least 4 minutes before starting the engine
- Open all **hatches and compartments** to air out any trapped fumes—especially after refueling
- Be aware that **wind conditions** can limit natural fume dispersal
- **Keep compartments open** until the boat is underway and ventilating naturally

🚫 Never start the engine if you smell fuel vapors. Investigate and resolve the source first.

⚠️ Fuel System Warnings

- **Do not paint aluminum fuel tanks** with copper-based antifouling paint—this can cause **galvanic corrosion**
- For **2-cycle outboards and personal watercraft**, only use:
    - **NMMA-certified TC-WII® or TC-W3™ oils**
    - Follow your engine manufacturer's oil recommendations

🔌 Ignition & Electrical System

Proper handling of your boat's electrical system is essential for both performance and safety. Follow these guidelines to protect your battery, prevent system failures, and reduce risk of injury or equipment damage.

⚠️ General Safety Warning

Do not connect or disconnect any part of the electrical system while the engine is running.
Doing so may cause short circuits, damage sensitive components, or create a spark hazard.

🔋 Battery Care & Maintenance

Inspect your battery **frequently** for:

- ✅ **State of charge** (use a hydrometer or voltmeter)
- ✅ **Water levels** in each cell (for non-sealed batteries)
- ✅ **Clean, tight cable connections**
- ✅ **Corrosion on terminals**—clean with baking soda solution and a wire brush

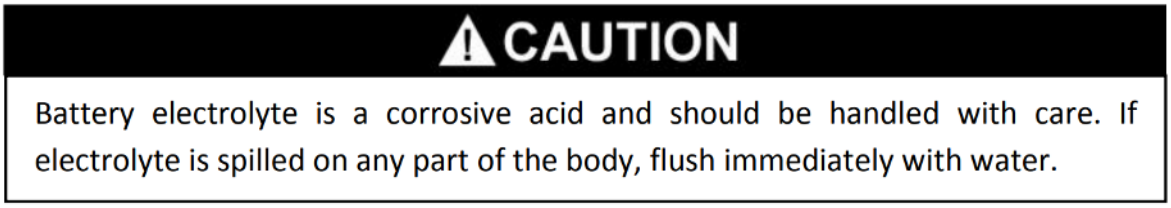
⚡ **Correct Battery Connections**

- **Negative (-) cable** must connect to the **negative terminal**
- **Positive (+) cable** must connect to the **positive terminal**

🔥 **Reversing the battery cables** can cause **immediate and permanent damage** to the electronic regulating unit and ignition system.

💉 **Battery Acid Safety**

- Battery electrolyte is **a corrosive acid**
- If contact occurs with skin or eyes, **flush immediately with water**
- Wear gloves and eye protection when servicing the battery



🛠️ **Troubleshooting Tip**

If the battery **discharges unexpectedly**:

- Check for accessories or lights left on
- Most commonly: **Stereo dash switch** may be in the **“On” position**, even when the stereo itself is off

Tahoe Gauge Troubleshooting Guide

Model Years: MY23 – MY26

This guide helps identify and resolve common issues with Tahoe gauge systems. Follow the solutions in the order listed to ensure thorough diagnostics.

⚙️ Main Gauge Does Not Power Up

Issue	Possible Cause	Solution
Main gauge does not power up	Ground is missing	Ensure battery negative is connected to **Pin 1** of the main gauge connector.
	Battery power missing	Confirm **12V** is present at **Pin 2** of the main connector when the **battery switch** is turned on.
	Ignition power missing	Confirm **12V** is present at **Pin 3** of the main connector when the **key switch** is turned on.

🔌 Simple Gauge Does Not Power Up

Issue	Possible Cause	Solution
Simple gauge not powering	4-pin connector not seated	Ensure proper connection of the 4-pin connector to both **simple and main gauges**.
	Ground is missing	Verify **Pin 3** of the 4-pin connector has a solid ground.

🚤 Tachometer Not Reading Correctly

Issue	Possible Cause	Solution
Tach not responding	Incorrect engine selected	Select the correct engine in the **settings menu**.
	Analog tach signal missing	Verify tach signal at: • **Pin 15** (5" gauge) • **Pin 11** (3" gauge)
	Improper engine data connection	Ensure proper CAN connection under the helm and at the engine (digital engines).
	Incorrect calibration	Reset all tach calibrations via the **settings menu**.

🕹️ Trim Not Reading Correctly

Issue	Possible Cause	Solution
Trim signal missing	Analog trim signal missing	Verify trim signal at: • **Pin 11** (5" gauge) • **Pin 9** (3" gauge)
	Honda trim signal missing	Verify Honda trim signal at: • **Pin 12** (5" gauge) • **Pin 10** (3" gauge)
	Incorrect engine selection	Confirm engine is correctly selected in settings.
	Improper CAN connection	Check CAN connections under helm and at the engine (digital engines).
	Incorrect calibration	Reset all trim calibrations in the **settings menu**.

⛽ Fuel Gauge Not Reading Correctly

Issue	Possible Cause	Solution
Fuel not reading	Signal missing	Check for fuel signal at **Pin 8** on the main gauge connector.
	Resistance value incorrect	Measure resistance between fuel sender and ground: should be between **33–240 ohms**.

🛰️ No GPS or Speed Reading

Issue	Possible Cause	Solution
No GPS signal/speed	No power to GPS module	Ensure **12VDC and ground** are present at the GPS module.
	CAN connection fault	Check continuity of **CAN+ and CAN-** between GPS module and main gauge.
	Missing terminating resistor or improper resistance	Disconnect both ends and check resistance across **CAN High and CAN Low**. Expect **60–120 ohms**.
	GPS signal blocked	Ensure GPS module has **clear sky visibility**, away from structures or obstructions.

SIMRAD SYSTEM TROUBLESHOOTING MY25-26

Control X Plus Troubleshooting Guide

Channels 1–4 (Connector A)

🔔 Channel 1: HORN

Step	Check	Action
1	Press switch	Confirm circuit indicator light turns green.
2	Disconnect Plug A	Measure for **+12VDC at Pin 1**.
3	No +12VDC at Pin 1	Engage **manual override** on CX+ to check output.
4	Still no +12VDC	**Replace CX+** (channel failure).
5	+12VDC present, Red LED not blinking	Disconnect HORN connector. Reconnect Plug A and check for **+12VDC and ground** at the HORN connector.
6	Power present	Reconnect HORN connectors and **test function**. Replace horn if needed.
7	Red LED blinking	Indicates **software fuse tripped**. Inspect for corrosion or burning. Replace parts as needed.
8	Wiring check	Inspect **BOAT MAIN, Pin 3** for bad crimping or wire continuity. Replace if faulty.

💡 Channel 2: EXTERIOR

Step	Check	Action
1	Press switch	Verify green indicator light.
2	Disconnect Plug A	Measure **+12VDC at Pin 2**.
3	No +12VDC	Use **manual override** to test output.
4	Still no +12VDC	**Replace CX+** (channel failure).

Step	Check	Action
5	+12VDC present, Red LED not blinking	Disconnect EXTERIOR connector. Reconnect Plug A, test for **+12VDC and ground** at EXTERIOR connector.
6	Outputs present	Reconnect and test EXTERIOR functionality. Replace part if needed.
7	Red LED blinking	Indicates **software fuse trip**. Inspect connector for damage/corrosion. Replace as needed.
8	Wiring check	Inspect **RGB/ICE Pin 2 and CONN-C ground**. Check for crimping or continuity issues. Replace parts as needed.

🚿 Channel 3: WASH DOWN

Step	Check	Action
1	Press switch	Confirm green function indicator.
2	Disconnect Plug A	Test for **+12VDC at Pin 3**.
3	No +12VDC	Enable **manual override** to verify output.
4	Still no output	**Replace CX+** (channel fault).
5	+12VDC present, Red LED not blinking	Disconnect WASH DOWN connector. Reconnect Plug A and test **+12VDC and ground** at connector.
6	Outputs okay	Reconnect and **test WASH DOWN**. Replace if needed.
7	Red LED blinking	Indicates fuse limit exceeded. Inspect WASH DOWN connector for **corrosion or burn signs**. Replace as needed.
8	Wiring check	Verify wiring to **WASH DOWN Pin 2**. Check for poor crimps or broken continuity. Replace if faulty.

🔌 Channel 4: USB

Step	Check	Action
1	Press switch	Ensure green LED activates.
2	Disconnect Plug A	Measure **+12VDC at Pin 4**.

Step	Check	Action
3	No +12VDC	Use **manual override** to test output from Pin 4.
4	Still no power	**Replace CX+** (channel failed).
5	+12VDC present, Red LED not blinking	Disconnect USB connector. Reconnect Plug A and verify **+12VDC and ground** at connector.
6	Power and ground okay	Reconnect and test USB. Replace if not working.
7	Red LED flashing	Indicates **overcurrent condition**. Inspect USB connector for corrosion or burn marks. Replace if needed.
8	Wiring check	Check wiring at **HELM INTERCONNECT Pin 1** and **OPTIONS Pin 5**. Inspect crimping and continuity. Replace if necessary.

Control X Plus Troubleshooting Guide

Channels 1–4 (Connector B)

🚨 Channel 1: NAV LIGHTS

Step	Check	Action
1	Press switch	Confirm green indicator light activates.
2	Disconnect Plug A	Test **Pin 1** for **+12VDC** with a multimeter.
3	No +12VDC	Engage **manual override** to test output.
4	Still no power	**Replace CX+** (channel has failed).
5	+12VDC present, LED not blinking	Disconnect NAV LIGHTS connector. Reconnect Plug A and test for **+12VDC and ground**.
6	Voltage present at connector	Reconnect and test NAV LIGHTS. Replace component if needed.
7	Red LED blinking	Indicates **software fuse overload**. Inspect for corrosion/burning. Replace connector if needed.

Step	Check	Action
8	Wiring inspection	Check **BOAT MAIN Pin 1** for continuity and poor crimping. Replace wiring if necessary.

💡 Channel 2: ALL AROUND LIGHTS

Step	Check	Action
1	Press switch	Ensure green indicator light is on.
2	Disconnect Plug A	Measure **+12VDC at Pin 2**.
3	No voltage	Use **manual override** to verify Pin 2 output.
4	Still no output	**Replace CX+** (channel failed).
5	+12VDC present, LED not blinking	Disconnect ALL AROUND LIGHTS connector. Reconnect Plug A, test for **+12VDC and ground**.
6	Voltage/ground OK	Reconnect and test function. Replace part if needed.
7	Red LED blinking	Indicates fuse trip. Inspect connector for **burns or corrosion**. Replace if necessary.
8	Wiring inspection	Test wiring at **BOAT MAIN Pin 2** and **FUNSHIP ANCHOR Pin 1** for continuity/crimps. Replace as needed.

⬆️ Channel 3: TOWER UP

Step	Check	Action
1	Press switch	Confirm green light above label.
2	Breaker check	Verify **30A breakers (STBD/PORT ARCH)** are active and outputting **+12VDC**.
3	Ground wire check	Ensure proper grounding at breakers.
4	Connector test	Inspect **DTP04-4P** for secure connection.
5	Voltage test	Check **+12VDC on pins 1 & 2** and **ground on pins 3 & 4** at DTP04-4P.
6	Disconnect Plug A	Test **Pin 3** for +12VDC.

Step	Check	Action
7	No power	Use **manual override** to test Pin 3.
8	Still no power	**Replace CX+** (channel failure).
9	+12VDC present, LED OK	Disconnect TOWER UP, reconnect Plug A, verify **+12VDC and ground**.
10	Power OK	Reconnect, test function. Replace if not working.
11	Red LED blinking	Indicates fuse overload. Inspect for **burning or corrosion**. Replace connector if needed.
12	Wiring inspection	Check **TOWER/SLIDE Pin 1** for poor crimps or broken wire. Replace as necessary.

⬇️ Channel 4: TOWER DOWN

Step	Check	Action
1	Press switch	Confirm green indicator light is ON.
2	Breaker check	Ensure **30A breakers (STBD/PORT ARCH)** are not tripped and delivering **+12VDC**.
3	Ground check	Inspect breaker grounding connections.
4	Connector test	Confirm good connection at **DTP04-4P**.
5	Voltage check	Verify **+12VDC on pins 1 & 2**, **ground on pins 3 & 4** at DTP04-4P.
6	Disconnect Plug A	Check **Pin 4** for +12VDC.
7	No power	Use **manual override** on CX+ to test Pin 4.
8	Still no output	**Replace CX+** (channel failed).
9	+12VDC OK, LED not blinking	Disconnect TOWER DOWN, reconnect Plug A, test for **+12VDC and ground**.
10	Voltage present	Reconnect and test function. Replace if necessary.
11	Red LED flashing	Indicates **overload trip**. Inspect connector for damage. Replace if needed.

Step	Check	Action
12	Wiring inspection	Check **TOWER/SLIDE Pin 2** for wire continuity and crimping. Replace faulty parts.

Channels 5–8 (Connector B)

💡 Channel 5: INTERIOR LIGHTS

Step	Check	Action
1	Press switch	Confirm the green indicator light turns on.
2	Disconnect Plug A	Measure **+12VDC at Pin 5**.
3	No voltage	Engage **manual override** on CX+ to test output.
4	Still no output	**Replace CX+** (channel failure).
5	+12VDC OK, LED not blinking	Disconnect INTERIOR LIGHTS connector. Reconnect Plug A and test for **+12VDC and ground**.
6	Voltage present	Reconnect and verify light function. Replace part if needed.
7	Red LED blinking	Indicates **fuse overload**. Inspect for corrosion or burn marks. Replace if necessary.
8	Wiring inspection	Check **HELM INTERCONNECT Pin 4**, **RGB/ICE Pin 12**, and CONN-C ground. Repair or replace as needed.

🌤️ Channel 6: BIMINI LIGHTS

Step	Check	Action
1	Press switch	Confirm circuit indicator is green.
2	Disconnect Plug A	Measure **+12VDC at Pin 6**.
3	No voltage	Use **manual override** on CX+ to test output.
4	Still no output	**Replace CX+** (channel fault).
5	+12VDC OK, LED off	Disconnect BIMINI LIGHTS connector. Reconnect Plug A, test for **+12VDC and ground**.

Step	Check	Action
6	Voltage present	Reconnect and test BIMINI LIGHTS. Replace component if required.
7	Red LED blinking	Indicates **software fuse triggered**. Inspect connectors for signs of corrosion or heat damage.
8	Wiring check	Inspect **OPTIONS Pin 1** wiring. Repair bad crimps or broken lines. Replace if needed.

🎵 Channel 7: STEREO

Step	Check	Action
1	Press switch	Verify green circuit light is on.
2	Disconnect Plug A	Measure **+12VDC at Pin 7**.
3	No voltage	Engage **manual override** on CX+ to test output.
4	Still no +12VDC	**Replace CX+** (channel failed).
5	+12VDC OK, LED off	Disconnect STEREO connector. Reconnect Plug A, verify **+12VDC and ground**.
6	Power present	Reconnect, test stereo. Replace if necessary.
7	Red LED blinking	Indicates overcurrent event. Inspect for **burned or corroded connectors**. Replace as needed.
8	Wiring inspection	Check **BOAT MAIN Pin 5** for continuity/crimping. Replace wiring if needed.

🧭 Channel 8: MFD (Multi-Function Display)

Step	Check	Action
1	Press switch	Confirm green indicator light is on.
2	Disconnect Plug A	Test for **+12VDC at Pin 8**.
3	No voltage	Enable **manual override** on CX+ for output check.
4	Still no output	**Replace CX+** (failed channel).

Step	Check	Action
5	+12VDC OK, LED off	Disconnect MFD connector. Reconnect Plug A and verify **+12VDC and ground** at MFD connector.
6	Power present	Reconnect and test MFD. Replace if not functional.
7	Red LED flashing	Indicates **software fuse exceeded**. Inspect connectors for damage or corrosion.
8	Wiring inspection	Check **HELM INTERCONNECT Pin 2** for wiring faults. Repair or replace as necessary.

Channels 9–12 (Connector B)

🌊 Channel 9: UNDERWATER LIGHTS

Step	Check	Action
1	Press switch	Ensure green indicator light is active.
2	Disconnect Plug A	Measure **+12VDC at Pin 9**.
3	No voltage	Use **manual override** on CX+ to test output.
4	Still no output	**Replace CX+** (channel fault).
5	+12VDC present, LED not blinking	Disconnect UNDERWATER LIGHTS. Reconnect Plug A and test for **+12VDC and ground**.
6	Voltage OK	Reconnect and verify light operation. Replace part if needed.
7	Red LED flashing	Indicates fuse overload. Check connector for **corrosion or burning**. Replace if required.
8	Wiring inspection	Check **RGB/ICE Pin 3** and **CONN-C ground**. Repair crimping or wiring as necessary.

⚙️ Channel 10: BILGE

Step	Check	Action
1	Press switch	Confirm green indicator is illuminated.
2	Disconnect Plug A	Measure **+12VDC at Pin 10**.

Step	Check	Action
3	No voltage	Use **manual override** to test output from Pin 10.
4	Still no output	**Replace CX+** (channel failure).
5	+12VDC OK, LED not blinking	Disconnect BILGE connector. Reconnect Plug A and verify **+12VDC and ground**.
6	Power present	Reconnect and test BILGE. Replace if necessary.
7	Red LED blinking	Indicates fuse trip. Inspect connector housing for **corrosion or burn marks**.
8	Wiring inspection	Check **OPTIONS Pin 2** for wire continuity or poor crimps. Replace as needed.

🚤 Channel 11: DOCKING LIGHTS

Step	Check	Action
1	Press switch	Confirm green function light is on.
2	Disconnect Plug A	Measure **+12VDC at Pin 11**.
3	No voltage	Use **manual override** to verify output.
4	Still no +12VDC	**Replace CX+** (channel failed).
5	+12VDC present, LED off	Disconnect DOCKING LIGHTS, reconnect Plug A, and test for **+12VDC and ground**.
6	Power present	Reconnect and test operation. Replace if faulty.
7	Red LED flashing	Indicates overload. Check connector for **damage or corrosion**.
8	Wiring check	Inspect **OPTIONS Pin 3** for wiring integrity and crimping. Replace if necessary.

🐟 Channel 12: LIVEWELL

Step	Check	Action
1	Press switch	Ensure the circuit indicator turns green.

Step	Check	Action
2	Disconnect Plug A	Measure **+12VDC at Pin 12**.
3	No voltage	Use **manual override** to check CX+ output.
4	Still no output	**Replace CX+** (failed channel).
5	+12VDC OK, LED not blinking	Disconnect LIVEWELL connector. Reconnect Plug A, verify **+12VDC and ground**.
6	Voltage present	Reconnect and test LIVEWELL. Replace part if needed.
7	Red LED flashing	Indicates fuse limit exceeded. Check connector for **corrosion or burn damage**.
8	Wiring inspection	Test **OPTIONS Pin 4** for poor crimping or broken continuity. Replace if necessary.

Control X Plus Troubleshooting Guide

Connector C – Channels 2–5

⛽ Channel 2: FUEL

Step	Check	Action
1	MFD/Gauge input	Verify fuel level signal is shown on **MFD N2K** or gauge.
2	No signal	Disconnect Plug C. Measure resistance between **Pin B of C19** and ground. Reading should be **33–240 ohms**.
3	Resistance outside spec	**Replace fuel sender** if not within expected range.
4	Wiring inspection	Check for **bad crimps** or faulty continuity. Replace affected parts as needed.

🌈 Channel 3: RGB ZONE 2 – RED (MFD Slide Bar)

Step	Check	Action
1	MFD RGB Zone 2	Turn ON **MFD**, select **Zone 2**, choose **White**. Confirm MFD light indicator is ON.

Step	Check	Action
2	Voltage test	With a meter, test **CONN-C Pin 3** for **+12VDC**.
3	No +12VDC	**Replace CX+ module** (no output on Pin 3).
4	Power present, no LED blink	Reconnect Plug C. Test for **+12VDC at C10 Pin 7**. Reading should match Step 2.
5	Functional test	Select **Red color** in RGB. Check for voltage increase. If present, inspect **RGB lights**, connectors, and harness for malfunctions, corrosion, or incorrect crimps. Replace light if needed.

🌈 Channel 4: RGB ZONE 2 – GREEN (MFD Slide Bar)

Step	Check	Action
1	MFD RGB Zone 2	Activate MFD, select **Zone 2**, choose **White**. Confirm light indicator is ON.
2	Voltage test	With multimeter, test **CONN-C Pin 4** for **+12VDC**.
3	No voltage	**Replace CX+** (faulty Pin 4).
4	Power present, LED OK	Reconnect CONN-C. Test **C10 Pin 8** for +12VDC. Reading should align with Step 2.
5	RGB signal verification	Select **Green** color. Voltage should rise. If so, test **RGB lights**, harness crimps, or corrosion. Replace parts as necessary.

🌈 Channel 5: RGB ZONE 1 – RED (MFD Slide Bar)

Step	Check	Action
1	MFD RGB Zone 1	Power ON MFD, select **Zone 1**, choose **White**. Check light indicator.
2	Voltage check	Test **CONN-C Pin 5** for **+12VDC**.
3	No power	**Replace CX+ module** (no output at Pin 5).
4	Voltage OK, LED steady	Reconnect Plug C. Verify **+12VDC at C10 Pin 4** and **C28 Pin 5**. Reading should match Step 2.

Step	Check	Action
5	RGB color function	Select **Red** color. Voltage should increase. If yes, inspect and test **RGB lights**, harness crimps, or corroded connections. Replace light if needed.

🌈 Channel 6: RGB ZONE 1 – GREEN (MFD Slide Bar)

Step	Check	Action
1	MFD RGB Zone 1	Turn ON the **MFD**, select **Zone 1**, and choose **White**. Verify light indicator is ON.
2	Voltage check	With multimeter, test **CONN-C Pin 6** for **+12VDC** using the meter's positive lead at the CX+ power post.
3	No voltage	**Replace the CX+ module** (failed output on Pin 6).
4	Voltage OK, LED steady	Reconnect Plug C. Confirm **+12VDC at C10 Pin 5** and **C28 Pin 6**. Readings should be close to Step 2 values.
5	Color signal check	Select **Green** in RGB settings. Check for voltage increase. If present, inspect **RGB lights**, check for bad crimps or corroded harness connectors. Replace RGB light if needed.

🔷 Channel 7: RGB ZONE 1 – BLUE (MFD Slide Bar)

Step	Check	Action
1	MFD RGB Zone 1	Turn ON the **MFD**, select **Zone 1**, choose **White**. Confirm that the light indicator is ON.
2	Voltage check	Test **CONN-C Pin 7** for **+12VDC** using the meter's positive lead at the CX+ positive post.
3	No power	**Replace CX+ module** (no output on Pin 7).
4	Power OK, LED not blinking	Reconnect Plug C. Verify **+12VDC at C10 Pin 6** and **C28 Pin 7**. Reading should match Step 2.
5	RGB signal test	Select **Blue color** in RGB menu. Look for voltage increase. If present, inspect **RGB lights**, harness crimps, or corrosion. Replace light if necessary.

🔷 Channel 9: RGB ZONE 2 – BLUE (MFD Slide Bar)

Step	Check	Action
1	MFD RGB Zone 2	Activate MFD, select **Zone 2**, choose **White**. Confirm the MFD light indicator turns ON.
2	Voltage check	Test **CONN-C Pin 3** for **+12VDC** with the meter's positive lead at the CX+ positive terminal.
3	No +12VDC	**Replace CX+ module** (Pin 3 has failed).
4	Power OK, LED not blinking	Reconnect CONN-C and verify **+12VDC at C10 Pin 7**. Value should match Step 2.
5	Color test	Select **Blue** from RGB colors. Watch for voltage rise. If it increases, test for faulty **RGB lights**, corroded connectors, or bad crimps in the boat harness. Replace parts as needed.

OP Box Troubleshooting Guide

🧩 Steps for Diagnosing Communication or Power Issues

Step	Check	Action
1	Power input	Confirm **+12VDC** is present at the breaker and that the **ground connection is secure**.
2	Network connections	Ensure **OP Box Port C** is connected to the **NEP-2 Port (NET-4)** and **Port F** is connected to the **N2K Backbone**.
3	MFD communication issue	If **MFDs are not communicating**, inspect the **N2K Network at the helm**. • Verify each terminal resistor reads **120 ohms**. • Inspect **T-connectors** for damage or bent/broken pins.
4	N2K Power test	With N2K powered ON, verify **60W between Pins 4 and 5** of the **micro connector**.
5	Connection integrity	Double-check all cables and connectors from the **OP Box to NEP-2 Network Box and MFDs**. Make sure no connections are **loose or damaged**.

🔧 Fusion Audio Troubleshooting Guide

This guide covers basic troubleshooting steps for **Fusion radios, speakers, and amplifiers**. Follow the steps below before reaching out for support.

🎛️ Fusion Radios

🔹 No Power

1. **Check the fuse** at the power connection.
2. Make sure the **red (accessory) wire** has 12V when the key is on.
3. Confirm the **yellow (constant power) wire** has 12V at all times.
4. Ensure the **ground wire** is secure and connected to clean metal.

🔹 Won't Pair with Bluetooth

1. Make sure Bluetooth is **enabled on your device**.
2. **Forget the Fusion device** on your phone and try reconnecting.
3. Perform a **hard reset** on the radio (see your model's manual).
4. Ensure the radio is **not paired to another device** already.

🔹 No Sound

1. Make sure **volume is up** on both the radio and your device.
2. Check that **zone outputs** are assigned correctly in settings.
3. Verify **speakers are connected** properly and not muted.

🔹 Display Issues or Freezing

1. Disconnect the power (both red and yellow wires) for 60 seconds.
2. Reconnect and power on to reset the system.
3. If issues persist, update to the **latest firmware** (via Fusion-Link app or website).

🔊 Fusion Speakers

🔹 No Sound / Distorted Sound

1. Check **speaker wires** for loose, corroded, or frayed connections.
2. Make sure the **radio output is not muted**.
3. Test the speaker with a different **known-working output**.
4. If using an amp, verify it's not **clipping or overdriving** the speakers.

🔹 **One or More Speakers Not Working**

1. Inspect the **wiring at the head unit and speaker ends**.
2. Swap the speaker with another to **confirm if the issue follows** the speaker or wiring.
3. Make sure speaker **zones are configured** in the radio settings.

📢 **Fusion Amplifiers**

🔹 **Amp Not Powering On**

1. Check the **inline fuse** on the power wire.
2. Confirm **12V at the battery**, **remote wire**, and **ground**.
3. Ensure the **ground wire** is secured to bare metal, not painted surfaces.

🔹 **Amp Turns On, But No Sound**

1. Confirm **RCA cables** are securely connected and not damaged.
2. Make sure **gain settings** are appropriate for the head unit output.
3. Check that the **speaker wires are connected** to the correct terminals.

🔹 **Amp Goes Into Protection Mode**

1. Look for **overheating**—check for ventilation and space.
2. Make sure there are no **shorts in speaker wiring**.
3. Inspect for **loose or undersized power wires**.
4. If the issue occurs at high volume only, consider **adjusting the gain down**.

🛠️ **Quick Reset Tips**

- **Hard reset radio**: Disconnect both red and yellow power wires for 60 seconds.
- **Factory reset radio**: Use the settings menu or specific button combination (model-dependent).
- **Firmware update**: Visit fusionentertainment.com or use the Fusion-Link app.

⚓ Engine Trim Basics

Trim plays a critical role in your boat's performance, comfort, and efficiency. It refers to two main factors:

1. **Weight distribution** in the boat

2. The **"in and out" angle** of the outboard or sterndrive lower unit (also called "tilt" or "engine trim")

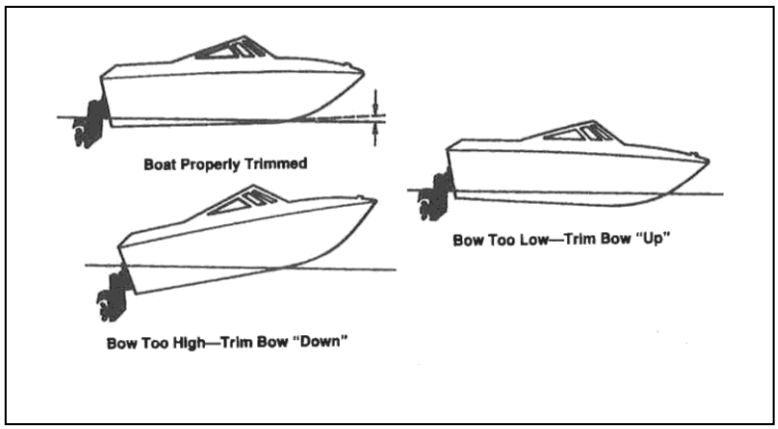
🎯 Why Trim Matters

Improper trim affects:

- **Fuel efficiency**
- **Speed and acceleration**
- **Steering control and handling**
- **Ride comfort and water spray**
- **Ability to plane**

🔁 How Trim Works

- **Trim "In" (Down)**
  - Lowers the bow
  - Improves planing time and control at slower speeds
  - Increases drag at higher speeds
  - Useful in rough water or when carrying heavier bow weight



- **Trim "Out" (Up)**
  - Raises the bow
  - Reduces drag and increases top-end speed
  - Can cause porpoising or instability if overused
  - Ideal for calm water and high-speed cruising

🛠️ The **ideal trim angle** positions the **propeller shaft parallel to the water** when your boat is at full cruising speed in its natural running position.

⚙️ Using Power Trim

Most outboard and sterndrive boats feature **power trim**, controlled by a switch either:

- **On the throttle handle**

- **Near the helm**

Pressing the trim switch adjusts the engine angle:

- 🔽 **"Down" (Trim In)** – Pushes bow down
- 🔼 **"Up" (Trim Out)** – Lifts bow up

⚠️ **Adjust trim gradually and observe changes** in speed, handling, and water spray. Over-trimming can reduce stability and increase fuel consumption.

📖 **Need Specific Settings?**

Refer to your **engine owner's manual** for:

- Detailed trim characteristics
- Trim tab adjustments
- Troubleshooting trim system issues

⚙️ Propeller Selection, Troubleshooting & Maintenance

The right propeller is key to your boat's performance. While your engine may come with a general-purpose prop, different conditions or uses—like skiing, cruising, or high-speed operation—may call for a different pitch or design.

🔍 **Choosing the Right Propeller**

There's no single "best" propeller. The correct prop:

- Matches your **engine's RPM range at full throttle**
- Provides the best **balance of acceleration, top speed, and load handling**
- Fits the typical use (e.g., cruising, watersports, heavy loads)

🧭 Use a **tachometer** when testing different props.
✅ At wide-open throttle under normal load, your RPM should fall within the engine manufacturer's **recommended full throttle range**.

- **If RPM is too low** → Install a **lower pitch** propeller
- **If RPM is too high** → Install a **higher pitch** propeller

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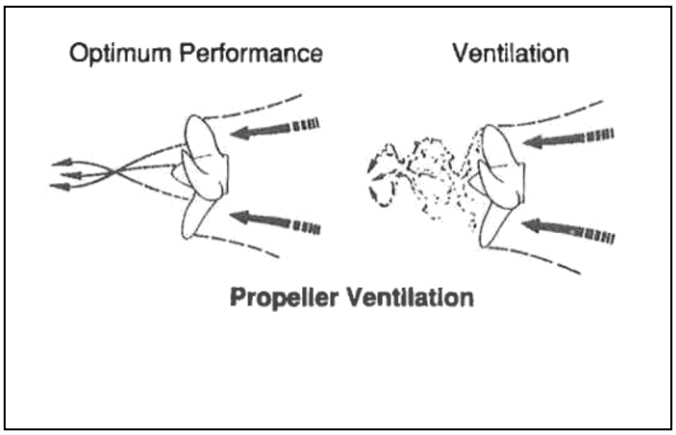
🌊 **Understanding Propeller Issues**

🌀 Ventilation

Ventilation occurs when air or exhaust gases are drawn into the propeller, causing it to spin without proper water resistance. This leads to a **loss of thrust** and poor performance.

Common causes:

- Excessively **trimmed-out engine**
- **Sharp turns** during acceleration or planing
- **Improper passenger weight distribution**, especially forward-loading in pontoon boats
- **Passengers seated in front fishing or recliner chairs** while underway (unsafe and can cause ventilation)



💥 Cavitation

Cavitation happens when pressure drops on the prop blade, causing vapor bubbles to form and collapse—damaging the blade over time.

Symptoms:

- Erosion or "burn" marks on propeller blades
- Poor performance at high speeds

Common causes:

- **Nicks or dings** in the leading edge
- **Improper polishing or blade cupping**
- **Excessive blade wear**

➡️ **Solution:** Replace or professionally recondition damaged propellers.

🚨 Engine Overspeed (Over-revving)

Overspeeding can result from:

- **Too low of a propeller pitch**
- **Incorrect trim angle**
- **Incorrect engine height** on the transom

⚠️ Prolonged over-revving can lead to **serious engine damage**, including broken rods, valve train failures, and crankshaft issues.

✅ **Monitor with a tachometer** and adjust trim or load to avoid exceeding the manufacturer's RPM range.

🧰 **Propeller Maintenance & Inspection**

Annually (or more often with heavy use):

- Remove the propeller and inspect:
  - **Shaft seal** for fishing line damage
  - **Drive pin** for wear or burrs
- Clean and **lubricate the prop shaft**
- Replace the **cotter pin or lock washer** when reinstalling
- Follow the **engine manufacturer's guidelines** for gearcase maintenance

Section 4

🛡️ Warranties & Servicing

Understanding your boat's warranties is essential for protecting your investment and ensuring any needed repairs are handled properly. Tahoe and its partners provide limited warranties on the boat, engine (powerplant), and select components.

📄 **What Your Warranties Cover**

- **Warranties generally cover:**
  - **Repair or replacement of defective parts**
  - **Components installed at the time of manufacturing or approved by the brand**
- **Warranties do not cover:**
  - **Normal wear and tear**
  - **Routine servicing and maintenance**
  - **Damage due to misuse, abuse, or neglect**
  - **Failures caused by modifications or improper installation**
  - **Consequential damage (e.g., to engines, batteries, or accessories not manufactured by Tahoe)**

⚠️ **Warranties only apply to the specific items and conditions described in each individual warranty document. Always review each one thoroughly.**

📌 **Important Warranty Reminders**

- **Read and understand each warranty provided with your boat and its components**
- **Keep all warranty documents for your records**
- **Some warranties require specific actions to remain valid (e.g., registering the boat or engine, completing maintenance within certain intervals)**

- **Verify that your dealer has submitted all necessary warranty registration forms**
- **Ask your dealer for confirmation or copies of these submissions**

🏭 Manufacturer Obligations

Tahoe is committed to meeting or exceeding all applicable U.S. Coast Guard safety standards and federal compliance regulations.

🔁 Product Recalls & Defect Compliance

In accordance with U.S. law:

- **The manufacturer is legally obligated to comply with any U.S. Coast Guard recall or repair directive involving:**
  - **Safety-related defects**
  - **Non-compliance with federal marine safety standards**
- **If a recall is issued, Tahoe will:**
  - **Notify registered owners of affected vessels**
  - **Provide instructions for inspections, repairs, or replacements**
  - **Work with authorized dealers to carry out repairs at no cost to the owner**

📌 **Reminder: To ensure you're contacted in the event of a recall or safety notice, it is essential that your warranty registration form is submitted within 30 days of purchase.**

🧾 Dealer Responsibilities

Your dealer plays a key role in ensuring your boat is set up correctly and your warranty coverage is fully activated.

📬 Warranty Registration

- **Your dealer is responsible for submitting the warranty registration form for your vessel within 30 days of purchase**
- **Registration ensures:**
  - **Your warranty is activated**
  - **Your ownership is on record in the event of a recall or safety bulletin**
  - **can notify you directly if necessary**

✅ **Protect yourself by confirming your dealer has submitted the warranty paperwork. Ask for a confirmation or copy for your records.**

🔧 **Rigging & Installation**

- **Your dealer is responsible for rigging your boat and installing accessories in accordance with Tahoe manufacturer guidelines (IF NOT ORDERED RIGGED FROM FACTORY)**
- **All components used during rigging or repair should be:**
  - **Factory-recommended**
  - **Or certified compatible with your specific model**

⚠️ **Use of non-approved or incompatible parts may void warranty coverage for certain systems or components.**

🛠️ **Servicing**

- **When performing maintenance or repairs, your dealer must use:**
  - **Approved methods**
  - **Correct parts and materials as specified by Tahoe or the engine manufacturer**

⚠ CAUTION

Use parts recommended by the engine manufacturer. Incorrect parts can be dangerous in some cases and could void your powerplant warranty. Marine engine electrical parts have been designed to prevent ignition of flammable fumes-do not substitute automotive parts.

AVALON & TAHOE LIMITED WARRANTY

(Effective model year 2026)

Avalon & Tahoe Mfg., Inc. (hereinafter "A&T"), makes this limited warranty. This written statement of limited warranty represents the entire warranty authorized and offered by A&T.

WHO IS COVERED

Except as set forth below, this warranty is extended only to the original retail purchaser (the "Owner").

TRANSFERABILITY

The warranty is transferable once within five (5) years from the date of original purchase. The second owner's transferable warranty is limited to a maximum duration of five years from the date of the original retail purchase. To transfer the remaining balance of 5 years from the original date to the second owner, the second owner must:

- Submit the warranty transfer form within 30 days of the purchase from the original owner.
- Pay $100 base fee plus $10 per month for the balance of each month up to 5 years from the original owner's purchase date.
- Provide proof of sale and schedule a dealer inspection of the vessel.

Any unexpired warranty periods are not extended for A&T reserves the right to reject any warranty transfer request for a boat that has been damaged, neglected, or is otherwise ineligible for warranty coverage.

The Limited Lifetime Structural Warranty transfers up to 10 years from the first owners original date of purchase.

COMMERCIAL WARRANTY. The limited warranty for boats used for any business purpose, competition, hire, governmental, rental, timeshare-including joint ownership by non-family members, military or any other commercial use ("Commercial Use") is **90 days from original date of purchase**. Any Commercial Use of any A&T boat at any time shall limit the warranty period to 90 days from the date of purchase. All other restrictions and exclusions contained in the other terms and conditions of this warranty also apply to boats used for Commercial Use.

PERSONAL USE WARRANTY.

The following limited warranty is made for boats purchased by individual(s) for normal personal recreational use. This limited warranty covers significant defects in manufacturing materials and workmanship performed by A&T, as well as the other specific components listed as being covered in the **warranty periods** section below:

Lifetime Structural Warranty:

- **Pontoons, structural components such as cross members, welded seams, transom and motor mount, structural framing and plywood decking are covered under the Limited Lifetime Warranty for the original registered owner.** One time transfer to second owner extends coverage up to 10 years from the original date of purchase of the original owner. For failures within these time periods, A&T will, at its sole discretion, repair or replace any structural failure on pontoons, cross channels, seat frames, motor mounts, structural portion of railings, and wood decks caused by defects in material and/or workmanship under normal personal non-commercial use. Boats with single motor 400HP or less: Lifetime[1] parts, ten years labor. Boats manufactured for use with twin motors or horsepower more than 400HP: five years parts, and two years labor. Damage

[1] If the original purchaser is not an individual, "Lifetime" shall be construed to be the earlier of 5 years from the date of original retail purchase or the dissolution of any non-human purchaser, whichever first occurs.

caused by lack of or improperly supporting the motor during transportation, wave or other water damage caused by failure to avoid operating in severe rough water conditions or failure to reduce speed in rough water is excluded from this warranty.

10 Year Limited Warranty:

- **Floor covering and upholstery vinyl – parts and labor are covered under this warranty for Ten years for the original owner.** One time transfer to the second owner extends coverage up to 5 years from the original date of purchase of the original owner. Products are warranted from failure due to abnormal fading, peeling or cracking. This warranty shall include replacement materials and/or labor, based upon an inspection by a qualified A&T representative. Excessive deterioration or fading caused by overexposure to the sun, as a result of failure to properly cover the boat while not in use, is excluded from this warranty. Damage caused by rips, tears, snags and unraveling or other abuse is not covered under this warranty. Flooring or seat stains or discoloration from sunscreens, ink, drinks, pollen, leaves, micro-organisms, bacteria, fungus, mold, etc., are excluded from coverage under this warranty. Damage due to lack of maintenance, failure to follow the cleaning procedures outlined in the user's manual or the use of improper cleaning agents and pressure washing voids this warranty. Woven and vinyl floor coverings may show some variation in weave and can be affected by environmental conditions (such as temperature swinging from cold to warm) and deck board seams may be slightly visible. These attributes are inherent in the product construction and application and are not defects in material or workmanship and are excluded.
- **Mooring Cover, Bimini, and enclosure top fabric, ladders and rails - parts and labor are covered under this warranty for Ten years for the original owner.** One time transfer to second owner extends coverage up to 5 years from the original date of purchase of the original owner. These components are warranted against excessive loss of color or strength under normal exposure conditions. Damage caused by trailering, storms, rips, tears, snags and unraveling or other abuse is not covered under this warranty. Stains or discoloration from ink, drinks, pollen, leaves, micro-organisms, bacteria, fungus, mold, etc., are excluded from coverage under this warranty. Damage due to lack of maintenance, failure to follow the cleaning procedures outlined in the user's manual or the use of improper cleaning agents voids this warranty.

5 Year Limited Warranty:

- **Electronics, lighting, wiring, and gauges - parts and labor are covered under this warranty for 5 years for the original owner.** One time transfer to second owner extends coverage up to 5 years from the original date of purchase of the original owner. Includes Garmin, Simrad, Fusion Audio and Medallion gauge electronics. Excludes wear items such as light bulbs, fuses, batteries, etc.
- **Fiberglass components such as helm stands, consoles, scoops and other fiberglass components - parts and labor are covered under this warranty for 5 years for the original owner.** One time transfer to second owner extends coverage up to 5 years from the original date of purchase of the original owner. Covers parts and labor for defects in materials and workmanship as to the boat's gelcoat subject to normal recommended usage and maintenance, solely to the extent the gelcoat exhibits structural cracking, significant blistering, abnormal fading or peeling.

WHAT IS NOT COVERED

Motors, drive systems, engine controls and batteries. Warranties applicable to these excluded parts and systems can be obtained from the manufacturer of the component parts and systems. Listings of available warranty information from accessory components can be accessed through the accessory documentation QR code located on the card supplied in your owner packet. A&T is not responsible for and will not pay for or honor any such warranties.

In addition to the other exclusions and limitations contained elsewhere in this limited warranty, any failure(s) caused by inadequate or improper cleaning, excessive exposure to salt, water, moisture, the sun and other natural elements, improper cleaning agents, accident(s), modifications, damage, freezing, and faulty maintenance procedures is expressly excluded from this warranty.

This A&T Limited Warranty excludes any failures that are not caused by a defect in material or workmanship. This warranty does not cover claims of defective design. Damage or performance issues caused or contributed to by any of the following are excluded from warranty coverage: racing, abuse, misuse, unreasonable use, overpowering, negligent operation, neglect of others, modifications, alterations, addition of aftermarket accessories such as Sea Legs, failure to observe proper maintenance and operating practices as outlined in the A&T user's manual, failure to comply with applicable safety regulations, failure to follow Safety recommendations in your user's manual, failure to trim boat properly or slowdown in rough water, overloading, immersion in water, power/pressure washing, rust, towing other boats, being towed behind other boats, use of improper trailer(s) or trailering, improper or lack of support of the motor(s) during trailering, improper use or stress on components or parts, attempted repairs by persons not authorized to make repairs by A&T; improper component alignment, tension, adjustment or altitude compensation; improper lubrication, improper fuel, surface imperfections caused by external stress, heat, cold or contamination; accidents, acid rain, natural disasters, mold or mildew related damage, rot or deterioration, Acts of God, or normal wear, tear, staining, or fading of fabrics and floor coverings; gelcoat crazing and blistering; Damage to or deterioration of cosmetic surface finishes, including scratches, gouges, chips, cracks, discoloration, fading, oxidation, normal wear and tear; Damage to the mooring cover, bimini top frame or canvas due to wind speeds in excess of 45 MPH, or improper storage/use while trailering; failure to disconnect the front and rear bimini support legs before activation of the power top, snow or other physical damage from external forces; damage due to improper use of a ski tow bar, including the warning label, with instructions that excludes the use of inflatables or tubes; rock chips; scratches; dents; road salt; tree sap; pollen; bird/spider droppings; acts of nature including but not limited to hail, lightning, windstorms; abrasions from boat covers, beach sand and rocks; vandalism, collisions, rodents, battery acid, and chemical spills; wave or other water damage caused by failure to avoid operating in severe rough water conditions or failure to reduce speed in rough water; and damage caused by improper mooring.

This limited warranty excludes any damage as a result of stray-current corrosion, galvanic corrosion, corrosion due to damage to painted surfaces, or saltwater corrosion. Electrolysis can occur under many different circumstances both in and out of the water, none of which are covered by this warranty. Electrolysis can cause severe structural damage to a boat and its accessories. To prevent damage, precautions should be taken including but not limited to: sacrificial anodes, anti-fouling paint, limited exposure to saltwater, trailers/lifts with plastic-tread bunks, fully wash the boat, tubes, and cross members immediately after every usage in saltwater.

This limited warranty is voided for: any boat that has been damaged and the cost of repairs exceed 30% of the fair market value of the boat before being damaged; declared a total loss or total constructive loss; any boat that bears a "salvage" or similar title; any boat that has ever been overloaded or equipped with horsepower exceeding the U.S. Coast Guard Maximum Capacity limits shown on the capacity plate of the boat.

OWNER'S RESPONSIBILITIES

Owner is required to complete the online warranty registration and accept the terms of this limited warranty at www.avalonpontoons.com/cwr within 30 days of purchase. The owner is strongly encouraged to complete the online warranty registration immediately upon completing the purchase of the boat. Owner is required to review and electronically sign the "New Owner Advisory Checklist" online. Your completion of the online warranty registration shall serve as an acknowledgement and acceptance of the terms and conditions of this limited warranty. You will receive email confirmation of your registration. Failure to properly complete and submit the online warranty registration within thirty (30) days of purchase will limit all warranty periods to ninety (90) days.

Owner is responsible for proper maintenance, storage and cleaning of the Boat and components. The owner is responsible for identifying and reporting any warranty repairs needed within 30 days of discovering a defect. **The owner must transport the boat to and from your local dealer or other repair facility designated by A&T.** Failure to timely submit a claim waives the claim. Owner must provide proof of current ownership when making a claim.

HOW TO GET LIMITED WARRANTY SERVICE

The only way to obtain a warranty service is to take your boat to the A&T dealer where you originally purchased your boat. Your dealer should be able to make the repairs and submit the warranty claim on your behalf. If you or your dealer have moved, or if you desire to change dealers you can locate an A&T dealer using our dealer locator tool at: https://www.avalonpontoons.com/find-a-dealer/, **or** https://www.tahoepontoons.com/find-a-dealer/. If your local A&T dealer cannot perform the service work, the Dealer should call A&T's Customer Service Department for assistance. In some instances, A&T may require that the boat or certain parts be returned to the A&T manufacturing facility in Alma, Michigan for warranty service. **Costs incurred for transporting the boat and/or parts to and from A&T and/or dealer are the responsibility of the Owner.**

DISPUTE RESOLUTION – MANDATORY BINDING ARBITRATION

By accepting A&T's Limited Warranty, the Owner agrees to resolve all disputes in accordance with this paragraph, which includes mandatory arbitration which is binding upon both A&T and the Owner. If you are unable to resolve a warranty issue with your dealer, contact the A&T Customer Service Department, 903 Michigan Ave., Alma, Michigan 48801, Phone: (989) 463-2112, Fax: (989) 463-8226. If a dispute arises between A&T and you, the disagreement will be resolved through binding arbitration under the United States Federal Arbitration Act, as amended. This mandatory arbitration provision shall apply to all disputes involving economic damage arising out of your purchase and use of an A&T product, including all tort claims, statutory claims and contract theories. The locale for any in-person arbitration hearing shall be in Gratiot County, Michigan, or any county adjacent thereto. We will consent to your attending by phone, video conference or other means that does not require your physical attendance, should you choose not to attend in-person. Avalon will pay all fees and expenses for the Arbitration.

CHOICE OF LAW

This warranty shall be governed exclusively by, and construed exclusively in accordance with, the internal laws of the State of Michigan without reference to the choice of law or conflict of law principles thereof. By accepting this warranty, Owner agrees that all claims against A&T relating to or arising out of your purchase of the boat, whether sounding in contract, tort or otherwise, shall likewise be governed exclusively by the laws of the State of Michigan without reference to the choice of law or conflict of law principles thereof. To the extent any action is permitted in a court of competent jurisdiction, such action shall take place exclusively in the state or federal courts sitting in Gratiot County, Michigan, or any county adjacent thereto, the parties hereby waiving any claim or defense that such forum is not convenient or proper. Each party agrees that any such court shall have personal jurisdiction over it for any such action, and each party consents to service of process in any manner authorized by Michigan law. Owners hereby waive any benefits conferred by the laws of any other State or Provence.

EXCLUSIVE LIMITED WARRANTY AND REMEDIES

THIS WRITTEN LIMITED EXPRESS WARRANTY IS THE SOLE AND EXCLUSIVE WARRANTY; ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY AND THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY DISCLAIMED. This written statement of limited warranty represents the entire warranty authorized and offered by A&T. There are no warranties or representations beyond those expressed in this written document. This warranty cannot be amended by any dealer. No warranties are made on products sold outside the continental United States or Canada.

A&T's obligations under this limited warranty is limited to, at A&T's option, repair or replacement of covered part(s) of the boat that are covered by and not excluded from coverage. Replacement parts provided under terms of the warranty will, whenever possible, match original equipment, but A&T does not guarantee the match of color of any replacement parts or components to the original. When necessary, A&T will substitute parts of comparable function and value. A&T will not be responsible for any sums exceeding the cost of defective part or product to the original purchaser and/or any costs associated with reapplication of aftermarket tube coatings, polishing or bottom paint. A&T reserves the right to make changes, without notice, to the design or material of the product without incurring any obligation to incorporate such changes for products previously manufactured by A&T.

Consequential, indirect, incidental damages, mental anguish or distress, damage to property or injury to persons, loss of property, loss of time or inconvenience, loss of earnings, loss of use and enjoyment, towing expenses, rental charges, haul out or launching expenses, de-rigging or re-rigging charges, gasoline, mileage, A&T dealer or non-A&T dealer service calls, transportation, telephone, loading expenses are all excluded from coverage and waived by the Owner. This warranty is expressly limited to the cost of repair and/or replacement of the damaged or defective part or parts, as the case may be, at the exclusive option of A&T and A&T shall not be responsible for any other damages whatsoever. A&T's maximum liability for any alleged breach of this warranty shall not exceed what the fair market value of your boat, excluding motor, controls, electronics, aftermarket installed options, and trailer, would be without the alleged defect.

No provision of this Limited Warranty will be modified, waived, or discharged unless the modification, waiver, or discharge is agreed to in writing and signed by both Owner and A&T. No waiver by either party of any breach of, or of compliance with, any condition or provision of this Limited Warranty will be considered a waiver of any other condition or provision or of the same condition or provision at another time.

LIMITATIONS PERIOD

Any demand for arbitration for an alleged breach of this warranty must be brought within one (1) year of the alleged breach. Any claims asserted after this time period shall be deemed waived.

Tahoe Warranty FAQ (For Customers)

Tahoe Warranty FAQ (For Customers)

🗓️ How long is the warranty on my Tahoe pontoon?
- Lifetime coverage for the structural frame (original owner)
- 10-year above deck structural warranty on all factory-installed parts
-5-year on electronics and fiberglass

🚪 What does the structural warranty include?
- Pontoons, transom, deck frame, crossmembers, welds, and motor mounts

🔧 What is covered under the 10-5 warranty?
- 5-year gauges, electrical wiring, lighting,
-10-year upholstery, rails, canvas, ladders, Bimini top, flooring
- Includes labor when serviced by Tahoe dealer

🤝 Can I transfer my warranty if I sell my boat?
Yes! If you sell within 5 years:
- Submit a transfer form within 30 days
- Pay a fee: $100 + $10 per month remaining on warranty
- Complete a dealer inspection if required

❓ How do I start a warranty claim?
1. Contact your Tahoe dealer
2. Provide DVN number (starboard rear pontoon riser)
3. Dealer handles inspection and submits claim if eligible

⚠️ What isn't covered?
- Engines, trailers
- Wear and tear: batteries, bulbs, mold, UV fading, stains
- Accidents, misuse, overloading, improper storage/trailering
-Improper cleaning (power washers, magic erasers, harsh cleaners) voids warranty.
-Saltwater corrosion, Pollen, Bacteria or any other element from environmental conditions out of our control

🚤 What if I use my boat commercially?
- Commercial/rental use is covered for 90 days
- Warranty is not transferable

🗓️ When does coverage start?
- From the original retail delivery date
- Warranty transfers keep the original start date

📄 Where can I read the full warranty?
- Visit Tahoepontoons.com or contact your local dealer

For more questions, contact your dealer or Tahoe Customer Support.

📚 More About Boating

Boating becomes safer, more enjoyable, and more rewarding as your knowledge and skills grow. Whether you're new to boating or a seasoned captain, there are valuable resources available to help you sharpen your seamanship.

🧭 Boating Education Courses

Free & Low-Cost Classes

A great way to get started, or refresh your skills, is through a boating safety or seamanship course. These classes are offered nationwide by:

🚤 U.S. Coast Guard Auxiliary

- **Courses offered: Boating Skills & Seamanship, Sailing, Coastal Navigation**
- **Contact:**
  U.S. Coast Guard Auxiliary
  Commandant (G-NAB)
  2100 Second St. SW, Washington, DC 20593
  ☎ 202-267-0972

⚓ U.S. Power Squadrons

- **Courses offered: General Boating, Basic Sailing**
- **Contact:**
  U.S. Power Squadrons
  1504 Blue Ridge Rd., P.O. Box 30423, Raleigh, NC 27622
  ☎ 919-821-0281
  🌐 **www.americasboatingclub.org**

🚣 American Red Cross

- **Courses offered: Canoeing, Outboard Boating, Rowing, Sailing (for all ages)**
- **Contact:**
  17th & D Streets NW, Washington, DC 20006
  ☎ 202-639-3686
  🌐 **www.redcross.org**

🗺️ State Boating Agencies

- Located in most state capitals
- Typically part of Departments of:
    - Natural Resources
    - Wildlife or Parks
    - Conservation or Law Enforcement
- Offer free safety guides, handbooks, and information on local regulations

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☎️ Important Boating Hotlines

- National Boating Safety Hotline (U.S. Coast Guard)
  ☎ 1-800-368-5647
    - Report suspected boat defects
    - Ask safety questions
    - Get recall information
- Education Course Locator
  ☎ 1-800-336-BOAT (nationwide)
  ☎ 1-800-245-BOAT (Virginia residents)

🗺️ Charts & Navigational Aids

🧭 National Ocean Service (NOS) – NOAA

- Produces official U.S. marine charts
- Distributes free chart catalogs for four regions:
    1. Atlantic & Gulf Coasts
    2. Pacific Coast (incl. Hawaii)
    3. Alaska
    4. Great Lakes & inland waterways

Contact for chart catalogs:

NOAA/NOS, Distribution Branch (N/CG33)
Riverdale, MD 20737
☎ 301-436-6990

🌐 **nauticalcharts.noaa.gov**

🏞️ **Additional Boating & Fishing Maps**

Federal and state agencies offer free or low-cost maps of recreation zones, boating access, and waterway features. Sources include:

- **U.S. Army Corps of Engineers**
- **U.S. Fish & Wildlife Service**
- **National Park Service**
- **U.S. Forest Service**
- **Tennessee Valley Authority**
- **State tourism offices**

These are excellent resources for locating boat ramps, fishing zones, and safe harbors.

ABOUT YOUR BOAT

SERIAL NUMBER: _____

MODEL: _____ **COLOR:** _____ **LENGTH:** _____
DIAMETER OF TUBE: _____ **WIDTH:** _____

SOLD TO: _____
ADDRESS: _____

CITY: _____ **STATE:** _____ **ZIP:** _____

MOTOR: _____ **HP:** _____ **PROPELLER SIZE:** _____

DEALER: _____ **DATE OF PURCHASE:** _____

NOTES _____
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🌐 Additional Boating Safety & Education Resources

Stay informed, safe, and confident on the water with these trusted online resources. Whether you're a first-time boat owner or an experienced captain, these sites offer valuable tips, tools, and training.

🛟 Boating Safety & Regulations

- **U.S. Coast Guard Boating Safety Resource Center**
  uscgboating.org
- **National Safe Boating Council**
  safeboatingcouncil.org
- **Campaign for Safe Boating**
  safeboatingcampaign.com
- **Federal Boating Safety Laws (About.com)**
  bit.ly/VV4uZa
- **U.S. Coast Guard Official Site**
  uscg.mil

📚 Boating Education & Courses

- **Discover Boating – Owning & Operating Tips**
  discoverboating.com/owning
- **Boat-Ed – Boating Safety Courses**
  boat-ed.com
- **About Boating Safely**
  aboutboatingsafely.com

🎥 Video Learning

- **U.S. Coast Guard Boating Safety – YouTube**
  bit.ly/SaA7wu
- **BoatSafe.com – Tips & Tutorials**
  boatsafe.com

Frequently Asked Questions (FAQs)

1. Can I buy parts or optional accessories for an older boat?

For parts and accessories, please contact your **authorized Tahoe dealer**, who is best equipped to assist you with accurate parts and service support.

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2. Can I get mooring or seat covers for my older boat?

Replacement covers are available for recent model years. For older models, availability may be limited.

- Contact your dealer to check availability.
- If unavailable, we recommend a **local canvas maker**, who can often provide high-quality, cost-effective custom covers.

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3. What trailer is best for my pontoon?

Scissor-Type Trailer

- Ideal for **short-distance transport** and **shallow ramp launches**.
- Fits under the deck, but has a **narrow wheelbase**, making it less stable on turns.
- Not suitable for **triple pontoon models**.

Drive-On (Float-On) Trailer

- Preferred for **long-distance travel**.
- Offers better **weight distribution** along bunks.
- Easier loading and unloading, though it sits higher, increasing **wind resistance** and making shallow ramp launching more difficult.

Drive-on trailers are the most commonly used type.

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4. Can I use my Tahoe pontoon boat in saltwater?

Preparation

- Apply **approved aluminum anti-fouling paint** to submerged surfaces.
- **Zinc anodes** may be needed to prevent electrolysis—check with your dealer.

- When trailering in saltwater, ensure **anti-fouling paint** is applied to protect pontoons where they contact the bunks.

Maintenance

- **Rinse thoroughly** with freshwater after every saltwater use.
- Only cover the boat when **completely dry** to prevent mildew.
- **Flush saltwater** from between bunks and pontoons if trailered.
- **Inspect annually** for corrosion or electrical deterioration.

🛑 **Note**: Tahoe does not provide warranty coverage for saltwater corrosion.

Some dealers may offer **Saltwater Series** models with additional resistant materials. However, these still require full preparation and maintenance and are not saltwater-proof.
Saltwater use should be limited to **protected bays and inlets**. Tahoe pontoons are not designed for open ocean use.

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5. What is the difference between Avalon and Tahoe?

Avalon and Tahoe are **two distinct brands**, each sold through separate dealers. Both are manufactured with premium materials and backed by **Avalon & Tahoe Mfg., Inc.**

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6. Should I contact Tahoe directly for warranty issues?

No. Please work with your **authorized dealer** for all warranty service needs.

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7. Can I call Tahoe for information on a boat I'm interested in?

Your **authorized dealer** is your best source of information. They are equipped to answer all your questions and provide personalized guidance.

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8. Can I get pricing on boats and motors from Tahoe?

Use our **Boat Builder tool** to explore configurations and pricing. Then, contact your **local dealer** for specific pricing and promotional offers.

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9. How do I clean my pontoon boat?

- 👉 Vinyl Floor Cleaning Tips
- 👉 Seat Vinyl Cleaning Tips