

Operation Manual: 21' Crest Pontoon with 40 hp Evinrude 4-Stroke Outboard

Boater Safety Guidelines

Operating a pontoon boat safely is critical to ensuring the well-being of all passengers and other water users. Follow these safety guidelines before, during, and after operation:

Pre-Operation Safety

1. **Personal Flotation Devices (PFDs):** Ensure all passengers have properly fitted, U.S. Coast Guard-approved life jackets. Children under 13 must wear PFDs at all times on the water. Carry enough PFDs for every person on board.
2. **Emergency Equipment:** Equip the boat with a first aid kit, a marine-grade fire extinguisher, a sound-producing device (e.g., horn or whistle), and visual distress signals (e.g., flares). Keep these items accessible.
3. **Weather Check:** Review local weather forecasts before departure. Avoid boating in high winds (above 15 knots), storms, or rough water conditions, as pontoons are less stable in choppy waters.
4. **Passenger Briefing:** Brief passengers on safety procedures, including the location of PFDs, how to use emergency equipment, and rules for safe movement to maintain balance on the boat.
5. **Boat Inspection:** Check the hull, pontoons, and deck for damage or leaks. Verify the operation of navigation lights, bilge pump, and steering system. Ensure the engine's cooling water intake and exit passages are clear.
6. **Load Capacity:** Do not exceed the boat's maximum capacity, typically 10–12 people or 1,600–2,000 lbs for a 21' Crest pontoon, including gear. Check the boat's capacity plate for exact limits. Overloading can cause instability.

On-Water Safety

1. **Safe Speed:** Operate at safe speeds, especially in crowded areas or near swimmers. A 21' Crest pontoon with a 40 hp Evinrude 4-stroke typically reaches 15–18 mph with a light to medium load. Avoid speeds above 20 mph when towing tubes, as higher speeds can be unsafe.
2. **Navigation Rules:** Adhere to local boating regulations, including right-of-way rules. Maintain a safe distance from other vessels, docks, and obstacles.
3. **No Alcohol:** Never operate the boat under the influence of alcohol or drugs, as this impairs judgment and reaction time.
4. **Weight Distribution:** Distribute passengers and gear evenly to prevent the bow from dipping or the stern from rising, which can lead to propeller ventilation or loss of stability.

5. **Emergency Stop Switch:** Use the emergency stop switch (lanyard) if equipped, typically located on the steering handle. Attach the lanyard to the operator to stop the engine if the operator is ejected.

Post-Operation Safety

1. **Docking:** Approach docks slowly (1–2 knots) and use fenders to protect the boat. Secure the boat with appropriate mooring lines.
2. **Engine Shutdown:** Turn off the engine and remove the key when not in use to prevent unauthorized operation.
3. **Cleaning and Storage:** Rinse the boat and engine with fresh water after use, especially in saltwater, to prevent corrosion. Store the boat in a dry, covered area.

Boat and Engine Overview

21' Crest Pontoon

- **Length:** 21 feet
- **Construction:** Features two or three aluminum pontoons (depending on the model), with a lightweight, durable deck designed for stability and comfort.
- **Capacity:** Approximately 10–12 passengers or 1,600–2,000 lbs, including gear. Verify exact limits on the boat's capacity plate.
- **Use:** Ideal for leisurely cruising, fishing, or light water sports like tubing. Not suitable for high-speed activities like waterskiing due to limited power.

Evinrude 40 hp 4-Stroke Outboard (1999–2001 Models)

- **Horsepower:** 40 hp
- **Engine Type:** 4-stroke, likely a Suzuki-based design (Evinrude 4-strokes from this period were manufactured by Suzuki).
- **Weight:** Approximately 190–210 lbs (86–95 kg), depending on shaft length.
- **Fuel:** Regular unleaded gasoline (maximum 10% ethanol).
- **Key Features:**
 - **Electronic Fuel Injection (EFI):** Provides smooth starts and fuel efficiency.
 - **Power Trim/Tilt:** Allows adjustment of engine angle for optimal performance.
 - **Alternator:** Typically 12–15 amps for charging onboard electronics.
 - **Cooling System:** Water-cooled with a thermostat, typically set at 143°F (62°C).
 - **Gearcase:** Uses Evinrude/Johnson Ultra-HPF™ gearcase lubricant, capacity approximately 16.4 fl. oz. (485 ml).
 - **Propeller:** Typically 12 1/4 x 15 in. (311 x 381 mm), pin drive or spline drive, depending on model year.

Pre-Operation Checklist

1. **Fuel:** Check the fuel level and inspect for leaks. Use fresh, unleaded gasoline with no more than 10% ethanol. Ensure the fuel primer bulb is firm.
2. **Engine Oil:** Verify the oil level using the dipstick. Use NMMA FC-W certified 10W-30 or 10W-40 marine engine oil.
3. **Battery:** Ensure the battery is charged and connections are secure. Tighten connections and apply Triple-Guard grease to prevent corrosion.
4. **Propeller and Anti-Ventilation Plate:** Inspect the propeller for damage or debris. Ensure the anti-ventilation plate is 3.9–5 inches below the waterline to prevent overheating.
5. **Cooling System:** Confirm the cooling water intake and exit passages are clear.
6. **Controls and Steering:** Test throttle, shift, and steering for smooth operation. Lubricate controls with Evinrude/Johnson-approved lubricant if needed.
7. **Safety Equipment:** Verify all required safety gear is onboard and functional.

Operating the Boat

Starting the Engine

1. **Neutral Position:** Ensure the gear shift is in neutral. The remote control must have start-in-gear prevention to avoid unexpected movement.
2. **Choke/Fuel Enrichment:** For cold starts, the EFI system automatically adjusts the air/fuel mixture. No manual choke is typically required.
3. **Ignition:** Turn the key to the “Start” position. Release immediately once the engine starts to avoid starter damage.
4. **Warm-Up:** Idle the engine for 1–2 minutes to warm up. Check for water flow from the cooling water check hole to confirm proper cooling.

Break-In Procedure

For a new or newly serviced engine, follow this break-in schedule during the first 10 hours:

- **First 15 Minutes:** Run at trolling speed (1,000–1,500 RPM).
- **Next 45 Minutes:** Operate at 2,000–3,000 RPM or 20–30% throttle.
- **Next 60 Minutes:** Increase to 3,500–4,500 RPM or 40–60% throttle.
- **Next 8 Hours:** Avoid continuous full-throttle operation. Limit full-throttle bursts to 5 minutes or less.

Cruising

- **Speed:** A 21' Crest pontoon with a 40 hp Evinrude 4-stroke typically achieves 15–18 mph with a light to medium load. Adjust speed based on water conditions and load.
- **Trim:** Adjust the power trim/tilt to keep the bow level. If the bow dips due to forward weight, lower the trim to keep the propeller submerged.
- **Turning:** Make wide, gradual turns to maintain stability. Sharp turns at high speeds can cause passengers to lose balance or the boat to list.

Stopping the Engine

1. Shift to neutral and allow the engine to idle for 1–2 minutes to cool down.
2. Turn the key to the “Off” position and remove it.
3. Secure the boat to the dock or mooring with appropriate lines.

Maintenance

Regular maintenance ensures the longevity and performance of your pontoon and engine. Refer to the Evinrude 4-stroke owner’s manual for a detailed schedule.

Daily Maintenance

- **Flush the Engine:** After each use, especially in saltwater, flush the engine with fresh water using a flush kit to prevent corrosion.
- **Inspect for Damage:** Check the hull, pontoons, and propeller for dents, cracks, or debris.
- **Clean the Boat:** Rinse the deck and pontoons with fresh water to remove salt, dirt, or algae.

Periodic Maintenance

- **Oil Change:** Change the engine oil every 100 hours or annually using NMMA FC-W certified 10W-30 or 10W-40 marine oil.
- **Spark Plugs:** Inspect and replace spark plugs every 200 hours or as needed (refer to the Evinrude manual for recommended plugs, e.g., Champion QC12PEPB).
- **Propeller:** Check for nicks, bends, or wear. Use the correct propeller size (e.g., 12 1/4 x 15 in.) for optimal performance.
- **Anodes:** Inspect sacrificial anodes for wear and replace if more than 50% eroded to protect against corrosion.
- **Fuel System:** Use fresh fuel and add a stabilizer if storing for over a month. Inspect fuel lines and primer bulb for cracks or leaks.
- **Water Pump:** Inspect the water pump every 100 hours or annually and replace the impeller if worn.

Winterization

1. Flush the engine with fresh water.
2. Drain and replace gearcase oil with Evinrude/Johnson Ultra-HPF™ lubricant.
3. Apply Evinrude/Johnson anti-corrosion spray to metal surfaces.
4. Store the boat in a dry, covered area, preferably on a trailer to protect the pontoons.

Troubleshooting

Issue	Possible Cause	Solution
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Engine won't start	Low fuel, dead battery, or fuel system issue	Check fuel level, charge battery, inspect fuel primer bulb and lines.
Engine dies in neutral	Clogged fuel filter or EFI issue	Replace fuel filter or consult a dealer for EFI diagnostics.
Overheating	Anti-ventilation plate above water or clogged cooling intake	Lower engine to ensure plate is 3.9–5 inches below water; clear intake.
Poor performance	Incorrect propeller or overloading	Verify propeller size; reduce load.
Excessive vibration	Damaged propeller or unbalanced load	Inspect and replace propeller; redistribute passenger weight.

For complex issues, such as fuel starvation or electronic control module (ECM) problems, consult an authorized Evinrude dealer. The Evinrude 4-stroke may experience intermittent fuel delivery issues, which may require professional diagnostics.

Additional Resources

- **Evinrude Owner's Zone:** Access warranty, maintenance, and safety information at www.evinrude.com.
- **Service Manuals:** Find Evinrude/Johnson service manuals for 40 hp 4-stroke models (1999–2001) at www.selocmarine.com or www.haynes.com.
- **Boating Safety Courses:** Contact the U.S. Coast Guard Boating Safety Hotline (1-800-368-5647) for courses and regulations.
- **Dealer Support:** Locate an authorized Evinrude dealer for parts and service at www.evinrude.com.

Warranty Information

Evinrude outboards typically include a limited warranty (e.g., B.E.S.T. contract). Contact an authorized Evinrude dealer with proof of purchase to verify coverage. Note that Evinrude discontinued outboard manufacturing but continues to support parts and service through its dealer network.