

SETUP AND PRE-DELIVERY INSTRUCTIONS

1994 TIGERSHARK® PERSONAL WATERCRAFT

Every Arctic Cat® Tigershark personal watercraft must be properly set up and inspected prior to delivery to the customer. Experience shows that dealerships that properly set up personal watercraft have less warranty problems and more satisfied customers, in addition to saving time and money.

NOTE: Every person in the dealership involved with any phase of setup or pre-delivery must also read and understand the Operator's Manual thoroughly in order to operate the watercraft for test riding, to explain all necessary procedures to customers, or to answer any questions the customer might have.

SETUP CHECKLIST

Listed below is a checklist of necessary items to properly set up the Tigershark Watercraft for delivery. It is required that the technician becomes familiar with the correct setup procedure. Both the itemized instructions and checklist must be used. Be sure to read these instructions thoroughly before starting to set up a Tigershark watercraft.

- | | |
|--|---|
| <input type="checkbox"/> Read and understand the Setup and Pre-Delivery Instructions | <input type="checkbox"/> Complete oil-injection system bleeding |
| <input type="checkbox"/> Inspect the crate and watercraft for damage | <input type="checkbox"/> Check steering (adjust if necessary) |
| <input type="checkbox"/> Uncrate the watercraft | <input type="checkbox"/> Check bilge pump operation |
| <input type="checkbox"/> Give consumer packet to the customer as soon as possible | <input type="checkbox"/> Inspect all hoses and connections for leakage and proper routing |
| <input type="checkbox"/> Verify serial numbers on the registration card and watercraft agree | <input type="checkbox"/> Test all switches (ignition, stop, tether, bilge, and trim) for proper operation |
| <input type="checkbox"/> Adjust the handlebar | <input type="checkbox"/> Check operation of trim and trim indicator |
| <input type="checkbox"/> Service the battery | <input type="checkbox"/> Check operation of the reverse components |
| <input type="checkbox"/> Install handlebar pad and cover | <input type="checkbox"/> Lubricate all cables and cable ends |
| <input type="checkbox"/> Fill fuel tank with a 50:1 gasoline/oil mixture | <input type="checkbox"/> Check for loose fasteners |
| <input type="checkbox"/> Fill the oil tank with Tigershark 50:1 Injection Oil | <input type="checkbox"/> Make sure drain plug is secured and seals properly |
| <input type="checkbox"/> Inspect oil and fuel gauges for proper operation | <input type="checkbox"/> Check seat base for proper seal |
| <input type="checkbox"/> Inspect check valves for correct directional flow | <input type="checkbox"/> Test ride the watercraft |
| <input type="checkbox"/> Check and adjust (if necessary) the choke cable | <input type="checkbox"/> Check tool kit, fire extinguisher, and fuse holders |
| <input type="checkbox"/> Check and adjust (if necessary) the throttle cable | <input type="checkbox"/> Inspect and clean exterior of watercraft |
| <input type="checkbox"/> Service the oil-injection system | <input type="checkbox"/> Educate customer |
| <input type="checkbox"/> Adjust the carburetor | <input type="checkbox"/> Complete registration information and return |

⚠ WARNING

Always wear safety glasses when performing any set-up and service work on Tigershark Watercraft.

⚠ WARNING

Whenever a fastener or jam nut is removed or loosened (except for the electrical control box mounting cap screws), apply LOCTITE 271 before securing.

⚠ WARNING

Whenever running the watercraft engine, always run in an area with adequate ventilation.

⚠ CAUTION

DO NOT run the engine at high RPM while out of the water on a stand.

INSPECTING FOR DAMAGE

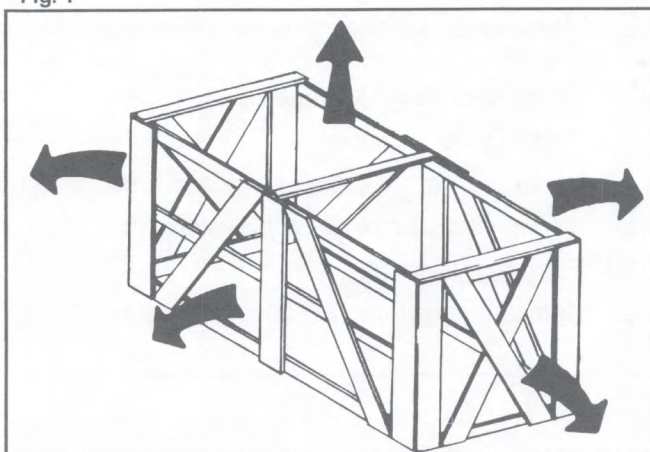
1. Inspect the outside of the crate for damage. If any damage is visible, closely inspect the inside of crate for damage. **If damage is detected, contact the Service Department before disassembling the crate.**
2. After uncrating the watercraft, carefully inspect the watercraft for scratches, flaws, or other damage. **If any damage is detected, contact the Service Department before continuing.**

■ **NOTE:** After this initial inspection, any scratches, flaws, or other damage will be the dealer's responsibility.

UNCRATING THE WATERCRAFT

1. Place the crate on a flat surface.
2. Remove the top and four sides of the crate.

Fig. 1



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⚠ CAUTION

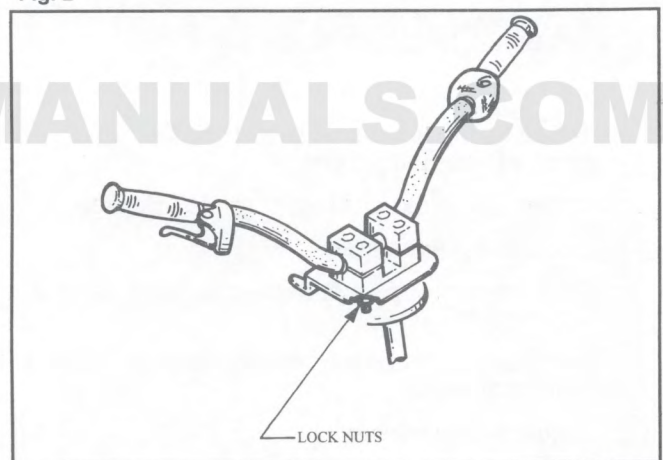
Remove the top and sides of the crate as entire units. Do not remove boards individually.

3. Uncrate the watercraft and remove the storage bag.

■ **NOTE:** If the watercraft is already sold, retrieve the Operator's Manual, video, and Safety Handbook, and give to the customer to read while the craft is being set up and pre-delivered.

4. Remove the tie downs securing the watercraft to the crate base.
5. Verify that the serial number on the registration card agrees with the serial number on the watercraft.
6. Raise the handlebar up into position making sure the handlebar caps are centered with the knurled area; then tighten the four lock nuts evenly to 1.4 kg-m (10 ft-lb).

Fig. 2



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⚠ CAUTION

The handlebar must be secured in the raised position before the watercraft is removed from the crate. This will prevent the handlebar from scratching the console.

7. With assistance, lift the watercraft by the hull and remove the watercraft from the crate base. Place it on the Work Stand (p/n 0678-005).

⚠ CAUTION

Lift the watercraft by the hull only. Do not lift with the handlebar or slide the watercraft off the crate base.

SERVICING BATTERY

1. Disconnect the vent hose from the battery; then remove the battery from the watercraft. Account for all positive and negative cables.
2. Blow into the battery end of the vent hose to ensure that it is free of obstructions and that the check valve is operating properly.

⚠ WARNING

Always wear safety glasses when filling a battery with electrolyte, connecting, or disconnecting a battery charger. Do not smoke or allow open flames near a battery. If electrolyte contacts the skin, rinse thoroughly with water; then cover the affected area with moistened sodium bicarbonate. If electrolyte contacts the eyes, flush first with water; then flush with a 1% solution freshly prepared sodium bicarbonate. Call a physician immediately.

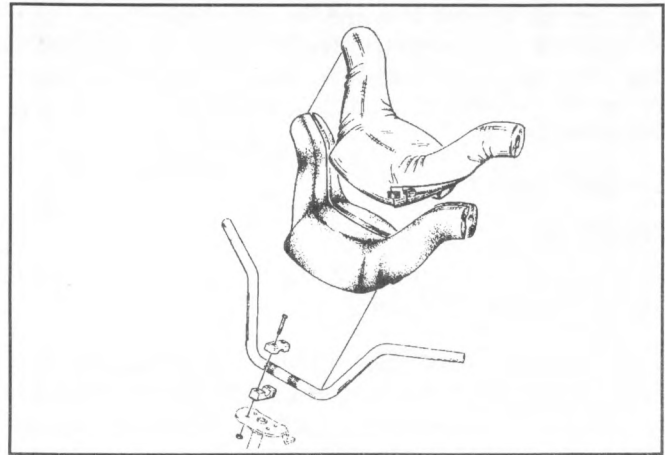
3. Fill the battery with electrolyte 6-13 mm (1/4-1/2 in.) above the separators.
4. Allow the battery to stand for 15 minutes at room temperature before the initial charge.
5. Trickle charge the battery at 2 amps for 15-20 hours.
6. After charging the battery, be sure the electrolyte is still 6-13 mm (1/4-1/2 in.) above the separators. Add DISTILLED WATER as required.
7. Using dielectric grease on the battery terminals, install the battery and cover; then secure with tie downs.

■ **NOTE: Make sure all positive and negative cables accounted for earlier are properly connected.**

INSTALLING HANDLEBAR PAD

1. Place the styrofoam pads on the handlebar making sure the pad with the large rounded base is in front of the handlebar; then, using duct tape, secure the styrofoam in place.

Fig. 3



2. Install the handlebar cover making sure the cover doesn't interfere with the steering stops.

FUEL AND OIL REQUIREMENTS

1. The first tankful of fuel must be pre-mixed at a 50:1 ratio. This is 473 ml (16 fl oz) of Tigershark 50:1 Injection Oil added to 6 U.S. gallons of gasoline.

■ **NOTE: Spark plug fouling may occur during the first tankful of pre-mixed fuel and should be considered normal operation. If spark plug fouling occurs, change the spark plugs.**

⚠ CAUTION

The recommended gasoline to use is 87 minimum octane unleaded.

2. Fill the oil-injection tank with Tigershark 50:1 Injection Oil.

⚠ CAUTION

The recommended oil is Tigershark 50:1 Injection Oil. If other brands of oil are used, engine damage may result.

3. Inspect all hoses and connections for leakage. Repair as necessary.
4. Inspect the check valves for correct directional flow. **The black portion of the check valve must point TOWARD the direction of air flow.**

■ **NOTE:** There is one check valve in the oil line and air must flow toward the oil tank. There are two check valves in the fuel line. In the line with the filter, the air must flow toward the fuel tank. In the line without the filter, air must flow away from the tank.

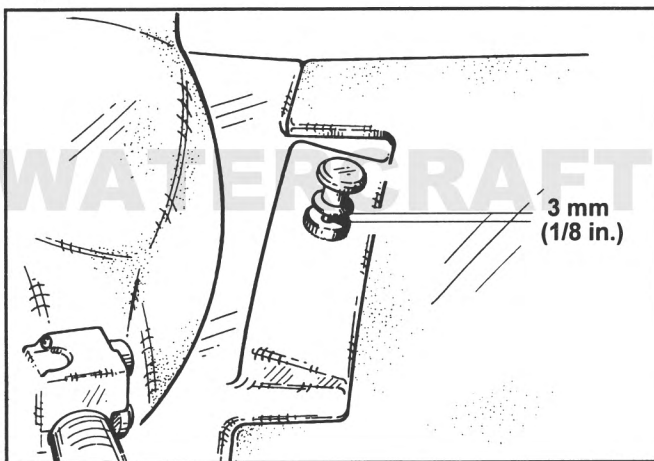
CHOKE CABLE

Checking

1. Remove the flame arrestor cover (if equipped) and the flame arrestor.
2. Move the choke knob in and out. The butterfly must completely open and close. There must be 3 mm (1/8 in.) between the end of the choke knob and the cable housing when the butterfly is in the full open position.

■ **NOTE:** The 3 mm (1/8 in.) clearance is required between the choke knob and housing to assure the butterfly is in the full-open position.

Fig. 4



Adjusting

1. If an adjustment is necessary, loosen the screw on the choke actuator arm and move the cable in the appropriate direction. Secure the adjustment by tightening the screw.
2. When the choke knob is pulled out, it must remain out. If the choke knob retracts to the console (does not hold position), tighten the knurled nut for more cable tension.

THROTTLE CABLE

Checking

1. Compress the throttle lever. Just as the throttle lever contacts the handlebar grip, the butterfly must be completely open.

2. The throttle lever must return quickly and smoothly when released. The idle stop screw must contact the stopper.

Adjusting

1. To adjust the throttle cable, loosen the lower jam nut at the throttle cable bracket; then turn the upper jam nut in the appropriate direction to obtain proper cable adjustment. Secure the adjustment by tightening the jam nuts.

■ **NOTE:** The idle stop screw must come in contact with the stop when the throttle lever is released.

2. Using LOCTITE 271 applied to the cap screws, install the flame arrestor and flame arrestor cover (if equipped).

OIL-INJECTION SYSTEM

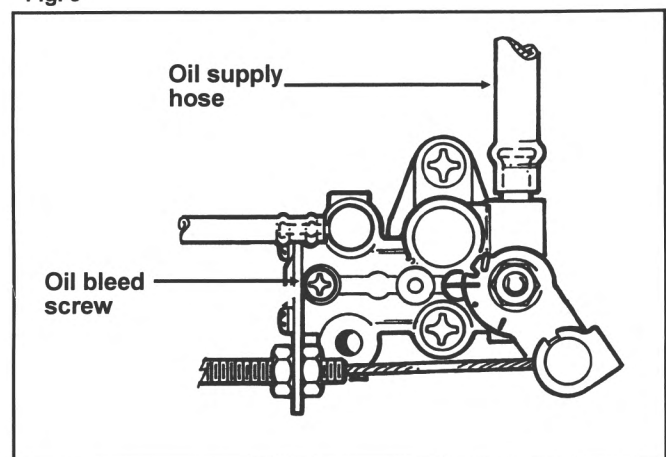
Bleeding

⚠ CAUTION

Whenever bleeding the oil-injection system, use a 50:1 gas/oil mixture in the gas tank to ensure adequate engine lubrication. Failure to use the 50:1 mixture during oil-injection system bleeding will result in severe engine damage.

1. Place an absorbent towel below the oil-injection pump bleed screw. Remove the bleed screw from the pump. Allow oil to flow through the oil-supply hose until the hose is filled with oil and free of air.

Fig. 5



2. Install the bleed screw.

■ **NOTE:** The remainder of the oil-injection system bleeding process will be performed (with the engine running) in the Adjusting Carburetor section. Do NOT start the engine until then.

Inspecting Synchronization

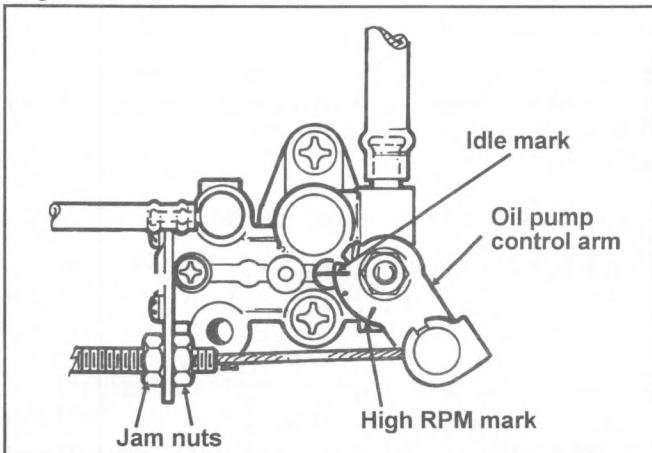
⚠ CAUTION

The oil-injection pump synchronization is dependent on throttle cable position. The throttle cable must be adjusted first.

1. With the engine OFF and the throttle in the idle position, check the idle mark on the oil-injection pump actuator arm to make sure that it is aligned with the mark on the pump housing.

■ **NOTE:** A mirror may be required to see the alignment marks.

Fig. 6



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2. With the engine OFF, move the throttle lever to the wide-open-throttle position. The high RPM mark on the actuator arm must align with the mark on the pump housing.
3. If the marks do not align, adjust the oil-injection system synchronization.

Adjusting

1. Loosen one jam nut securing the adjustment cable to the oil pump.
2. Move the throttle lever to the wide-open-throttle position.
3. Rotate the jam nuts in the proper direction until alignment is achieved.
4. Lock the jam nuts to secure the adjustment.

ADJUSTING CARBURETOR

High-Speed Mixture Screw

1. Prior to test riding the watercraft, set the high-speed mixture screw to an initial setting following the chart below.

High-Speed Mixture Screw

Engine Size	Turns Out (0-7,000 ft Alt)	Turns Out (Over 7,000 ft Alt)
639 cc	1	1 1/2
644 cc	1 1/4	7/8

Low-Speed Mixture Screw

1. Attach the Flush Kit (p/n 0678-006) to the watercraft.
2. Attach a tachometer.
3. Start the engine, immediately turn the water on, and allow the engine to idle.

⚠ CAUTION

Always start the engine first; then immediately turn the water on or engine damage may result.

■ **NOTE:** While idling the engine and with the assistance of a stiff wire with a hooked end, pull the oil-injection pump control arm upward to the wide-open position. Idle the engine until oil flows to the top of the oil-delivery hose free of air bubbles.

⚠ WARNING

Keep hands and clothing away from moving parts.

4. Turn the low-speed mixture screw in the appropriate direction until the engine idles smoothly and responds quickly to throttle lever movement.

■ **NOTE:** Turning the low-speed mixture screw clockwise leans out the mixture; turning the screw counterclockwise enriches the mixture.

Idle Stop Screw

1. Turn the idle stop screw in the appropriate direction (clockwise to increase idle speed; counterclockwise to decrease idle speed) until the engine idles smoothly at 3000 rpm out of the water (1800 rpm in the water).

⚠ CAUTION

The idle stop screw must come in contact with the stop. If not, the throttle cable must be adjusted (see Adjusting Throttle Cable section).

⚠ CAUTION

When adjusting the idle, do not run the engine at wide-open throttle or the rev limiter will activate and the engine will not rev up.

STEERING

Checking

1. Turn the handlebar SLOWLY from left to right, applying only light pressure.
2. The handlebar MUST bottom on the steering stops in both directions without applying any additional pressure.

CAUTION

It is very important that the handlebar contacts the steering stops in both directions without applying any additional pressure. If additional pressure is required to make the handlebar contact the steering stop in one direction, the steering cable requires adjustment.

Adjusting

1. Loosen the jam nuts securing the steering cable to the steering bracket.
2. Rotate the jam nuts in the appropriate direction to achieve proper adjustment.
3. Before tightening the jam nuts, make sure the steering cable is at the BOTTOM of the steering cable bracket.

■ **NOTE:** It may be necessary to hold the steering cable at the bottom of the steering cable bracket while tightening the jam nuts.

4. Tighten the jam nuts to secure the adjustment.

WARNING

Whenever a fastener or jam nut is removed or loosened, apply LOCTITE 271 before securing.

5. Check handlebar movement by following steps 1-2 in the Checking section.

WARNING

Turn the handlebar to the left and right several times to ensure free movement and synchronization. The handlebar MUST bottom on steering stops in both directions.

BILGE PUMP

1. Check the bilge pump for proper operation. With the engine running the bilge pump must be on.

■ **NOTE:** If the model is equipped with a bilge pump override switch, test the operation of the bilge pump and switch with the engine off.

INSPECTION

1. Inspect all hoses and connections for leakage and proper routing; correct as required.

FINAL PRE-DELIVERY PROCEDURES

1. Test that all switches (ignition, stop, tether, bilge, and trim) are operating properly.
2. Check the trim (on the Barracuda and Daytona) for full movement from the UP to DOWN position while observing the trim indicator. When the trim is trimmed full-up, the indicator should indicate full-up. When the trim is trimmed full-down, the indicator should indicate full-down. Adjust as necessary.

■ **NOTE:** If trim indicator adjustment is necessary, adjust the trim indicator cable on the trim motor (located on the jet pump housing).

3. Check throttle control operation.
4. Inspect the reverse shift lever and the reverse deflector (on the Monte Carlo) for proper operation.
5. Inspect the bilge for any signs of fuel, oil, or water leakage. If fuel is present, pressure test the fuel system. If oil is present, pressure test the oil-injection system.
6. Inspect the bilge area to ensure all cables and hoses are properly-routed.
7. Check to be sure the spare fuses are in their holders.
8. Apply Silicone Lubricant to the throttle cable, choke cable, steering cable, steering post bushings, steering cable connectors, and steering nozzle bushings.
9. Check the entire watercraft for loose fasteners and jam nuts. Tighten as required.
10. Check the contents of the tool kit.
11. Inspect the fire extinguisher for proper charge.
12. Check the seat for a tight seat seal. Adjust as necessary.
13. Test ride the watercraft. During the test ride, be sure all components of the watercraft are functioning properly and that no abnormal noises or vibrations are present. If necessary, adjust the high-speed mixture screw so the engine runs smoothly at full throttle.

■ **NOTE: Turning the high-speed mixture screw clockwise leans out the mixture; turning the screw counterclockwise enriches the mixture.**

14. Flush the cooling system.
15. After the engine has been run for 30 minutes, torque the head bolts to 1.8-2.8 kg-m (13-20 ft-lb).
16. Check to ensure all safety decals are in place and clearly legible.
17. Clean and polish the watercraft just prior to pick-up or delivery.
18. Inform the customer about the operation, maintenance, and safety features of the watercraft. Inform the customer about:
 - a. the proper salt water maintenance.
 - b. the proper submerged watercraft procedures.
 - c. the proper storage and after storage preparation procedures.
 - d. the Warranty Policy.
 - e. the Operator's Manual.

19. Complete the registration card and survey. Return them to Arctco, Inc. promptly.

GENERAL INFORMATION

■ **NOTE: The following information applies to all 1994 models.**

1. There is no oil in the jet pump.
2. Oil should not be added to the magneto housing.
3. Engine timing is not adjustable.

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