



Ready-to-Run Owner's Manual

Performance R/C Boats & Zenoah Engines

Property of Bonzi Sports

www.bonzisports.com

Thank you for choosing **BONZÍ Sports**. Please read the following instructions carefully before attempting to operate your Bonzi boat. *Failure to do so could result in injury, equipment damage, or voided warranties.*

READ PRIOR TO OPERATION

FIRST START CHECK LIST:

1. **DO NOT RUN ON LAND** – water-cooled engines require flowing WATER
2. **DO NOT ATTEMPT TO LIFT OR CARRY YOUR BOAT BY THE HATCH** - Lift by the sides with two hands
3. **CHARGE BATTERIES FOR 24 to 36 HOURS for INITIAL CHARGE**
4. **MIX FUEL AND OIL 25:1 or 20:1**

This is 5 or 6 ounces of 100% synthetic oil (Amsoil Saber Pro for example) to 1 gallon of low octane (**87 or 89 (R+M)/2**) Gasoline. No alcohol or ethanol is best if possible (**no higher than 10%**)

NOTE; most countries outside the US and Canada use ROM method to calculate octane values which results in a 4 to 5 point higher rating for the same fuel.
5. **CHOKE** - MAKE SURE CHOKE IS IN THE **OPEN** POSITION ONCE ENGINE IS RUNNING
6. a) **CARBS WITH A PRIMER BULB** – PUMP UNTIL BULB IS $\frac{3}{4}$ FULL

b) **CARBS WITH NO PRIMER BULB** – HOLD FINGER OVER CARB AND PULL ROPE STARTER SLOWLY 3 TO 4 TIMES TO PRIME

OPERATION AND MAINTENANCE

DO NOT RUN ENGINE WITHOUT WATER FLOWING – All water-cooled engines must have water flowing from the outlets at all times while running. Running a water-cooled engine on land for more than a few seconds is **NOT** recommended. If water flow stops while the engine is running, severe damage can occur (and warranties would be voided).

DO NOT LEAVE CHOKE IN CLOSED POSITION (ENGINE MAY FLOOD) - If your engine has a carburetor that is equipped with a choke, make sure the choke is **OPEN** when the engine is **running**. Running with the choke closed can result in flooding and/or hydra locking of the engine. **The choke should be closed (used) only for the first few pulls of the start cord on a cold engine.** After the engine pops, the choke should be turned to the full open position.

Give it the once over:

Your **BONZÍ** has been professionally assembled and shipped. However, it is important that you check the boat for any parts that may have been knocked out of alignment or loosened during shipping: Make sure to check all nut and bolts, the out-drive assembly, steering linkage, and radio gear.

Radio batteries:

Your Bonzi boat may have dry cell batteries (AA Alkaline), and/or rechargeable batteries. Standard dry cell battery configurations use 8 AA's for the transmitter and 4 for the receiver pack. Be sure to check your batteries and charge them (if applicable) for 24 hours for the initial charge. After each day of use, batteries should be charged for 16-24 hours, and a minimum of once every 6 months to maintain battery life. For more details, see your radio manual.

Adjusting your throttle & rudder:

Even though your **BONZÍ** is pre-adjusted from the factory, you will still want to do a final check and adjustment of your controls. Starting with the throttle, make sure you are getting full range of movement with no binding. It is very important that the carburetor closes all the way to the idle stop screw when the throttle trigger is released. *Failure to do so could cause personal injury and void your warranty.*

Refer to your radio manual for servo throw adjustment info. The steering linkage should be set-up so that the rudder is in the neutral position when the wheel on the transmitter is centered.

Radio range check:

To protect the safety of both you and your property, it is necessary to perform a range check each day prior to operation of your boat to ensure your radio equipment is working properly.

Turn both the transmitter and receiver on. Keep the antenna on your transmitter in the down position. While walking away from your boat, move the rudder back and forth watching for movement. Your radio should operate at a distance of at least 50 feet from the boat with the antenna down. If it does not, first check your batteries. If these check out good you may have a problem with the radio system that might require service from the manufacturer. **Do not attempt to operate your boat if your radio does not check out satisfactorily!**

BONZÍ Engine Break-in Procedure

Proper engine break-in is required to achieve top performance and to avoid engine damage:

1. Use **BONZÍ Break-in Oil** for the first gallon of gas through the engine (5 oz. oil to 1 gallon of 87 to 89 octane gasoline). Stop using the break-in oil mixture after 1 gallon and switch to AMSOIL Saber Pro or a comparable 100% synthetic oil (20:1 or 25:1 = 5 or 6 ounces of oil to 1 gallon of low octane gas). You can also break-in the engine with a mix of 5 or 6 ounces of AMSOIL Saber Pro (or comparable) to 1 gallon of low octane gasoline. This break-in procedure may take longer before the engine is "seated".
2. Do not run the engine at full throttle during break-in. Vary running speed. Do not stay at one speed for extended periods of time.
3. Do not idle or run the engine without water cooling for more than 1 minute.
4. **Do not over-rev the engine.** Over-revving will cause serious damage to your engine over-revving. If the boat "catches air" and the prop has no load or resistance, **immediately** let up on the throttle. Damage caused by over-revving the engine is not covered under warranty.
5. After your engine is fully "seated" and broken-in properly make carburetor adjustments to achieve top performance.

Fueling your BONZÍ:

Your **BONZÍ** engine operates on standard pump gasoline. Use low octane (87 to 89 with no or little alcohol/ethanol). Do **NOT** use “race” or fuels that are designed for aviation, race cars or other specialty high-performance applications (engine damage can occur and is not covered by warranty). Your **BONZÍ** engine **requires pre-mix oil lubrication** at a 20:1 or 25:1 ratio (5 ounces of oil to gas for 25:1 or 6 ounces 20:1). **Bonzi Break-in Oil** is recommended for engine break-in. After break-in, use mix of 100% synthetic 2-cycle pre-mixed oil (like Amsoil Saber Pro 100:1). Mix fuel/oil properly and safely, carefully fill the tank in the boat up to just below the filler neck. Operating your engine with less than the recommended gas/oil mixture can cause excessive wear and/or damage (not covered by warranty).

For more information on octane ratings see page 1

Do not smoke while working on or fueling your BONZÍ; gasoline is highly flammable!

Starting your BONZÍ:

Push the primer bulb on the top of the carburetor until it is about half full of gas. If engine does not have a primer bulb move on to the next step. If engine is equipped with a choke, turn it to the full closed position. If you do not have a choke, place your finger over the carburetor intake (venturi). Slowly pull the starter rope until you see gas come up the line and into the carburetor. Continue pulling the rope until you hear the engine pop or try to start. Turn the choke to the open position or remove your finger. Open the throttle to just below half and quickly pull the starter rope until the engine starts. Bring the throttle back to idle. *Do not* allow engine to over-rev while out of the water. Failure to do so can result in engine damage and will void the warranty. If the engine becomes flooded in the starting procedure (too much gas in the engine) it will be necessary to do the following: 1. Remove spark plug from engine and set it aside in a safe place. 2. Cover plug hole with a clean rag and pull the starter rope several times to clear out the excess gas. 3. Reinstall the spark plug and repeat the initial start procedure. You are now ready to operate. Damage will occur if allowed to operate without water for more than 1 minute. You have plenty of time to safely put your boat in the water; don't be in a rush - this can result in unnecessary damage or injury

Carburetors:

STARTING POINT CARB SETTINGS

257 and 1027	H- 1 ¹ / ₈ TURNS	L- 2 ¹ / ₄ TURNS
488	H- 1 ¹ / ₈ TURNS	L- 1 ¹ / ₂ TURNS
603	H- 1 ¹ / ₂ TURNS	L- 1 ⁵ / ₈ TURNS
644	H- 1 ¹ / ₂ TURNS	L- 1 ¹ / ₂ TURNS
813 and 813-A	H- 1 ¹ / ₂ TURNS	L- 1 ¹ / ₂ TURNS

WARNING -- DO NOT DISASSEMBLE WT-813 CARBS. WALBRO WT-813 CARBURATORS ARE EQUIPPED WITH AN ACCELORATOR PUMP WHICH IS ACTUATED BY A BALLBEARING CHECK VALVE. THIS BALL IS LOCATED AT THE RIGHT SIDE OF THE CARB BODY WHEN LOOKING AT THE BUTTERFLY FROM THE CYLINDER SIDE. THIS CARB IS NOT DESIGNED TO BE REASSEMBLED. DISASSEMBLY WILL VOID ANY WARRANTY. *IMPORTANT: 813-A butterfly output shaft uses 257 size Throttle Arm Stand-off.*

Your **BONZI** engine's carburetor has been factory set for proper break-in. This setting will not enable the engine to over-rev or run hot, allowing the internal parts break-in smoothly and assure good life span. We recommend 2-3 tanks of fuel to be run through before fine tuning your engine. Once your engine has been broken in properly, you can adjust the high speed needle to achieve top end speed. The needle on the carburetor marked (H) is the high speed needle and can be turned clockwise to lean the mixture or counter clockwise to richen the mixture.

Fine Tuning:

The best way to fine tune your engine is to turn the high speed needle 1/8th of a turn at a time, running the boat in between until top speed is achieved. If the boat starts off fast and the slows down at full throttle, the mixture is to lean and will need to be richened up until you find your boats top end limit. Depending where you live, altitude can play an important role on the carburetor settings. The higher you are the less oxygen; this will require a leaner setting. The opposite occurs if the weather is cold or rainy.

Bonzi Modified Engines feature the latest in power-increasing enhancements to provide you with a balance of power, reliability and ease of handling. In order to obtain peak performance from the "BZ" series engines, a run-in period is required. We have found that it can take up to 2 gallons through the engine before full potential is reached. For break-in and other engine info, please refer to your original engine manual. This is just a reference and actual testing will be required for optimum performance. We have found that a 20:1 (6 oz. oil per 1 gallon of fuel) mix to be ideal.

Tips for Running: After starting the engine, be careful when putting the boat in the water. Always be aware of the propeller, keeping it away from yourself and others. Be careful not to submerge the rudder or water pickup in the mud as this will clog the water pump causing the engine to overheat.

Never put your **BONZÍ** into the water where swimmers or boaters are present. After placing the boat in the water, slowly ease the throttle until the boat reaches planning speed. As a new boater, keep your model about 100 feet offshore and make right-hand turns getting familiar with the boat's response and actions. Once you feel comfortable, try making some left hand circles. Don't be concerned with full speed operation; you must first have total control of your model before attempting full speed runs. To master this takes the average person only a few hours, so take your time and enjoy the learning process. By having patience, you will become a better and safer boater. The boats run-time averages between 45 minutes to 1 hour depending on your engine level. Be sure to time your runs to avoid those long floats to the shore. **Do not** attempt to swim after your boat! If your boat is dead in the water, always use a chase boat or a tennis ball on a fishing rod as a retrieval device. **Always** use proper floatation devices when entering the water!

REQUIRED REGULAR MAINTENANCE

- **Grease the drive cable** after every day of use.
- **Lube prop** shaft with oil such as AMSOIL MP (Metal Spray) before each day of running.
- **Spray metal parts** with a light coat of AMSOIL MP after each day of use to prevent rust.
- Periodically **lube throttle cable and rudder pushrod** as needed for smooth operation.
- **Check all screws and bolts** periodically to make sure they are tight.
- **Check radio box for moisture** and dry out as needed.
- Make sure **batteries** are fully charged before use

HATCH LATCH MAINTENANCE: Occasionally the inner workings can become pitted and stick, spray a little WD-40 or Amsoil MP into the mechanism for smooth operation.

DRIVE CABLE REMOVAL - BONZI CZ OUTDRIVE: To remove the drive cable for greasing, you will need to loosen the two set screws (5/64" allen wrench) in the stainless steel shaft ferrule and slide the prop shaft back allowing the ferrule to drop out of the assembly. Next loosen the collet nut from the collet arbor (9/16" and 5/8" open end wrench) and remove Flex Cable. To re-assemble, simply reverse the process. (when re-inserting the cable push it in with the ferrule to assure proper alignment)

DRIVE CABLE REMOVAL – TUBE DRIVE: To remove the drive cable for greasing, you will need to loosen the collet nut from the collet arbor (9/16" and 5/8" open end wrench) and slide the entire Hughey Cable assembly (complete cable and prop shaft) out the back. For boats equipped with a shaft saver you will need to loosen two 4-40 socket head cap screws with a 3/32" allen wrench first. (if you have this it will be located between the stuffing tube and the collet nut)

NOTE FOR HUGHEY CABLES: It is very important to allow for cable shrinkage under load. After the cable and shaft are re-assembled there should be 3/16" to 1/4" space between the front of the drive dog and the rear of the tube (thrust washers are NOT recommended). **ALLWAYS CHECK TIGHTNESS OF COLLET AND SHAFT SAVER BEFORE EVERY RUN** Failure to do so could result in the loss of your entire cable assembly including propeller !

****Salt water use has special maintenance requirements****

SALT WATER MAINTENANCE: Salt water is **corrosive**, especially to the metal and electronics used in radio control boats. A **strict maintenance schedule** must be followed as detailed below:

Recommended Items to have on-hand:

- A garden-type sprayer filled with fresh water
- A spray lube and rust inhibitor such as WD-40 (avoid contact with rubber dampers and waterline as much as possible)
- A water proof grease for drive shaft (flex cable) lubrication

Important – Required after each day of running in salt water:

1. Spray the entire boat with fresh water to remove any salt residue
2. Remove the flex drive shaft & spray down with WD-40, re-grease and reinstall.
3. Spray all metal parts with WD-40.

Important - Engine or Radio contact with salt water:

1. **Rinse immediately with fresh water** to help stop the salts corrosive action
2. Spray down with WD-40, this will displace any water and help protect against the corrosive effect on the electronics
3. Shake off excess oil and let air dry
4. If everything was done correctly, you should be able to reassemble and be back in working order

WARRANTY

BONZI Sports' products are designed to last for years with proper care and maintenance. **BONZI Sports'** manufactured products include a 90-day warranty (from date of purchase). **BONZI**-series engines (not including Bonzi modified or in-line engines) include a 30-day warranty. Due to the high RPM and increased power of all **BONZI**-modified and in-line engines, Zenoah factory warranty does not apply. **Bonzi Sports warranty terms are NOT unconditional.** Problems due to improper care, misuse and abuse are not covered under warranty. Warranty will be voided if (specifically, but not limited to) damage is caused by improper gas/oil mixture, hydraulic engine failure (water ingested into engine), overheating due to running without water flowing (or running too lean), salt water corrosion, installation of non-**BONZI** aftermarket products causing engine or product failure, improper maintenance, wave jumping or other abusive running (common reason for gel coat fractures and/or over-revving engines).

We reserve the right to inspection and final determination of any damage covered by warranty. Freight/Shipment charges to and from Bonzi are the customer's responsibility (regardless of warranty coverage). **Please be aware that Gel coat is not covered under warranty** (as is common with boats regardless of size). ***With proper care and maintenance, Bonzi boats and parts will last for many years.***

Warranty for Electronic and Peripheral Devices such as radios, GPS systems, and Tiny Tachs **are provided by the equipment manufacturer.** Direct support may also be required.

Bonzi Tech Support and Sales:

Phone: **(317) 844-4695** Monday-Friday, 8am-4pm EST

Email: techsupport@bonzisports.com or sales@bonzisports.com

General Maintenance & Tips:

1. Recharge batteries, use tester to check charge. Always used fully-charged batteries!
2. Transmitter batteries should be judged by the indicator lights on the transmitter. Do not risk low readings!
3. Remove tape from the radio box lid after each daily use.
4. Check the radio box for water seepage regularly and for any corrosion on the battery pack and receiver/servo terminals.
5. Grease the flex cable shaft after each daily use.
6. Apply spray lube into the throttle cable tube after every 10 hours of use or if the boat has been submerged.
7. Check for loose nuts and bolts before running on a regular basis.
8. Use fresh water to circulate through the cooling system after running in salt water. Remove the water pick-up line from the rudder and place the end in a bucket of fresh water. Allow engine to run for 2 minutes at idle.
9. Clean the interior and exterior of the boat with a mild soap and water solution.
10. As an added safety feature, you can wrap your receiver and battery pack in a balloon to protect against water.

Off-season storage:

1. Drain all gasoline from the tank and remove all batteries.
2. Remove spark plug and spray non-corrosive oil into the engine cylinder.
3. Pull the starter rope a few times to assure total lubrication then re-install spark plug.
4. Remove drive cable and store in a tube of automatic transmission fluid (ATF).
5. Spray all metal parts with lubricant.
6. Apply a coat of automotive wax to the gel-coat surface.
7. Cover the boat with a breathable material (cloth) and store in a safe, dry place.

Do's & Don'ts of R/C Boating:

1. Never operate r/c boats where swimmers and boaters are present.
2. Never swim to retrieve a "dead boat" without an approved life saving floatation device.
3. Keep hands and clothing away from the propeller while the boat is running.
4. Keep all spectators at a safe distance from your **BONZI'** while it is running.
5. Never allow unsupervised operation by children.
6. Recommended minimum operating age is 14.
7. Never smoke while fueling or working on your **BONZI'**
8. Maintain your model regularly, so it will perform safely and satisfactory.
9. Average radio range is approx. 100 yards (there is no need to be that far from the shore).
10. Your **BONZI'** will reward you with many years of enjoyment if properly cared for. It is a real boat and can be potentially dangerous causing both personal injuries as well as property damage if carelessly used. As an operator, you are responsible for your actions using this model boat. Use common sense while operating your **BONZI'** and enjoy a safe model boating experience.

Troubleshooting Guide:

PROBLEM	SOLUTION
ENGINE	
Boat runs fast for a short time then slows down when at full throttle.	Adjust carburetor high speed needle to lean. Open needle counter-clockwise in 1/8 increments between water testing.
Engine stalls or runs very hot.	Water pump or cooling lines clogged. Check water pick-ups, pump and hoses for internal debris.
Engine sounds raspy or misses.	-Carburetor high speed needle to rich. Close needle clockwise in 1/8 increments between water testing. - If your engine has a choke, make sure it is fully open
Engine surges at full speed.	- Low fuel. - Fuel cap breather hole clogged (clean/replace) - Fuel pick-up lines reversed.
Clutch will not disengage.	- Engine idles too high. See carburetor adjustments. - Clutch bolts rusted or dirty. Clean or replace.
Engine revs-up; clutch will not engage.	Clutch shoes and or clutch bell worn. Must be replaced.
EXHAUST	
Large amount of black oil is evident inside the hull.	- Tighten exhaust manifold or canister. - Replace exhaust gasket. - Replace exhaust coupler.
Exhaust header loosens up after running.	Check exhaust manifold screws and tighten if necessary after each use. If persists, change exhaust gasket. <i>Do not</i> use thread lock on exhaust manifold bolts.
HULL	
Boat runs flat on water causing control issues.	Raise out-drive angle slightly positive until the hull runs 1/3 or less surface contact.
Boat pulls to the right when throttle is increased.	Add more left rudder trim to compensate for propeller torque. It is best to set up your boat by trimming it to run straight at high speeds. Prop torque is more evident in models than in real boats and must be dealt with.
HARDWARE	
Strut bearings wear frequently	- Check prop for balance. - Check stub shaft for trueness.