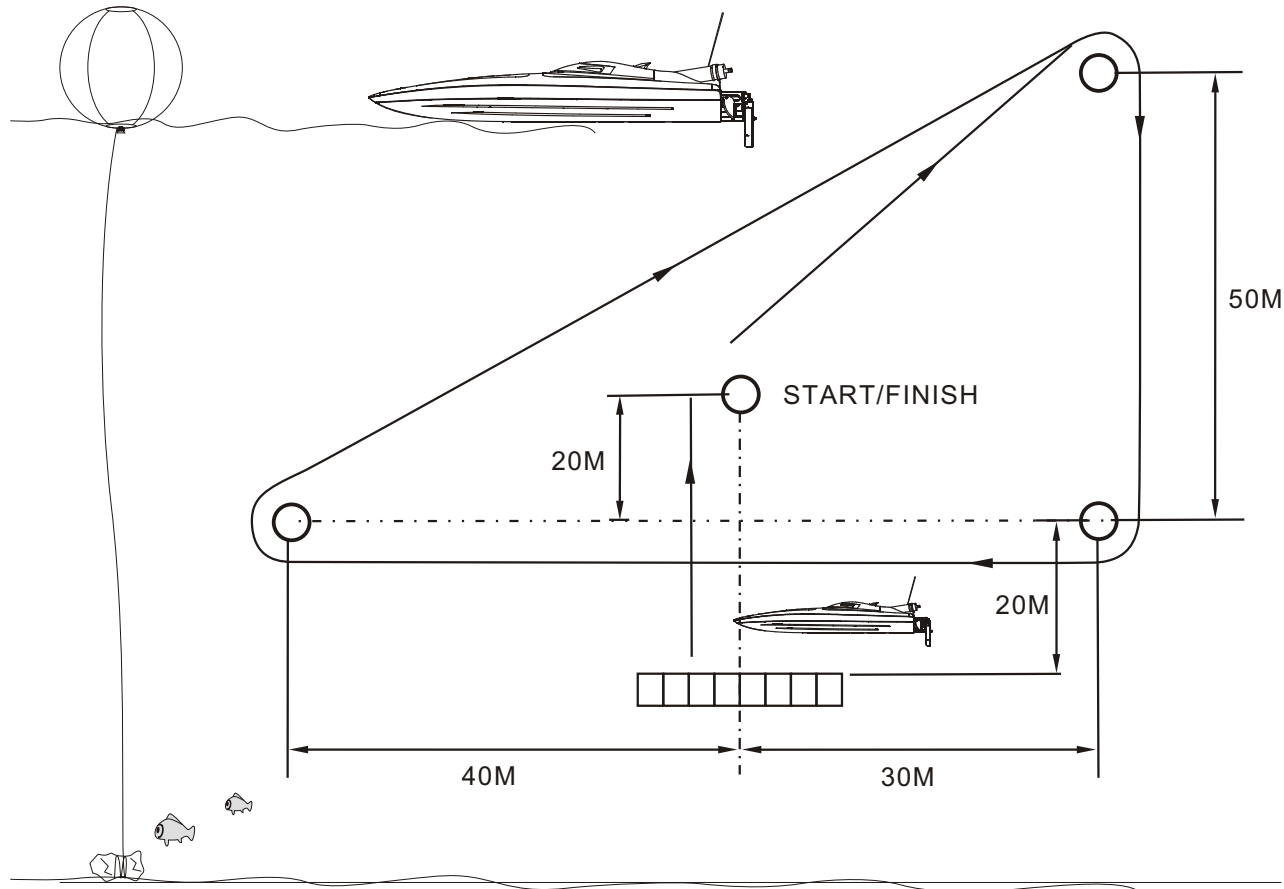


Here are some suggestions for setting up a simple race course for boats:

Make 3 simple "Maker Buoys" with beach ball, string, and heavy objects for anchors, similar to the above sketch. Place the buoys as above sketch. for "OVAL RACING" The length can be vary.



**MEMO**

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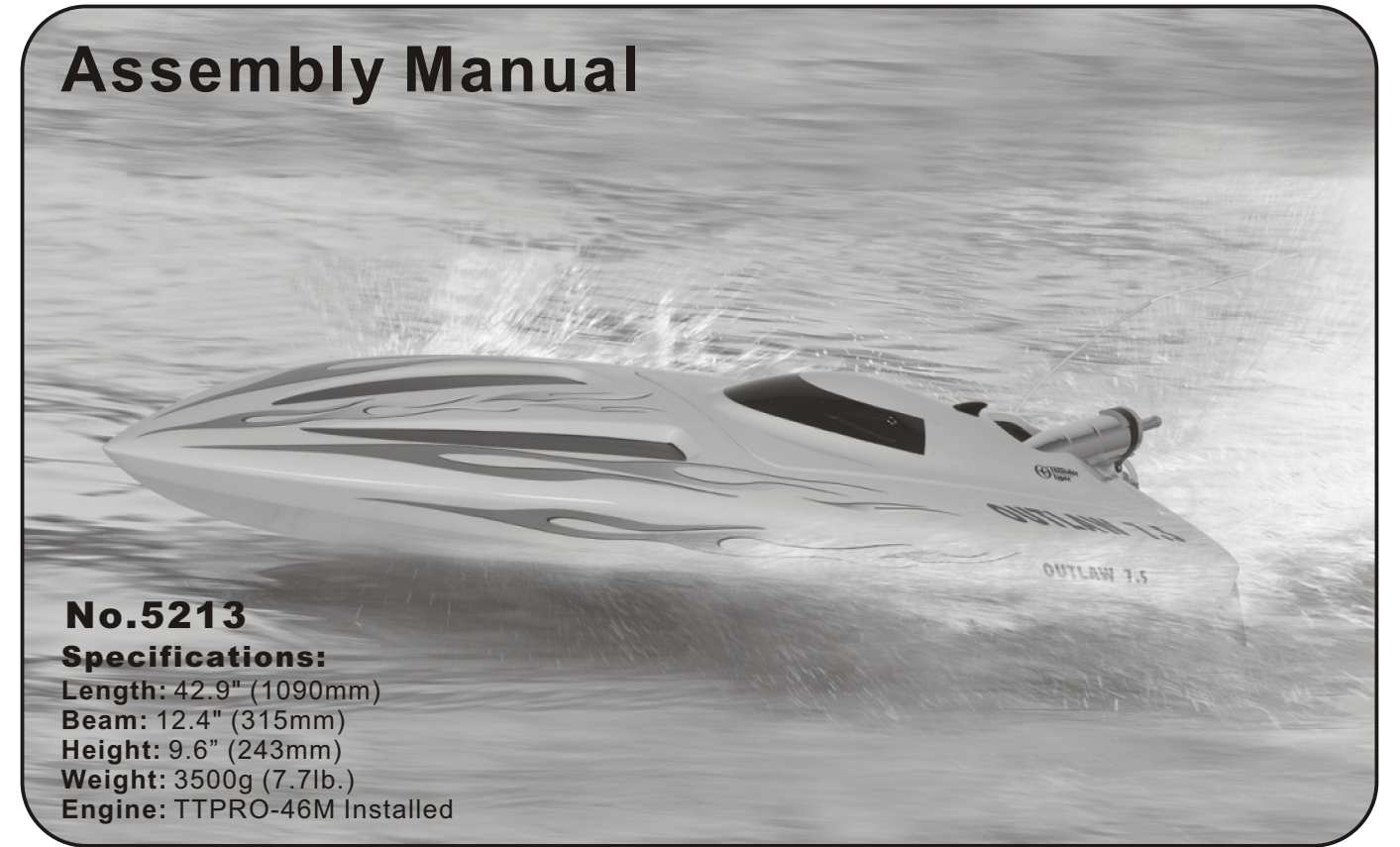
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# OUTLAW 7.5

**Off-Shore Deep Vee**

**Assembly Manual**



**No.5213**  
**Specifications:**  
 Length: 42.9" (1090mm)  
 Beam: 12.4" (315mm)  
 Height: 9.6" (243mm)  
 Weight: 3500g (7.7lb.)  
 Engine: TTPRO-46M Installed

**Warranty**

This kit is guaranteed to be free from defects in material and workmanship at the date of purchase. It does not cover any damage caused by use or modification. The warranty does not extend beyond the product itself and is limited only to the original cost of the kit. By the act of building this user-assembled kit, the user accepts all resulting in liability for damage caused by the final product. If the buyer is not prepared to accept this liability, it can be returned new and unused to the place of purchase for a refund.

**Notice: Adult Supervision Required**

This is not a toy. Assembly and running this product requires adult supervision. Read through this book completely and become familiar with the assembly of this boat. Inspect all parts for completeness and damage. Browse [www.thundertiger.com](http://www.thundertiger.com) for more information or customer service if you encounter any problems.

# INTRODUCTION



## INTRODUCTION

Thank for purchasing Thunder Tiger Outlaw 7.5 Off-Shore Deep Vee! This performance racing boat is test approved by Hydro World Champion Jorgen Andersson that you will experience the racing thrill very soon. Read the manual thoroughly to familiar with this boat spare parts and starting step as well as some tips and safe cautions is strongly recommended. If you encounter any problem in running this boat, contact Thunder Tiger for tech support and customer service.

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## SAFETY PRECAUTIONS

- Do not get anything close to the spinning propeller as it is dangerous and may cause serious injury.
- Never run this boat in water where there is any swimmer, animal or obstacle. It might cause property damage and serious injury if a collision occurs.
- Refer to radio manual and always do the range, frequency checking to avoid any possibility of interference. Never take the risk to run the boat without doing these checking procedures.
- Model fuel is highly flammable. Always store it in cool, away from sparks or heat source.
- Always exam the silicone tube includes fuel tube, water tube, and pipe tube. Make sure there is no leak and the tubes are in well condition.
- Always start your engine in an open area as it exhausts deadly carbon monoxide.
- Do not touch the engine and pipe until it has cooled down. Special when pick up the boat from water.
- Always attach the water fin sleeves as the fin is very sharp may cause body injury.
- Wear safety glasses is strongly recommended as spinning propeller may throw loose material such as sand or gravel into your face.



Developed In Cooperation with  
**Hydro**  
World Champion  
**Jorgen Andersson**



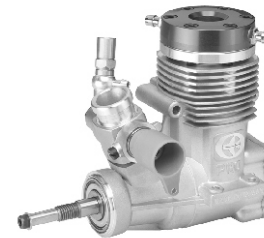
# OUTLAW 7.5

## ITEMS INSTALLED



No.8217

**Radio** - A 2ch Radio with 2 standard servos are installed. Read the radio manual before operation.



No.9554

**Engine**-Water Cooled PRO-46M Engine is installed. Check the manual for the break-in procedure.

## ITEMS NEEDED FOR COMPLETION



No.1263-65

**Carry Master**-Thunder Tiger offer a complete organizer of field equipment. All you need is included.



**Fuel**-15~30% Nitromethane Model Fuel.



No.1645

**Pump**-An efficient hand crank fuel pump.

# ITEMS NEEDED



No.1102

**4 way Wrench**-Easy to unplug the glow plug.



No.2156~2161

**Glow Starter**-Thunder Tiger 2.4Ah high capacity Glow Starter provides long time power to the glow plug. Each glow starter comes with wall charger.



No.2675

**12V DC Starter**- Provides high torque starting power to start your outboard engine.



No.2624

**Sealed Battery**- 7Ah 12V Sealed Battery-Provides power for your 12V starter.



No.2980

**Battery Pack**-AcePower NiMH 3600mAh 4.8V Battery Pack is recommended. High capacity for long time use and perfect fit in radio compartment.



**Dry Cell**- AA size 12 pcs Alkaline dry cell are required.

## COMPREHENSIVE ITEMS NEEDED CHECK LIST

- Rubbing Alcohol
- Paper Towels
- Sponge
- Misc. Household Tools
- 17mm Wrench x 2 pcs
- Lubricant oil or WD40
- Grease

# PARTS LISTING



### PJ6087 Hull

Hull (1)

### PJ6088 Hatch Cover

Hatch Cover (1)

### PJ6089 Radio Box

Radio Box (1)  
Waterproof Seal (1)  
Servo Tray (1)  
Radio Box Cover (1)  
Nut (5)  
4x15mm Socket Screw (5)

### PJ6090 Turn Fin Set

Turn Fin (L/1,R/1)  
Turn Fin Mount (2)  
Blind Nut (4)  
3x12mm Socket Screw (2)  
3x15mm Socket Screw (4)  
M3 Locknut (2)

### PJ6091 Trim Tab Set

Trim Tab (2)  
Trim Tab Mount (2)  
Nut (4)  
Blind Nut (4)  
3x15mm Socket Screw (4)  
4x22mm Socket Screw (4)

### PJ6095 Rudder MNT Set

Rudder Mount (1)  
Rudder Retainer (1)  
3x3mm Setscrew (2)  
3x15mm Sink Screw (4)  
Pin (1)  
Standoff Ball (1)  
Steering Arm (1)  
Blind Nut (4)

### AJ0363 230 Prop.

Propeller (1)

### PJ6093 Strut

Strut (2)  
M4 Locknut (1)  
4x15mm Socket Screw (1)

### PJ6094 Strut MNT

Strut Mount (2)  
Blind Nut (4)  
Sink Screw (4)  
3x15mm

### PJ6096 Pushrod Set

Throttle Pushrod (1)  
Rudder Pushrod (1)  
Clevis (2)

### PJ6097 Rudder Set

Rudder (1)  
3x17mm Sink screw (1)  
4x18mm Socket Screw (1)  
M3 Locknut (1)  
M4 Locknut (1)

### PJ6098 Flexible Shaft

Flexible Shaft (1)

### PJ6099 Prop. Shaft

Prop. Shaft (1)  
3x2mm Setscrew (2)

### PJ6100 Drive Collar

Prop Drive Collar (1)  
M4 Locknut (1)  
4x4mm Setscrew (1)  
Teflon Washer (1)

### PJ6186 Teflon Tube

Teflon Tube A (1)  
Teflon Tube B (1)

# OUTLAW 7.5

# PARTS DRAWINGS

### PN0297 Flywheel Set

Flywheel (1)  
Nut (1)  
Collet (1)

### AA1813 Flywheel Shim

Flywheel Shim (1)

### PN1806 Clutch Shoes

Clutch Shoes (4)

### PN1807 Clutch Spring

Clutch Spring (4)

### PN0296 Clutch Bell

Clutch Bell (1)  
Washer (1)  
Ball Bearing (2)

### PN0309 Coupling Set

Rear Coupler (1)  
Front Coupler (1)  
3x3mm Setscrew (2)  
Jaw (1)

### PN1502 Muffler Bolt Set

3x35mm Socket Screw (2)  
Spring Washer (2)

### PN0295 Water-cooled Manifold

Water-cooled Manifold (1)

### PJ6188 Engine MNT

Engine Mount (1)  
Washer (4)  
4x13.5mm Socket Screw (4)  
3x15mm Socket Screw (4)

### 9723 Tuned Pipe

Tuned Pipe (1)

### PJ6092 Muffler Strip Set

Silicon Plate A (1)  
Silicon Plate B (1)  
3x8mm Washer Self-tapping Screw (2)  
Mounting Strip (1)

### PJ6187 Muffler Adaptor

Muffler Adaptor (1)  
Tie Band (2)

### PJ6194 Damper

Damper (4)

### 3265 Fuel Tank

480cc Fuel Tank (1)  
Clunk (1)  
480cc

### 1177 Silicone Fuel Line

φ 2.5 Silicone Fuel Line (1)

### 1250 Silicone Tube

φ 3 Silicone Tube (1)

### PJ6189 Al. Stiffener Set

Al. Stiffener (2)  
Washer (6)  
4x13.5mm Socket Screw (6)

### PJ6190 Antenna Set

Antenna Tube (1)  
Antenna Mount (1)  
2x8mm Wood Screw (2)

### PJ6191 Waterproof Set

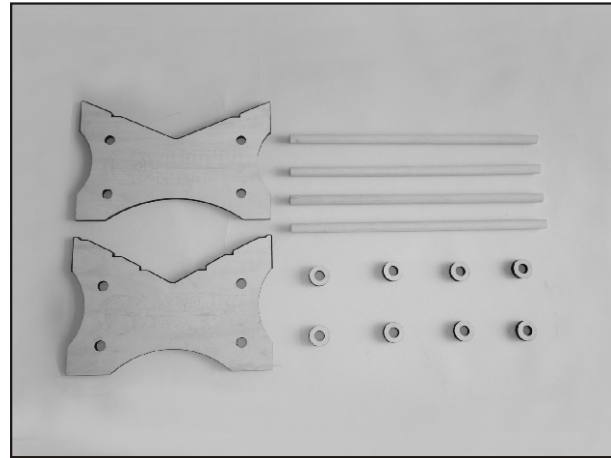
Waterproof Seal (3)  
Fuel Tank Foam Retainer (2)  
Rubber Band (S/2)  
Rubber Band (L/2)  
Ring (1)  
Switch Boot (1)  
Switch Plate (1)  
Ballon (2)

### PJ6192 Wrench Set

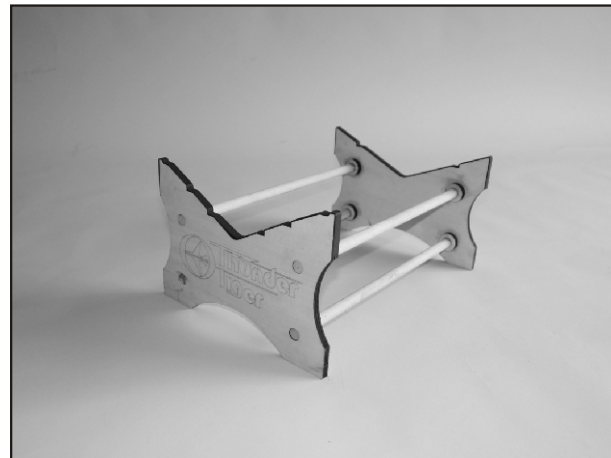
M1.5 Hex Wrench (1)  
M2 Hex Wrench (1)  
M2.5 Hex Wrench (1)  
M3 Hex Wrench (1)  
4 Way Wrench (1)

### PJ6193 Boat Stand

Wood Stand (1)  
Wood Stick (4)  
Foam Tape (4)



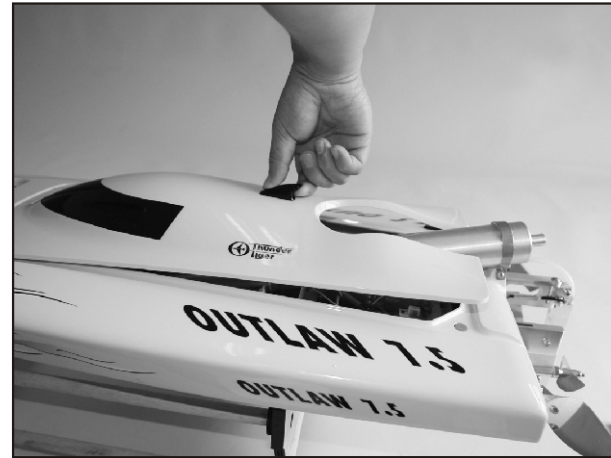
1. Carefully remove your Outlaw stand kit from the box. Includes two stands, 4 sticks and 8 doublers. Assemble the stand as illustrated.



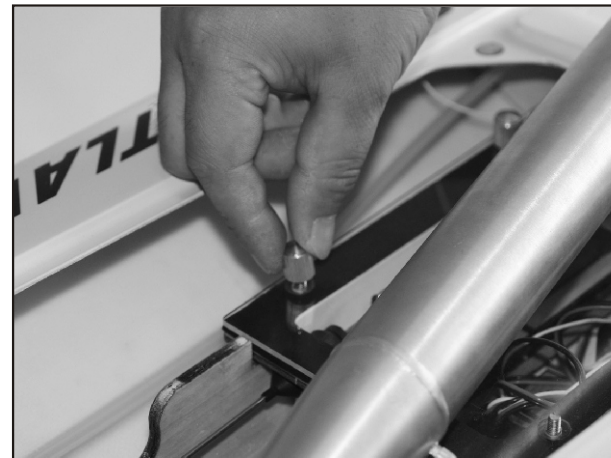
2. You need to use epoxy or CA to secure the sticks and doublers. Locate the foam tapes, then apply on the top side of the front and the rear stand, this is to protect the bottom surface of the hull.



3. Now you can place the Outlaw on the stand. Note the orientation, if you place the Outlaw in a wrong way then there will be a big gap between the bottom surface and stand.



4. Open the hatch cover with your index finger at the black fin. Always open the cover gently, do not open wildly as this may damage two pins which are located in the front of the hatch over.



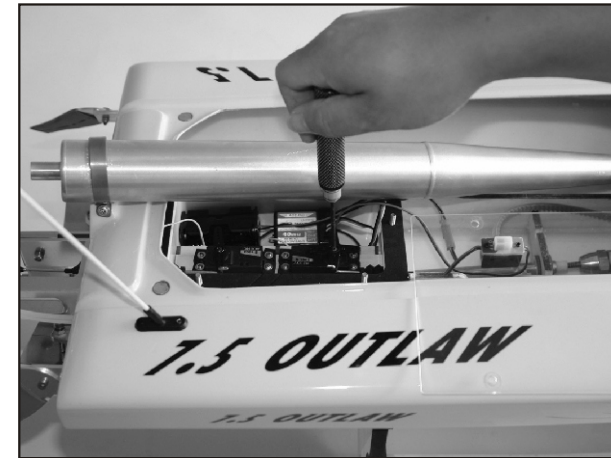
5. Remove the radiobox cover by loosening 5 nuts.



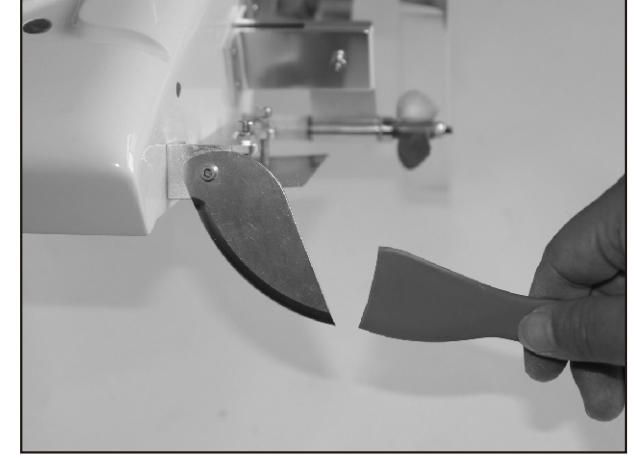
6. Install 4 dry cells or rechargeable battery in the battery holder. Change to 3600mAh 4.8V NiMH battery pack is recommended. Insert the antenna tube in the antenna mount.



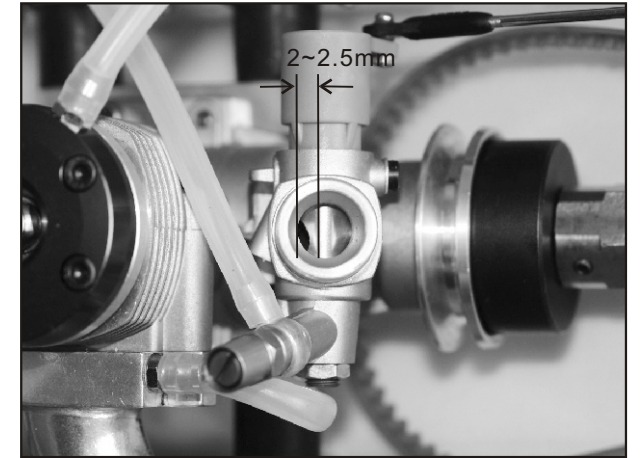
7. Use balloon to well wrap the receiver and battery holder, next seal the opening with the small rubber band. This will help to resist from the water or humidity.



8. Next install 8 dry cells in the Transmitter then open the radio. Refer to the radio manual and page 10 to adjust the throttle and rudder properly. Turn off the radio switch after adjustment. Check all hardware screws and make sure they are tightened before starting the engine.



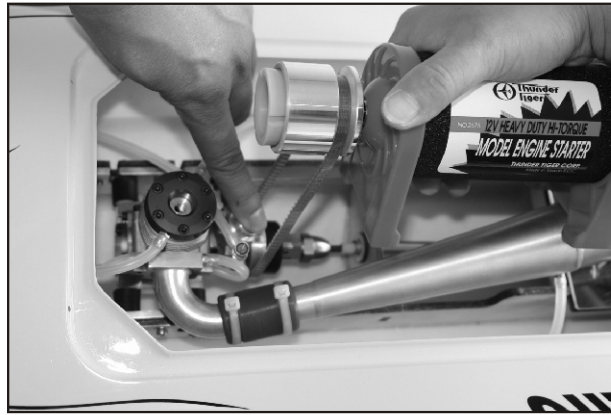
9. Remove the sleeve of water fin before starting the engine or placing the boat in water. Always put the sleeve on when boat is off water or use care when in operation as it is sharp and may hurt your body.



10. The initial setting of the engine is suggested as follows, a small flat head screwdriver is required to do the needle adjustment.  
Main Needle 2-1/2~3 turn  
Idle Needle 1-1/4~ 1-3/4 turn ( Barrel Full Open)  
Barrel open at 2~2.5mm as photo shown



11. Unplug the fuel line from carb then pump the fuel to tank, 15% of Nitro is recommended. Of course the higher percentage of Nitro, the more of the power. However, high nitro means higher price and also will decrease the life of engine.



12. Remove the glow plug by using the 4-way wrench. Choke some fuel in by blocking the carb for a second or two running the starter.



15. Place the boat in water to break-in the engine or engine will overheat and be damaged. As soon as the engine starts, trigger the throttle and make sure the engine rotates counterclockwise, remove the glow starter, well position the belt in the notch then put on the hatch cover. Next place the boat in the water and go.



18. Run the boat in rich about two tanks then you can try to reach the peak. As this boat has clutch system you can easily stop the boat in idle near the shore or pier. It is not recommended at slow speed for a long time as there is no water to cool the engine.



21. After cruising, come back to the pier then stop the engine by pushing the trigger. Always take great care and away from the hot pipe and sharp water fin. Check all screws again, make sure they are tightened.



13. You may do this way several times to clean the engine before Break-In. Note: Keep away from the spray out fuel, use your hand to feel fuel spray until it is foggy.



16. It is required and suggested to put the boat in water as soon as engine starts, if you tune the engine too long or too high then engine will be overheated. You will have to let engine water cooled by running the boat.



19. If boat is too slow then come back to the pier and adjust the main needle. Suggest to tune 1/4 turn each time until you feel it is faster. Once you feel it is getting higher but not the peak then tune 1/8 or 1/16 turn in each time for peak performance.



14. Screw in the glow plug then start the engine. Suggest to use high voltage 18-24v starter for easy starting, if a normal 12V starter is used then unscrew the glow plug by 1/2 turn for less compression is required or it is hard to start. You will need one assistant to help you start the engine. Hint: You may wisely to turn on starter first then pull the belt, this is to let starter has a initial speed for easy rotating. If belt is pulled before turning on the starter then starter may be not torque enough to rotate.



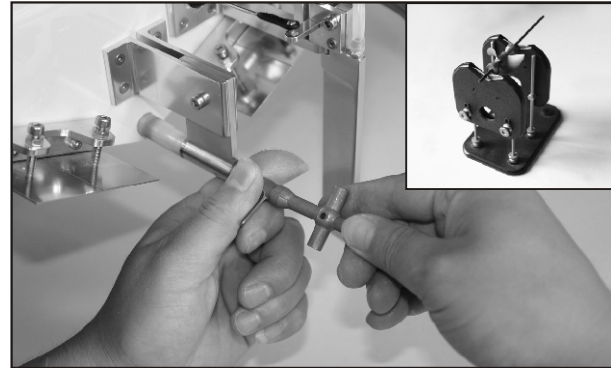
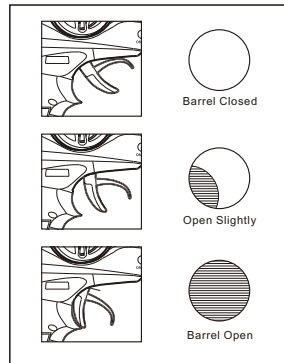
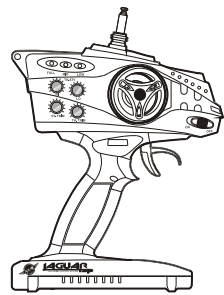
17. It is required to run the boat at least middle speed around 20 mph/ 32 kmp so it is fast enough to draw the water from rudder to engine and pipe. Always check if there is water out from the port. No water goes out the engine will overheat very soon.



20. The Outlaw can run in high speed for about 10-min. without question if you well tune the engine. Always keep engine rich or it is easy overheated when full is less in the tank.

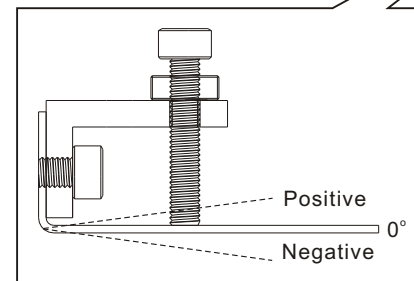
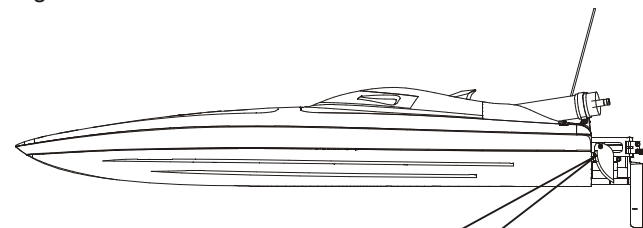


22. Lubricate the drive shaft is important. You will need two 17mm wrench to loosen the coupler. Take out the shaft by unscrewing the strut from the mount. Suggest to exam the shaft every 5 runs, clean and apply new grease is required. Replace new tube and shaft if they are worn out.



### BALANCING THE PROPELLER

To improve performance, balancing the metal propeller is highly recommend. First remove any flashing on the propeller then use quality propeller balancer to do the balancing. Sharpen the leading edge of propeller will have better performance and get less prop work to the right.



### PROPELLER THRUST ANGLE

Adjust the thrust angle might be necessary. The default setting of the thrust angle is in the neutral position where strut is level with the mount.. However, it might be necessary to adjust upon the following situation.

Bow Up-Adjust the thrust angle to negative so it will Downward the bow.

Bow Down-Adjust the thrust angle to positive so it will Upward the bow.

### TRIM TAB

The Outlaw 7.5 has two trim tabs at the transom. Suggest to do the all adjustment in calm water. Basically the Outlaw is capable of running on wild water yet it need to adjust the trim tab downward or it might jump too high and have a loop in air.

The thrust angle and trim tab are related to each other, use patient and adjust your outlaw for its peak performance.

Bow Up-Adjust the trim tab to negative so it will

Downward the bow.  
Bow Down-Adjust the trim tab to positive so it will Upward the bow.

Each trim tab has two tabs, try the inner one or outer one respectively may get different result in the water.

### Congratulations!

Now you are ready to test run your boat!

### RUNNING THE OUTLAW

#### LAUNCH PROCEDURE

- 1.Refer to radio manual and always transmitter on first receiver last.
- 2.Refer to Manual and start the engine, always stay clear of spinning propeller.
- 3.Gently place the boat in at least 12"(30cm) deep water and free of obstacles (rocks, weeds, sticks, muskrats, ducks, etc...).
- 4.Watch out the spinning prop and water fins during the launch.
- 5.When finished running, stop the engine then Receiver off first Transmitter off last.

#### MORE RUNNING TIPS!

Besides the "Safety Precautions" at the beginning of this manual we recommend you read through the following valuable tips that help you enjoy boating the Outlaw successfully and safely.

- Make sure the water cooling system is working properly or it will cause engine overheated.
- Refer to engine manual to lubricate your engine periodically.
- Choose a windless day to run your Outlaw as wind can cause rough water that will affect the performance.
- The running time of Outlaw about 10 minutes (full tank of fuel). Always notice the running time and have it back to the shore before engine quits.
- Check the lake and wind direction then choose a good location for boating. The wind can carry it back to the shore if engine is killed. The following is a good way to get your back. Retrieve the stalled or capsized model boat with a fishing rod that equips real. Tie a tennis ball on at least 12 lb. string.
- Do not run your Outlaw on a flowing water like creeks or rivers as well as jump into the water or swim after a stalled or capsized boat!
- Always keep running away from wildlife, do not intend to threaten with any wildlife with your Outlaw. This is prohibited at any lake or pond.

Happy Boating!

#### MAINTENANCE

Basically you need to dry and clean the boat after running, specially if you would store the boat for a period of time. Lubricate the engine, grease the drive shaft is required.

#### RADIO BOX

Check radio box immediately once flipping is occurred.

Always keep radio box dry or R/C device will be damaged, suggest to open the box after running. This is to absorb any moisture inside the box.

Remove the balloon from receiver and battery after running.

#### HULL

- 1.Prepare the sponge or cloth which will help to remove the water in the hull.
- 2.Always clean the hull after each run special the area has fuel or exhaust residue.
- 3.Exam the hull after each run, make sure there is no damage at side and bottom.
- 4.Always remove the hatch cover, this will help to dry the inside of the hull.

#### ENGINE

Pump out all fuel after running. Remove the glow plug and drop some After-Run-Oil or spray WD-40 in the carburetor(Full Throttle) then using starter to rotate the flywheel and make sure the lubricating oil is in.

#### DRIVE SHAFT

Remove the drive shaft, includes Teflon Tube, Flex Shaft, and Prop Shaft. Clean and dry these parts then apply new grease.

#### RACING

It is always exciting to race with other boats. Be aware of following suggestions before you go race with other boats.

Race with other boats.

- 1.Fine tune the engine and boat. Make sure all screws are fasten firmly.
- 2.Aware of the environments and racing course.
- 3.Aware of the rough water created by other boats. Keep distance to other boats and avoid crash.

#### MODEL BOATING ORGANIZATIONS

Please browse the following website for more details of regional or national racing.

United States and Canada:

APBA [www.Apba-rcboating.com](http://www.Apba-rcboating.com)

IMPBA [www.impba.net](http://www.impba.net)

NAMBA [www.namba.com](http://www.namba.com)

France

FFMN [www.ffma.fr](http://www.ffma.fr)

Great Britain

MPBA [www.mpba.org.uk](http://www.mpba.org.uk)

Sweden

SMBF [www.smbf.info](http://www.smbf.info)

Australia

AMPBA [www.ampba.asn.au](http://www.ampba.asn.au)

### RADIO CHECK

Check the radio manual to familiar with the adjustment of the throttle activity and the steering dual rates.

In above figures, squeeze the trigger on the transmitter; throttle is opened. Conversely, moving the trigger forward, throttle is closed completely. If this is not the case, you will need to reverse the direction of the servo. Check the instruction manual that came with your radio system for the correct procedure.

Make sure the steering is correct when rotate the wheel on the transmitter. Later on when running the boat you may trim the steering by adjusting the trim knob on your transmitter until it runs straight when the steering wheel is at neutral position.