Thunderboat Tuning

This is being written for the Zippkits Thunderboats, but most of this will apply to any boat.

With the rules requiring a stock Zenoah 260, you will have to do some work to get your boat competitive.

One of the most common questions we get is about boat weight. We have found that it is not a major concern. Try to keep it under 20 pounds and you will be fine. The average weight for a Bullitt is just under 17 pounds.

The key to a winning boat is in the details. I would say that the most gains are in the prop and turn fin.

Here is a list of things that you will want to do.

Let's get the east ones out of the way first.

Balance point: The Bullitt should balance at the sponson transom (bulkhead 3). There is no other place. It will blow over if not here. Add as much weight as needed to get here. Adding fins, etc. to the rear will make this worse.

Prop: Current props are PW 6717/3-400 RES and Zipp 2716/2-20

Zipp Pipe length: Set at 13.5 inches. If using the dropped header, pull it all the way in.

Sand bottom: Sand the entire bottom (in the direction of water flow) with 400 grit wet paper.
Sand Just enough to remove the gloss. Do not wax bottom.

Sharpen fin: The perfect turn fin would have a leading edge of zero thickness, and a trailing edge of full thickness. This is practically impossible to achieve, so we get it as close as we can by making a long bevel and blending it in. The leading edge does not have to be razor sharp. .020 or so is fine. Too sharp and the edge will roll over.
The goal is to make the transition to full thickness as smooth as possible. You should not be able to see or feel any transition.

Thunderboat Tuning

Adjust fin: Open up the small hole in the fin so that you can pivot it on the front bolt. 1/8 inch each way is more than enough. Bolt the fin in place so that it is flush with the top of the bracket.

With the 257 carb, set your needles at 2 turns on the L needle and 1 turn on the H.

The strut should be set exactly as shown in the manual (7/8 inch, flat). You should never have to adjust the angle of the strut. Flat on the bench is the best setting.

We break the engine in by running alternating slow/ fast laps. Slow way down, but stay on plane.
Do this for every other lap. Full throttle on the others. Same oil and ratio always (8 ounces/gallon).

While running, note how the boat is riding in the front. If it seems to be pushing water, kick the bottom of the fin FORWARD a tiny bit. Make it so that the top of the fin is about 1/32 inch below the bracket at the rear and try again. Keep moving the bottom of the fin forward and test the position by making a left correction. Not a left turn, just a correction. If the fin climbs out of the water, it is too far forward.

Once you have run the engine for 4 or 5 cycles (cool down completely between cycles), you will notice that it is really starting to make some power.

Time for the radar gun.

At this point, you should be in the low 50's or so. Radar each test run from now on.

Adjust the pipe by pulling it out 1/8 inch and testing. Make at least 3 passes at the radar gun.

Try different props.

Keep in mind that whenever you make a prop or strut change, the turn fin will need to be adjusted.
Different props will lift the transom in varying amounts. The transom is connected to the boat,
which is connected to……. The turn fin!

Currently, if you can get to 55-56 mph in testing consistently, you will have all the boat you need to win.
The other 80% is skill and strategy…Good Luck!

Joe Petro
Zippkits.com