



Motorsport america

If it has Horse Power - We'll be There!



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New Issue

Events

Links

Archives

Classifieds

Advertising

Contact Us

Home

IHBA:

You Can Tune A Boat, But You Can't Tuna Fish (with apologies to REO Speedwagon)

Story & Photo by Glenn Boylan

Like their 4-wheeled counterparts on land, drag boat racers are all about making horsepower and maximizing acceleration. IHBA Top Fuel Hydro racer Greg Tedesco talked with Motorsport America about the ins and outs of tuning a drag boat at the recent IHBA Southern Thunder Boat Drags on the Coosa River in Gadsden, Alabama.



Crowds enjoy a clear view of the river race from shore.

Greg is well versed on the matter. He is a two-time IHBA champion in TFH. After 6 races this season, he's got 4 wins, 2 runner-ups, and a huge lead in the points standings. His "Loose Cannon" entry is the most feared boat on the circuit.

Obviously, the engine is the most critical part of the boat's setup. Greg's blown nitro aluminum Hemi is no different than what Kenny Bernstein runs. But while Kenny is limited to 90% nitro, Greg uses between 92% and 97% depending on the conditions.

The clutch in the Loose Cannon locks up immediately when Greg hits the throttle at the start. To keep the engine from bogging down, boat racers rely on propeller efficiency. Propeller efficiency is measured by how much horsepower is transferred to the water (and thus driving the boat) versus how much horsepower is supplied to the propeller.

"The propellers are totally inefficient at the start," Greg explained, "and

then they start to catch up as the boat speeds up until they are completely efficient." Getting the proper balance of inefficiency at the start and efficiency at the top end requires the right horsepower, fuel curve, and propeller size. The team switched to a dual prop setup this year, which Greg says requires tremendous changes to the tune up of the boat. "I'm running a tune up that I could never run with a single prop."

The most important inputs to the tuning process are the air and water temperatures. Air temperature is especially tricky because the temperature in the pits is usually different than the temperature on the water, and that has to be accounted for in the tune up. At Gadsden, the ambient air temperature in the pits was about 100 degrees, but it was only 70 out on the river. At the race in Red Bluff, California earlier in the year, it was 110 in the pits and 52 degrees out on the lake.

When I asked Greg if there's a difference between the water at the various race venues, he said "Absolutely! The warmer the water the less dense it is and the propellers don't grab as well." Add to that the fact that the water temperature is unrelated to the air temp. At the previous race in Augusta, Georgia, the air was hotter, but the water was 20 degrees cooler.

Of course, even a perfectly setup boat has to be skillfully driven down the course. When he's driving, Greg keeps track of how the boat hooks up and its attitude in the water, which he tracks by watching the horizon. Greg's been driving a long time, and he knows what it takes. "I like driving, but these boats are volatile. They're violent. If you're intimidated, you're going to get hurt. You can't be afraid, but you have to have respect."

Quite literally, Greg and the entire Loose Cannon team have learned to walk that fine line between fear and respect. The results speak for themselves.

[Back to Home Page](#)

[New Issue](#) | [Events](#) | [Links](#) | [Archives](#) | [Advertising](#) | [Contact Us](#) | [Employment](#) | [Classifieds](#)