



Dixon Smith: THE MAN WITH THE ANSWERS, Part Three.

When someone within the sport of unlimited hydroplane racing has a technical question about the boats, he or she will often go to Dixon Smith for the answer. In parts one and two of our interview with Smith, he recapped his first experience with Unlimited hydroplanes, then talked about his early involvement working on *Miss Seattle* and *Hawaii Kai III*. Next, he worked on *Miss Bardahl*. He explained how the quill shaft problem was solved and the use of nitrous oxide. In 1966, when the cabover *Miss Bardahl* crashed, he went to work on *Tahoe Miss*. He then joined the Navy as a naval flight officer. When



Jon Osterberg

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his active duty was concluded, he worked on *Pay 'N Pak* and flew *Pay 'N Pak's* corporate jet. When *Pay 'N Pak* left racing, Smith became a pilot for United Air Lines. At the same time, he was on a retainer, working on the Rolls Griffon *Miss Budweiser*. In part three of our interview, Smith talks about the turbine-powered *Miss Budweiser* boats, restoration of the vintage 1962 *Miss Bardahl*, offers some comments about drivers he knew, and concludes with a story of how he met his wife. The majority of the interview was conducted by Craig Fjarlie on May 26, 2023, but a few comments are from an October 8, 2022, discussion when Smith was the guest speaker at the Seafair Boat Club's annual meeting.

UNJ: The *Budweiser* team stopped using the Rolls Griffon engines and concentrated on turbine power. What was your involvement when the change was made?

Smith: I worked on the turbine boats and when, a little bit later, they decided to build a dynamometer for testing the engines, I did all the instrumentation, computer work on the test cell, and so forth. I was with the turbine boat basically until it quit racing and did mostly engine development work, but we also did some wind tunnel work.

The first time they sent a model down to the wind tunnel they just had aerodynamics people down there doing some stuff. When the results came back, I asked a bunch of questions and some of the answers didn't make real good sense to me from a boat racing standpoint. Aerodynamically it was probably okay. One of the things that I asked about is, "In the wind tunnel, how much side slip do you guys look at?"

"Oh, we looked at 10, 12 degrees. That's a lot."

"No, that's not a lot."

"Yeah, that's plenty, you know, you'll never get it."

Well, in an airplane that's true. So, I kinda called bulls--t on that one. We didn't have, really, any way of figuring out side slip. So, I built a side slip vane and we put one on the boat so we could measure side slip. There are some pic-

tures somewhere, on the top of the engine cowling, about that far back [gestures], it looks like a weather vane that's about this by this [gestures] that sticks up on top of the engine cowling and it's a vane to measure air flow.

So, in a corner, if the boat gets cocked sideways, the vane still lines up and you can measure it. Well, I was measuring 40 degrees of side slip, and that thing was accurate. So, the next time there was money available to go to the wind tunnel, I proposed instead of just having aerodynamics people down there, a boat racer needs to go down. You know, send Loren, send Rheinberger, send somebody who understands race boats. Don't let

those aerodynamics guys just do it, because they don't get it.

So, I ended up going down to Georgia Tech with Derrick Rogers, who's kind of an aero guy from Boeing. Georgia Tech has a low-speed tunnel that used to belong to Lockheed that was given to them. It's a really nice, very well-done wind tunnel that can do close to the ground type of stuff. So, we get the model in there and do some stuff and start kicking up and we can get it to about 40 degrees in a wind tunnel before we get bangin' against the side of the walls of the wind tunnel.

See, the model is this long and the tunnel is, like, yay wide, so you can only



F. Pierce Williams

The *Miss Budweiser* in 1991. The boat won three races and the national championship that season.



Mark Evans did most of the driving of *Miss Budweiser* in 1996.

go so much. And it was really interesting. Everything is really nice up to about 15 degrees of side slip and once you get to about 20 degrees of side slip, some really nasty stuff starts happening to the boat aerodynamically.

Mmm, yeah.

The center of lift moves forward. The center of lift actually goes up and there's this really nasty left rolling moment. Well, Hanauer had gotten the boat upside down a couple of times, just entering the corner and then doing one of these tuck under rolls.

Yeah.

We couldn't figure out what the hell was going on there. Well, the wind tunnel told us. When you cock it sideways that hard, the center of lift goes forward and the center of lift goes up. As soon as anything ticks the boat, it's gone.

Chip had gone car racing at some point. The previous year he had done some car racing and one of the things he learned car racing was, the farther you can drive into a corner before you have to get off it and start turning, the faster you're gonna go. Previous to that, what he had been doing is like all boat racers. He had been driving up and some time before the turn he'd been starting to set up and kinda drifted into the corner. From his car racing experience, what he

was doing now is he would drive up to the corner and go whack!

Crank it hard.

He said he could pick up a couple boat lengths on most people because they're scrubbing off speed as they're sliding sideways. Well, he's going up there and going whack! What he was doing is, he was generating this huge side slip angle at speed. Previously, he had been scrubbing off, maybe 20, 30 miles an hour before he got to the corner. Now he's going up there at 195 or 200, all of a sudden he's doing this [gestures a sharp left turn] and generating this huge side slip angle.

Well, the wind tunnel told us when he does that, the aerodynamics on the thing get really nasty and all you need is a little bit of a hit here, like a wave to tick it, or some head wind, and he was getting it right when he went into the corner and doing one of these [gestures a flip]. Well, at the time, we didn't understand what was going on and Chip got discouraged with the boat, the way he'd crashed it a number of times, so he left, but now we understood what was going on with the boat, and we found a fix.

Well, this is where the aerodynamics guys don't get it. We figure out that what's going on is, we've got this and we've also got this nasty left rolling mo-

ment because, if you think about it, when you're sliding sideways and the cowling's sticking up here, the air's trying to roll the boat anyway. So, the aero guys down there at the wind tunnel start working on the left side of the boat because what they want to do is they want to generate some lift on the left side to counter this rolling moment. So, they do a couple of things and I'm kinda thinking, "Okay, time out, guys."

A side slip of 35, 40 degrees, you can't pick up the left sponson of this boat if you put a 10-ton floor jack under it."

"Well, what do you mean?"

"The boat has got this thing called a skid fin on the left side and it's cocked in like this." I showed 'em a couple of videos—I had some videos of races—and they see all the water coming off the boat in the turn. I said, "That's all coming from this skid fin that's cocked like this and all that water going up is generating a huge down force on the sponson. So, there's no way in hell, what you're doing aerodynamically on the left side, is going to overcome this huge skid fin type of thing."

"Really? We didn't know that, we never knew about that."

"But that's why we're boat racers down here, not aerodynamics guys." So, we ended up putting a fence on the inside of the right sponson. If you look at most of the boats now, they have this Plexiglas thing that's stuck on the inside of the right sponson. It's all the way up to the front of the sponson. That generates some down force on the sponson, and that came from the wind tunnel.

So, that's the kind of stuff if people spent some money and time and effort in the wind tunnel to learn what's really going on, instead of guessing, that was money well spent. I mean, if we saved one crash, we paid for all the wind tunnel time we ever spent down there. I mean, \$25,000 for a week in the wind tunnel, and a crash in the boat's probably \$100,000. So, the payback is pretty good on this thing.



Karl Pearson

In 2000, the *Budweiser* team completed the construction of its last boat, a craft that is known to many as the T-6 hull. It is shown here after its christening and its debut run on Lake Washington that spring. Note the clear Plexiglas fence that is attached to the inside of its right sponson.

"I could've killed him. That hits the paper. Next day there's a big meeting, boat racer meeting. 'You guys are doing what?'"

Yeah.

So, that was interesting. Most boat racers don't have a background in aerodynamics to understand what's going on. Unfortunately, they just don't. Anyway, that was some of the stuff that happened at the *Budweiser*, and Bernie was really good that each year they would get some amount of money to do something. Over a couple of years we built a dynamometer, test cell for engines, we spent some money down at the wind tunnel.

We also, one year, hired a couple of PhDs who were hydrodynamicists from the David Taylor tow tank facility in Bethesda, Maryland. It's where the Navy does all of their hydrodynamic development research on hulls and propellers, and all kinds of stuff.

What started that was once I explained to these guys what this skid fin does, on holding the left side of the sponson, the left side of the boat down, they said, "I got a buddy who works at Bethesda, the tow tank facility. You guys ought to call him and talk to him, because he might have some ideas on what you can do hydrodynamically." So, we did. We called and talked to these guys and talked to the head of it and they showed some amount of interest in maybe doing something for money, because a part of what their budget was, is they could do outside work to help offset the cost. So, I finally said, "You know what you guys need to do? You guys need to come to a boat race and see one of these things."

So, they came out to a race in San Diego?

Yeah, we had two of these guys and both of 'em PhDs in hydrodynamics. Really, really smart guys. They asked some really interesting ques-

tions, looking at boats, what's going on, getting themselves oriented. I was kind of tasked with marching these guys around and explaining things and so forth. So, I don't remember who was running but I said, "Okay, let's go out to the end of the dock." We're watching whoever was running.

At the end of the straightaway they're really doing this [side-to-side gesture] and doing that. I said, "Pay attention to this, something's going to happen, maybe." And the next time I say, "Now, watch this guy. See, he's getting kind of light and does this. Keep an eye on him when he's coming down here." Next time [gestures a flip].

The guy said, "Wow, how'd you know that?"

I said, "Been watching these things for a long time. Those guys are, it's getting too dicey, they're not doing something right."

So, after watching boats run and looking at boats, I sent 'em a bunch of data from some of our runs, from our computer system. We didn't give them any particular task, we just said, "Think about it, you know, just think about it."

They came back, I don't know, a month later and said, "We think we got something that might help you, we need a little bit of a budget to spend some time on the thing."

I don't know, we paid 'em, it wasn't a whole lot, \$5,000 or something like that for these guys' time, which I thought was dirt cheap. Both of the guys came up with a curved skid fin. Are you familiar with that?

Yeah.

Okay, the skid fin that's curved. Those are the guys that came up with it. They came up with the shape. We built one and the first time we ran

it, it was a little squirrely. We modded the shape a little bit and got it sorted out to run it, and it worked really well. I mean, the boat turned way better and we were significantly faster. The problem is, they're expensive to build.

Yeah.

The shape makes it really expensive to build and so, now they're outlawed. And that's a typical deal of, you know, boat racers. If somebody else has got something and we don't want to do it, maybe we just outlaw it.

We had, well, back up in the *Budweiser* turbine days, five, six years before we quit racing, or before Bernie died, we were working on an active-pitch control system of the boat. This was before we had a canard, we had a fixed surface with some flaps behind it. We didn't have a full canard, but we had some spoilers on the boat. If the boat got up, the spoilers would come up and the driver could control, he had a button on the steering wheel. My intent was to eventually, at some point, pick the boat up and fly it. That was a long-term goal. Pick it up and fly it, that far off the water. But to do that, you have to do a bunch of development.

We already had the spoilers on the boat. You need to know pitch of the boat, you need some way to know the pitch of the boat. So, you need a gyro. I

made some phone calls to get a gyro and I chased down some outfit that builds aerospace-type gyros. Really good, high-quality stuff. One of their engineers, just by happenstance, happened to be a race car driver. So, he's a racer. I told him what I wanted to do and that I needed a really good gyro that would live in the environment, waterproof, all that kind of stuff. He said, "Well, let me check around 'cause I think we might have something. Let me call you back."

So, he called me back a day later and said, "We built some gyros for an Israeli-built cruise missile, and we built extras because we weren't sure how many they were going to need. We still have a couple of those around. Would \$500 be too much money for this?"

That thing had to be a \$5,000 piece of equipment if it was a penny, 'cause it was mil [military] spec for a cruise missile. "Nope, how soon can I get it?"

He says, "We'll get it to you."

So, anyway, we put this gyro in the boat so now we can measure pitch attitude very accurately. We taught the computer. What we did is, I wrote an algorithm that looked at water speed and pitch and if the water speed was above a certain value and if the pitch got above a certain value, it would pop the spoilers to settle the boat back down. We still

had a button on the steering wheel for the driver, but now we had the computer that could do it also, and we instrumented the button so we knew when the button was pushed.

When the correlation between the driver pushing the button and the computer kicking 'em up was, like, I don't know, 85, 90 percent, they agreed. And two-thirds of that time the computer beat the button. So, I said, "Okay, we got something going here. This is a start. We can do some of this stuff, we got something and we'll start working on it."

We were kinda playing with this thing at some races 'til we get to Madison and there's a press conference. Bernie is there and I don't know who else. One of the reporters kind of pings on Bernie and says, "You guys are stone-age people. The people that, like, Formula 1 and Indy, they have all this computer-controlled stuff, they got all these really nice aerodynamic surfaces and you guys are in the stone age compared to the rest of these racers."

Bernie blew his cool. "You f--kers don't know what you're talkin' about. We have a cruise missile gyro in our boat, talking to a computer controlling spoilers."

I could've killed him. That hits the paper. Next day there's a big meeting, boat racer meeting. "You guys are doing what?"

"Yeah, we're kinda, you know..."

Oh, Jesus, it's over. I said, "I'll tell you what. I'll tell you where to get all the hardware. I'll tell you where to get the gyro. They'll tell you where sources are for computers and all of that kind of stuff and how you get all the hardware, and then you've got what you need."

Somebody asked a critical question, "What about the computer algorithm?"

"Uh, I don't think so," because that's the key. Well, the next day there was a rule written that said there will be no computer-controlled aerodynamic devices on an Unlimited hydroplane. I wish I would have gotten to Bernie ahead



F. Pierce Williams

The *Miss Budweiser* prepares to head onto the racecourse in 2001.

of time and said, “Do not say something,” but I didn’t know that question was gonna get asked, I wasn’t there. You don’t know, so stuff like that happens.

If that had gone to fruition and we had been able to make it happen, and been able to pick the boat up and fly it an inch or two above the water, that would’ve made it phenomenally safer, ‘cause if it did pitch any more you could slap it back down if you had enough control surfaces on the thing and fast enough. That would’ve been a huge project, it would’ve been expensive to do, but boy, would it have been nice to do.

Anyway, we tried. That was the nice thing about the *Budweiser* operation. There were enough resources there to do stuff like that. We didn’t spend money frivolously and we did not have, as most people thought, an unlimited budget. Absolutely did not. But we did have some amount of play-around money that we could do things with occasionally, which most teams right now, they just don’t have that, or they don’t know how to do that kind of stuff, which would be really helpful at times. So, anything else?

Well, we’ve covered a lot. Will you tell us about the vintage 1962 *Miss Bardahl*, how you acquired it, what kind of shape it was in when you got it?

Well, I have to thank Jon Osterberg, ‘cause Jon is the guy who found it. What had happened with the *Bardahl* is when we quit racing it and went to the cabover in ‘66, it went off into a corner of the warehouse. It stayed there for a couple of years and when swift Eddie [Karelsen] built the checkerboard boat, he measured that boat and the checkerboard boat was a very close copy of that boat as far as sponsons, bottom, a lot of that stuff. He changed the non-trips on the back and some structure, but it was very close to it.

Sometime after that, Bardahl decided they had a major manufacturing operation back in Boston, with the can products, took care of the East Coast. So, they shipped the boat back there for

them to use as a display boat. It went back with a trailer, and I think it had a dummy engine in it, maybe, so the people in Boston could hook it up behind a pick-up truck and drag it around and do displays for Bardahl.

That lasted a couple of years and at some point—I have no idea why—they decided to close the Boston manufacturing facility. So, the instructions that went back there, as best as I know is, some of the canning equipment send it back here; product, do whatever you want with it; and anything else just sell it and get rid of it.

Well, Ole had gotten kind of old at that time, he was quasi-not running the company and nobody thought about the boat. So, the manager back there, “Here are my marching instructions, sell everything else.” He takes the boat, sticks it out in front of the plant, hangs a sign on it, “For Sale, Make an Offer.”

Somebody comes along and I guess said something like \$1,500, the guy said, “Sold.” So, it got sold and, according to Jon Osterberg, it went through at least three people back there. Somebody got it, did something with it, thought they could make a race boat out of it, obviously didn’t have the resources or knowledge, sold it to somebody else, somebody did something else to it, and it ended

up somewhere in New England in some guy’s back yard with no deck on it.

Somebody had taken the deck off it. Big blue tarp over it, sitting outside. The big blue tarp blew away and it sat one winter outside in New Hampshire with no deck on it. It sat, and Jon, I mean, the story of him chasing it down is just amazing, the amount of work that he did, and so, he arranged, after some serious negotiations, that the guy who owned it would give it to, I think it was Bob Williams, maybe, is the name, the guy who was gonna have a museum down in Tacoma.

Okay.

There was a guy who, and this is about 1995 or ‘6, something, ‘7. He had gotten access to a building at the Port of Tacoma, and he was going to have a hydroplane museum down there. I didn’t know much about it, but Jon Osterberg knows, kinda, what’s going... But, anyway, it was an agreement made that this guy would give the boat to this museum in trade for some kind of paperwork that said, “You made a charitable donation of ‘X’ number of dollars, you can take it off your taxes,” type of thing.

It came out here, no deck on it, it stopped in Pasco at the race and there’s a picture of it sitting in the pits at Pasco with no deck, looking terrible. Ended up



The team that restored the 1962 *Miss Bardahl* pose amid their handiwork. From the left, David Smith, Dixon Smith, Skipp Schott, and Mike Hanson.

at the museum there. He had collected two or three hulls and some other paraphernalia and so forth, and at some point he basically ran out of money. He contracted with some architects to do some work on getting the building up to code and making a museum out of it and they bought some small amount of material.

So, anyway, he thinks he's going broke and there was an agreement made between what is now the Hydroplane and Raceboat Museum and, back then, I'm not sure quite what it was called, but it was still kind of the museum, but they weren't where they are now, they were in South Park. Anyway, there was an agreement made that what is now the current Hydroplane and Raceboat Museum would get the assets for this, but they also had to incur the debt. So, Joe Fraunheim, Curt Erickson, [Ken] Muscatel, and maybe somebody else, were involved in this transfer from museum to museum.

They went to the people who had what they called the soft money, like the architects, and said, "We'll pay you 25 cents or 30 cents on the dollar for what we owe you and if you don't like it, you'll probably get nothing." For the stuff that they'd actually bought, they decided they should just pay those people. So, what happened is—I don't know about the rest of the boats—but the *Bardahl* was sold to Curt Erickson.

The money that he paid for that is part of the money that went to pay off some of these debts. Part of the agreement was the museum had first right of refusal to buy the boat back, so it was kind of a loan, but it was actually sold to Curt with a first right of refusal for buying back.

Somewhere along the line, I found out about the thing and I had talked to Curt a couple of times, because I had acquired a whole bunch of Merlin stuff from a sale. Dwight Thorne and I had bought out Jeff Neff's Second Wind engines. Neff was doing engines for airplanes and boats and things weren't



Dixon Smith sits on the deck of the *Miss Bardahl* as the boat was being restored.

going well, so he decided to close the business. Dwight and I bought, basically, the Merlin inventory out of it. Dwight got the airworthy stuff, I got the boat-worthy stuff and the junk. I had this stuff and part of the reason for that is I was helping Dwight out, 'cause he needed the airworthy stuff but he didn't have the money to buy it all, so I said, "Okay, I'll take some of it for a while."

I had talked to Curt and suggested that he restore the boat, I'd put together hardware, engine, gearbox, all the rest of the stuff that was needed for the boat. We'd have some kind of a handshake partnership and get this thing running again. Curt is a really good boat restorer. He's done several, not race boats but pleasure boats like old Chris-Crafts and stuff like that. The guy does really nice work. So, I had proposed that and he said, "That sounds like a pretty good deal."

Well, this went on for a year, year and-a-half and I talked to Curt occasionally and finally my brother and I went down and had lunch with Curt and his wife, and I said it nicely as I possibly could, "Curt, either get off the dime and start restoring this boat or sell it to me."

And he said, "Well, I don't know."

So, about a week later I get a phone call and Curt says, "I think you need to own the Green Dragon."

So, we talked about it and came up with a reasonable price to agree on and I basically bought the boat. And I asked Curt, "Hey, can I keep it at your place for a couple months, 'cause I got no place to put this thing until I figure something out?" Got the boat and somewhere along the line in this museum deal it had a cosmetic restoration, which involved putting plywood on the deck and slopping some paint on it. The deck was door skins and had been put on with staples, I think.

When we got the boat, I tore the deck off and took a look at it, and pretty bad. So, then it was, "What do I do?" I started talking with people. I was still flying for United at the time, and I didn't have the time to really do it myself, but I could participate. I was starting to talk to people about somebody to take this on as a project. I went through several people and finally ended up with Mike Hanson.

I only knew Mike as a driver at the time. I didn't know he'd been, among other things, through full shipwright apprentice school. He'd also built a bunch

Jon Osterberg



Chris Denstlow



Brian Silcox



Brian Silcox

TOP: The restored *Miss Bardahl* does a demonstration run on the Columbia River with Dixon Smith at the helm. **MIDDLE:** Dixon Smith offers direction to crew members as they prepare to trailer-fire the boat's engine. **ABOVE:** Dixon Smith talks about his boat to members of the Aircraft Engine Historical Society.

of boats. He worked for Jones and all kinds of stuff and at the time he was working for Mike Jones on Mike's racing equipment and the way they were operating is kind of April, May time frame through about October. Mike Jones was paying Mike Hanson, his brother, Larry, to work on the race boat and go racing and then the other six months of the year he would lay them off so they could go on unemployment and my suspicion is they got paid under the table a little bit, too.

So, what I ended up doing is I made an agreement with Mike Jones. I said, "I'll tell you what. Instead of laying these guys off, why don't you spread the work around and I'll get my boat in your shop. I'll pay you a shop rate per day for when it's being worked on and you can pay these guys and I'll come down, my brother and I and somebody else will come down and we'll work with them, probably, to help do this thing. When it comes time for real boat racing, stuff it in the corner, throw a tarp over it, and don't do anything 'til you're done boat racing. This keeps your people employed throughout the year and if this thing takes three or four years to get done, that's fine."

So, Mike and I ended up making an agreement on that, so it ended up in his shop. I paid whatever the shop rate was, like two days a week, and using my brother, myself, and Skip Schott, we would go down there and work with them on those two days and the other three days they'd work on Jones' racing equipment, and then come summer time it just got shoved in the corner and nothing happened for several months while they went racing. So, it took about, I don't know, three or four years to do that.

That's how the boat got restored. There's probably 20-to-25 percent of the original boat is all. I was hoping for 40-to-50 percent, but we just kept tearing it apart until we got to something good, and it went a lot further than I expected.

You have a Rolls Merlin engine in it. Is it a Dash-7, Dash-9, or a mix?

It's kind of a mishmash of parts and stuff that I bought when Dwight and I bought all that stuff. Neff had collected a whole bunch, like Jim Harvey and other people's Merlin stuff when they quit racing. So, there were kind of the remnants of several boat racing operations. I took a look at that. There was not much Dash-9 stuff left because most had been used up and blown up. So, most of it was Dash-7 stuff, but there was still some stuff that was really good like weighted crank shafts and ground cam shafts, and some of that stuff I've also resurrected over the years. So, it's probably about 90 percent of what a really hot, good race motor would be.

The boat right now is probably in better shape than it was, by far, at the end of its racing career. It was pretty tired when it quit racing. We've run it on the vintage circuit. People ask me, "How fast will the boat go?" I've seen 150 on the speedo a couple of times. It would go faster than that, but I won't. It's got a really good, stout engine in the thing.

We spend serious time keeping it in good shape. It runs well. One of the things, when it was a race boat, it went 57 consecutive heats without an engine failure. That record still stands for piston-powered boats. We've run the boat a couple hundred times since then, doing exhibitions, giving rides, and so far, it is always driven back to the dock under its own power. It has not come back being towed by a rope. One of these days something will happen, we're going to come in, being towed in, but so far, the boat has behaved, worked well, and every time it has gone out, it has come back under its own power.

One thing we should have talked about earlier, how would you rate Ron Musson as a driver?

Ron was an excellent driver. Really good "instinct," very good feel for the boat, even to the point that he could show up in the morning somewhere between still being lit and having a hang-over. Ron liked to party a lot of the time



Jon Osterberg

Dixon Smith in the cockpit of his *Miss Bardahl*.

and he would show up in kind of rough shape in the morning, but he could still drive the boat really, really well.

Good driver, um, communicating with the crew, so-so. We learned fairly early on that the driver can give you some input but a lot of the times, if the boat is mishandling, watching the boat and paying attention to it with binoculars or maybe if you can take movies of it, sometimes you can learn as much as the driver knows by just watching what the boat does.

As far as engine performance, Ron was less than forthright about what was going on with the engine. We got the boat upside-down in Madison, Indiana, and Ron got a couple of busted ribs. So, he was out, another driver, Don Wilson, got hired. A very experienced, well-known driver. So, he shows up, his question was, "Okay, how hard can I run your motor?"

Leo talked to Ron about that, gave him some numbers and Donnie goes out and drives the boat, looks like crap. It isn't going fast, we're not doing well. Back to the hospital, Leo talks to Ron again, comes back, runs a little harder, boat still looks like crap, not going fast.

After about three iterations of this, finally Donnie Wilson gets told, "Just go out and stand on the gas and make the boat go. Then come back and tell us how hard you're running it."

Well, it turned out Ron was actually running the boat a whole lot harder than he would 'fess up to us, because any time an engine would blow, he'd get yelled at for blowing up the engine, and he told us, "I'm not running it that hard." I can understand what's going on but at the time it didn't sit very well.

So, excellent driver, good feel for the boat, knew how to get it in the right place, in general an easy guy to get along with, but less than forthright about how hard he was running the boat sometimes. He and I got into kind of a heated discussion one day about something after an engine had come unraveled and his final comment to me is, "I can blow 'em up faster than you can build them." We still got along pretty well, but that's kind of the stuff that happens with a very competitive driver.

On another subject, you recently drove the restored *Tahoe Miss*. What can you tell us about that?

The *Tahoe* ran, for a first out of the

box restoration, I thought it ran great. The squawks we had on it were really minor. I got kind of a water bath, oil bath the first time we ran, but it was pretty minor compared to what could have been. For the power that's in it, it's doing really well. The boat handles well. We had a little issue with our water speed indicator, so we disabled that. I don't know, my guess is I was probably doing maybe 130, 135. Engine's running fine, handles OK. Right now, I wouldn't change anything.

All-in-all, for first run out of the box, after restoration, I think it went incredibly well. Mike and Larry Hanson have worked their butts off on this thing for several years and it shows. It works good, it looks good, and I think we're happy with the ride on the thing. On the last run it acted like one of the mags on the engine might be going away, but that's all nickel and dime stuff. We tried three different propellers, two worked really good, the third one, kind of marginal.

The second prop looked like it may be the best.

The first one I didn't run real, real hard, because, you know, the first run of the boat. It behaved okay. We put the second prop on, I ran it a little harder but from my perspective in the cockpit



Craig Fjarlie

Dixon Smith takes the newly restored *Tahoe Miss* out for a test run.

the two props behaved very similarly to each other. The third prop that we just ran, that wouldn't be my first choice. But, just one of the things we have to do with these old boats is start trying propellers and find out...

Find out what works.

Yeah. But all-in-all, it runs good, I don't have any complaints. If there was anything to do right now, it would be try more props.

When you worked on the boat in 1966, the driver was Mira Slovak. How would you evaluate his driving, and how would you compare him with Ron Musson?

Mira was wonderful. He got the

nickname, "The Magnificent Refugee." He basically grew up in communist Czechoslovakia and became a pilot in one of their airlines. Basically swiped an airplane and flew it out of the communist country into Germany and requested asylum. He ended up being debriefed by the CIA extensively on what was going on, and so forth, and ended up in the Seattle area working for Bill Boeing, Jr. Drove the *Wahoo* and eventually ended up driving *Harrah's Tahoe Miss* when I worked on it in 1966. The nickname, "Magnificent Refugee," came because he kind of used his refugee status with the young ladies, "I'm a poor refugee and I'd love to be taken care of," and he used that pretty well. So, that's where that came from.

Really good driver, easy to get along with, very talented, better at communicating on how hard he was running the boat. Ron Musson really liked to just drive the heck out of the boat and go fast. He really, really did, and that's one of the reasons he was a good driver.

One of the things Ron told me, toward the end, the last year we were running, "This boat goes so good, what I like to do is drive up next to somebody in a race, look over at 'em, wave bye-bye, push the nitrous oxide button, and drive around 'em." That was his idea of a good time.

Mira didn't do stuff like that. He ran the boat only as hard as he needed to, to



Dixon Smith with Mira Slovak in 2010.

Jon Osterberg

win the race. Didn't drive it any harder than he needed to, and he seemed to have a really good feel for the boat. A very personable guy, also. I got along with him really well, and just in general, a real gentleman. Did not imbibe like Ron did, but both of 'em were really good drivers. I enjoyed working with them both.

Well, kind of as a wrap-up, we've heard stories about how you met your wife at a boat race. Will you share that with us?

[Laughs] Okay, um, when I was working on the *Pay 'n Pak*, the crew chief—this was in Seattle, during the Seafair race—the crew chief had invited this young lady down to the pits to see what boat racing is all about, and I think maybe had a date or two with her at the time. So, she's down there, kind of hanging around the boat. Things were kind of busy and the crew chief wasn't paying any attention to her so she's getting kind of bored. So, I talked to this young lady, seemed like a nice person, I'm thoroughly enthralled with her, so I just casually mentioned, "Gee, if things don't work out with you and the crew chief, would you mind if I gave you a call sometime?"

She said, "That would probably be okay."



Dixon Smith with his wife, Judy.

Well, I was still in the Navy at this time, I was living up at Whidbey Island—this is before I was working as a pilot for *Pay 'n Pak*, I'd been working on the boat—and sometime later I get a call from this young lady asking me if I wanted to come to an office party that they were having. She called me, oooh, this is a good idea. So, anyway, we've been married for well over 40 years, so it all

worked out. But I only met her because she showed up at a boat race and I was working on a race boat.

Okay, well, thank you.

I'm talked out unless you have more questions.

I think we're good. Really appreciate it, thank you. ❖

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This is one of those times.

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FROM THE UNJ VAULT: Is the Rolls Griffon really superior?

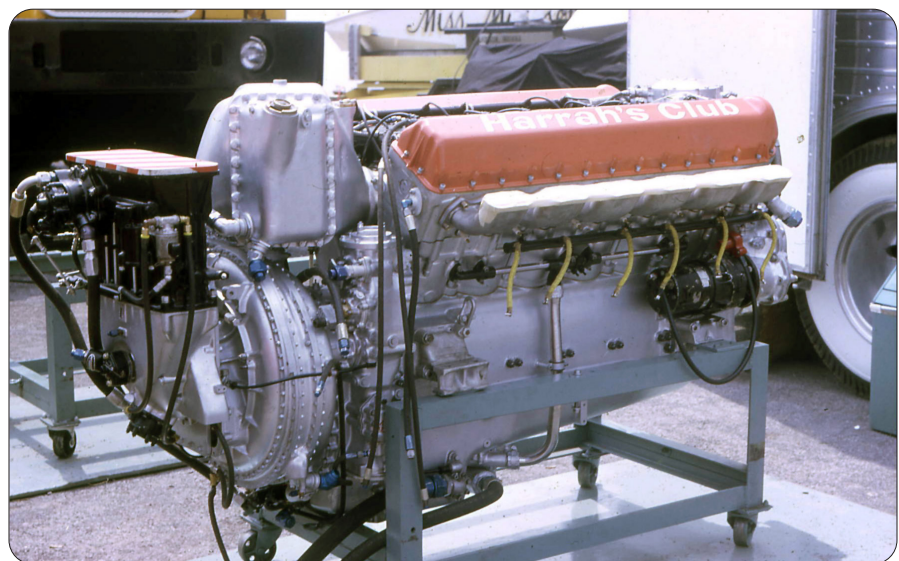
The following article first appeared in the March 1980 issue of the Unlimited NewsJournal, several months after the Budweiser team's first Griffon-powered entry was destroyed while trying to set a world straightaway speed record and while a replacement was under construction. In this piece, David Greene looked at the performance of the Miss Supertest III, the most successful Griffon-powered hydroplane up to that time. The boat won every race that it entered during its brief career, but was that because its Rolls-Royce Griffon engine was so much better than the others? Greene explores that question and attempts to answer what really might have been behind Supertest's remarkable success and how it actually compared with the other top boats during that time.

BY DAVID GREENE

From the perspective of Unlimited history, the epitome of a Rolls-Royce Griffon boat was the *Miss Supertest III* of London, Ontario. The third *Miss Supertest* was the only Unlimited to go through its entire career without ever suffering a defeat. This fact, together with the 126-mph lap record that it set in the 1960 Harmsworth Trophy, has made the craft assume legendary proportions.

The mystery surrounding that boat has been enhanced by the restrictive manner in which it was campaigned. Basically the "III" was kept for Harmsworth competition only. Her four-race career spanned three years and was limited to two appearances at Detroit and Picton, Ontario.

After *Miss Supertest's* smashing win in the 1960 Harmsworth, that was punctuated by the aforementioned 126-mph lap, her reputation was made. Stories of jackrabbit acceleration that would devastate the best America had to offer filtered



One of the Rolls-Royce Griffon engines used by *Harrah's Club* in 1968.

down from the Maple Leaf country. The *Supertest's* reputation was backed up by the specifications of the Rolls Griffon engine. This engine undeniably had several more hundred horsepower than either the Allison or the Rolls-Royce Merlin.

Even more impressive was the fact that the Griffon developed its horsepower rating at markedly less rpm than the other powerplants that were used by the Unlimteds at that time.

But legends that are based on merely

Sandy Ross Collection



The original *Miss Supertest* had raced earlier in its career as *Miss Canada IV*.

four races in three years are sometimes rather fragile when held to the light of careful examination. Thus, the purpose of this piece is to separate fact from fantasy with regard to the *Supertest* legend and, as a consequence, come to a better estimation of the true capabilities of the Rolls Griffon engine.

The Griffon engine first made an appearance in *Miss Canada IV*, a step hull designed by Douglas Van Patten, in the 1949 Harmsworth Trophy. The *Miss Canada* failed to distinguish itself either in this race or the other two that it competed in. The boat did, however, set a North American mile record of 138.865 mph on October 2, 1949. Attracted by this success, fellow Canadian J. Gordon Thompson purchased the boat from Ernest Wilson and began campaigning it in 1951 as the first *Miss Supertest*.

Three years of competition with a Rolls Griffon in the craft produced only marginal results. As a consequence, a new *Miss Supertest II* was planned for 1954 to be built by Les Staudacher. The boat, a three-pointer, was to carry the Griffon and as a result was more than a foot longer than the other single-engine entries of that era.

The *Miss Supertest II* ran for an initial period of 1954 to 1958 and generally had a reputation as a heavy, rough-riding hull. Many changes were made to the boat, including drop sponsons, but the craft was never more than an average boat, although it won three relatively mi-

nor races during its career.

Perhaps the *II*'s major accomplishment was setting a kilometer record of 184 mph in 1957. It was against this background that J. Gordon Thompson and his son, Jim, developed plans for the *Miss Supertest III* to be launched in 1959. The Thompsons hoped that the new boat would be a smooth riding hull that could handle all the power that the Rolls Griffon could put out.

The initial competition for the new *Supertest* came in the 1959 Detroit Memorial. The Canadian entry scored its first victory achieving heat wins over such boats as *Miss Thriftway* and *Maverick*, both of which were in the second race of their respective careers after debuting on Lake Chelan. However, the *Miss Supertest* was decisively defeated by the Merlin-powered defending national high-point champion *Miss Bardahl* in Heat 2B. Thus it can be seen that the *Miss Supertest III*'s first victory, although impressive, was less than overwhelming.

The next race for the *Supertest* was the 1959 Harmsworth Trophy race at Detroit. The contest was a match race between the Canadian entry and *Maverick*, which at the time was the leading American boat from the point of view of both speed and consistency. *Miss Supertest III* won her second race by taking two out of three heats from *Maverick*. But the interesting fact is that only in the third heat was the *Maverick* clearly defeated, and this defeat was facilitated by the

U-00 spinning out in an early lap. In the second heat *Maverick* decisively defeated the CA-3 and in the first heat also had a decided advantage until she experienced engine trouble.

During the balance of the 1959 season the *Maverick* went on to win the national high-point championship by winning three of her next five races to compile an overall record of five wins and five losses for the year. During the *Maverick*'s winning period the boat that caused the U-00 the most trouble was the Rolls Merlin-powered *Wahoo*.

Maverick and *Wahoo* had three major heat confrontations during the year. The first at Seattle in Heat 1A of the Gold Cup showed *Wahoo* to be a six-second winner. The second confrontation came in the first heat of the President's Cup. At the time the *Maverick* had come to within 20 yards of catching the flying *Wahoo* and flipped over.

The final time that the two entries met in serious competition was in Heat 2B of the Lake Mead Cup. *Wahoo* again topped the *Maverick*, but this time by just three seconds. By comparison, it is clear that the Allison-powered *Maverick* had a much more difficult time with the Merlin-powered *Wahoo* than with the Griffon-powered *Miss Supertest III*.

The third race of *Miss Supertest III*'s career came in August 1960 at Picton, Ontario, for the Harmsworth Trophy. As in previous years the leading Rolls-Merlin boats were not allowed to participate since the engine was not entirely indigenous to the United States, having been designed in Great Britain. This left the Allison-powered *Gale V*, *Nitrogen*, and *Nitrogen Too* as opposition for the undefeated Canadian entry.

Miss Supertest III had no difficulty in sweeping the contest by winning two consecutive heats—the Harmsworth being a best-two-out-of-three affair. In the process the *Supertest* set a lap record of 126 mph, 10 mph faster than the previous record; a heat record of 116 mph, four mph faster than the former stan-



Hydroplane and Raceboat Museum

ABOVE: Bob Hayward drives the Griffon-powered *Miss Supertest III* in 1959. **RIGHT:** *Supertest III* leads *Maverick* during the 1959 Harmsworth Trophy race on the Detroit River.

...the impression is unmistakable that the CA-3 was a very fast boat in relation to her counterparts. The conclusion, however, that the III was unbeatable cannot be supported.

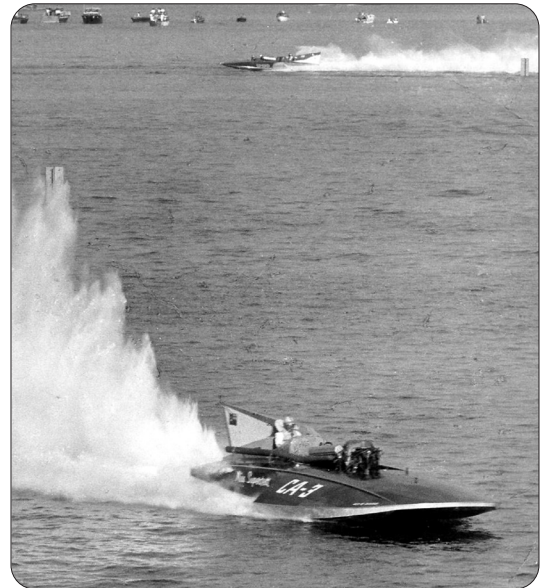
dard; and a 90-mile match record of 115 mph, seven mph faster than the 45-mile record and exceeding the 90-mile mark by a full 10 mph.

At first blush this performance seems nothing short of incredible. However, close analysis of the situation leads to a different conclusion. The main fact to be considered is that this record performance was made on a five-mile course, which has straightaways that are one mile longer than the standard three-mile course that was used at that time.

It is possible to translate the *Supertest III's* performance to a three-mile course by estimating her speed in any particular lap over the two miles of straightaway that differentiate the three- and five-mile courses and then by changing this speed estimate to arrive at the equivalent performance over a three-mile course by subtracting this time from the total time for the relevant five-mile lap. By performing this arithmetic, the time for covering that part of the five-mile course that corresponds to a three-mile course can be calculated. Once this time is converted to speed, a comparison between five-mile performances and their three-mile counterpart can be made.

By surveying various drivers throughout the modern history of the sport it can be stated that the maximum sustainable straightaway speed during a lap is generally 40 mph faster than the total lap speed. This rule of thumb was confirmed at Picton when *Supertest* driver Bob Hayward estimated his maximum straightaway speed at between 165 and 170 mph.

Applying the rule of thumb and using the



Sandy Ross Collection

method described above, a differential of 12.7 mph is arrived at in translating five-mile performances to a three-mile course. Translated, *Miss Supertest III's* performances are as follows: lap 113.5 mph, heat 103.7 mph, and race 103.2 mph. This conversion brings the *Supertest's* speeds well within the records that were current in 1960.

The *Supertest III* performance at Picton is brought into further perspective by noting the speeds of the other participating boats for equivalent distances over the five-mile course. In comparison to *Miss Supertest III's* 126.226-mph lap, *Nitrogen Too* turned a lap of 123.350 mph and *Nitrogen* made a circuit at 122.860 mph. *Gale V* recorded a heat at 115.516 mph, which comes very close to the *Supertest* record of 116.464 mph.

For one lap the *Nitrogen* was rated at 109 mph and *Nitrogen Too* at 108 mph on a three-mile course in 1960. In addition, *Gale V* had a heat rating of 105 mph. By making the comparison in this way the *Supertest* speeds translate as follows: lap 111 to 113 mph, and heat 106 mph.

However, in making the heat comparisons it must be noted that the Harmsworth heats were 45 miles long. The standard heat of 1960 was 15 miles in distance. *Miss Supertest III's* best consecutive 15 miles at Picton averaged out at 122.990 mph. Under the first method described above this translated to 110.2 mph. Under the second comparison method the *Miss Supertest's* best 15 miles would be projected on a three-mile course at between 109 and 110 mph.

Even after reducing the *Miss Supertest III's* performance at Picton to the equivalent on a three-mile course, the impression is unmistakable that the CA-3 was a very fast boat in relation to her counterparts. The conclusion, however, that the *III* was unbeatable cannot be supported. Three Rolls-Merlin boats that competed during the *Miss Supertest III* era stand out as being superior. They are the first *Miss Thriftway*, *Hawaii Kai III* and the third *Miss Thriftway/Miss Century 21*.

The first *Miss Thriftway* was launched in 1955 and won three races during her three-year career. Bill Muncey generally drove the U-60 in a restrictive, conservative fashion—pushing his charge just fast enough to ensure victory. Nevertheless, in the fall of 1957, Muncey abandoned this approach and started to explore the *Thriftway's* potential. The result was a 15-mile heat at 112.312 mph, and a three-mile lap of 115.342 mph. These speed ratings would give the *Thriftway* a significant advantage in reference to the *Supertest III* over the 15-mile distance that was standard for 1960 heats.

Hawaii Kai III, which generally had the reputation of being the nation's most competitive entry at the time of her initial retirement after the 1958 Gold Cup, proved her reputation convincingly on



Bob Carver Photos



Bob Carver Photos



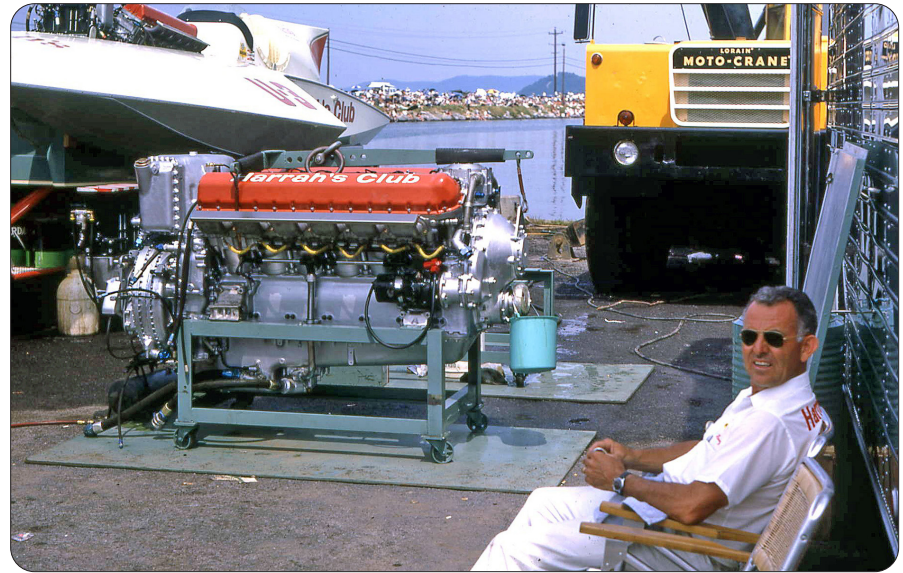
Bob Carver Photos

According to the author, three Rolls Merlin-powered hydroplanes racing at the same time as *Miss Supertest III* were superior in performance. **TOP:** The *Miss Thriftway* of 1955 to 1957. **MIDDLE:** *Hawaii Kai III* competed from 1956 to 1958 under the ownership of Edgar Kaiser. **ABOVE:** This boat saw action as *Miss Thriftway* in 1959 and 1960, and again in 1963, and also carried the name *Miss Century 21* in 1961 and 1962.

two occasions. The first was at the 1957 Apple Cup when the *Kai* turned a competitive lap of 116.004 mph over a three-mile course. This record stood for seven years. In her final race under the stewardship of the *Slo-mo* crew, the *Hawaii Kai* showed an ability to consistently turn laps in excess of 113 mph on a three-mile course. Thus it is clear that the *Hawaii Kai III* was also superior to the *Miss Supertest III* on the basis of their respective records.

The third *Miss Thriftway*, later *Miss Century 21*, was launched in 1959. After a difficult first year the third U-60 settled down to win 14 races in four years. In 1961 at Detroit the then *Miss Century 21* turned a three-mile lap of 115.879 mph. During the last race of her career at Seattle in 1963 the old, leaking *Miss Thriftway* recorded a heat of 112.500 over a three-mile course. On her performance record it is also very easy to imagine the *Miss Century 21* a winner over the *Miss Supertest III*.

Miss Supertest III won the last race of her career in August 1961 at Picton in the Harmsworth Trophy. Her only opposition was the *Miss Detroit*, which had won the President's Cup the previous year. The *Miss Detroit* figured to be outclassed and she was. The only factor worth noting was that the *Supertest III's* fast lap of 109 mph over the Picton three-mile course matched her best ef-



Harry Volpi, the team manager for the *Harrah's Club*, with one of the Rolls-Royce Griffon engines the team used in 1968.

Tony Bugeja Collection

fort on the Detroit three-mile course in the 1959 Harmsworth. Nevertheless, it is felt that the *Supertest III's* performance was a reflection of her lack of opposition and that the marks set in 1960 better define the boat's capabilities.

On this basis it is this writer's opinion that the *Supertest* improved to the point that she could have handled her 1959 Harmsworth antagonist *Maverick* at the end of her career, since at that time she had about two mph on Bill Waggoner entry. The *III* would have been rated even with the *Wahoo*, the fastest boat of 1959, which also showed a capability of

consistently running 110 mph around a three-mile course. In addition, the *Miss Supertest III* would have clearly defeated her other successful antagonist, the 1959 *Miss Bardahl*—the U-40's heat rating being 107 mph.

As a result of her early retirement the competitive potential of the *Supertest III* and her Rolls Griffon engine can only be speculated upon. There were major Rolls Griffon entries in 1968 (*Harrah's Club*) and 1979 (*Miss Budweiser*). Neither of these entries, however, outclassed their opposition in the years mentioned. The *Harrah's Club* effort terminated after one year, but the *Miss Budweiser* Griffon program will continue into 1980.

As indicated above, we can only speculate as to the performance of the *Supertest* if she would have been pushed to the limit by the *Thriftway* or *Hawaii Kai*. We can say nevertheless that on the strength of what she accomplished that she probably would have been defeated.

Perhaps the top flight *Budweiser* team and their further development of the Rolls Griffon concept will provide some further answers in 1980 and the following years as to the true capability of the Griffon in relation to the Rolls-Merlin engine. ❖



The *Miss Budweiser* team reintroduced the sport to the Rolls-Royce Griffon engine with this boat that appeared in 1979.

Randy Hall

HYDROFILE

Race Team News by Lon Erickson



Miss Madison Racing/Goodman Real Estate

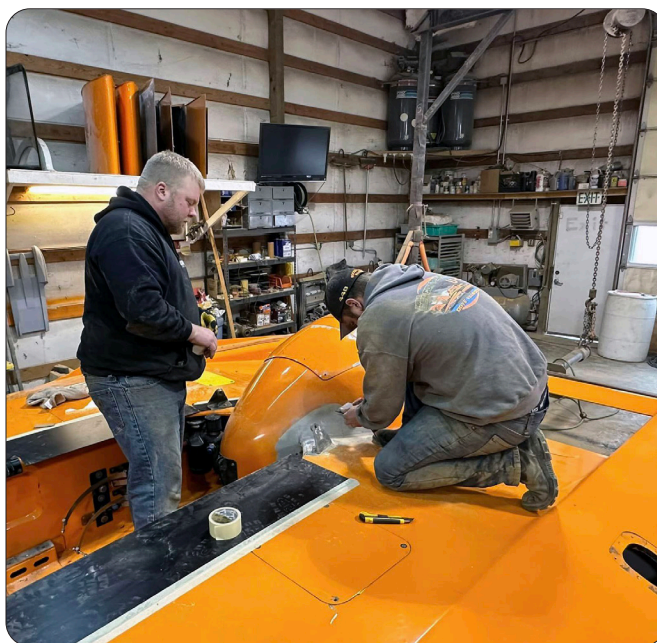
The *Miss Goodman Real Estate* crew has been hard at work converting the team's 2018 hull over to the U-91 colors theme. After extensive sanding, cleaning, and prep work, the hull has been first sprayed white in the Tukwila paint booth. Now the *Miss Goodman Real Estate* graphics have been applied. Meanwhile, *Miss Goodman Real Estate* driver Andrew Tate was recently in Madison promoting the July 5 to 7 Madison Regatta. The Madison display hull was setup along Vaughn Drive, a flash ticket sale took place, and Andrew was signing autographs.



Miss Madison Racing photos

Bucket List Racing

The Bucket List crew has been working on the hull repairs from the 2023 season and prepping for a paint refresh heading into 2024.



Michael Lemler photos

Tri-Cities Spring Testing

The countdown has started for the hydros to hit the water on the Columbia River. The Tri-Cities Spring Testing is scheduled for Friday, May 31 at the Neil F. Lampson pits in Columbia Park.

The 2024 season is just around the corner.

The long offseason is nearing its end. The 2024 H1 Unlimited hydroplanes are scheduled to get back on the water for a test session in about two months and the 2024 racing season is set to get underway four weeks after that.

So, where do things stand as the starter's gun gets ready to fire?

In addition to the test session in the Tri-Cities on Friday, May 31, the current version of the schedule has six race dates, with two of those still tentative. Like last year, the boats will start the season in Guntersville, Alabama, the last weekend in June; and then move to Madison, Indiana, the weekend after that. Following their journey west, the racing will resume on the Columbia River during the last weekend of July then continue the following weekend in Seattle.

That's where the season ended a year ago, but there remains a possibility that two more events could be added. It's still not certain. The boats might go back east again to compete for the Gold Cup on the Detroit River and/or they could head south to San Diego. It depends on whether the race organizers in either place can find a title sponsor—a search that has so far eluded them.

And, how many boats will show up at these races? A tally of the hydroplane teams seriously preparing for the season gets us to five, so far. Here they are:

◆ U-1 *Beacon Electric*, the defending champion from Strong Racing, to be driven by J. Michael Kelly.

◆ U-9 *Beacon Plumbing*, also from Strong Racing, driven by Corey Peabody.

◆ U-11 *Legend Yacht Transport*, owned by Shannon and Scott Raney, driven by Jamie Nilsen.

◆ U-40 *Bucket List Racing*, owned by Sharon and Kelly Stocklin, driven by Dustin Echols.

◆ U-91 *Miss Goodman Real Estate* (raced as *Miss HomeStreet* last year), from Miss Madison Racing and driven

by Andrew Tate.

Also possible are the U-12 *Graham Trucking*, owned by Rob Graham and driven by Bobby King, and the U-21 from Go Fast, Turn Left Racing and driven by Gunnar O'Farrell. If someone purchases last season's *Goodman Real Estate* from Madison Racing, it also would appear.

At least as things look now, among those not likely to compete are Ed Cooper's piston-powered U-3, Charley Wiggins's U-27, and the Stocklin's U-440.

So, that's where we stand as the 2024 season approaches—four races most likely, with a possibility of five or six, and five boats, with a possibility of another two or three. We'll continue to keep you posted in the months ahead. ❖

2024 H1 Unlimited Racing Series

May 31	Tri-Cities, Washington	Preseason Testing
June 29-30	Guntersville, Alabama	Hydrofest
July 5-7	Madison, Indiana	Madison Regatta
July 26-28	Tri-Cities, Washington	Water Follies
August 2-4	Seattle, Washington	Seafair
August 23-25 (Tentative)	Detroit, Michigan	APBA Gold Cup
September 13-15 (Tentative)	San Diego, California	San Diego Bayfair

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Send comments to: ajmuntz@icloud.com

PLEASE JOIN US AT THE NEXT MEETING OF UNLIMITEDS UNANIMOUS

Noon on Sunday, April 14, 2024 (Note the time change)

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