

AeroMarine Research

TBPNews - Performance Report

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TBPNews #157-Dec 11 2012  
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>>>> Tunnel Boat Performance News >>>>> (over 5000 members!)  

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MERRY CHRISTMAS and HAPPY HOLIDAYS!

1) Fred Kiekhaefer To Leave Mercury Racing



Fred Kiekhaefer plans to leave his position as president of Mercury Racing at the end of the year. A Mercury statement said Kiekhaefer would work as a consultant for the company through 2014.

Kiekhaefer founded Kiekhaefer Aeromarine in 1983 and sold that company to Brunswick Corp in 1990. Kiekhaefer joined Mercury as president of its Performance Products division.

"The achievements of Fred Kiekhaefer have been integral to the success of Mercury Marine for two decades and more specifically to Mercury Racing," said Mark Schwabero, president of Mercury Marine, in the statement. "Fred's genetic association to boating (he is the son of Mercury Marine founder E. Carl Kiekhaefer) was strengthened by an

impressive education and powerful desire to create the best-performing marine engines."

Erik Christiansen, director engineering at Mercury Racing, has been appointed general manager of the division. Christiansen has worked at Mercury Marine for 15 years. Before joining Mercury Racing in 2008, he worked on the design team for the Mercury Verado outboard.

“Erik’s rich experience and intimate knowledge of the programs and market needs will ensure the continuity of Mercury’s leadership in the global high performance market,” said Schwabero.

Read more at: raceboatinternational.com

and here: mercurymarine.comine.com

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2) Al Qamzi Wins For Team Abu Dhabi In F1H2O Sharjah



SHARJAH, UAE - For the first time this season and for the third time on the Khaled Lagoon in fourteen previous starts, local driver Thani Al Qamzi won the 14th Grand Prix of Sharjah to wrap up the final race of the 2012 UIM F1 H2O World Championship tour in front of thousands of spectators on a cloudless late afternoon on the edge of the Gulf.

The Team Abu Dhabi driver beat out 19 other competitors from 13 different countries around the difficult six turn 2.235 kilometer (1.38 mile) race circuit closing the season with 60 points and tying with Finnish driver Sami Selio for third place in the Drivers Championship.

As Thani adds to his career win total of seven victories in 102 starts, his victory here marks the third time on top of the podium after victories in 2006 and 2008 making this the fifth time in eight years Team Abu Dhabi has come here to capture the victory flag. Coming home in second was the fast rising star of rookie Terry Rinker of the Qatar Team as the veteran driver from America who owns six North American titles charged hard on Thani's heels all day and set the fast lap of the race with a 50.30 second tour and coming up short by just 2.09 seconds after 33 laps. Taking the final place on the podium is 2000 winner Francesco Cantando of the Singha Team who charged from eighth to third right from the start and stayed there for all 33 laps. The driver from Milan was 5.02 seconds back of Al Qamzi at the end of the day taking home 12 more duck-its and finishing sixth overall in the championship with 38 points.

Fourth went to an ever battling Swedish driver Jonas Andersson, who in his Danish boat for Team Sweden got around Selio in the Mad Croc machine late in the event to gather up nine points and finish seventh overall in the championship with 26 points. Selio, who had pole position just couldn't keep his speed up, for the two time winner of this event back in 2007 and 2009, settling for fifth ending the season with 60 points and tying Al Qamzi for third when the day was done. His remarkable recovery from injuries from an accident a year ago in China makes this one of the "feel good" stories of the season.

French driver Philippe Chiappe had a steady run and did just enough to secure a well earned second place in the

Drivers Championship with 62 points while finishing sixth in the race 10.33 seconds back. It was his worst result of the season but his consistent races and three podiums gave him his best career finish in his ten years of racing F1.

Rounding out the top ten and helping his new team to record their first ever championship point was Italian Ivan Brigada of the Caudwell Team from South Africa. The new concept for F1 racing got a much needed shot in the arm with the one time winner on the tour eventually taking 20th in the drivers title. Notable retirees were new F1 World Champion Alex Carella of the Qatar Team. The 27 year-old started 18th because of engine problems in morning warm-up, got up to 11th in the race and eventually dropped out on the 14th lap. The Italian finished the season with 79 points and 17 ahead of Chiappe at the end of the day.

Another World Champion, Jay Price, who had qualified as high as third dropped quickly down to 10th with steering problems. He later would get caught up in traffic and got tagged by another driver and retired on the 20th lap for the New Orleans, Louisiana driver racing for local team Skydive Dubai.

Check out more at f1h2o.com

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3) BRP Launches new Evinrude E-TEC 135 H.O. outboard



Sturtevant, Wis. - BRP announced the introduction of the 135 H.O., the newest horsepower available in the Evinrude E-TEC outboard engine line-up.

The Evinrude E-TEC 135 H.O. provides superior value and a real choice for power and performance in the 100-150 HP segment. Best-in-class features of the 135 H.O. include:

- More Low End Torque - A 2-stroke design allows the 135 H.O. to have up to 36 percent more torque than competitive 150 HP 4-strokes
- 2.6 Litres of Displacement - A V-6 cylinder engine with more displacement means more torque, more low-end power and more top-end speed
- Lightweight Design - At 418 lbs., the 135 H.O. offers the best power-to-weight ratio in the industry and allows for better fuel efficiency, less draft, better handling and less stress on the boat structure
- True High Output Alternator - With more than twice the total output of competitors, the 135 H.O. will deliver enough power to run all of today's outboard electronics with less chance of a dead battery
- Multi-Point Oiling System - Oil is injected at multiple points (crankcase and cylinder block), dramatically improving lubrication at slow speeds and increasing engine life
- Clean Technology - The 135 H.O. has maximum power allowed, but still maintains

a 3-Star CARB clean emission rating from the EPA and can deliver as much as three times better fuel economy at idle speeds than competitive 4-stroke models

With a factory-backed, 3-year non-declining warranty and 3 years or 300 hours with no dealer-scheduled maintenance, the 135 H.O. is factory-tuned for high performance applications. It is available in four configurations - 20" white, 20" blue, 25" white and 25" white counter rotation.

For more information, go to: outdoorsfirst.com

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4) Great Powerboat Videos



Check out these great videos....

.....[UIM F2 Worldchampionship 2012](#)

.....[Worldspeed record attempt in Norway for the UIM F2](#)

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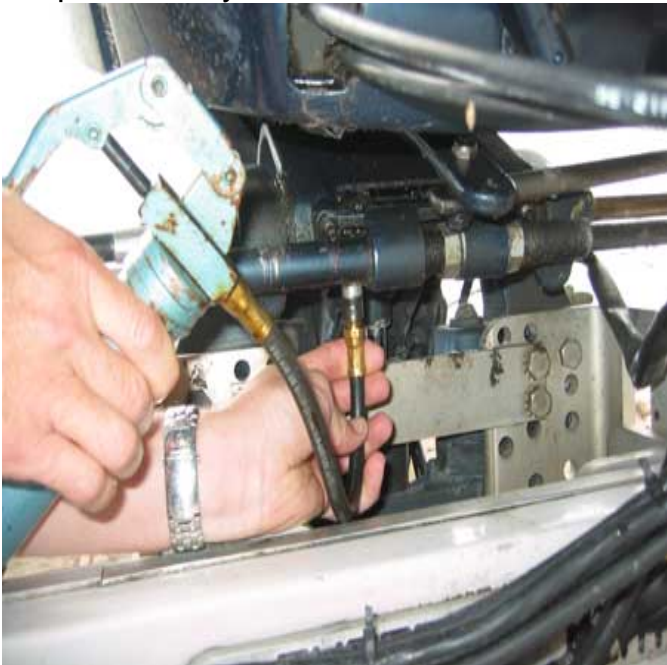
5) FEATURE: "Winterizing Your Performance Outboard Engine (Part 2)

...by Jim Russell

Getting your performance powerboat ready for winter storage is more than just pulling it out of the water. Proper winterization of your boat and motor can be the most important maintenance a boat owner can perform to help ensure it weathers the winter without damage, and to ensure safe boating next spring. In the last issue of [TBPNews, Part 1](#) we discussed Tools required, Preparing the Fuel System, and Inspect & Change Gearcase (Lower Unit) Oil. Now, in Part 2, we will cover Preventing Rust & Corrosion, Engine Inspection & Preparation, and Freezing prevention.

Prevent Rust & Corrosion

Lubricate linkages - Clean all pivots and visible gears and protect them for the winter with oil or grease, as specified in your owner's manual. Grease all of the pivot points in the steering and trim/tilt



mechanisms. Pumping some grease into these areas will displace any water that might be there.

Allowing corrosion to flourish during the off-season is less dramatic but equally destructive. Corrosion can establish a foothold on idle components, so liberal use of corrosion inhibitors--both internal and external--is a second guiding principle for winterizing.

Drain cooling passages - Use a flushing attachment (Flushing kits are available from boat dealers.), or run the outboard in a tank filled with clean fresh water. Disconnect the flush attachment or remove the motor from the flush tank. With the motor upright, let all water drain out of the pick-up. Open drain plugs (if any--see your owner's manual) to empty the powerhead and intermediate housing. Crank the motor a couple of times by hand or

"bump" it with the starter to empty the water pump. If the motor will be exposed to freezing conditions, it is essential that no water remain inside.

Fog the cylinders - Remove each spark plug and spray fogging oil into the holes to coat the interior surfaces of the cylinders. Rotate the flywheel (do this by hand, not by turning the starter motor with the ignition key) a few turns to spread the oil on the cylinder walls. While the plugs are out is the time to check them and re-gap or replace as required. Reinstall the spark plugs.

CAUTION: do not over tighten. Over tightening is the #1 mistake made when tuning up your outboard engine. Just turn the plugs until finger tight, and then use your socket wrench to tighten only 1/8th turn more. (Over tightening can strip the threads in the head, and really ruin your day!).

Fill oil tank - For (2-stroke) engines with automatic oil injection, fill the reservoir to the top fill line. This will prevent condensation from forming inside the tank. For 4-stroke engines drain the oil in the sump. When you're done filling the sump again with fresh oil, check the level using the dipstick (just like you would in your car!). Old oil left in the reservoir of four-stroke engines can contain particles that can fuse to the engine's interior if left undisturbed for the winter, so make sure you drain well and change the filter too.



Touch up damaged paint (you can usually get a perfect color match paint from your dealer or from an automotive paint store. Mist-coat powerhead and any unpainted parts with an anticorrosion spray.

Spray a moisture displacing lubricant such as a silicone product onto electrical terminals and the fuse panel. Read the label to make sure the spray is safe for use on electrical components.

Clean and liberally lubricate propeller shaft - The off-season is the perfect time to have your prop(s) serviced. If the engine will be stored on the boat, take the prop(s)

home to discourage theft.

Clean starter motor shaft and pinion gear - now is a good time to clean any buildup of grease and dirt from the starter. If there is too much buildup on the pinion gear, or the shaft or the return spring, then the starter may not function properly. Clean it all well, then put some white grease on the shaft and the pinion gear.

Inspect

Check the props for nicks or dings. Even very slight damage will hinder performance. Worse yet, blade damage can cause vibration, damaging other engine parts and the drive system. Get any damage repaired - some damaged props can be repaired by marine dealers for a fraction of the cost of a new one.



Inspect steering systems, including tiller steering friction fittings on outboards. Tighten them if they're loose. Grease the cylinders on mechanical steering connections



to the motor.

Battery Prep - Remove the battery and store it inside. Do not store your battery directly on a concrete floor or on the bare ground as this can discharge your battery. Use an automatic shut-down (current limiting) battery charger to keep your battery charged up over the winter. If your battery has water fill caps, make sure they are filled to the "fill-line" with distilled water.

Mouse-proof your engine - This might sound crazy, but if you've ever had a bad marine experience with a rodent, you'll know what we mean! They can do allot of damage

mice to an outboard over the course of a long winter - and seem to really enjoy doing it in the most hard to reach corner of your engine. In addition to chewing up your wires and hoses, they really love that foam or plastic soundproofing material on the inside of the cowling. Use a fitted canvas engine cover, or something smelly that will discourage the mice from living inside your engine during the winter.

Watch out for freezing - It is sometimes a good idea to disconnect gages that use water pressure to operate - such as speedometer and water pressure gage. Trapped water in the line can make its way to the gage. The freezing process causes thermal expansion in the lines and inside the gage, ultimately damaging the gage if the water freezes.

None of these operations are very difficult, and can be done by the average handy boat owner. The 'checklist' makes it easy to go through the full process without missing any steps. For boaters who aren't comfortable doing their own maintenance, a qualified marine technician at your local boat dealer may perform the procedures. Taking a little time in the fall to get your boat and motor ready for winter means that you can be one of the first boaters out on the water next spring.

/Jimboat

[Ed. Note: Do you have any of your own questions on performance hull design? Send your question or story to Jimboat@aeromarineresearch.com]

See more Performance Articles at: aeromarineresearch.com/articles.html **

Read more about Vee Hull & Tunnel Boat design and setup in the world acclaimed "[Secrets of Tunnel Boat Design](#)" book

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6) *NEW!* Tunnel Boat Design Program software, Version 7.15 RELEASED!

NEW Release of Tunnel Boat Design Program software. Includes Vee Boat Design Program in the same package, same upgrades!

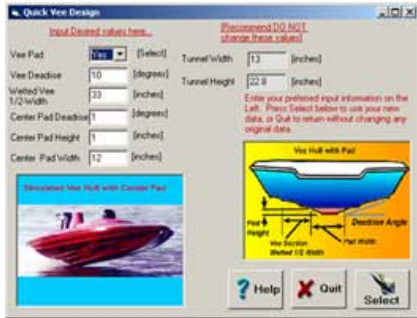




Check out the new TBDP performance software V7.15 at:
aeromarineresearch.com/tbdp6.html

And... check out the new VBDP performance software V7.15 at:
aeromarineresearch.com/vbdp.html

The Tunnel Boat Design Program (TBDP/VBDP) software makes performance analysis and design, fast and simple for all types of tunnel hulls, power catamarans, modified tunnels, vee hulls and vee-pad hulls.



The TBDP and VBDP incorporates the same ("AR Analysis") design approach as documented in the Secrets of Tunnel Boat Design book. The super power of the software allows for even more comprehensive analysis, employing engineering techniques that include detailed aerodynamic, hydrodynamic and stability calculation methods that are key to proper Tunnel hull design and accurate performance prediction. TBDP/VBDP is a high performance software, but it's not just for high performance applications. Great for recreational, commercial, fishing, high performance and racing tunnels, powercats and vee hulls (even whitewater jet hulls, RC boats, Fishing/Utility tunnels, modified tunnel (Mod-VP), modified Vee

hulls, bass boats).

NEW Version 7.15 NOW RELEASED!



Accurate Performance Prediction through full velocity range; Dynamic Stability Analysis; Hull design optimization.

BIG NEW FEATURES...YOU ASKED FOR IT...NOW WE'VE GOT IT!

This is the ONLY software specifically for design, performance analysis and setup of tunnel hulls and performance Vee hulls!

*** New Performance Summary Wizard with key indicators and recommendations! Optimization of hull design features. New aerodynamic algorithms. NEW USER picture import feature. New CG import feature. Dozens of NEW features - including

VEE HULL DESIGN software INCLUDED.

*** Vee Hull Design Feature - full Vee Hull & Vee-Pad Hull design & performance analysis.

*** Porpoise Analysis - NEW TBDP V7 BREAKTHROUGH FEATURE! - New analysis tool! XPorpoise is an engineering tool developed by AR that predicts your hull's inherent susceptibility to instabilities that lead to porpoising.

see more on the TBDP/VBDP [features here](#).



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7) Powerboat Racing on TV

*** "AMSOIL Offshore Powerboat Series" - Check out TV Schedule on [Fox Sports Net](http://FoxSportsNet.com)

*** "Powerboat SuperLeague" Series - Check out show schedule at AmericaOne.com

*** "IHBA Lucas Oil Drag Boat Racing" Series on SPEED TV - Check next show at speedtv.com

*** "P1 Powerboat World Championship" - See at: www.boatson.tv

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8) Jimboat's Feature Articles



NEW - Author Jim Russell outlines secrets of 'Step Design in Powerboats'

Jimboat outlines secrets for 'Successful Propeller Testing for Performance'

Jimboat details the speed secrets of 'Vee pad design', vee hull design and performance powerboat design

Jimboat explains 'Gearcase & Propeller BlowOut' (RIB magazine April 2011 issue)



Jimboat explains 'Chine Walking' (RIB magazine Dec 2010 issue)

Jimboat explains 'How Trim Angle and engine height affects performance' (RIB magazine Jan 2011 issue)

Jimboat interviews in RaceBoat International magazine, the newest up-and-coming star of F1 H2O World Championship circuit, Shaun Torrente together with his Crew Chief Ted Gryguc.

[Jimboat writes Feature articles in PowerBoat & RIB magazine, HotBoat, Family&Performance Boating, Performance Powerboat, RIB magazine, World of Powerboats, RaceBoat International, SEA Yachting, Extreme Boats magazines].

- [Tunnel Vision - 'How Do Tunnel Boats Fly?' - HB Nov/Dec 2008](#)
- ['Why Do Boats Create Rooster Tails?' - HB-August 2008](#)
- ['What a Blow Out!' - "Gearcase & Propeller Blowout- Why it Happens & How to Fix it" - HB-June 2008](#)
- ['Walk on the Wild Side' - "Chine Walk - Why it happens & How to Fix it" - HB-Jan 2008](#)
- ['Hump Zone' - "Why does your Boat Porpoise?" - HB-April 2007](#)
- ['The Bottom Line' - "Why does a Pad make a Vee Hull faster?" - F&PB-Sept 2005](#)
- ["10 Smokin' Speed Secrets Revealed..." - HB-Feb2005](#)
- ["Winterizing your Performance Outboard" - F&PB-Jan2005](#)
- ["What a Drag" - 'Trim Angle & Engine Height Can Reduce Drag and Increase Speed' - HB-Sept2004](#)
- ["10 Safety Tips" - 'Ten Safety Ideas for High Performance Go-Fast Boats' - HB-Aug2004](#)
- ["Flight Path" - 'Where does Lift Come From?' - HB-April2004](#)
- ["Rocket Science" - 'How To Increase Your Hull's Design Speed With Aerodynamics' - World of Powerboats-Winter2004](#)
- ["Tunnel Vision" - 'What Factors Influence Tunnel Hull Performance' - Extreme Boats-April2003](#)
- ["Step-by-Step" - 'Step Design in Powerboats' - TBPNews #88, October 2005](#)

