

TBPNews #163-March 17 2014
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### 1) Performance Analysis Report - Charger DL16 Vee Hullt



The Charger 16DL is a 16ft vee-pad design hull, originally designed by George Linder with the18DL, both based on his well-known Challenger 21 hull. Our test hull is a somewhat lightweight, 18deg (medium deep vee) hull design with a flat center pad, and specified with 150hp power and 6" setback jack plate. This is a well balanced setup to achieve maximum performance from this hull.

We have done a short analysis of top speed, dynamic stability and porpoising sensitivity through the full expected velocity range. We also completed a weight/performance sensitivity analysis. We used assumed setup details available from an on-water boat test. The performance results are very representative of the hull's capabilities. We used the new AeroMarine Research "Vee Boat Design Program", new Version 8.0 to do the analysis, since it has many new features that make "fine tuning" the analysis quite easy for top speed, porpoising and stability simulation. Here are the results and a few of my conclusions from the analysis done. You'll see that the VBDP© results are very similar to those that the boat test runs recorded. You'll also see that the 150hp Charger 16DL is one great

performing boat!

Get the full Report here

2) Carella Wins For First Time on Home Waters in Doha!

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DOHA, Qatar - Italian three-time defending World Champion Alex Carella of the Qatar Team vindicated last

http://www.aeromarineresearch.com/download/TBPNews/tbpnews163.html



seasons disappointment by winning the opening round of the UIM F1 H2O World Championship for powerboating and taking his first step in chasing history searching for four straight titles at the Grand Prix of Qatar on Saturday.

The 28 year-old driver from Piacenza looked to be watching his teammate Shaun Torrente win for the second straight year on the home waters of Doha Bay as he sat in second place, but the young Florida driver from Miami had his boat fill with smoke and catch fire briefly when on the 31st lap of the 40 lap event ending his dreams of victory.

Shaun's power steering failed him as he was forced to quickly drive the boat off the circuit to the waiting safety personnel along the launch pontoon to put out the smoke and ending his hopes of glory and putting Torrente in the "hot seat" in his hopes of winning his first title at the same time.

Carella, who was leading the race a year ago here before his engine expired with just two laps to go handing the win to Torrente, picked up his ninth career victory and earned 20 points and take the early lead in the championship.

Alex had a fortunate day while his challengers for the title struggled beginning with Finnish driver Sami Selio of the Mad Croc Team who started from pole and only lasted one lap before he pulled off down on the west end of the circuit and no points in Doha for the second straight season. Fastest qualifier Jonas Andersson of Team Sweden had his day go from bad to worse when first in the morning his engine broke forcing him to the back of the grid starting and only lasting two laps before his day came to an end. French driver Philippe Chiappe of the CTIC China Team kept his streak alive by taking second place and reaching the podium for his fifth straight race that he's finished in a row. Norway's Marit Stromoy charged from ninth to take sixth in her Team Nautica boat ahead of young Chinese driver Ziwei "Leo" Xiong who's seventh was a career best for the CTIC China driver.

If his home race was any indication Carella and his teammate Torrente who are expecting new updated boats in the near future from the DAC race plant in Como, Italy will make the season even more challenging for the other drivers eyeing their own championship dreams for 2014.

See complete article at: F1H2O.com

## 3) Helicat 22 at Miami



The HeliCat 22 is a cool-looking catamaran designed and built for rough water. According to its designer, the Helicat 22 is great for 'stable and safe, fun, fast, economical and practical water travel, island transport, resort adventure tours (with 4 side facing jump seats with seat belts) or day charter/rental'.

They say she can be wrapped with a company logo, photos and contact info for eye-catching and fun advertising on and off the water. The new design makes this cool-looking, lightweight, stable and agile catamaran safe in rough seas, and a lot of fun with great fuel economy and near zero

maintenance. Side vinyl doors keep you totally dry. At speeds from 20-45, she burns only 4-13 gph, getting 5 to 3.5 miles per gallon, which is unusually good for a boat that can handle rough water. Combined with her stability, it makes commuting on the water practical and economical.

The Helicat can be ordered with 60-90 hp motors of your choice or sold alone for you to select your own motors. A custom Aluminum Trailer with LED lights and disc brakes is available and usually included. She can be

towed by a mid-sized car or small SUV, because she will be under 3,400 pounds on the trailer full of fuel and gear, ready to go anywhere.

More at watersportnews.com

and at www.helicat.net

For more information, go to: <u>f1h2o.com</u>

# 4) Great Powerboat Videos



Check out these great videos.... .......<u>Sami Seliö-Lewis Hamilton in F1 boat</u> ......<u>Renato Molinari testing inboards</u> ......Helicat 22 video

5) Outer Limits to Launch Assault On V-bottom Kilo Record



While the venue has not yet been determined, Outerlimits Offshore Powerboats is gearing up for an attempt to break the V-bottom kilo record in late March. The record currently stands at 171 mph and was set by a 42-foot Fountain Powerboats V-bottom in 2004.

In recent test sessions, this Outerlimits SV 43 reportedly reached 164 mph. Mike Fiore, the owner of the custom high-performance V-bottom and catamaran company in Bristol, R.I., is teaming up with Joe Sgro—the record attempt will be made in Sgro's SV 43 canopied

raceboat—and noted offshore racer Brian Forehand, as well Michael "Doc" Janssen, who owns the two-time offshore world championship-winning SV 29 Snowy Mountain Brewery raceboat and Dave Scotto, who owns an Outerlimits SL 52 open cockpit V-bottom that ran a record-setting 150 mph at the 2013 Lake of the Ozarks Shootout.

"We figured that since we have been very successful making our boats run very fast it was to time to break the V-bottom kilo record and establish a new mark," said Fiore in a telephone interview this evening. "It's going to be a collaborative effort. We're using Joe's SV 43, which has Mercury Racing 1350 engines in it right now, and we'll be swapping those out for Dave Scotto's Mercury Racing 1650s for the record runs. Doc Janssen is excellent at managing and organizing a team, so that's where his talents will come in. "We're working on the logistics for a site right now," he continued. "In testing with the 1350s, the boat has already run 164 mph. Brian Forehand told me he had never been in a boat that handled so well at such high speed. We've done a lot of bottom development to make the boat go faster, and that's still happening. As soon as we're done testing with the 1350s, we'll pull them out and install the 1650s."

"It was like it was on rails," said Forehand, who ran the boat in testing today and currently has the 43-footer at Marker 17 Marine, his powerboat dealership and service center in Wilmington, N.C.

Fiore said that the final decision on who will be in the cockpit for the record attempts has not been made. "Brian will be in there for sure," he said. "I'm not sure who else will be in the boat. I wasn't planning to, but I may end

up in there. Our goal isn't just to break the kilo record of 171 mph, it's to break the one-way record of 177 mph. We're pretty confident in our ability to do both."

Read more et: speedonthewater.com

### 6) NEW! Tunnel Boat Design Program software, Version 8.0 RELEASED! - March 1 2104



NEW Release of Tunnel Boat Design Program software - Version 8.0 - NEW Release (March 1, 2014) includes Vee Boat Design Program (VBDP) in the same package, with all the other great feature upgrades!

Check out the new TBDP performance software Version 8.0 at: <u>aeromarineresearch.com/tbdp6.html</u>

And... check out the new VBDP performance software Version 8.0 at: <u>aeromarineresearch.com/vbdp.html</u>

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

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The NEW TBDP and VBDP Version 8.0 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) - and NOW

for Vee hulls & Vee-Pad hull designs!

#### NEW Version 8.0 NOW RELEASED!



Version 8.0 - Accurate Performance Prediction through full velocity range; Dynamic Stability Analysis; Hull design optimization.

\*\*\* See the NEW TBDP/VBDP NEW Version 8.0 Features here

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\*\*\* New Performance Analysis Wizard (auto Report Writer) - Version 8.0 - 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.

\*\*\* Porpoise Analysis - NEW TBDP V8 BREAKTHROUGH FEATURE! - Version 8.0 - 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 Version 8.0 features here.

\*\*\* See the TBDP/VBDP "What's New" Vesion 8.0 feature summary here

#### **Buy Now**

### 7) Jimboat's Feature Articles - FREE!



NEW - Jimboat explains <u>'How To Prepare Your Hull Bottom For Speed &</u> Efficiency" (PB&RIB magazine April 2014 issue)

Author Jim Russell outlines secrets of <u>'Anatomy of a BlowOver!'</u>

Jimboat reviews <u>'Step On It! - The In's and Out's of Foot Throttles'</u>

Jimboat reviews <u>'Outboard Jack Plates for Performance in Powerboats'</u>



Jimboat interviews in RaceBoat International magazine, the newest up-andcoming star of F1 H20 World Championship circuit, Shaun Torrente

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

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

Jimboat outlines secrets of 'Step Design in Powerboats'

[Jimboat writes Feature articles in PowerBoat & RIB magazine, HotBoat, Scream&Fly magazine, 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

See you next time! /Jimboat

Let us know ideas you have, requests for articles, questions or comments on TBPNews. Send comments to TBPNews@aeromarineresearch.com

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Get your full, illustrated, 13th edition copy of the world acclaimed "Secrets of Tunnel Boat Design" book; "History of Tunnel Boat Design" book, "Secrets of Propeller Design" book, the "Tunnel Boat Design" software



for tunnel and high-performance Vee-hull design, and "<u>PropWorks2" software</u> for speed prediction and propeller selection at the AeroMarine Research web site: <u>http://www.aeromarineresearch.com</u>