



TBPNews #117 – Mar. 8, 2008

>>>> **Tunnel Boat Performance News** >>>>> (over 5000 members!)
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***** TBPNews *****

1) Finnish Selio Wins UIM F1 World Championship



SHARJAH, United Arab Emirates - Selio wins Sharjah and is new world champion - For the first time in 8 years, the name on the UIM. F1 World Championship Trophy for world champion will have neither Scott Gillman or Guido Cappellini on it's face as Finnish star Sami Selio made a statement that he is the driver of "new era" by taking the title while winning his 2nd straight in the Emirates and his 3rd of the year taking the 2007 title.

Guido Cappellini came into the event with a great shot at gaining his 10th overall title in his 18th year of racing, needing to only place 6th or better, but he ran into his same bad luck that has plagued him for 5th time in 6 years, failing to finish, this time with a blown engine and ending his season again in tears on the 39th of the

50 scheduled laps.

The only accident of the race came early in the first lap when ex-World Champion Fabrizio Bocca of the Rainbow Racing team crashed out on the north side of the race course barrel rolling to a stop and ending his season in 12th place in the championship with 15 points.

The 8th month journey for the UIM. F1 World Championship for power boating began in Portimao, Portugal in May and ended in the late afternoon darkness in December with a new driver enjoying the taste of the World Championship glory, Sami Selio. The 31 year-old native of Helsinki, will now join 9 other drivers in the select group that can be called "World Champion".

The start of the 2008 campaign for the UIM. F1 World Championship for power boating will begin in March in Doha, Qatar.

check out more at: f1boat.com

***** TBPNews *****

2) FEATURE ARTICLE: "Why do the boats create rooster tails?"

FAQ: This question comes to us from one of our readers (DS)- "Why do the boats create rooster tails".

Response: I've had many people ask me about the "lost energy" in a performance boat's roostertail. You are all right - there is a lot of energy to pump that much water into the air.

Definition: "Rooster-tail - A projected mass of fine particles of water, having an arced shape similar to that of a rooster's tail."



The rooster tail is the result of propeller hydrodynamics - the displacement of water used to generate the thrust to propel the boat forward at great speed. Present day engines can have huge power capability, and it's a challenge to transport this energy as thrust for forward motion of the boat. For example, the 200+ hp or so of engine power is converted through an outdrive to thrust of about 1300 pounds (or more) at 60 mph. That load is

pushing against the water. Some of the water just can't stay where it belongs, especially if the angle of the trim is trying to push the bow of the boat up - and hence the water at the rear up too! So this is why thrust is more efficient when the motor drive is trimmed "in", with a "thrust-line" angling down into the water.

Surfacing propellers also contribute to "rooster-tails". The surface piercing propellers run half in and half out of the water and usually display a rooster tail into the air behind the boat. While these surface-piercing props experience much less drag and are much less susceptible to cavitation, they also expel a certain amount of water "normal" to (straight up from) the water surface. Since this happens as the prop also generates forward thrust at the expense of the static water, the result is a "flow" of water up and back from the propeller.

Propeller shaft depth and thrust (trim) angle can affect the efficiency of your propeller thrust, and is often illustrated in how much of a rooster tail you see. Propeller design features also have an affect on thrust efficiency and thus, on the view of the rooster tail. Generally, however, the more "rooster tail" we see, the more INefficient is the thrust.



For example, propellers designed to generate bow lift (eg: high rake) can operate to direct the "thrust cone" of your propeller to be more "narrow" or more focused. Propellers designed to be "stern lifting" can result in a "thrust cone" to be more expanded or "fat", expending energy that is not aligned with the direction of the prop shaft, and shows a more dramatic rooster tail as a result. These types of setups can have the benefit of lifting the rear of the hull and reducing overall hull drag - so the tradeoff (less efficient propeller thrust) can be worth it! Props that have very narrow thrust cones will push more of the water directly in line with the prop shaft - more efficient thrust - very little energy is thus wasted and only a small rooster tail will be visible.

Larger diameter and/or smaller pitch props can usually generate lower rooster tails - but this won't always mean better performance. It is most always, like everything in performance powerboating, a trade-off or compromise.

When you see a boat that is well rigged, well set up and well driven, the rooster tail can give it away! Often the tell-tale of great setup is NO ROOSTER TAIL! - the "spray" of rooster tail shows very little loss of energy through the lower unit and propeller setup. The hull setup is perfect for the speed he is going, and the engine trim angle is perfect to maintain hull stability and minimize power lost through generation of rooster tail. It is a picture of beauty to see a boat set up as perfectly as to see the 'perfect rooster tail'

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

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

***** TBPNews *****

3) Cowes-Torquay-Cowes race to run again



The most famous endurance race in powerboating, the Cowes-Torquay-Cowes (CTC), will be reintroduced to the sporting calendar in 2008 by the organizers of the Powerboat P1 World Championship. The CTC, which first ran in 1961, will take place over the August Bank Holiday weekend and is expected to attract worldwide interest.

The Cowes-Torquay-Cowes is an open event, organized in association with the British Powerboat Racing Club (BPRC) and up to 80 craft are expected to participate. The boats will start and finish in Cowes and the front runners are expected to complete the course in less than four hours - weather permitting. The Cowes-Torquay-Cowes was the very first offshore race in Europe and is

recognized as one of the toughest challenges in world powerboating, comparable with the Indy 500 and 24 Hours of Le

Mans.

check out more at: powerboatp1.com

***** TBPNews *****

4) 17 Unlimited Hydroplanes are possible for 2008 season



14 Race teams & 17 Unlimited Hydroplanes are possible for 2008 season - Two new teams, the U-22 and U-28 race teams, are set to make their debuts in 2008 and a third team, the U-48 Lakeridge Paving, plans on running a second boat on the west coast.

Here's the complete list of possibles. If the Spirit of Detroit team decides to run more than one boat this year - or split the racing duties between the U-13 hull and the newly acquired U-2 hull from Ken Muscatel - that could increase the number to 17.

U-1 Elam

U-3 Cooper

U-5 FormulaBoats.com

U-6 Oh Boy! Oberto

U-7 FormulaBoats.com

U-9 Jones Racing

U-10 USA Racing Partners

U-13 Spirit of Detroit

U-17 Red Dot

U-22 Webster Racing

U-25 Superior Racing

U-28 New Kid on the Block

U-37 Beacon Plumbing

U-48 Lakeridge Paving

U-50 TBA (O'Farrell)

U-100 MirageBoats.com

With that many new boats, the next logical step is to increase the number of race sites from the current six. Increasing the number of races is one of the ABRA's top priorities.

Check out more at: abrahydroplanes.com

***** TBPNews *****

5) Mercury Racing introduces new Verado 350 SCi outboard



Mercury Racing announced the introduction of the all-new Verado 350 SCi – the latest addition to Mercury Marine's flagship Verado outboard family. The 350 horsepower in-line six-cylinder engine continues Mercury Racing's heritage of delivering more power and performance than competitive outboards with the same horsepower rating.

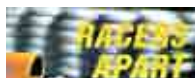
From the top cowl to the all-new gearcase, this engine is designed to exceed consumer expectations in product quality, reliability and performance. The 2.6-liter supercharged engine features electronically controlled sequential multi-port fuel injection, four valves per cylinder, double overhead cam design, a charge-air cooler and electronic boost bypass control. The new top cowl design, developed by Mercury Racing, features fresh air intakes at both the top and front of the engine. The custom cool air intake at the cowl top, designed to help maintain consistent engine operating temperatures, draws air into a flywheel-mounted fan. The flywheel fan circulates cool air around the powerhead and associated components. An innovative air scoop, on the cowl front, channels fresh air directly to the supercharger via the air intake attenuator - thereby improving power and performance.

Mercury Racing developed an all-new sand-cast driveshaft housing for Verado's revolutionary Advanced MidSection (AMS) for enhanced durability in the unforgiving offshore environment. Stainless steel guide plates with fiber wear pads, along with high-performance engine mounts, result in enhanced engine stability at high speeds. Mercury Racing designed an all-new gearcase to handle the Verado 350 SCi's high torque and power output. Engineers developed a new hydrodynamic shape and size to accommodate the larger-diameter straight cut gears, heavy-duty 1-1/4" diameter propeller shaft and billet aluminum bearing carrier.

Check out more at: mercuryracing.com

***** TBPNews *****

6) NEW Powerboat History & Design Books On-line



Most complete supply of performance powerboat history, design and racing books...Over 50 unique classic hardcover books on performance powerboat design, powerboating People, History, Racing,

Technical, Construction and Engineering.

Too many classic books to list here...check out the complete list at [Powerboat Design & History books](#)

check out ALL the new book additions: [Powerboat Design & History books](#)

***** TBPNews *****

7) 2008 Software Update includes New Yamaha 350hp V8 & Mercury 350hp Verados for TBDP© and PropWorks2©



New [2008 Motor Wizard update](#) (AeroMarine Research®) for TBDP© and PropWorks2©

Now over 575 engine choices in Motor Wizard database! [Included with "Tunnel Boat Design©" software & PropWorks2© software].

The 2008 motor database update now has over 575 engine specs, including new jet-drive outboards, new Yamaha 350hp V8 outboard, Evinrude E-Tec specs, new Mercury 300hp & 350hp Verados. Use the New Motor Design Wizard to easily input the dimensional information for your setup. Just select your OEM engine manufacturer and highlight your model from the over 575 listed. The published manufacturers specifications are all there - Mercury Marine, Merc Hi-Performance, Bombardier Evinrude/Johnson, Yamaha, Suzuki, Nissan, Honda, Tohatsu, Mariner, Volvo,

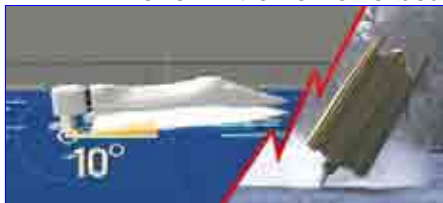
MerCruiser, Steyr, OMC, Volvo Penta. The OEM factory correct MaxHP, Height, Weight, RPM and gear ratio will be automatically input to TBDP V7.9 and PropWorks software V2.9.

Check out more information or your MOTOR WIZARD© Update at: aeromarineresearch.com

***** TBPNews *****

8) Powerboat Racing on TV

*** **"Thrill Zone: Extreme Powerboats"** - National Geographic powerboat show.



Author Jim Russell (Jimboat) is powerboat design technical consultant on a new National Geographic special for "Thrill Zone" series...

Details at: (channel.nationalgeographic.com)

check out next show date at: **Thursday, March 20, 2008 at 01P** and Friday, March 28, 5A

Watch for other show dates on AR's website! aeromarineresearch.com/NatGeo_thrill-zone.html

*** **"Streaming Motorsports"** on Speedbox.tv - Parker ENZED Jetsprinting Championship - - Check at: speedbox.tv

*** **"Champ Boat Grand Prix Series"** - on SPEED Channel - Check next show at: www.champboat.com or at: www.speedtv.com

*** **"F1 World Championship TV Show"** on The Water Channel - Check it out at: www.waterchannel.com; [see web site for other show times]

*** **NEW "War On Water" TV Show** on The Water Channel - Check it out at: www.waterchannel.com; [see web site for other show times]

*** **"Class 1 – World Championship – 2006"** on The Water Channel - Check it out at: www.waterchannel.com; [see web site for other show times]

*** **"Offshore Classics"** on The Water Channel - Check it out at: www.waterchannel.com; [see web site for other show times]

*** **"American Powerboat Television"** on The Water Channel - Check it out at: www.waterchannel.com; [see web site for other show times]

