

# AeroMarine Research

## TBPNews - Performance Report

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**TBPNews #114 – Sept. 30, 2007**  
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>>>> **Tunnel Boat Performance News** >>>>> (over 5000 members!)

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### 1) Ferrari joins P1 Powerboat Racing!



Sportscar racer and businessman Massimiliano (Max) Ferrari will race in the 2007 Powerboat P1 World Championship, competing for Evolution Class honours with an American-built Skater 399 powered by Mercury Marine Racing engines.

For several years Ferrari has maintained close ties with Powerboat P1 and, with this announcement, his racing plans are finally complete. The Skater Racing Team represents a significant entry into the P1 fraternity, not only

in the quality of the boat, pilots and back-up infrastructure

but also the charismatic personalities of the team:

Massimiliano 'Max' Ferrari: Respected businessman and experienced powerboat and sportscar racer;  
Prince Emanuele Filiberto di Savoia: The 'Prince of Venice and Piedmont', a motor sport enthusiast;  
Giorgio Pasotti: Actor (winner of the 2004 Flaiano Film Festival Best Actor Award for 'Dopo Mezzanotte') and fanatical sports competitor; Tomaso Trussardi: Youngest family member of the famous Trussardi Italian fashion brand; Andrea Bergamini and Maurizio Bulleri: 2005 P1 SuperSport World Champions and renowned PR and media experts.

The team's progress will be one of the most eagerly observed during the season on more than one level; a strong pilot line-up, royal blood and celebrities, in a racing boat built by one of the marine industry's top boat manufacturers. Lorenzo Quadri, owner of 'Quadri Racing' in Geneva, Switzerland, is supplying the engines and technical equipment and, already, the 40ft boat has a 'Hollywood' pedigree,

having been used in the United States by Columbia Pictures to advertise the 'Spiderman' movie.

check out more at: [www.powerboatp1.com](http://www.powerboatp1.com)

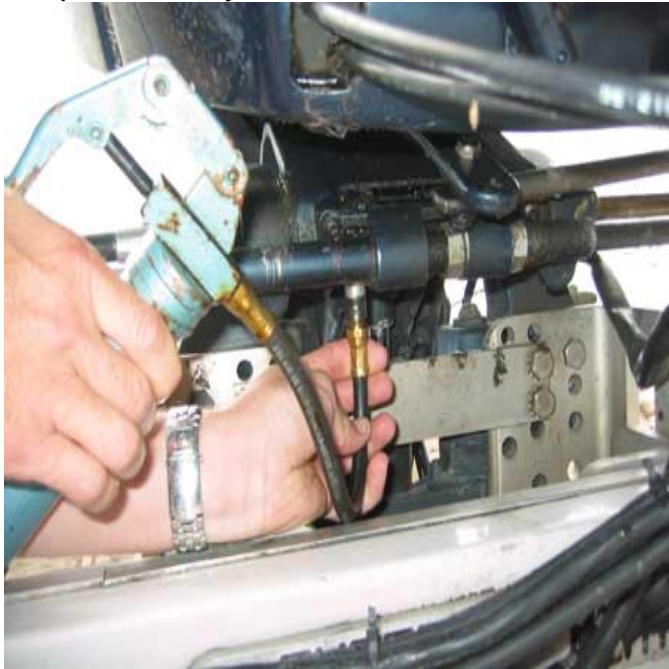
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## **2) FEATURE: 'Winterizing Your Performance Outboard Engine' (Part 2)**

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 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!).



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 a lot 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.

See Jimboat's full colour article published in Family & Performance magazine at: <http://www.aeromarineresearch.com>

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### **3) Fountain Mercury Sets Center Console World Speed Record**



Fountain Powerboats, in a two-way average speed of 87.6 MPH, set the American Poker Run Associations (APRA) center console world speed record. The kilo boat was a Fountain 38' Tournament Edition, named CorporateCars.com, powered by four 300 horsepower Mercury XS Optimax engines. Conditions were less than optimal with a steady north wind coupled with a six to 12 inch chop, which proved to be no

match for Fountain's positive lift hull design.

Fountain's new speed record shows the boating world that an outboard powered Fountain center console can now compete with sport boats. Reggie Fountain has incorporated his legendary notched transom, pad keel, positive lift hull designs into what is now the industries most extensive line of high performance fishing boats.

see the Fountain video at: [www.fountainpowerboats.com](http://www.fountainpowerboats.com)

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### **4) David overtakes Bernard to win ABRA San Diego Thunderboat Regatta**



Steve David in the U-6 Oh Boy! Oberto passed U-5 Formulaboats.com driver Jeff Bernard on Lap 3 in the final heat of the San Diego Thunderboat Regatta on Mission Bay and never looked back, capturing his second ABRA hydroplane series race this season.

The U-16 Ellstrom Elam Plus driven by Dave Villwock left the course after three laps with engine problems. The U-16 still

won the team championship with 8,794.

Villwock, also with 8,794 points, defeated David by 935 for the 2007 driver championship.

Looking to 2008 season already, 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. That brings the total to as many as 18 boats that could score points during the season. The U-22 team is taking a piston boat and converting it to turbine while the U-28 is converting a turbine boat to piston power.

Along with the new teams, several existing teams may enter 2008 with different boats. Both the U-1 Miss Elam Plus and U-37 Miss Beacon Plumbing teams have explored the option of building new hulls for next season while the U-13 Spirit of Detroit is reportedly negotiating to buy the former U-2 Miss Trendwest hull from Muscatel. Muscatel campaigned that boat in 2006 as the U-2.25 Superior Racing.

Check out more at: [abrahydroplanes.com](http://abrahydroplanes.com)

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## 5) 2007 J.D. Power Marine Engine Survey

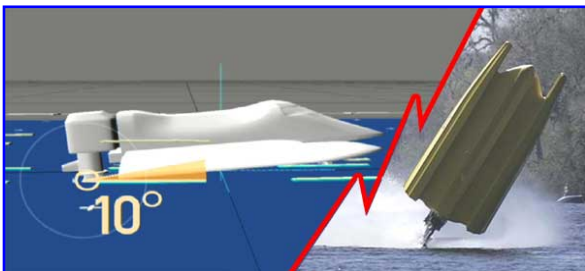
Jim Shepard outlines the results of the J.D. Power and Associates Competitive Information Study for 2007 for Marine Engines. This survey measures overall customer satisfaction with marine engines that have been divided into four (4) separate categories. The study reports on engine classifications including EFI (Electronic Fuel Injection) Inboard Engines, 4-Stroke EFI (Electronic Fuel Injection) Outboard Engines, 2-Stroke DI (Direct Injection) Outboard Engines, EFI (Electronic Fuel Injection) Stern drive (I/O) Engines; and examines seven (7) separate factors in determining overall customer satisfaction as reported by owners of marine engines including 1. Starting Ease, 2. Quietness at Cruise, 3. Reliability, 4. Fuel Economy, 5. Shifting Smoothness, 6. Lack of Engine Fumes, 7. Ability to Accelerate the Boat Quickly.

Check more at: [powerboat.about.com](http://powerboat.about.com)

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## 6) 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](http://channel.nationalgeographic.com))

Watch for other show dates on AR's website! [www.aeromarineresearch.com/NatGeo\\_thrill-zone.html](http://www.aeromarineresearch.com/NatGeo_thrill-zone.html)

\*\*\* **"Champ Boat Grand Prix Series"** - on SPEED Channel - Check for next show at: [www.champboat.com](http://www.champboat.com) or at: [www.speedtv.com](http://www.speedtv.com)

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

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

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

\*\*\* **"Honda Formula 4-Stroke Powerboat Series"** - Check it out at: [honda-racing.co.uk](http://honda-racing.co.uk)

**[Ed. Note: The Water Channel is available on [The Dish Network](#)]**

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## **7) Jimboat's Feature articles**

***Watch for Jimboat's new article on "Chine Walk" in upcoming HotBoat magazine.***

Jimboat writes Feature articles in HotBoat, Family&Performance Boating, World of Powerboats, Extreme Boats magazines.

- ['Hump Zone' - "Why does your Boat Porpoise?" - HB-April 2007](#) new
- ['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](#)

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See you next time!  
**/Jimboat**

**MINIMOST & MINIMAX "Sea Fleas"** - In the late 50's and early 60's William D. Jackson introduced the two famous seafleas known today as the Minimost and Minimax. Plans & Full Size Patterns Now Available! Brian Cranfield at BC Seafleas now offers full size patterns for replicas of these boats. Included in the package is a complete set of full-sized patterns, building plans and a booklet to help guide you through the building process. Contact Brian at: [cranfieldbrian@hotmail.com](mailto:cranfieldbrian@hotmail.com) or 905-986-4868. More details at: [BC Seafleas web page](#)

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