



Up River

Bordentown Yacht Club Newsletter July 2007



Upcoming Events for July

- 2nd - General Membership Meeting 8:00 P.M.
- 14th - BYC Annual Cruise to the Chesapeake begins
- 21st - BYC Commodore's Dinner in Chesapeake City
- 22nd - BYC Annual Cruise to the Chesapeake ends
- 23rd - Trustees Meeting 8:00 P.M.

Upcoming Events for August

- 6th - General Membership Meeting 8:00 P.M.
- 17th - Raystown Lake cruise begin
- 20th - Trustees Meeting 8:00 P.M.
- 25th - BYC Crab Feast

Bordentown Yacht Club
P.O. Box 11
Bordentown, NJ 08505

Important Information Inside
Correction Requested

BYC Happenings

July 2007

New Members

Welcome to new BYC members:

Frederick and Elizabeth Vaneekhoven

Tom Mensel

Keith and Patricia Schuk

Joan O'Gara and Pat Treptow

Jan Troy

Peter and Nicole Vescovi

John and Connie Hartwell

DRYL – Delaware River Yachtsmen League

The July monthly meeting will be on July 3rd, Tuesday, at 8:00 P.M. at Quaker City YC. All are welcome. Come see the DRYL in action. For other DRYL events, check the web site:

http://www.dryl.org/2007/Events/dryl_2007_scheduled_events.htm

Princess Notes

Dockage is \$25 for the night of the pageant, that information is due by July 3rd, the event is Aug 11 in Philadelphia. The theme is the 70's. Those attending by boat, we will get together to make a plan for decorating. Meeting TBA, when we know who will be taking their boat.

Pageant Fund raising items:

Buttons. The button order forms are also due by July 3, buttons are \$5 each and a great way to show your support for Ashley. If buttons are not your thing they are also offering T-Shirts. T-shirts are \$12; July 3rd is also the dead line.

Boat Load of Cheer Tickets. \$1 each available at the pageant, drawing on pageant day.

July's Fleet Captain's Report

The July Cruise Meeting will be Wednesday, July 11th at 8pm. Anyone taking a boat either on the cruise or to the commodore's dinner, please attend.

Commodore's Dinner tickets will be on sale until the July meeting, July 2nd. If you are planning on taking your boat, please call Chesapeake City and reserve your slip, they are not holding any spots without a credit card and specific vessel information. 410-885-2040

Dinner is \$42 per person, children under 12 are \$25. We are also setting up a pizza party for the kids who do not want to attend, boat and price TBD.

^{online.net} We received another Furthest Distance Plaque, from attending Farragut's Opening Day. Scott Jones did a wonderful job representing the club and introducing Princess Ashley. We had 2 boat, 2 jet skis for a total of 14 members.

DRYL Events: Poker Run, July 28th; Bristol Crab Feast, August 4th; Von Nieda Picnic @ Riverside, September 8. For a complete list of all events visit www.dryl.org

cruising corner

The column designed to give everyone the skinny on the cruise.

It's finally cruise time! The final meeting will be the Wednesday before we leave, July 11th. Anyone taking a boat on the cruise (this includes to the commodore's dinner) should attend.

Cocktail party itineraries will be distributed at the meeting, but are available upon request ahead of time. Please bring your cruise check lists, so we can compare, you may help someone remember something very important!

Apparel

Golf Shirts	\$29
Tee Shirts	\$10
Men's Tank Tops	\$10
Burgees	\$24
White Button Down	
Dress Shirt	\$32

Coozie	\$2
Denim Long	
Sleeve Shirt	\$29
Ladies Tank Top	\$12

Steve Allen is now handling Apparel. He has t-shirts, golf shirts, ladies shirts and much more in stock. In the display case is just a sample of what is in stock. In addition to clothing the Apparel Committee also has your BYC burgee, vinyl burgees, cozies and much more. See Steve Allen or give him a call.

Boat for Sale

2006 Bayliner 285 2006 – 31’ length overall, less than 90 hrs. Better than new and \$20K less than comparably equipped 2007 model. Freshwater cooling 300HP/Bravo III, 12K AC/heat, windlass, spotlight, fire suppression system, bottom barrier coated, Navman gps/plotter, 4 years left on transferrable engine/outdrive warranty, full camper canvas plus cockpit cover, 4 person galley dining, stove, microwave, fridge, galley, enclosed head with shower, sink, pumpout fitting, snap in cockpit carpet, largest single engine model made by Bayliner. Cruises about 25 mph at 3400 rpm, top speed 38 mph. \$72,900. Sleeps 6. Contact John Griffin 609-298-3980.

Editor’s Notes:

Please email news items, corrections, and column ideas, to the editor (John Griffin) at: john@mosey.orgT

UUUUUUUUUUUUUUUBoating Tech Talk

Material in *Seaworthy* may be reprinted with credit to "Seaworthy, the BoatU.S. Marine Insurance and Damage Avoidance Report."

Thanks for the following article from "Seaworthy":

Keeping a Wary Eye on Raw-Water Cooled Manifolds and Risers Can Prevent the Premature Death of Your Engine

Pop Quiz: The owner of a 30' powerboat hops aboard his boat one day to go for a cruise, but his inboard V-8 engine is slow to start. When it finally does start, he notices a distinct knocking noise which he's never heard before. He continues to run the engine briefly, and then shuts it down to investigate the cause. Eventually he removes the spark plugs and discovers water in the # 2 and #4 cylinders (hmm...). Later, when the engine is torn down for inspection, it is discovered that the #4 piston connecting rod is bent and the cylinder walls are rusted due to water intrusion. How did water get into the cylinders? (Hint: It's not supposed to be there.)

There are several possibilities, but if you guessed "Act of God," try again. More likely, saltwater passed into the cylinders through a leak in either the raw-water cooled exhaust "manifold" or the "riser." Once water gets inside the cylinders, the result is usually catastrophic engine failure. It can ruin your day, and much of your summer by the time busy mechanics get around to a total engine rebuild (if possible) or replacement. Because the engine is often the single most expensive part of your boat, it makes sense to inspect or replace the risers and manifold periodically before an internal leak occurs, which is more a question of "when" than "if." Once it happens, there is usually little or no warning before the engine is ruined.

Keeping the Water and Gas Separated

Exhaust manifolds and risers are large metal castings that carry hot exhaust gasses away from the engine block on inboard engines. All V-8 engines, for instance, have a separate exhaust manifold along the side of each cylinder bank. The riser, which is shaped like an inverted "U," is sometimes located at the aft end of each manifold (e.g., on Chrysler engines), and sometimes it's centered on top of the manifold (e.g., on MerCruiser engines). Sometimes the riser slopes down from the end of the manifold, if the engine sits high enough above the waterline, in which case

it's often called an elbow. The exhaust hose is then attached to the aft end of the riser or elbow.

What makes these cast iron parts unique is that they are a double-walled pipe within another pipe. This arrangement allows hot exhaust gasses in the internal pipe to be surrounded by an external water-filled pipe, called a water-jacket, which remains cool enough to touch. At the aft end of the riser, water from the water-jacket combines with and cools the hot gasses before continuing out the exhaust overboard discharge. Without the cooling effect of the water, the exhaust gas would overheat the manifold and risers and burn through the exhaust hose in short order.

Keeping the cooling water and exhaust gasses separated until they exit the riser is crucial. If water finds a way into the gas-only chamber before the end of the riser because of a leak in the water-jacket, it can seep into the cylinders when the engine is at rest and either seize the pistons with rust, or create a "hydro-lock" condition. That happens because water cannot be compressed in the cylinders, so the engine suffers massive and usually irreparable damage when you try to start it. Both result in the premature death of your engine.

Why do these heavy iron castings fail? Manifolds and risers live in a harsh environment. They must endure very hot gas containing corrosive acids travelling at high velocity. They are exposed to saltwater and vibration, and then left idle for long periods while rust and corrosion eat away at the metal and clog water passages. It's a wonder that they last as long as they do. Unfortunately, this kind of loss is usually the result of long term corrosion, which is not covered by insurance.

Reducing the Odds of Failure

The warning signs of a potential manifold or riser failure are elusive. Hard starting and an unfamiliar knocking sound, as in the claim above, is one way to discover a leak, but by then the damage is usually done and the engine must be completely rebuilt or replaced. When the water-jacket of a manifold or riser becomes clogged with scale and corrosion, a leak is usually close behind because the internal walls are deteriorating. Suspect this if the engine overheats at high speed or under a load, but overheating may also be caused by a damaged impeller, clogged raw-water filter, or restricted raw-water intake screen.

Sometimes it's possible to detect hot spots by comparing the temperature of two risers with your hand; if one seems relatively hot it may indicate that the water passages on

that side are clogged. In which case, you may also notice less water exiting the exhaust discharge if each side has an independent exhaust hose (unlike most I/O's). Note that the engine temperature gauge may not indicate overheating when idling at low speed. However, all things being fairly equal on V-block engines, if one side becomes clogged the other is usually not far behind, so the touch test is not very conclusive. A more scientific approach is to hire an engine surveyor who has an infrared pyrometer. This instrument can determine temperature variation in cast-iron exhaust parts much better than your hand, plus you profit from the surveyor's experience.

Another sign of trouble is corrosion at the joint between the manifold and riser, which means the gasket between them has failed and water is seeping out. If water is seeping outside the joint, there's a high probability it will soon leak along the inside joint to the gas-only chamber, if it hasn't already. Don't wait for confirmation on this one.

In fact, the best policy is to not wait for any warning sign at all, but to periodically remove the risers for inspection, and possibly the manifold depending on what you find. How often depends on where the boat is located and how often it's used. Boats operating in Florida may get two or three years out of risers and not much more for manifolds, while those in Maine may last five or six years. It's understandable that there's no primordial urge to do this; after all, your car mechanic never nags you to inspect the risers (probably because car engines don't have risers). Nevertheless, on boats that operate in saltwater, it should be considered standard maintenance. If it helps, remember that the BoatUS Marine Insurance claims files show that most owners had absolutely no warning that they had a problem until it was too late, fun over.

What to Look for

The good news is that risers are not that difficult to remove for those inclined to do it themselves; only four bolts hold it to the manifold and the exhaust hose is held on by a few hose clamps. Once off, you'll be able to see if all the water passages are open or clogged. Take a large flat head screw driver and dig around for corroded metal that's easily removed. If you hit solid metal right away, it's probably okay, but if large chunks flake off, replace it. There should be no evidence of rust in the gas-only chamber on the side that connects to the manifold (expect to see black carbon). If there is rust, water is probably leaking in through a hole in the water-jacket at the upper loop of the riser.

Also look carefully at the metal faces where the manifold and riser join together. Since the walls of these faces are

fairly thin to accommodate the water passages, the gaskets tend to deteriorate and develop leaks at the narrowest sections. Sometimes water seepage can be seen outside the joint, as noted above. If the metal face is pitted on either the manifold or riser, replace it or have the surface machined smooth again; otherwise it will probably leak again, perhaps inside the gas-only chamber.

If you decide to replace the risers (always replace both at the same time), you need to decide whether to also replace the manifolds, which are both more costly and a bit more difficult to remove. Any sign of rust in the gas-only chamber indicates a leak, which obviously warrants replacement, but it's more difficult to inspect the interior of a manifold. Risers tend to fail before manifolds because the water is hotter by the time it reaches them, which accelerates corrosion and causes the salt to separate and stick to the walls more readily. Also, the top and aft side of the riser is exposed to both saltwater and air where the two combine, which is a perfect environment for corrosion, so you may get a few more years out of a manifold.

Unfortunately, there is no practical, conclusive method to evaluate the internal condition of manifolds. It can be removed, cleaned, and even pressure checked, but there's no guarantee it won't develop a leak soon after. In the end, you may have to weigh the cost of replacing an aging manifold against the cost of a replacing the engine if it fails.

Another option is to convert your raw-water cooled engine and manifold with a freshwater cooling-system conversion kit. This will increase overall engine life and you won't have to worry about raw-water corrosion in the manifold. Risers, however, are always raw-water cooled, so they will still need to be inspected regularly.

A word of caution: Exhaust hoses disconnected from the riser provide an open path to the outside. They must be plugged and tied securely above the waterline to prevent water from flooding the boat. Each year, both owners and mechanics sink boats by leaving exhausts open.



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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<h1>BYC July 2007</h1>						
1 Rental 12pm-6pm Bill Horan Bartender	2 Membership Meeting 8PM Justin Edwards Bartender	3	4 Independence Day	5	6 Bar Open 8pm Bob Marlin	7 Bar Open 8pm Ryan O'Hare
8 Rental 3pm-7pm Paul Ducharme, Pete Bergin	9	10	11 Bar Open 7pm Ken Kriedler Final Cruise Meeting 8PM	12	13 Bar Open 8pm Frank Falconio	14 Bar Open 8pm Bill Ulrich BYC Cruise
15 BYC Cruise	16 BYC Cruise	17 BYC Cruise	18 Bar Open 7pm Alan Stevens BYC Cruise	19 BYC Cruise	20 Bar Open 8pm Charles Parker BYC Cruise Chesapeake	21 Rental 7pm-12 Joe Godcharles, Ron Kubacki Chesapeake City Commodore's
22 BYC Cruise Chesapeake City	23 Trustees Meeting 8pm	24	25 Bar Open 7pm Steve Miccio	26 Coast Guard Aux Meeting 7pm	27 Bar Open 8pm Curtis Hook	28 Bar Open 8pm Greg Poole
29	30	31				

BYC August 2007

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 Bar Open 7pm	2	3 Bar Open 8pm	4 Bar Open Rental 3:30pm-9:30pm
5	6 Membership Meeting 8PM	7	8 Bar Open 7pm	9	10 Bar Open 8pm	11 Bar Open 8pm
12	13	14	15 Bar Open 7pm	16	17 Bar Open 8pm Raystown Lake	18 Bar Open 8pm Raystown Lake
19	20 Trustees Meeting	21	22 Bar Open 7pm	23 Coast Guard Aux Meeting 7PM	24 Bar Open 8pm	25 BYC Crab Feast
26	27	28	29 Bar Open 7pm	30	31 Bar Open 8pm	