



(top) Engine before cleaning; (bottom) White paint does wonders for an old engine.

sure that to dock spectators, it looked like I was performing some unnatural act atop my engines in order to get at these plugs. After completing this difficult task four times, which meant handling each plug eight times, I was finally able to put in the new coolant. Luckily, the coolant on the starboard engine was still clean but to put both engines on the same maintenance schedule, I flushed that engine once with only water and then re-filled it with new coolant.

We also replaced the fuel injectors and water pumps on both engines, not because they were bad but because we wanted to know they were dependable. Now both engines have freshly main-

tained cooling and fuel systems and we can start our summer Bahamas cruises with confidence.

I wanted the entire cooling system in good order, so I decided to clean the raw-water side of the heat exchangers on both engines. Online, I learned of a method to do this in-place, which I decided to use because the exchangers are very hard to remove on this boat without tearing apart the boat interior. I could get my finger into the zinc plug holes and feel old zincs rattling around in there and, after removing the end caps, could see the crud they left behind. I cleaned the exchangers in place by pumping an acid/water solution directly into the exchanger through the zinc plughole, using a drill-operated pump and a barbed fitting. I let the acid sit and cook the crud away for about 20 minutes and then reassembled the plug and flushed out the acid by running the engines. After installing the new zincs, my cooling system is like new.

The tips and information in *DIY boat owner* magazine and archives were very helpful through all of the projects. I would also like to thank Captain Patrick McCrary for his help, experience and his website: [www.bertram31.com](http://www.bertram31.com). It's full of technical information and access to helpful, experienced Bertram owners. There is also a website for the Bertram 33 by David Sumich at [www.bertram33.com](http://www.bertram33.com). These websites are a haven for do-it-yourselfers. After buying this boat, I suddenly found myself in a community of Bertram owners that freely share valuable knowledge and experience and the group meets for Bertram rendezvous all over the U.S.

Next on our project list is an autopilot, which I have just begun. Following that is much needed attention to the anchor windlass. I'm sure there will be many more satisfying projects to complement the boat and enhance our pride and joy of ownership. I seem to like working on the boat as much as I do using it. The Bertram is a great boat and it deserves to have the best.

— Sean Burlingham was 12 when he bought his first boat and has

since owned "at least 10 boats, probably more." Most of the early boats were works in progress or as he wrote, "pieces of junk to put it correctly." Tired of losing money on each boat upgrade and wanting to move up to something much larger and higher quality that would not depreciate 40% after launching, his search led him to the Bertram 33. He and his wife Rachel, shown sitting together on the aft bench, keep "Island Time," in Melbourne, Florida.

[Ed: "The Bertram Doctors Are In ... and they have the prescription if you hit a snag in your Bertram refit." These words are quoted from a recent issue of *Soundings* (August, 2005) and bring exciting resources to classic Bertram owners and would be owners. Lee Dana and Jerry Solderholm recently set up a consulting group to provide Bertram model information, help track hard-to-find parts and offer refit consulting and engineering services for Bertrams built before 1996. Dana is a former Bertram executive and vice-president of engineering and Solderholm was manager of Bertram's parts and service department before each respectively retired. You can reach Lee Dana in Vero Beach, Florida at 772/2345211.]



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