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[Before You Throw In The \(Electrical\) Towel](#)

What to do When Your Boat Won't Start, Part Two. Proper electrical maintenance is KEY



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Last week, we wrote about various techniques you could try before throwing the towel and calling for help, whether that be the towing services or your brother-in-law. (See Daily Boater, [Boat Stuck? Help Yourself](#), 1/10/2011.) Mechanical issues are one thing. Electrical are another. This column is about that.

For 1,000 years, Safety at Sea starts at the Dock

So said Admiral Halsey a half century+ ago. It was true then, true before and true forever. And a key to safety of life at sea is a reliable boat under you. And, with the ever increasing reliance on electronics and computers aboard, we need to be sure that our electrical system is ready to go. This starts with preventative maintenance (PM.) I'll admit that I hate PM; as I'm working on something, I'm saying to myself, "the odds on this being a problem are million-to-one!" But I keep working on it because a little voice in my head keeps says, "wanna be that millionth guy...?"

I start PM where the boat starts – with the ignition system. For most boats, it is simply a key and a safety-lanyard cut-off key. That is the lanyard that you are supposed to attach to yourself so, if you fall overboard, the boat doesn't keep going down the bay or, worse, spin around until it runs you over. Most boaters don't attach that lanyard to themselves for reasons that become self-evident if you've ever put it on. You reach over to help somebody with something 2' away and the boat stops. (There are electronic ones now that are wireless and let you walk around the boat to your heart's content. See DailyBoater, [Lanyard Law Coming Soon](#), 12/1/2010, and [Autotether.com](#))

But what about the guy with an enclosed engine space. Quite likely, there is a solenoid switch down there which is an integral part of the starter system. It is mounted low on the

engine, not too far from the bilge. Take a good look at it. If you see any salt on it, it is likely from evaporated seawater that has splashed on it. Think about putting a splash plate under it, to keep the bilge water from giving it a bath in heavy seas. Also, check to see that the terminal nuts are properly tightened. You don't want them working loose. My mechanics will tell you that faulty wiring connections are the most common reason for failure. Take a look at every wiring connection. Nothing wrong with removing them, checking them, then cleaning and refastening. Visually check the cable looms and look for signs of chafe or damage.

Next, take a look at the battery or batteries. Are the cables clean and securely fastened to the battery terminals? They shouldn't have any "white powder" on them (leaking solution from the battery itself is likely the problem and that means it may be time for a new battery.) The cables shouldn't move at all when prodded, even with a good rap with a hammer. If they do move, this can set up a condition of poor connectivity, high resistance and poor starting power.

Any good mechanic will check the battery for voltage. But, even if it reads 12 volts, it may not be giving out the proper voltage under starting load, which is the greatest time of energy drain on the batteries. Under start-up, a battery should never drop below 9.5 to 10 volts. If it does, go back and check those terminal connections noted above. And don't forget the negative post too. It is just as important as the positive connection. A bad or loose negative connection can stop an engine as surely as no power at all.

If the engine doesn't get enough starting power to reach starting RPM, it just won't start. Most of us think, "Ugh! The battery is dead" and move to get a new battery. There are over a dozen places where connections can work loose, almost imperceptibly to the human eye – but not to the electronic components.

BTW, if you are interested in being part of USCG Forces, email me at JoinUSCGAux@aol.com or go direct to the D1SR Human Resources department, who are in charge of new members matters, at [DSO-HR](#) and we will help you "get in this thing..."

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