

Information Please

Steve D'Antonio

As I sit in my office quietly contemplating a series of exchanges between one of my clients and the owner of the shop that recently completed a refit that cost several hundred thousand dollars, one word comes to mind; exasperation. Hold that thought.

Boat building and repair, systems design and installation as well as executing the installation of complex engine, plumbing, electrical and electronic systems are all challenging yet rewarding tasks to be sure. I've undertaken this work for my entire professional career, from bottom painting to electrical panel replacement and while it was never fun hanging upside down in a narrow bilge on a hot summer day wiring a bilge pump, knowing it would work reliably because I did it correctly was and remains immensely satisfying. All of the aforementioned tasks and many others in the world of boats share one thing in common, without accurate information and instructions none of it could take place successfully.

I routinely inspect vessels, both factory fresh and pre-enjoyed whose myriad and often complex systems lack what many boat owners ultimately consider a basic necessity, documentation and instructions. In fact, many owners confide in me, not knowing if this is standard practice in the industry or not, "Steve, isn't it just common sense that I should expect instructions/diagrams/documentation with this installation? How would I know how to use this or what to do when it doesn't work?" Indeed, this is a valid

question and one you've likely asked yourself at some point in your boat ownership or acquisition life.

What's reasonable from an expectation point of view? Considering you've probably spent a great deal of money on the vessel or the work that was carried out I believe it's appropriate for your expectations to be high. For instance, new vessels should be provided with schematics or diagrams for electrical and all plumbing systems. If you have electrical or electronic work carried out on your boat part of that installation or repair should include preparation of a diagram that clearly indicates what was done. When I point this out to boat yards or other installers they often scoff, saying "do you know how much time that would take? No one wants to pay for that". I have two responses, one, let the customer be the judge of what he or she wants to pay for, if you offer it *as the default*, i.e. it's part of the job, I suspect few will want to back it out for the perceived savings. Two, think about how much it will cost the owner in troubleshooting time, or worse, for someone else to track down a problem two or five years later when they are 1000 miles away and none of the wires, switches or fuses are labeled. Another retort I hear from the folks from whom I expect such documentation is "we can't justify the CAD program and operator training for creating these schematics". This is either a simple misunderstanding of the expectation, or an excuse for avoiding this responsibility to the client. Let me be clear, I don't expect computer generated schematics using electrical engineering argot and symbols. On the contrary, a neatly drawn diagram simply laying out the placement of the components, indicating where they are located aboard the vessel if it's not immediately obvious, and lines connecting them, along with any relevant notes will often suffice. *This should be a standard part of all but the most*

basic electrical installations. A pdf scan of this diagram enables the owner to keep an electronic as well as printed copy, and the yard/installer can retain one as well for future reference. To omit this vital step in the new boat building, systems installation or refit process is simply irresponsible, and you should expect, nay, demand more.

Along similar lines, consider how utterly confusing a series of valves can be if they are not clearly labeled. For that matter, consider the consequences of a single valve that's not labeled, is it the raw water intake for the engine or an overboard discharge for the sanitation system? I'm not exaggerating; I routinely venture aboard high quality, well-respected new boats and find dozens of unlabeled valves. I worked with vessel owner recently who, when asked about manipulation of fuel system manifold valves said, "It all works so don't touch them, I'm not sure what they do anyway". Small wonder, most of the valves aboard this new boat were unlabeled. Folks, this is simply unacceptable and you need to let it be known that you expect more.

Let's return to the exchanges between the owner of the recently refit boat and the yard carrying out the work. The source of the client's frustration, and my exasperation, is the yard's failure to provide the necessary documentation. Such documentation would have made the delivery of the vessel and its subsequent use, it's now hundreds of miles from the yard, a seamless and, if not stress-free at least a low anxiety transition for the owner. Imagine; the vessel is now filled with new, complex equipment that wasn't there before, the instruction manuals that came with the gear are disorganized and in some cases absent all together as are warranty and registration cards. The owner doesn't know where to start because he doesn't know what might be missing. Additionally, he's not even sure where to look for a blown fuse when a set of cabin lights stops working.

Furthermore, in many cases, the instruction manuals for each piece of gear are insufficient to explain how they work in unison. This irresponsibility lies with the installer or installer's manager, he or she must take the time to not only explain the operation to you verbally, it must also be written down, with diagrams if necessary, for future reference or for reference by the next owner. I'm not suggesting this be done free of charge, on the contrary, it's part of the job, just like tie wrapping wire bundles and making sure all connections are properly crimped and bus bar screws torqued. Never the less, this all too important aspect of so many tasks must be carried out and it's worth paying for.

Here's a list of reasonable expectations you should have from any boat builder, boat yard or specialized contractor...

- Every fuse and circuit breaker must be clearly and permanently labeled.
- Wires should be labeled or numbered at both ends. If numbered they should correspond to an accompanying diagram.
- All but the simplest of electrical/electronic installations or refits should include a wiring or layout diagram.
- Installation and owner's manuals must carefully stored and supplied upon completion of the project, including warranty or product registration cards.
- Equipment model and serial numbers should be recorded; these can be written in the instruction manuals.
- *Every* valve should be clearly and permanently labeled, including seacocks and overboard discharges.

- Installation of gear that requires set up or initialization, unless specifically instructed otherwise, should be so initialized by the installer. Battery chargers and electrical system monitors, autopilots and alternator regulators come to mind. Set up is part of the job, it's unreasonable for the installer or boat builder to expect you to do this, unless you specifically request this option.
- Provide a list or diagram of fuses used aboard and a list of replacement fuses for the owner to purchase.
- The installer should walk the client through the location of key fuses/circuit breakers and their operation.