

# Photo Essay – June 2015

## Tools of the Trade

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I'm frequently amazed at the unwillingness of marine mechanics to carry out thorough engine evaluations during pre-purchase surveys, in some cases the words "ineptitude" and "incompetence" are the only terms that could accurately describe the actions, or inactions, of these individuals. Simply put, there's no excuse for it.

Two recent examples effectively drive this point home. Shortly after leaving the dock for a sea trial I inquired of the mechanic, a staff member from an otherwise well-respected and Seattle area engine dealership, if he had already begun to measure crankcase pressure and if so, was it normal? "No", he responded, "I didn't have the tools but I think the engine's instruments will measure this". I knew that this engine didn't have built in crankcase pressure monitoring, no engine I know of does, and I said, "Please confirm that and if you can't, we'll return to the dock so you can get what's needed to do this". At my request, when the client retained the dealership to carry out the engine survey, he asked that crankcase pressure be measured. The mechanic sheepishly called his office and asked for the necessary tools to be delivered to the dock. In his defense, he claimed he'd never been told about this request. Regardless, it should be part of any pre-purchase engine survey.

In another case, this one in Fort Lauderdale, an independent mechanic who came highly recommended from the broker arrived at the boat and announced he was ready for the sea trial. I

thought that perhaps he'd visited the boat before my arrival and had already deposited his tools, although I hadn't seen them. I said, "OK, so all of your gear is hooked up to the engines already?" His response took me aback, "Nah, I don't need tools, these electronic engines tell me everything I need". I said, "What about crankcase pressure and exhaust back pressure". "If there's a problem with those I'll be able to tell by the way the engine is running". Of course nothing could be further from the truth, which is why those tools exist. During the sea trial I shut down the generator, and as soon as I did the engine instrument voltmeters began to fall, a clear sign the engines' alternators weren't charging. I pointed this out to the tool-less mechanic, asking if he was concerned, "No, that's normal", he said, "you shut the genset so the battery charger isn't working now", as if this represented some sort of deduction on his part. "I know," I said, "but the alternators should..." I stopped in mid-sentence realizing my efforts were futile.

If a mechanic shows up to carry out a pre-purchase survey and his kit doesn't look like this (these are owned by colleague Tim Caruso, one of the industry's savviest mechanical surveyors), he or she isn't prepared, or capable of doing the job. You can avoid this sort of surprise by making your pre-purchase engine survey expectations clear before retaining a firm to carry them out.