There is a killer aboard your boat. You can't see it, smell it or even taste it. But it may be there waiting… it can kill in minutes or hours, it can kill hours after you leave the boat. This killer is clever and is a master of disguise and the one defense you have against it may be disabled and you may have even disabled it yourself.

The killer is Carbon Monoxide poisoning. CO is produced typically from the burning of fossil fuels but may also be produced by other means. However it is produced the results are deadly.

A quick search of the Journal of American Medical Association discovered the following statistics: "approximately 2,100 annual deaths and 10,000 injuries annually related to CO poisoning" Now of course most of the issues are not boating related, in fact I couldn't find a boating injury statistic but there remains a significant CO threat aboard many boats and it is a safety concern I take seriously during survey.

The symptoms of CO poisoning are especially deadly aboard a boat because they mimic sea sickness: "Dizziness, fatigue/weakness, throbbing headache, nausea/vomiting, irregular breathing, sleepiness and confusion can all be possible symptoms." So instead of recognizing the CO poisoning the victim wants to lie down inside and only gets worse. I once surveyed a very well kept mid sized cruiser for a new buyer. The owner was attending and I asked him why he was selling such a nice boat. His response was that his wife hated boating. "She gets sea sick even in very calm seas". It seems that every time they went out his wife, who always rides in the cabin, would get a headache and nausea. Sure enough on inspection I found a cracked exhaust manifold on the generator and all three CO detectors in this 3 year old boat unplugged. I plugged them back in and they all started alarming within a minute of starting the generator.

The first defense against CO poisoning is good maintenance of your mechanical systems. Failed and leaking exhaust elbows and manifolds, hoses and clamps as well as cooking fuels like LPG or CNG all can introduce CO into the boat. Thankfully in Fl. We don't have to worry about propane heaters. The second stage of defense and the one I consistently find disabled is the early warning system. CO detectors have been installed on new ABYC compliant boats with gas engines and enclosed spaces before the year 2003. Even diesel boats are equipped with detectors these days. The problem is that most are disconnected. That's right, unplugged. When I survey boats for purchase it much more common to find the CO detectors unplugged than to find them operational. The reason so many are unplugged is because of nuisance alarms. The units have a few downfalls; the older units would draw a lot of current and would be blamed for dead batteries. Most of these units are also very sensitive to low voltage, so if the boat had a battery problem the alarm would keep beeping, it would get unplugged then somehow never be placed back in service. Perhaps the reason most are unplugged and perhaps why yours are too without you even knowing it is a phenomena called "out gassing" or "off gassing". This is when the resins and glues and solvents used to make a new boat are still evaporating. These gasses have enough of a hydrocarbon content or similar nature to set off the CO alarms. Riggers and marina staff will unplug the units to avoid the false alarms and then they somehow never get re-activated.

It is your responsibility to maintain this level of defense. A CO detector is not a smoke alarm or explosive gas vapor alarm. All three have a place and certain value. Learn to

differentiate between the alarms you do have so you may react correctly in the event of a signal. Test your CO detectors a couple times a year. If nuisance alarms persist call in an expert to determine if unsafe Carbon monoxide levels are truly present and from where they are originating. Most manufacturers will test and service their detectors for free or cheap. And some have offered upgrade incentives. So have it tested and calibrated every two years. The new generation of alarms are wired in series so that if one goes off, they all go off. They also have the ability to turn off the generator. Household domestic carbon monoxide detectors, while better than nothing are really not recommended for marine use, as they are very susceptible to corrosion.

So your project for today is to go down to the boat and test each CO detector you have aboard. If you find them unplugged you may start to wonder how long it has been that way.

If you have a boat with a cabin I suggest that you bone up on the whole CO topic and protect your crew accordingly. There is a ton of information available online or call me and I can provide some good reference.

If you had a boat in this years lighted boat parade that is awesome! Thanks and we will see you next year!

Happy New Year.