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Silent and Odorless — a Killer!

By Vincent Pica

Most of us have heard of a tragic story of some poor soul giving it all up by ending their life in the garage. Close the door, start the car and wait for a precious few moments. For many of us, that's all the thinking we ever do about carbon monoxide poisoning. Of all the dangers that the mariner confronts, carbon monoxide poisoning is perhaps the most dangerous, since it is odorless, colorless and tasteless. Unarmed, you will never see it coming.

What Creates Carbon Monoxide?

Burning hydrocarbons, plain and simple. Diesel, gasoline, propane – all are hydrocarbons and CO is a natural by-product of burning them. You cannot tune your engine not to create CO. You can create CO-safe environments in and around your boat, but you cannot defy the laws of chemistry.

Your engine doesn't even have to be the one that's on. Your neighbor at the dock has his generator on to power the A/C and TV – and his exhaust is wafting into your cabin. The smell of it isn't what's killing you. What you smell is *unburned* hydrocarbons. What you can't smell is CO. Also, it could be your engine, but you think that you're immune because you haven't closed your cockpit. You've only enclosed the windshield and side panel areas, leaving the aft wide open. Well, in something known as the "station wagon effect," an area that's enclosed on three sides creates a vacuum behind it as it pushes ahead, and it's sucking CO into the "cup" that it's created. You are in that cup.

What Is It, and How Do You Know You're Succumbing to It?

Carbon monoxide (CO) kills by attaching itself to your blood cells in a way that keeps your blood from picking up fresh oxygen as it passes through your lungs. You essentially suffocate slowly while surrounded by air. Little by little, the CO hitches a ride on your blood cells until there are no seats left on the life-sustaining bus (your blood) for the oxygen to sit. As it happens, you start to get headaches, muscle aches, excessive fatigue and nausea. As I tell my seamanship students, "If you're starting to feel like you're coming down with the flu, but don't have the sniffles, get out of there! You're succumbing to CO poisoning!"

What do you do now!

Say you enter your cruiser, and you find a crewman lying unconscious on the sole of the cabin. The manual actually says that first you are to try to isolate the source of the fumes, extinguish them and proceed to get your mate to fresh air (to start the cleansing cycle of kicking the COs out of their seats and replacing them with Os!)

Here is where I'm coming from. This strategy could cause two people to die from CO poisoning, not one. *If* you know that the only source of CO poisoning is *Your* engine, and you can kill it in a virtual

flash, do it – or get out of there immediately and run for help! If you have to play Inspector Clouseau looking for clues, you're also playing with your life.

Remember, it could be your slip mate's engine that's polluting your air. Also, the cabin has built up some degree of CO concentration. It may be a deadly amount, and you don't have a chemistry kit in your pocket. Again, you're playing with your life.

You certainly can (1) grab a lungful of fresh air from outside, hold your breath and (2) try to drag your crewman out of the cabin. If you can't, (3) drop them and run for help. If you can get them out, but they're not breathing, give them artificial respiration (CPR) and scream for help between breaths!

How to Prevent CO Poisoning

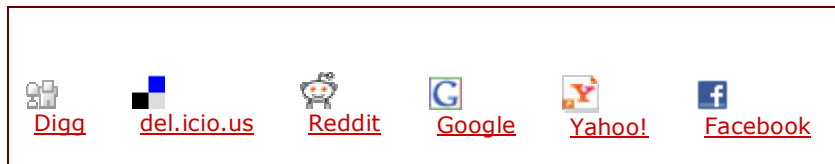
First, create fresh air paths that prevent the station wagon effect from overtaking you. Don't form that cup: crack a window somewhere and create a jet stream through your boat. Second, put carbon monoxide detectors in ALL enclosed spaces, especially sleeping quarters. These devices can be battery-operated and are readily available. They'll cost you \$29.95 at places like Home Depot, Wal-Mart, etc. there are models that can be directly tied to your battery system, like a bilge pump – it never fails unless the battery itself is dead.

I've heard these devices go off. They can wake the dead. Almost. Be aware. Be safe. Always prepared – *Semper Paratus*.



About the Author: *Vincent Pica is a coxswain and the Commander of Flotilla 18-06 East Moriches. He was a navigator in a brown-water and blue-water sailboat racing crew for eight seasons. From the "iron sails" side, he is a licensed US Coast Guard Master of Steam and Diesel Powered Vessels, carries a Radar Observer endorsement, Unlimited, on his license and is certified in Marine Diesel Engine Operation and Maintenance.*

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