

Fire Onboard

by Capt. Bob Cerullo

It happened forty years ago, but it is such a vivid memory for me that even to this day just thinking about it sends shivers up and down my spine. My dad had his 46-foot Chris Craft Constellation docked at a marina near Sheepshead Bay in Brooklyn. A new boater was assigned the slip next to my dad's boat and from the start he was a problem. The skipper of the *Chiquita* left all sorts of things on the finger of the slip we shared. The strawbreaker was the day we came back from a vacation cruise and found he had been cutting fish on our teak decked boarding stairs. In fact there were all sorts of fish entrails squarely in the spot where we would have to step to get off our boat. My dad went right to the dock master and demanded the *Chiquita* be berthed elsewhere.

The boat was moved to the gas dock about a hundred feet away from us. That seemed as if it would solve the problem until one Sunday afternoon the *Chiquita* exploded. I watched as the entire cabin lifted up for a moment then settled down. At the same time the skipper's teenage grandson was catapulted off the rear deck and into the air. Fortunately he landed in the water. The skipper was not so lucky. Moments after the blast, he crawled out of the front cabin hatch with his clothes in shreds. Frantic, he yelled to his daughter regarding the whereabouts of his infant granddaughter. She screamed, "The baby is on the couch in the main cabin." The skipper climbed back down into the smoking hatch to search for the baby. When the fire was eventually extinguished, the charred body of the baby was found on the couch. The distraught grandfather was found wandering among the boats on the hard. Despite our efforts and the firemen's valiant work, the burning *Chiquita* put our boat



fumes in the bilges.

So what caused the *Chiquita* to explode? It was a combination of things that all came together at the right moment. First of all, the skipper was careless with his boat housekeeping. Just as he thought nothing of cleaning fish on our boarding stairs, he kept the bilge like a small compost pile. There were oil cans, a rat's nest of wiring, rags, grease and grime: all the ingredients needed for a bilge fire. Obviously, he did not vent the bilges by operating his bilge blower. Most serious of all was that he had two badly-worn engines that were always difficult to start because of worn piston rings. It was only a matter of time before unburnt fuel accumulated in the crankcase of one or the other of the big old Sterling engines. A crankcase full of gasoline vapors, a bilge full of gasoline fumes, repeated attempts to start the engine with flame leaking past the piston rings and boom: death and destruction.

The point here is that boats burn for a reason. The wise boater learns what can make a boat go on fire and makes sure those conditions are not allowed to exist on his or her boat. Here are some basics every boater needs to know:

The US Coast Guard requires every boat of any size to have at least one fire extinguisher, more on larger vessels. They are useless if not charged and a total waste if no one tries to put out the fire. A fire that could be put out in 30 seconds can destroy a boat if no

one tries to extinguish it. Certainly it is wise to get everyone off the boat immediately, but a quick shot with a dry chemical extinguisher can often avert the need and save the boat.

Prevention is always the best way to deal with a fire. Motor oil stored in a cardboard box, oily rags, grease and grime in the bilge are ac-

cidents waiting to happen. Forty-four percent of all boat fires are caused by faulty wiring, circuits that were not guarded by fuses or circuit breakers, overloaded panels, inadequate wiring and battery overcharging. Wiring a boat is not a job for amateurs. Boat wiring is serious business. It is not a job for people who don't really know what they are doing. The American Boat and Yacht Council (ABYC), offers reams of standards for the safe way to do marine wiring. Ask any boat electrical technician and they can recount stories of disastrous do-it-yourself wiring.

Unlike an automobile, the engine and transmission on a boat are generally contained in the bilge and surround by flammable materials. If the engine or transmission overheats sufficiently they can actually set the boat on fire. More often than not, overheating occurs because of a bad pump impeller, ruptured hoses, blocked water intakes or broken belts. These items require yearly maintenance, neglecting them can only lead to



Diver inspects hull to determine cause of fire.

a serious problem. Nearly a quarter of all boat overheating problems are caused by restricted water flow, oil leaks or broken hoses. Generally, proper maintenance by technicians who are certified by ABYC can mean the difference.

The shoreline and its related equipment account for eleven percent of all boat fires. Be honest now, when was the last time you touched your shore power cord inlet connector to see if it was warm. A bad connection at the shore power cord connector can set your boat on fire. It needs to be cleaned and tested regularly. And don't overlook white-encrusted battery terminals. Left uncleaned, they can arc and ignite battery gases.

Fuel leaks account for eight percent of all boat fires. Sometimes they are just stupid mistakes like a marina fuel attendant pumping gas into the fishing rod holder instead of the fuel tank inlet. As crazy as that seems, it happens every year somewhere in the country, sometimes

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A fuel tank leak and electricity combined to destroy this sailboat on the hard.

on fire. We were lucky; we were able to put the fire out and save our boat.

My dad and I made it a special project to find out why the *Chiquita* exploded. My dad eventually found the distributor from one of the boat's two engines up on shore. The *Chiquita* had a crankcase explosion which triggered gas

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with tragic results. I have seen it happen at a marina in New York City. As a boat owner, you need to know more than you have to shut off the engines when you take on fuel. You need to know about closing the hatches while fueling, allowing enough time for any accumulated vapors to disperse and most of all you need to learn how to use your nose to check for gas fumes in the bilge before you attempt to start the engine.

Diesel fires are less likely, but they can happen where there is a fuel leak. Another cause of my recurring spinal chills comes when I recall, as a young boy, being on a friend's old Mathews going out to the fireworks at Coney Island when my dad detected the odor of fuel. We checked the bilge and found a metal fuel line had rusted and was dripping gasoline into the bilge. The potential that night was a loss of at least thirty people if the boat exploded. Thanks to my dad's keen sense of smell, it did not.

Electrical heaters, propane heaters and stoves can be very dangerous on any boat or for that matter in any home. They need special attention to prevent fires. Never ever put an electrical heater in the bilge unless it is designed

and UL-approved expressly for that purpose.

Unfortunately, particularly when the economy is depressed, there will be people who burn their own boats for the insurance



Marine smoke detector is great protection on larger boats.

money. The chances of getting away with it are slim. Nationally known and respected arson investigator Herb Johnson, President of Arson-Fires Consultants in New York City says: "After three years as a New York City Fire Marshal and investigating fires for 32 years, I have come across many boat fires. My advice: don't set fire to your boat for insurance or any other reason. With today's modern technology I can guarantee you will be caught and convicted 80 to 90 percent of the time."

A fire at the dock may mean a simple leap to safety for you and your family provided no one is trapped in a cabin. At sea it is a different story. You might not have time to launch the dinghy or even don your lifejacket. Informed prevention has to be a serious part of your boating life.



Sad and useless remains of the "Chiquita" destroyed by fire.

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