

Fire Extinguishers
A very short primer

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*Fire breaks out aboard cruise ship; one dead
Star Princess en route to Jamaica has 4,000 aboard*

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MIAMI, Florida (CNN) -- A fire broke out Thursday on the Jamaica-bound Star Princess cruise ship, and one person died of a heart attack, according to cruise line officials.

Two people suffered significant smoke inhalation and nine others had "minor complications from smoke inhalation," said a statement from Princess Cruises, which is owned by Carnival Corp.

One of the scariest occurrences in life is an uncontrolled fire. On land, people normally have some path to egress; somewhere to run; some safe ground they can go to. But throughout history, a fire aboard ship meant death, from the fire, the smoke or drowning, since there is no where to run while on the high seas.

A fire on a naval ship or a passenger ship, while still a major cause of concern; is inherently less dangerous than a fire on a recreational boat. First, allay some fears, all naval vessels and passenger ships have trained firefighting teams. On large passenger ships and naval vessels, there are members of the crew whose sole duty is firefighting. However, unless you or a friend are firefighters, your crew on your recreational boat, doesn't have trained firefighters

The first step in fire fighting is preventing the fire. However, this topic is outside the scope of this article. The second step is having proper fire fighting equipment, and on a recreational boat, it is your fire extinguisher.

In the early 1960's, with the boon to recreational boating and the rise in the overall accident and death rate, the Coast Guard along with Congress took a hard look at safety for these recreational boaters. It is during this time that all the federal equipment requirements were initially formulated.

If you're interested, take a look at the Code of Federal Regulations, Title 46 – Shipping and Title 33 - Navigation and Navigable Waters. These two titles

contain all the federal laws related to boating safety, as well as other aspects of boating and the maritime industry.

Federal requirements mandate that all vessels with gasoline/diesel engines carry approved fire extinguishers [46CFR162]. The Code specifically states that the extinguishers must be labeled "Marine Type USCG Type -----, Size -----, Approval No. 162.028/-- -----." *Sec. [162.028-4]*

This is very important. The reasoning for this requirement on all fire extinguishers used in the marine environment has to do with the safety tests and construction requirements built into the Code. Marine fire extinguishers have to pass tests related to corrosion, salt spray tests, bursting pressure, vibration tests among other requirements. Remember, most equipment on your boat needs to be better made, and made from different materials than those you'll find in your home or car. The marine environment is very very tough and not very forgiving on equipment!

Specific requirements for recreational boaters

Fire extinguishers are required if one of the following conditions exists: (1) Your vessel has inboard engine(s); (2) You have closed compartments that store portable fuel tanks; (3) Your boat has double bottom hulls not completely sealed or not completely filled with flotation materials (4) You have a cabin that contains closed living space (5) You have closed stowage compartments that contain flammable materials or (6) Your vessel has permanently installed fuel tanks.

Just like the federal regulation about lifejackets, if your lifejackets or fire extinguishers are not readily accessible and verified as serviceable, the Coast Guard considers them not to be there if you are boarded for a safety check. More importantly, and not withstanding the legal ramifications, if you can't get to your life jacket or fire extinguisher when you need it, and if it doesn't work, then you're in major trouble.

[img http://www.safetyseal.net/vsc_images/fireex.jpg]

Minimum number of extinguishers required

<u>Boat Length</u>	<u>No Fixed System</u>	<u>With Fixed System</u>
Less than 26'	one B-1	none
26' to less than 40'	two B-1 or one B-2	one B-1
40' to 65'	three B-1 or one B-1 & one B-2	two B-1 or one B-2

The referenced chart showing the required number of extinguishers should be considered not enough. Should you encounter a fire, the extinguishers will only last a few minutes at most, and once you're out of fire suppressant, what do you do then?

Placement of your extinguishers

There is no ideal place for each boat as of a different design and construction. However a few pointers may assist you in where you ultimately place your extinguishers.

First, if all possible, especially if you're using dry chemical extinguishers, is to mount the fire extinguisher parallel to the deck, this way the chemical is constantly being shaken within the container and doesn't pack down. Should the chemical pack down, the extinguisher won't work properly.

Second, find a spot handy on the outside of your engine compartment. Should there be a fire in your engine compartment, you don't want to open it to find your fire extinguisher. That would add much needed oxygen to the combustion triangle, and make your situation go from bad to worse.

Third, place an extinguisher by the helm. Someone is usually always by the helm, especially when underway, and this makes it easy to quickly grab an extinguisher.

Fourth, place one by the galley, for obvious reasons.

Fifth, place one in each of the cabins. Again, should fire break out while you're in the cabin, it's a grab and run action.

Some final points

Create a fire plan. Decide where everyone will muster. I know on a small boat you don't have much choice, but on the bow is the best place – which is as far away from the engine room and gas tanks as possible.

When you have new guests on board your vessel, besides showing them the amenities of the house, you should also show them the safety items of the house.

Show them where all the fire extinguishers are. Where you keep your life jackets and how the radio works and to call for help. If you have a GPS, show them how to quickly find your Lat-Lon.

Remember to practice your fire plan, as well as your man overboard plan. These plans may someday save you or someone else's life.

Take your old fire extinguishers and actually practice using them. Understand how they work, and how you fight a fire should one break out. The last place you want to learn is when there is a fire.

And lastly, take more boating education and safety education courses and get an annual Vessel Safety Check (<http://www.safetyseal.net>).