



When Lightning Strikes! By Gowrie Group, Marine Insurance



What is lightning? Lightning is a channel of negative charge that zigzags downward in roughly 50-yard segments in a forked pattern. It shoots to the ground in less time than it takes to blink. As it nears the ground, the negatively charged particles (called a leader) are attracted to a channel of positive charge reaching up (called a streamer), normally through something tall, such as a tree, house, or telephone pole (*or a mast!*). When the oppositely-charged leader and streamer connect, a powerful electrical current begins flowing. A return stroke of bright luminosity travels about 60,000 miles per second back towards the cloud. A flash consists of one or perhaps as many as 20 return strokes. We see flicker when the process rapidly repeats itself several times along the same path. The actual diameter of a lightning channel is only one-to-two inches. Thunder is caused by the extreme heat associated with the lightning flash. In less than a second, the air is heated to 15,000 to 60,000 F. (Source NOAA, 2009)

How often does lightning really hit boats? You may be surprised at how frequently lightning finds its way to a boat. In the last five years, Gowrie Group boat clients have had 71 lightning claims, resulting in over \$1,300,000 in lightning related damages. On average, each claim totaled nearly \$20,000. Sailboat strikes outnumbered powerboat strikes by a 3:1 ratio; however the largest claim came from a powerboat which sustained almost \$100,000 in damages from a direct hit.

Don't take the old saying lightning doesn't strike twice in the same place too seriously. A sailboat of one Gowrie client was hit by lightning while on its mooring and a then again a week later! Another client's boat surprisingly was hit twice in the same month, but two years apart!

Boats are especially at risk from being struck by lightning because they are often the tallest object in a large open space. A direct lightning hit can damage or destroy the boat, overload navigational and electronic equipment, and/or electrocute the people on the boat. Lightning claims range from the small (a few electronics needing replacement) to the enormous (a constructive total loss). Often times, a boat owner won't know he has had a lightning strike until he goes aboard and finds his electronics are not working. Closer examination might reveal parts of the antenna scattered on the deck.

What can be done to protect your boat? When lightning strikes your boat, the electrical current is searching any route to ground. You cannot lightning proof your boat but you can lessen the damage in the event of a strike. If a boat is grounded, the lightning current is diverted through a predetermined path. This hopefully will avoid the lightning making its own path which can be through fiberglass, teak, or an unsuspecting crew member. Similar to protecting your home appliances and electronics, unplug televisions, stereos, microwaves and electronics when you are not on the boat.

What if you are on your boat when there is a storm? If you are caught on the water during a thunderstorm and cannot get to shore in time, NOAA recommends the following guidelines:

- Go to the center of your boat's cabin if it has one. If no cabin is available, crouch down in the center of the boat and stay as low as possible.
- Do not touch anything metal.
- Do not fish, water ski, or swim. Keep arms and legs in the boat, do not dangle them in the water. Divers should get out of the water and into a sturdy shelter or boat. If that is not possible, dive as deep as possible for the duration of the storm.
- Wear a life jacket at all times. A victim struck by lightning can be rendered unconscious.
- Disconnect and do not use or touch electrical equipment, including the radio.
- Lower, remove, or tie down radio antennas and other protruding devices unless they are part of a lightning protection system.
- If your boat has a lightning protection system, avoid making contact with any device connected to that system. NEVER be in contact with two components connected to the system at once. Should you have a hand on both when lightning strikes, the lightning could travel through your body.
- After the last flash of lightning, wait 30 minutes before leaving your shelter.

If you think that your boat has been hit by lightning, report the claim as soon as possible. You will want to arrange to have an electronics specialist test the electronics. Working with a marine insurance specialist like the Gowrie Group ensures that you will have our in-house claims experts on your side if lightning ever strikes.

Gowrie Group provides insurance, benefits, and financial services to individuals and businesses throughout the US, and specializes in customized business, home, auto, and marine insurance products and services. For more information about Gowrie Group, visit www.gowrie.com, 800.262.8911.



Gowrie Group provides insurance, benefits, and financial services to individuals and businesses throughout the US, and specializes in customized business, home, auto, and marine insurance products and services. For more information about Gowrie Group visit www.gowrie.com or call 800.262.8911