



# UNITED STATES COAST GUARD

U.S. Department of Homeland Security

## **MARINE SAFETY ALERT**

Assistant Commandant for Marine Safety, Security and Stewardship

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Washington, DC

Alert 03-10

### **Portable Generator use on Recreational Houseboats**

Three persons recently died aboard a houseboat due to the use of a portable generator. They were overcome by carbon monoxide from a generator that was being operated in the engine compartment adjacent to the main cabin.

The nonoperational 1973 Gibson houseboat was anchored at the time of the casualty; a portable generator was being used to provide power for lights, as well as, charging batteries for the boat's bilge pumps. The generator was partially lowered into the houseboat's engine compartment alongside the remnants of the houseboat's inoperable main propulsion engine. Investigators concluded that the 3500 KW generator's exhaust permeated the houseboat's firewall (immediately aft of cabin) and bilge filling the cabin with carbon monoxide. The duration of exposure is unknown; however, autopsy reports of the deceased indicated that their carboxyhemoglobin (COhb) saturation levels were in excess of 60%.

The Coast Guard **strongly encourages** boaters to ensure proper ventilation to prevent the accumulation of combustion gases from any equipment. Generators, main engines, powered pumps, kerosene space heaters, barbeque grills, etc., will create hazardous atmospheres if improperly maintained and if there is inadequate ventilation or if gasses can accumulate. Placement of such equipment on an open deck may not be adequate if the exhaust enters the vessel's cabin through other intakes. Accumulation of carbon monoxide can occur even outside of a boat in those areas between catamaran hulls or between boats tied together. Prolonged exposure regardless of location can be deadly.

To prevent accidental deaths as described in this casualty, the Coast Guard **urges** the use of carbon monoxide detectors for internal enclosed areas of boats, particularly sleeping quarters.

Access [http://www.uscgboating.org/safety/carbon\\_monoxide.aspx](http://www.uscgboating.org/safety/carbon_monoxide.aspx) for additional carbon monoxide prevention and other useful boating safety information.

This safety alert is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Developed by the Boating Safety Division's Product Assurance Branch and distributed by the Office of Investigations and Analysis, United States Coast Guard Headquarters, Washington, DC. Questions can be addressed to Mr. Michael Jendrossek at (202) 372-1052 or [michael.a.jendrossek@uscg.mil](mailto:michael.a.jendrossek@uscg.mil)

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