



Emergency Operating Procedures for:

Fire and Emergency

I. Overview

Fire is an infrequent but terrifying occurrence on board a boat. Because of the environment and potential distances involved, firefighting assistance may take a while to arrive on the scene. Plus, unlike fires on shore, there may be no place to evacuate except into the water. It's important to make every effort to prevent fires, to have the equipment on board to extinguish fires, and to know what quick action to take should one occur, including having a plan in place for combatting a fire.

A majority of fires aboard recreational vessels are caused by the ignition of spilled fuel or fuel vapors. Such fires can be catastrophic - often explosions rather than fires - and frequently result in the complete loss of the vessel. In general a fire will be a result of one of the following:

- Poor Fueling Practices,
- Leaking Fuel Lines,
- Grease or other Galley Fires,
- Overloaded or Incorrectly wired Electrical Systems,
- Improperly Stowed Greasy or Oily Rags.

However the fire is ignited, it is important that you take immediate action to ensure the safety of your crew and the houseboat. Life Safety is paramount, you should never take undue risk in combating a fire aboard the houseboat.

LEGEND



II. Fire Plans

a. Lower Hull



c. Upper Deck



III. Fire Fighting Equipment

- a. Fire Extinguishers
 - i. The Serenity has 5 fire extinguishers aboard.
 - 4 extinguishers are monoammonium phosphate dry chemical that are effective on Class A (Common Combustibles), Class B (Flammable Liquids and Gasses), and Class C (Electrical) fires.
 - 2. 1 extinguisher, located in the galley area, is a sodium bicarbonate dry chemical that is effective on Class B (Flammable Liquids and Gasses), and Class C (Electrical) fires. This extinguisher is also designed for use on Class K (Grease and Cooking Oil) fires, though it is not rated as such.
 - ii. To Use an Extinguisher, remember the acronym PASS.



- b. Fixed System. The Serenity is equipped with 2 fixed firefighting systems; one in the engine compartment and one on the galley hood.
 - i. Engine Compartment. A fixed HALON 1301 Flooding System is installed in the Engine Compartment. This system is automatically actuated when temperatures in the Engine Compartment reach 175-deg F. HALON is a firefighting agent that attacks the fire by inhibiting the chemical reaction itself and is rated for Class A (Common Combustible), Class B (Flammable Liquids and Gasses), and Class C (Electrical) fires.
 - ii. Galley. A fixed Sodium Bicarbonate Dumping System is installed above the range in the Galley. This system is automatically actuated when flames reach the device. Sodium Bicarbonate is dumped onto the range to extinguish the fire by smothering; when sodium bicarbonate is heated it releases carbon dioxide gas, which deprives the fire of oxygen.
- c. Elide Fire Balls. The Serenity is equipped with 2 Elide Fire Balls, which act as fixed automatic fire suppression systems in the main salon above the electrical panel and in the aft stateroom. These Fire Balls can also be taken down and thrown into a space to combat a fire without having to make entry or attack the fire directly. They are a hollow polystyrene ball containing monoammonium phosphate dry chemical surrounding a small explosive charge. Flames will ignite a fuse, which will set off the explosive charge and distribute the firefighting agent evenly throughout the space. They are rated for Class A (Common Combustible), Class B (Flammable Liquids and Gasses), and Class C (Electrical) fires.

IV. Fire Aboard the Vessel

- a. Sound the Alarm and make sure everyone aboard is aware there is a fire.
- b. Don Life Jackets.
- c. Prepare to Abandon the Vessel.
 - i. If Underway, Muster all non-essential crew away from the fire and prepare to abandon vessel (bring towed craft alongside).
 - ii. If Alongside, Muster all non-essential crew on the dock or beach.
- d. Issue a Mayday Call on VHF Channel 16.
- e. Sound Fire Signal; Continuous Sounding of the Vessels Horn for 10-seconds.
- f. Secure All Non-essential Electronics.
- g. If Underway, slow to reduce relative wind and maneuver to place fire on downwind side of the vessel.
- h. Attempt to Determine Location and Source of Fire.
- i. If safe to do so, combat the Fire. Under no circumstances should you make entry into a compartment with an oxygen deprived fire. Nor should you attempt to battle a fire that is fully developed and cannot be put out with an extinguisher.
 - i. Engine Compartment Fire
 - 1. Turn Off Engines and Generator.
 - 2. Secure Engine Compartment Blower.
 - 3. HALON 1301 System should automatically discharge.
 - 4. Do Not Open Compartment Hatches. The HALON will put out any fire in the compartment, but relies on maintaining a sufficient concentration of HALON gas in the compartment to suppress the fire.
 - 5. Once Compartment has cooled, you may open hatches with an ABC Fire Extinguisher or Elide Fire Ball at the ready to combat any flare-ups.
 - ii. Galley or Grill Fire
 - 1. If fire occurs on Grill or in a pan on the stove, first attempt to Smother Fire with Lid.
 - 2. Turn off burners. If possible, Secure Propane Bottle on the Grill.
 - 3. Use the BC Fire Extinguisher mounted in the Galley to combat Grease or Cooking Oil Fire.
 - 4. NEVER use water; water will increase the surface area of the grease or cooking oil and cause the fire to flare up and spread.

iii. Cabin Spaces Common Combustible Fire

- 1. Attack the fire directly with an ABC Fire Extinguisher or Water.
- 2. If fire is too large to attach with fire extinguisher, throw an Elide Fire Ball into the space and evacuate.
- 3. If safe to do so, discharge burning material overboard.

iv. Electrical Fires

- 1. Secure All Power, including switching the Inverter Battery Switch in the Forward Battery Compartment Off.
- 2. Attack the fire directly with an ABC Fire Extinguisher.
- 3. NEVER use water; water conducts electricity and can result in electrocution.

j. Once Fire is Out.

- i. Set a Reflash Watch with Fire Extinguisher to make sure that the fire does not reignite. An Elide Fire Ball could be left in the space to provide automatic fire suppression in the event of a flare up.
- ii. Ventilate the space to remove smoke.