



## **MARINE SAFETY ALERT**

### ***Inspections and Compliance Directorate***

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Washington, DC

Safety Alert 07-97

### **PROPELLER CLEARING PORT HAZARD**

In August of 1996 a commercial fishing vessel capsized while tending hagfish traps 13 nautical miles south east of Cape Elizabeth, Maine. The crew of the vessel first noticed the flooding condition while recovering fishing gear, but were unable to determine the source of the flooding. Within 10 minutes the vessel capsized. The vessel's crew safely abandoned the vessel into a liferaft. Following the salvage of the vessel, Coast Guard investigators determined that the source of the flooding was a loose hatch cover on a propeller clearing port. This port allows the crew easy access to the propeller so that they can clear away fouled line, fishing gear and debris that may have become fouled in the vessel's propeller.

In this incident, the vessel's master had removed the propeller clearing port hatch cover the day prior to the accident to clear away a line that had become entangled in the propeller. Coast Guard investigators believe that this hatch was not properly secured after it had been opened and loosened at some point the following day which then led to the flooding of the vessel. The Coast Guard feels that propeller clearing ports such as this are becoming more popular on vessels constructed to tend stationary fishing gear because the gear itself is more likely to become fouled on the propeller. Stationary fishing gear includes lobster and hagfish traps, as well as gillnets and longlines. Because the hatches of the propeller clearing ports are typically placed above a vessel's waterline, some vessel operators may underestimate the risk of flooding associated with them. The assumption is that sea water will not rise up through a hatch opening that is above the waterline. However, because propeller clearing ports are placed in the same plane as the propeller in order that a fouled propeller can be easily cleared, any side wash from the vessel's propeller when it is operating will act like a pump and place considerable water pressure on the clearing port hatch opening. The pumping action of the propeller can, in some cases, be in excess of 1000 gallons per minute.



The photograph demonstrates what happens when a vessel is maneuvered with a loose clearing port hatch cover. This vessel's clearing port hatch is located on the weather deck, which makes flooding easy to detect. The Coast Guard advises fishermen considering the installation of propeller clearing ports to design the ports with the access hatch on the vessel's main deck. On vessels with access hatches placed below the main deck, a means should be provided to prevent the hatch from unintentional opening, such as the use of double nuts, safety wiring of the bolts, etc... The Coast Guard strongly advises against the installation of clearing ports below the main deck in hulls that are not fitted with watertight bulkheads.

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