



# National Transportation Safety Board

Washington, D.C. 20594

## Safety Recommendation

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**Date:** July 5, 2007

**In reply refer to:** M-07-9 (Urgent) and  
M-07-10 (Urgent)

Admiral Thad Allen  
Commandant  
U. S. Coast Guard  
2100 Second Street, SW  
Washington, DC 20593-0001

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On May 14, 2007, about 0130 Alaska daylight time, the passenger vessel *Empress of the North* grounded at the intersection of Lynn Canal and Icy Straits, about 20 miles southwest of Juneau, Alaska, after the vessel failed to negotiate a turn to the west. No injuries resulted from the accident, but the vessel sustained significant damage to its underside and propulsion system. The 206 passengers were safely evacuated to assisting vessels and transported back to Juneau.

The National Transportation Safety Board's investigation of this accident has discovered serious safety issues regarding the approved lifesaving equipment on board the vessel. Specifically, deficiencies have been identified in both the liferaft release units and the evacuation slides. The Safety Board regards the issues as critical enough to issue urgent safety recommendations in advance of the final accident report.

The *Empress of the North* was equipped with 22 inflatable liferafts stowed overhead on the main deck, 11 on each side. Each liferaft had two release units, manufactured by Hammar,<sup>1</sup> that would release the raft from its cradle by one of two methods: one designed for automatic launching in the event of the vessel's sinking, and the other for manual launching. Automatic launching of the liferafts would be accomplished by a unit that, when submerged to a predetermined depth, would sever the line securing the raft. Manually releasing a liferaft required the use of a hand pump, a Hammar model H20 remote-release unit (RRU), located on the vessel bulkhead, next to the rafts. Activating the pump would sever the line, freeing the liferaft from its cradle and allowing it to drop into the water alongside the vessel.

A placard posted below each pump states that to deploy the rafts, "Pump plunger two to six times until the raft releases." According to the manufacturer, pumping the plunger would

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<sup>1</sup> CM Hammar, AB, of Göteborg, Sweden.

create sufficient vacuum to activate the RRU, releasing a knife that would cut the rope securing the liferaft to the vessel. However, the chief mate told Safety Board investigators that the hand pumps failed to activate about half the mechanisms in the 13 liferafts that were launched. Crewmembers were forced to cut the lines using their own knives to launch the liferafts. Evidence provided by the vessel operator indicates that the pumps had not been lubricated as directed by the manufacturer.

The *Empress of the North* was also equipped with two inflatable slides. The slides were packed in fabric valises and stored separately from the liferafts in deck lockers on the main deck, one on each side of the vessel. Crewmembers who attempted to launch the slides found that they inflated upside down. The slides were intended to quickly evacuate passengers and crew from the vessel to the liferafts. Because the slides were upside down, crewmembers had to manually turn them over. Several crewmembers were required to overturn the slides to their correct positions. If there had been strong wind and waves, that operation could not have been done either quickly or safely.

The slides, which were estimated to be about 20 feet long, were manufactured by DBC Marine Safety Systems Ltd. of Richmond (Vancouver), British Columbia. They had most recently been serviced in February 2007 by Marine Safety Services of Seattle, Washington. Servicing, which is required annually, involves deploying the slides, inspecting them, and repacking them. The evidence indicates that they were repacked incorrectly during the February 2007 servicing. The inspection and repacking of the slides can be carried out only by a facility approved by the U.S. Coast Guard, and Marine Safety Services was authorized to perform such inspections. There is no indication that this problem extends to other servicing facilities.

The difficulties in launching the liferafts and the slides did not adversely affect the safe evacuation of passengers from the *Empress of the North*, all of whom were first transferred to small assistance vessels and a Coast Guard cutter, then taken to Juneau on an Alaska Marine Highway System vessel. Nevertheless, the Safety Board is concerned that had the emergency necessitated a rapid evacuation, valuable time would have been lost employing the lifesaving devices, endangering the safety of both passengers and crew. The Safety Board believes that to preclude that possibility in the future and on other vessels, urgent action is needed by the Coast Guard to ensure that this lifesaving equipment works properly.

Therefore, the National Transportation Safety Board recommends that the U.S. Coast Guard take the following action:

Verify the functionality of Hammar model H20 remote-release units for liferafts by inspecting or delegating the inspection of a sample of the models, requiring authorized facilities to demonstrate functionality, or other equally effective method. (M-07-9) Urgent

Conduct a one-time inspection and correction of all deficiencies of evacuation slides last serviced by Marine Safety Services of Seattle, Washington. (M-07-10) Urgent

Chairman ROSENKER, Vice Chairman SUMWALT, and Members HERSMAN, HIGGINS, and CHEALANDER concurred with these recommendations.

*Original Signed*

By: Mark V. Rosenker  
Chairman