



# National Transportation Safety Board

Washington, D.C. 20594

## Safety Recommendation

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**Date:** July 3, 2002

**In reply refer to:** M-02-16

Mr. John Groundwater  
Executive Director  
Passenger Vessel Association  
801 North Quincy Street, Suite 200  
Arlington, Virginia 22203

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The National Transportation Safety Board (Safety Board) is an independent Federal agency charged by Congress with investigating transportation accidents, determining their probable cause, and making recommendations to prevent similar accidents from occurring. We are providing the following information to urge you to take action on the safety recommendation in this letter. The Safety Board is vitally interested in this recommendation because it is designed to prevent accidents and save lives.

The recommendation addresses the adequacy of vessel maintenance. The recommendation is derived from the Safety Board's investigation of the fire on board the small passenger vessel *Port Imperial Manhattan* in the Hudson River, New York City, New York, on November 17, 2000, and is consistent with the evidence we found and the analysis we performed.<sup>1</sup> As a result of this investigation, the Safety Board has issued the safety recommendations to the U.S. Coast Guard, the Federal Communications Commission, NY Waterway, and the Passenger Vessel Association. The Safety Board would appreciate a response from you within 90 days addressing actions you have taken or intend to take to implement our recommendation.

Based on its investigation, the National Transportation Safety Board determined that the probable cause of the fire on board the *Port Imperial Manhattan* was NY Waterway's inadequate inspection and maintenance of the vessel's electrical system. Contributing to the extent of the damage were the lack of a fixed fire detection and suppression system and the crewmembers' lack of knowledge of proper marine firefighting techniques.

From interviews with company officials and reviews of company documents, Safety Board investigators determined that NY Waterway did not have a preventive maintenance program for the hulls, the mechanical systems, and the electrical systems of

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<sup>1</sup> For further information, read: National Transportation Safety Board, *Fire on board the Small Passenger Vessel Port Imperial Manhattan, Hudson River, New York City, New York, November 17, 2000*, Marine Accident Report NTSB/MAR-02/02 (Washington, DC: NTSB, 2002).

the vessels in its fleet. Documentation provided by the company indicated that engineroom inspections had been made but lacked details indicating the scope of the maintenance performed and the intervals between the maintenance. Company officials stated that a circuit check had been conducted on the 12-volt electrical system but could not say when the check had been performed. Preventive maintenance of the electrical system would have included testing the circuits, checking the junction box, and tightening the wire connecting bolts, which loosened over time and caused the fire.

While this accident resulted from inadequate maintenance of the electrical system, passenger safety cannot be ensured by maintenance of electrical systems alone. Shipboard mechanical systems consist of numerous moving parts that require planned inspections and maintenance to avoid unexpected breakdowns and unsafe conditions for passengers and crew. The preventive maintenance program developed by a company needs to address all systems affecting the safety of passenger vessels.

After the fire, NY Waterway introduced additional checksheets to improve the monthly maintenance of its vessels. However, the use of checksheets is not equivalent to the implementation of a comprehensive preventive maintenance program, which is much broader in scope. A preventive maintenance program for a fleet of vessels should include, as a minimum, established procedures for reporting maintenance and repair needs, for interacting between vessel-operating personnel and shoreside maintenance staff, for conducting vessel inspections and repairs, for verifying and/or testing repairs, for retaining and reviewing maintenance and repair records, and for overseeing the maintenance and repair process.

The Coast Guard does not have specific regulations requiring a preventive maintenance program for small passenger vessels. The Federal regulators of other modes of transportation recognize the importance of preventive maintenance to the safety of operations and require that operators have a systematic program for performing inspections and maintenance. As a result of the *Port Imperial Manhattan* accident and other small vessel fires, the Safety Board is asking the Coast Guard to promulgate regulations for such programs. However, given that the rule-making effort is likely to be a time-consuming process, the Safety Board is convinced that interim measures addressing this safety issue are needed within the small passenger vessel industry.

More than 350 vessel owners and operators of small passenger vessels, or about 65 percent of the owner-operators nationwide, belong to the Passenger Vessel Association (PVA). The Safety Board is aware that an objective of the PVA is to assist its member companies improve the safety of their passenger vessel operations and that the association has published risk management and training manuals for that purpose. The risk management manual includes a safety audit guide containing checklists for inspecting vessels for hazardous conditions that could lead to slips, trips, falls, and injuries to passengers and crewmembers. The manual briefly mentions that engineroom, safety, and deck equipment inspection logs are useful for conducting proper maintenance. The training manual provides information for training deckhands in several areas, including safety precautions for engineroom operations. The manual also contains a primer on small passenger vessel machinery operations and systems.

While the PVA's voluntary guidelines cover several areas of passenger and vessel safety, the Safety Board found that the PVA does not provide adequate guidance to companies for establishing preventive maintenance programs for the hull and the machinery and electrical systems. In addition to operational checks, PVA guidelines should stress the importance of vessel maintenance and list machinery, electrical, and hull items that require periodic inspection and maintenance by a company's maintenance staff. The guidelines for preventive maintenance should describe, for example, procedures for reporting maintenance and repair needs, for ensuring good interaction between vessel-operating personnel and shoreside maintenance staff, for conducting vessel inspections and repairs, for verifying and testing repair work, for retaining and reviewing maintenance and repair records, and overseeing the maintenance and repair process for its fleet. Given the large number of passengers that are carried on small passenger vessels and ferries today and the commensurate safety risks, preventive maintenance should be performed on a regular basis.

Although the PVA does not include the entire domestic small passenger vessel fleet, its members represent a large enough portion of the industry to incrementally improve the level of small passenger vessel safety.

The National Transportation Safety Board, therefore, makes the following safety recommendation to the Passenger Vessel Association:

Provide your members with guidelines for developing a preventive maintenance program for all systems affecting the safe operation of their vessels, including the hull and the mechanical and electrical systems.  
(M-02-16)

In your response to the recommendation in this letter, please refer to M-02-16. If you need additional information, you may call (202) 314-6177.

Chairman BLAKEY, Vice Chairman CARMODY and Members HAMMERSCHMIDT, GOGLIA, and BLACK concurred in this recommendation.

*Original Signed*

By: Marion C. Blakey  
Chairman