

NATIONAL TRANSPORTATION SAFETY BOARD
Public Meeting of December 11, 2018
(Information subject to editing)

Fire on Board US Small Passenger Vessel *Island Lady*
Pithlachascotee River Near Port Richey, Florida
January 14, 2018
NTSB/MAR-18/01

This is a synopsis from the NTSB's report and does not include the Board's rationale for the conclusions, probable cause, and safety recommendations. NTSB staff is currently making final revisions to the report from which the attached conclusions and safety recommendations have been extracted. The final report and pertinent safety recommendation letters will be distributed to recommendation recipients as soon as possible. The attached information is subject to further review and editing to reflect changes adopted during the Board meeting.

Executive Summary

About 4:00 p.m. on the afternoon of January 14, 2018, a fire broke out in an unmanned space on the small passenger vessel *Island Lady* near Port Richey, Florida, during a scheduled transit to a casino boat located about 9 miles offshore in the Gulf of Mexico. Fifty-three people were on board the *Island Lady*. After receiving a high-temperature alarm on the port engine, the captain turned the *Island Lady* around to return to the dock. During the return trip, smoke began filling the lazarette, main deck, and engine room. The captain deliberately beached the vessel in shallow water near shore to evacuate the passengers. All crewmembers, employees, and passengers evacuated the vessel by entering the water and wading/crawling ashore. Fifteen people were injured and transported to local hospitals; one passenger died in the hospital several hours after the fire. The *Island Lady*, valued at \$450,000, was declared a constructive total loss.

The NTSB identified the following safety issues:

Lack of company guidance regarding engine high-temperature alarms: After the captain received a high-temperature alarm for the port engine's jacket-water system, he did not shut down the engine but instead left it idling. Doing so allowed the overheating engine to continue to generate excessive heat, which in turn affected the exhaust tubes and ignited their surrounding structures. Tropical Breeze Casino Cruz did not provide specific guidance to its vessel captains about how to respond to high-temperature alarms.

Lack of fire-detection in unmanned spaces with exhaust tubing: Although federal regulations require small passenger vessels to have fire detection and suppression systems in spaces containing propulsion machinery (such as engine rooms), the regulations do not require such systems in unmanned spaces with engine exhaust tubing. The fire on board the *Island Lady* most likely started in the lazarette—an unmanned space aft of the engine room—through which the exhaust tubes led toward the vessel's stern. Because there was no fire in the engine room initially, activating the vessel's fixed fire-suppression system for that space would have served no

purpose; further, activation would have caused the vessel to needlessly lose all available propulsion during the emergency.

Insufficient preventive maintenance: Although Tropical Breeze Casino Cruz stated that it implemented a preventive maintenance program after a previous fire on board a company vessel (the *Express Shuttle II*) in response to an NTSB safety recommendation, the quality of the program was insufficient. The US Coast Guard does not require small passenger vessels to have preventive maintenance programs and, importantly, even when such programs are voluntarily in place (such as in this case), the Coast Guard provides no enforcement oversight.

Insufficient crew training and documentation: The investigation revealed that the *Island Lady* crewmembers lacked sufficient understanding of firefighting principles and that their training drills were infrequent or not completed. In addition, records pertaining to crew training drills and daily maintenance checklists were kept only on board the vessel and were lost in the fire; no duplicate records were kept ashore.

Inappropriate material and design of fuel tank level-indicator system: Counter to Title 46 *Code of Federal Regulations* 182.440 (a)(7), the *Island Lady*'s fuel tanks were equipped with plastic hoses used as fuel level indicators; further, the system did not have automatic shutoff valves. As a result, during the fire, the plastic material melted and the release of diesel fuel exacerbated the fire.

Findings

1. Weather, fatigue, and impairment due to alcohol and other drugs were not factors in the accident.
2. The high-temperature alarm for the port engine's jacket-water system resulted from a failure of the port engine's raw-water pump.
3. The fire likely started in the port engine's fiberglass exhaust tubing and spread to wood structures in the lazarette, through which the tubing transited.
4. The captain's decision to continue to run the port engine in an overheated condition, even though the starboard engine was available and functioning normally, allowed the port engine to overheat to failure and the engine's exhaust tubing to ignite.
5. Tropical Breeze Casino Cruz did not provide adequate guidance to its crews regarding response to engine and other machinery alarms.
6. The captain's decisions to return the vessel to the dock after receiving the engine high-temperature alarm and to subsequently beach the *Island Lady* when smoke overwhelmed the vessel were prudent and increased the likelihood of survival for those on board.
7. The company's lack of inspections and infrequent maintenance likely resulted in undetected, wear-related damage causing the port engine's raw-water pump to fail.
8. If Tropical Breeze Casino Cruz had followed Caterpillar's recommended maintenance schedule for the *Island Lady*'s propulsion engines, the failed raw-water cooling pump would have been inspected and likely replaced.
9. The *Island Lady* crewmembers had insufficient training in firefighting.

10. Implementing safety management systems on all domestic passenger vessels would further enhance operators' ability to achieve the higher standards of safety that the Coast Guard requires of US oceangoing vessels in international service.
11. Had the *Island Lady* been outfitted with fire detectors in the lazarette, the fire and its location would have been identified earlier, providing the opportunity for swifter response.
12. The use of plastic tubing on local tank level indicators and lack of automatic shutoff valves on the fuel tanks resulted in release of diesel fuel, which contributed to the severity of the fire.
13. During an inspection of the *Island Lady* before the fire, the Coast Guard did not correctly assess the fuel system's compliance with applicable regulations.

Probable Cause

The National Transportation Safety Board determines that the probable cause of the fire on board small passenger vessel *Island Lady* was Tropical Breeze Casino Cruz's ineffective preventive maintenance program and insufficient guidance regarding the response to engine high-temperature conditions, which resulted in the captain's continued operation of an engine that was overheating due to a cooling water pump failure, leading to ignition of the exhaust tubing and surrounding structure. Contributing to the spread of the fire was the lack of fire detection in the vessel's lazarette, which was not required by regulations and which allowed the fire to take hold unbeknownst to the crew.

Recommendations

New Recommendations

As a result of this investigation, the National Transportation Safety Board makes the following new safety recommendations:

To Tropical Breeze Casino Cruz, LLC:

1. Develop and apply an oversight system to ensure that your maintenance program complies with the manufacturer's recommended preventive maintenance program for the engines and associated machinery and systems on board your vessels.
2. Revise your marine firefighting and job training programs, including documenting both on board and ashore that all crewmembers are qualified and can continually demonstrate proficiency in their duties, such as firefighting techniques and other emergency situations.

To the US Coast Guard:

3. Require fire detection systems in unmanned spaces with machinery or other potential heat sources on board small passenger vessels.
4. Issue a Marine Safety Information Bulletin that addresses the need to use only approved material and components in fuel tank level-indicator systems.

Previously Issued Recommendation Reiterated in this Report

As a result of its investigation, the National Transportation Safety Board reiterates the following safety recommendations:

To the US Coast Guard:

5. Require that companies operating domestic passenger vessels develop and implement a preventive maintenance program for all systems affecting the safe operation of their vessels, including the hull and mechanical and electrical systems. (M-02-5)
6. Require all operators of U.S.-flag passenger vessels to implement safety management systems, taking into account the characteristics, methods of operation, and nature of service of these vessels, and, with respect to ferries, the sizes of the ferry systems within which the vessels operate. (M-12-3)