

Log M-290

**NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.**

ISSUED: September 18, 1985

Forwarded to:

Admiral James S. Gracey
Commandant
U.S. Coast Guard
Washington, D. C. 20593

SAFETY RECOMMENDATION(S)

M-85-83 through -89

On September 8, 1984, the 42-foot passenger vessel M/V FANTASY ISLANDER was returning to Fishermen's Village, Punta Gorda, Florida, after a sightseeing/luncheon cruise to Cabbage Key in Charlotte Harbor. About 1545, a fire, which started in the engine compartment, forced the 2 crewmembers and 35 passengers to abandon the vessel about 0.5 nautical mile off Punta Gorda. There were no injuries. The vessel, which was a total loss, was valued at about \$25,000. 1/

The fire on the FANTASY ISLANDER most likely originated in the engine compartment at the after wooden bulkhead when the hot, deteriorated starboard flexible exhaust pipe ignited residual fuel which had leaked through the pipe and saturated surrounding insulation; the burning residual fuel subsequently ignited the wood bordering the bulkhead penetration. Since the bordering wood had been charred earlier and had been subjected to the high heat from the exhaust pipe for a significant period of time, it was readily susceptible to ignition at lower than normal temperature. An examination of the outside of the hull after the accident revealed that there was discoloration of the outside paint from scorched wood in the area of the starboard flexible exhaust pipe. Although the operator had enlarged the opening about the flexible exhaust pipe, the deterioration of the pipe may have allowed the section to sag close to the edge of the enlarged opening. Oil spraying from an undetermined source into the engine compartment and onto the vessel's wooden structure accelerated the spread of the fire which, uncontrolled, rapidly consumed the superstructure of the vessel. The spraying oil could have come from some part of the starboard engine, but more likely came from a fuel line leak. The oil spraying on the hot engine exhaust manifold or the exhaust pipe could have been the initiating cause of the fire, but the development of the fire suggests that this event occurred sometime after the operator initially detected the odor of burning wood at 1500.

1/ For more detailed information, read Marine Accident Report--"Loss by Fire of the U.S. Passenger Vessel M/V FANTASY ISLANDER in Charlotte Harbor, Florida, September 8, 1984" (NTSB/MAR/85-09).

The FANTASY ISLANDER, built in 1955, was required to be in compliance with 46 CFR Part 181 relative to fire protection equipment only "insofar as deemed reasonable and practicable by the Office in Charge, Marine Inspection," because the vessel had been contracted for before June 1958. The vessel was found to be "fit for the service and route specified," according to the Coast Guard inspection conducted on October 6, 1983.

Since the FANTASY ISLANDER was not permitted to carry more than 49 passengers, it was not required to have a power-driven fire pump. The vessel was equipped with the required hand operated fire pump with a capacity of 5 gallons per minute. The vessel's operator described the fire pump as a "toy," and he believed that a 5-gallon bucket was more useful. That attitude probably contributed to the operator's failure to maintain the fire pump assembled and ready for use or to assemble the equipment after he detected the fire. Unfortunately, the vessel did not have a 5-gallon bucket on board the day of the accident.

In any shipboard fire incident, early discovery is essential for the protection of passengers, crew, and the vessel. The fire must be confined, controlled, and extinguished in its early stages before it endangers the vessel and the lives of persons on board. In this instance, the fire was allowed to smolder for 45 minutes before action was taken to extinguish it. Promptly used, a 5-gallon bucket of water initially might have been effective in extinguishing the smoldering fire, as might have the 5-gallon per minute capacity hand fire pump.

The FANTASY ISLANDER's GM 6V-53 vessel engines were equipped with emergency air shutdown control levers located at the forward upper end of the engine. However, when the starboard engine became a runaway, the operator had to open the engine compartment to manipulate the emergency control lever to stop the engine. Because he was unable to locate the lever due to the black smoke in the engine compartment, he returned to the cockpit to close the engine fuel oil supply valves.

Had the diesel engines been equipped with remote emergency air shutdown controls which could have been activated from outside the engine compartment, preferably at the flying bridge, valuable time might have been saved in stopping the runaway engine and the procedure would have been safer. However, Federal regulations do not require such remote controls to be installed.

Federal regulations and the American Boat and Yacht Council, Inc., (ABYC) standards address the installation and the materials to be used in a diesel engine dry exhaust system; the installation on the FANTASY ISLANDER was in compliance. However, the installation had been made before 1983 when King Fisher Cruise Lines, Inc., acquired the vessel. The vessel had experienced wood scorching and a small fire since it was purchased, but these incidents were not significant enough to require a report to the Coast Guard under the requirements of 46 CFR 185.15-1.

The condition of the flexible exhaust pipe was not readily apparent to the Coast Guard inspectors because the pipes were covered with fixed insulation. The removal of such insulation would have been difficult, time consuming, and caused some inconvenience and replacement expense to the operator. Since the Coast Guard inspectors detected no apparent problems and were not apprised by the vessel's operator of the scorching of the engine compartment's wooden after bulkhead, they assumed that the exhaust installation was in good condition. However, the investigation of the starboard flexible exhaust pipe after the accident revealed that the pipe had 1/8- to 1/2-inch holes caused by rust

wasting away the metal. Once the holes had developed in the flexible exhaust piping, unburned fuel leaked out and permeated the exhaust pipe insulation, and high exhaust temperatures could cause ignition of the residual fuel.

The FANTASY ISLANDER's passengers were informed by the operator concerning the vessel's lifesaving devices and their location shortly after the vessel left its berth at Fishermen's Village. However, on the return trip when the operator detected the odor of burning wood, he did not have the passengers don life preservers or even remove them from their stowed positions so that they would be readily available if needed. The operator appeared to be more concerned that the passengers would panic if they became aware of the fire. However, even after the operator found that about 11 life preservers had been made useless by the fire, he still did not issue the remaining life preservers to the passengers.

Although the passengers had been briefed concerning the vessel's safety devices, they did not of their own volition obtain or don life preservers when the fire first erupted. Consequently, the passengers were not wearing life preservers when they abandoned the vessel, and neither was the crew. The rapidity with which the fire spread after it broke out quickly prevented access to the stowed life preservers. Had the life preservers been more widely distributed about the passenger seating locations, at least some of them would have been accessible for use.

Passengers tend to rely on vessel operators and crewmembers to advise them when to obtain or don life preservers. While some of the passengers sensed there was danger and made their feelings known to the mate, they did not anticipate the events that followed. Only a few passengers may have experienced a fire ashore and fewer still may have experienced a fire at sea which could have prepared them to cope with this accident. This accident again illustrates that even though a vessel is in relatively protected waters an accident can rapidly lead to disastrous results. Because of the few crewmembers relative to the number of passengers carried on small passenger vessels, the crew may not have time to advise passengers of actions they should take in a rapidly developing emergency. Further, during an emergency, crewmembers may become more preoccupied with saving the vessel and neglect assisting passengers. For these reasons, the Safety Board believes that Coast Guard inspectors, during the inspection of small passenger vessels, should consider whether the life preservers are distributed widely enough when stowed so as to be readily accessible to individual passengers during an emergency.

The FANTASY ISLANDER was required by 46 CFR 180.10-20 to carry sufficient lifeboats or buoyant apparatus for not less than 30 percent of all persons on board while operating in lakes, bays, and sounds. The 15-person lifefloat on board would have accommodated 4 persons in excess of the 11-person minimum requirement, based on the persons on board for the trip. Therefore, 22 persons without life preservers would not have had flotation support if help had not been available.

The Safety Board, in its investigation of the U.S. Passenger Vessel M/V YANKEE, ^{2/} expressed its concern about the "adequacy and accessibility of primary lifesaving equipment in a worse-case situation" and recommended that the Coast Guard:

^{2/} Marine Accident Report--"Collision of the U.S. Passenger Vessel M/V YANKEE and the Liberian Freighter M/V HARBEL TAPPER In Rhode Island Sound, July 2, 1983" (NTSB/MAR-84-05).

Reevaluate 46 CFR 75.10-20(a) to determine whether the primary lifesaving equipment required is adequate to safely support the entire crew and maximum embarked passengers in the water pending arrival of search and rescue assistance and amend the regulations, as necessary, to eliminate deficiencies in prescribed primary lifesaving equipment. (Class II, Priority Action) (M-84-29)

On February 26, 1985, the Coast Guard replied that:

This recommendation is concurred with in part. The Coast Guard continually evaluates its lifesaving regulations to ensure that adequate protection is afforded to all persons on board. One area currently being evaluated is whether a reduction in lifesaving requirements for the summer season should be based on calendar date or on the prevailing water temperature in the operating area.

However, the Coast Guard determined that the regulation delineating the amount of primary lifesaving equipment required on board should not be amended. Since the casualty occurred in July, persons in the water probably would not be subjected to an immediate threat from hypothermia. In addition, there were numerous other vessels close by that could have provided assistance quickly.

The Safety Board responded that the requirements for primary lifesaving devices on passenger carrying vessels of this type should be determined without regard to the temperature of the water. The threat of hypothermia is but one consideration in the event of an accident. Had the YANKEE sunk, many passengers would have been forced into the water without adequate lifesaving devices at their disposal. The Safety Board believes that sufficient primary lifesaving equipment should be required on board for all passengers and crewmembers authorized to be embarked on passenger carrying vessels, without regard to water temperature. Therefore, Safety Recommendation M-84-29 has been classified as "Open--Unacceptable Action." The Safety Board has asked the Coast Guard to reconsider its position on this matter.

When the charter fishing boat JOAN LA RIE III ^{3/} capsized off Manasquan, New Jersey, both crewmembers and 4 of the 20 passengers on board were lost. None of the persons on board was wearing a life preserver, and the life preservers stowed in the cabin became inaccessible. The vessel was certificated for 37 persons and carried primary lifesaving equipment for 22 persons. By coincidence, there were only 22 persons on board on the day of the accident. The Safety Board finds that the FANTASY ISLANDER accident further illustrates a need for the Coast Guard to reconsider the adequacy of primary lifesaving equipment on 46 CFR Subchapter T passenger vessels in all operating areas.

The Safety Board is concerned that communications practices continue to be a significant factor in accidents. The mate's broadcast illustrated a lack of knowledge of the correct radiotelephone procedures to be used when making a distress broadcast. However, since the mate was not required to be licensed or certificated by the Coast Guard or the FCC and lacked experience, her lack of knowledge of radio communications procedures is understandable. Since a proper distress message is crucial to obtaining rapid, adequate assistance in an emergency, the Safety Board believes that a placard

^{3/} Marine Accident Report--"Sinking of the Charter Fishing Boat JOAN LA RIE III off Manasquan Inlet, New Jersey, on October 24, 1982" (NTSB/MAR-84/02).

containing pertinent information as to the content of a proper distress message should be maintained near the radio transmitter to aid the person initiating a distress broadcast in providing pertinent information concerning the vessel involved and the nature of the distress.

Therefore, as a result of its investigation, the National Transportation Safety Board recommends that the Coast Guard:

Require that insulation used on dry exhaust pipe installations on small passenger vessels be removable so that the pipe can be more readily examined during inspections and deterioration detected. (Class II, Priority Action) (M-85-83)

Require more stringent inspection of dry exhaust piping installations on small passenger vessels, and include in the Inspection Books an appropriate check-off item for this purpose. (Class II, Priority Action) (M-85-84)

Require on small passenger vessels that emergency air shutdown controls on diesel engines be remotely operable from outside the engine compartment, preferably at the control station. (Class II, Priority Action) (M-85-85)

Require that required fire protection equipment on small passenger vessels be maintained assembled and ready for immediate use. (Class II, Priority Action) (M-85-86)

Conduct a one-time survey during the next inspection of small passenger vessels of life preserver stowage and, where appropriate, direct changes in stowage to provide individual passengers on deck easy access to life preservers in an emergency. (Class II, Priority Action) (M-85-87)

Amend 46 CFR 180.10 to require that the primary lifesaving equipment carried on small passenger vessels be adequate to safely support in the water 100 percent of the authorized number of passengers and crewmembers pending the arrival of assistance. (Class II, Priority Action) (M-85-88)

Require that small passenger vessels install a placard near the radio transmitter containing vessel information to be used when initiating a distress broadcast. Verify during inspections of radio equipment that the placard is in place and currently updated, and that vessel operators are familiar with radio distress procedures to be used in an emergency. (Class II, Priority Action) (M-85-89)

BURNETT, Chairman, GOLDMAN, Vice Chairman, and BURSLEY, Member, concurred in these recommendations.


By: Jim Burnett
Chairman