

Log 1486

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

CORRECTED COPY

ISSUED: July 27, 1982

Forwarded to:

Honorable J. Lynn Helms
Administrator
Federal Aviation Administration
Washington, D.C. 20591

SAFETY RECOMMENDATION(S)

A-82-70 through -73

On February 21, 1982, at 1533 e.s.t., Pilgrim Airlines flight 458, a scheduled commuter passenger flight, made an emergency landing on the northwest branch of the Scituate Reservoir near Providence, Rhode Island, after a fire erupted in the cockpit while the aircraft was en route under instrument conditions between Groton, Connecticut, and Boston, Massachusetts, at 4,000 feet. The fire, which spread from the cockpit to the cabin in flight, destroyed the aircraft after impact. The captain and first officer were seriously injured. One passenger was killed, eight passengers had serious injuries, and one passenger sustained minor injuries. 1/

Title 14 CFR 135.155, which applies to aircraft in commuter service, requires that the aircraft be equipped with at least two fire extinguishers. One must be located on the flight deck for use by the crew and at least one must be "conveniently located" in the passenger compartment of each aircraft that has 10 to 31 passenger seats. The accident aircraft was equipped with the required two portable fire extinguishers. The cockpit extinguisher was mounted behind the copilot's seat on the cockpit/cabin bulkhead. The cabin extinguisher was mounted under the left-side passenger seat on the aft bulkhead. The cabin extinguisher was accessible only by a person kneeling on the floor and reaching under the seat to release it from its mounts. The cabin extinguisher was not visible when the seat was occupied.

The cockpit was configured in the conventional captain (left) and first officer (right) crew positions, and their seats were equipped with four-point restraint systems, including shoulder harness inertia reels. Entry doors were located outboard of the captain's and first officer's seats. The cabin was configured with 18 passenger seats, which had "metal-to-metal" seatbelt fittings. There were two emergency exits on the right side of the cabin, one emergency exit and the main "airstair" boarding door on the left side of the aircraft, a cargo door aft of the main boarding door, and an overhead escape hatch over the aisle between seat rows Nos. 4 and 5.

Title 14 CFR 135.117 requires that the oral pretakeoff briefing of passengers by the crew be supplemented by printed cards that contain "(1) a diagram of, and method of operating the emergency exits; and (2) other instructions necessary for the use of emergency equipment on board the aircraft." This section further requires that the cards "must contain information that is appropriate to the aircraft on which it is to be used."

1/ For more detailed information read Aircraft Accident Report—"Pilgrim Airlines Flight 458, deHavilland DHC-6-100, N127PM, near Providence, Rhode Island, February 21, 1982" (NTSB-AAR-82-7).

The pretakeoff briefings, which were read over the aircraft's public address system, included the sentence: "There are two fire extinguishers; one under [sic] the right pilot's seat and the other under the left rearmost seat of your cabin." However, because the pretakeoff briefing announcement was garbled and hurried, passengers said they were unaware that a fire extinguisher was located in the cabin. The seatback "Emergency Procedures" safety briefing cards in the cabin showed the location of the fire extinguisher at the right cockpit seat, but did not show the location of the fire extinguisher located under the rearmost left seat. The cards also did not show the location of the overhead escape hatch in the cabin.

Although 14 CFR 135.155 requires that a fire extinguisher be "conveniently located" in the passenger compartment, no requirement exists that the extinguisher be readily accessible and properly identified. The Safety Board is aware that 14 CFR 91.193(c)(4), which applies only to large aircraft and to turbojet-powered multiengine aircraft, specifies that fire extinguishers located in the cabin "must be readily accessible, and unless the locations of the fire extinguishers are obvious, their stowage provisions must be properly identified." The Safety Board is concerned that the requirements of 14 CFR 135.155 are less definitive than the requirements of 14 CFR 91.193 and do not provide for the equivalent level of safety in passenger-carrying operations.

The passenger seats were equipped for the underseat stowage of carryon baggage in accordance with 14 CFR 135.87, but one passenger said he had his attache case on his lap during takeoff. Although 14 CFR 135.87(c)(6) requires carryon baggage to be stowed before takeoff and before landing, there is no requirement that flightcrews inform passengers of the requirement or that safety cards contain this information. Neither the pretakeoff briefing nor the safety briefing cards on the accident aircraft mentioned requirements for carryon baggage. This type of safety information becomes most important in commuter operations because operators usually are not required to have onboard a cabin attendant who would insure that the passengers have their seatbelts fastened, that there is no smoking, and that carryon baggage is stowed beneath seats. Consequently, the Safety Board believes that the pretakeoff briefing and safety briefing cards should be amended to inform commuter passengers of the carryon baggage stowage requirement.

Title 14 CFR 135.117 requires that the pretakeoff briefing of passengers include information concerning the use of seatbelts. The Pilgrim Airlines flightcrew pretakeoff briefing did not address seatbelt use. Likewise, the seatback safety briefing cards did not address use or operation of seatbelts as supplemental information. The Safety Board believes that the oral briefing should comply with the regulatory requirement and that the seatback safety briefing cards should provide supplemental information on the operation and the use of the seatbelts.

The Safety Board believes that more comprehensive surveillance by Federal Aviation Administration (FAA) inspectors would have discovered the obvious discrepancies in the safety card and the lack of instructions for the use and operation of seatbelts in the pretakeoff briefing. The FAA's surveillance of air taxi and commercial operators which operate under 14 CFR Part 135 should certainly place heavy emphasis on occupant safety and safety equipment. The rapid growth of the commuter industry, as discussed in the Safety Board's special study on commuter airline safety, ^{2/} clearly requires that FAA inspectors be aware of the need for operators to conform to all applicable requirements in the Federal Aviation Regulations under which they operate.

^{2/} Special Study—"Commuter Airline Safety," dated July 22, 1980 (NTSB-AAS-80-1).

Therefore, the National Transportation Safety Board recommends that the Federal Aviation Administration:

Issue an Operations Bulletin requiring Principal Operations Inspectors of 14 CFR Part 135 operators to determine: (1) that oral briefings by the crew and safety briefing cards in the cabin comply with 14 CFR 135.117 and 14 CFR 135.87(c)(6) regarding use of passenger seatbelts and stowage of carryon baggage, (2) that fire extinguishers and other safety equipment are accessible and that their locations are identified by placards, and (3) that operators stress to their flightcrews the importance of making public address announcements slowly and articulately. (Class II, Priority Action) (A-82-70)

Issue a Maintenance Bulletin calling attention to the need for properly functioning public address systems to assure that safety messages by the crew are understandable in all parts of the cabin both on the ground and in flight. (Class II, Priority Action) (A-82-71)

Amend 14 CFR 135.155 to make the requirements regarding the accessibility and location of fire extinguishers in passenger compartments of aircraft in commuter service at least as stringent as the requirement in 14 CFR 91.193(c)(4). (Class II, Priority Action) (A-82-72)

Review the training of and the surveillance procedures followed by Federal Aviation Administration inspectors and modify them if necessary to provide increased emphasis on the provisions of 14 CFR Part 135 with regard to occupant safety and safety equipment. (Class II, Priority Action) (A-82-73)

BURNETT, Chairman, GOLDMAN, Vice Chairman, and McADAMS, BURSLEY, and ENGEN, Members, concurred in these recommendations.


By: Jim Burnett
Chairman