

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: January 25, 1974

Forwarded to:

Honorable Alexander P. Butterfield
Administrator
Federal Aviation Administration
Washington, D. C. 20591

SAFETY RECOMMENDATION(S)

A-74-3 and 4

On July 31, 1973, Delta Air Lines Flight 723, a DC-9-31, was involved in an accident at Logan International Airport in Boston, Massachusetts. The National Transportation Safety Board's investigation of the accident disclosed two problems which impaired the safety of airport operations immediately after the accident.

First, a problem was detected with the approach light system (ALS) monitor panel which is located in the tower cab. The monitor panel contains two sets of red alarm lights which are associated with the sequence flashers and the ALS. The alarm lights associated with the sequence flashers often illuminated because of water which was frequently present in the power line. When water was present in the power line, maintenance personnel determined the status of the sequence flashers by visually observing the installations. If the sequence flashers were found to be operating normally, signs which advised tower controllers to disregard the alarm were usually placed on the control consoles. Maintenance personnel cleared the line after several hours of manual pumping. No effort had been made to install automatic pumping devices, nor to prevent the water from getting into the lines. We have been advised recently that this problem was eliminated by the installation of waterproof lines.

Light bars Nos. 25 and 26 of the ALS and their associated sequence flashers were destroyed by Flight 723 when the airplane crashed. Destruction of the lights caused an alarm to sound and both sets of red lights to illuminate. When the alarm was detected, controller personnel silenced the signal and ignored the red lights.

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An inoperative ALS requires increased landing minimums for arriving flights. Tower controllers are directed to advise inbound flightcrews of an indicated malfunction in the ALS, pending visual verification of the system's status. Because the crash of Flight 723 was not detected for several minutes, two other flights were cleared to land without the benefit of such an advisory. Since the major portion of the wreckage of Flight 723 remained on the landing runway short of the displaced threshold, additional accidents may have been averted when the pilots of these flights initiated missed approaches.

Controllers do not receive formal training in the use of the ALS monitor panel. In addition, controllers at Logan International Airport minimize the significance of the ALS alarms because of the frequency of false alarm signals caused by water in the line.

The Board's investigation disclosed also that heavy fog which existed over portions of the airport at the time of the accident restricted visibility and precluded visual observation of the accident from the tower cab. Also, controllers could not determine visually the status of the ALS.

The second problem resulted from a lack of communication between the tower ground controller and the local controller concerning the sequence of incoming flights.

Delta Air Lines Flight 623, a preceding arrival, was taxiing toward the passenger debarkation area when Flight 723 crashed. The similarity between flight numbers caused confusion because controllers believed that the flight which was taxiing toward the passenger debarkation area was Flight 723. Accordingly, airport operations continued without interruption. The actual location and status of Flight 723, however, was not known for several minutes, when emergency crews were alerted by an engineering aide.

Since the tower ground controller was not provided control information pertaining to the arrival sequence, he was not aware that two arriving flights had similar flight numbers. Such information could have eliminated the confusion regarding identification of the accident aircraft.


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

1. Require that controllers receive formal training in procedures for using the approach light system monitor panel.

2. Revise air traffic control operational procedures to assure that the ground controller is provided, concurrently, with the same arrival sequence information that is provided the associated local controller.

Members of our Bureau of Aviation Safety will be available for consultation in the above matter if desired.

REED, Chairman, McADAMS, BURGESS, and HALEY, Members, concurred in the above recommendations. THAYER, Member, was absent, not voting.


By: John H. Reed
Chairman

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DEPARTMENT OF TRANSPORTATION
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