



National Transportation Safety Board

Washington, D. C. 20594

Safety Recommendation

Log 2116A

Date: January 17, 1989

In reply refer to: A-88-159

Mr. Robert W. Grant
President
National Fire Protection Association
Batterymarch Park
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About 1825 on November 23, 1987, a Beech Aircraft Corporation 1900C (Be 1900), N401RA, operated by Ryan Air Service, Inc., crashed short of runway 3 at the Homer Airport, Homer, Alaska. Flight 103 was a scheduled Title 14 Code of Federal Regulations (CFR) Part 135 flight operating from Kodiak, Alaska, to Anchorage, Alaska, with intermediate stops in Homer and Kenai. Both flightcrew members and 16 passengers were fatally injured; 3 passengers were seriously injured.¹

Rescue personnel removed passengers through the open left front cabin door. Because the three overwing exits were too narrow to accommodate passengers on backboards, rescuers attempted to gain access to the cabin by cutting the left rear cargo door and widening one of the cabin windows. Rescuers had difficulty in cutting the cargo door free because the fuselage skin kept springing back into place. The attempt to widen the cabin window was abandoned for the same reason.

Information on recommended forceable entry locations would have resulted in quicker access into the cabin and to the passengers. As it was, passengers had to be removed one at a time through the main cabin door. The seven passengers arrived at the hospital in Homer between 48 to 78 minutes after the first rescue units arrived at the crash site. Survivors would have arrived at the hospital sooner had it been possible to remove more than one passenger at a time from the airplane.

Moreover, rescue personnel had to exercise extreme caution when they cut into the fuselage because they believed that fuel lines and electrical wires would be severed--fuel had been spilled and the electrical system was still energized during the extrication of survivors. Given the spilled fuel and several ignition sources in the cabin, the potential for a fire was great. Obviously, firefighters and rescue personnel must know exactly where forceable entries can be made into aircraft without endangering themselves and trapped survivors.

¹For more detailed information, read Aircraft Accident Report--Ryan Air Service, Inc., Flight 103, Beech Aircraft Corporation 1900C, N401RA, Homer, Alaska, November 23, 1987 (NTSB/AAR-88/11).

Another problem faced by rescuers was their inability to locate the master switch to shut off the electrical power. When rescuers arrived on scene, the pilot and first officer were still in their seats and the instrument panel had been forced down onto them. During the 45 minutes it took for rescue personnel to locate and disconnect the battery, the first officer could not be removed from his seat because movement in the area resulted in electrical arcing in the instrument panel.

Examination of the cockpit revealed that the master switch was located on the lower left of the captain's instrument panel. It was a black-colored lever with white letters labeled MASTER SWITCH which were clearly visible under normal conditions. However, in the cockpit it was difficult to see the master switch lever. The importance of disconnecting electrical power in any accident is obvious--to negate the potential as an ignition source for a catastrophic fire and to allow for expeditious removal of injured crew and passengers.

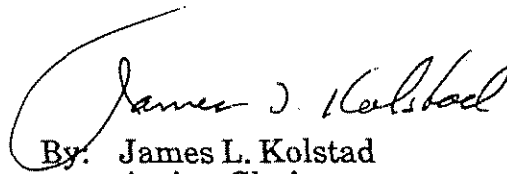
Information in the form of Crash Crew Charts pertaining to forcible entry, normal exit points, location of fuel and electrical lines, and location of batteries for various commercial airplanes are contained in the National Fire Protection Association's document 402M--*Aircraft Rescue and Fire Fighting Operational Procedures*, 1984. However, the Crash Crew Charts apply to larger commercial aircraft similar to the Boeing 727, de Havilland Dash 7, and McDonnell Douglas DC-10. A search of available literature failed to discover any document that contains small airplane charts for use by crash, fire, and rescue personnel. The Safety Board believes that with the proliferation of commuter airplanes, there is a need for training aids for crash, fire, and rescue agencies that provide support for smaller airplanes that operate under 14 CFR Part 135.

Therefore, the National Transportation Safety Board recommends that the National Fire Protection Association:

Expedite the publication and dissemination of information on airplane access points, fire hazard zones, interior fuselage arrangements, the master power switch, and battery locations for airplanes with 10 or more seats. (Class II, Priority Action) (A-88-159)

Also, as a result of its investigation, the Safety Board issued Safety Recommendation A-88-158 to the Federal Aviation Administration.

KOLSTAD, Acting Chairman, LAUBER, NALL, and DICKINSON, Members, concurred in this recommendation. BURNETT, Member, dissented.


By: James L. Kolstad
Acting Chairman