

**Rec #:** A-03-054  
**NTSB Status:** Open - Acceptable Response  
**Issue date:** 12/2/2003  
**Accident Date:** 10/25/2002  
**Source Event:** ACCIDENT  
**Location:** Eveleth Minnesota

**Mode:** AVIATION  
**Most Wanted List:** No  
**Closed date:**

**Report Number:** AAR-03-03  
**Accident ID:** DCA03MA008

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**Background Synopsis:**

On October 25, 2002, about 1022 central daylight time, a Raytheon (Beechcraft) King Air A100, N41BE, operated by Aviation Charter, Inc., crashed while the flight crew was attempting to execute the VOR approach to runway 27 at Eveleth-Virginia Municipal Airport, Eveleth, Minnesota. The crash site was located about 1.8 nautical miles southeast of the approach end of runway 27. The two pilots and six passengers were killed, and the airplane was destroyed by impact forces and a postcrash fire. The airplane was being operated under the provisions of 14 Code of Federal Regulations (CFR) Part 135 as an on-demand passenger charter flight. Instrument meteorological conditions prevailed for the flight, which operated on an instrument flight rules flight plan.

**Recommendation:**

The National Transportation Safety Board makes the following recommendation to the Federal Aviation Administration: If the panel requested in Safety Recommendation A-03-53 determines that a requirement for the installation of low-air-speed alert systems in airplanes engaged in commercial operations under 14 Code of Federal Regulations Parts 121 and 135 is feasible, establish requirements for low-air-speed alert systems, based on the findings of this panel.

**Safety Recommendation History for A-03-054 FAA**

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4 records found

Response Date:	
4/12/2004	From: Addressee
<b>Response:</b> Letter Mail Controlled 4/12/2004 12:32:08 PM MC# 2040165 The FAA shares the Board's concern regarding flightcrew awareness of low airspeed situations. As noted in the Board's letter dated December 2, 2003, failure to maintain adequate airspeed can result in unsafe circumstances like loss of control, impact with terrain or water, hard landings, and tail strikes. The Board further states that it has investigated numerous accidents and incidents involving commercial flightcrews that inadvertently failed to maintain airspeed. For example, the Board has investigated at least 11 events since 1982 involving 14 CFR Part 135 flights and at least seven events involving 14 CFR Part 121 flights in which stall or failure to maintain airspeed during approach or landing phases was cited as a causal or contributing factor and in which icing was not cited as a factor. Current rules require stall warning (stick shaker or natural buffet) for both small airplanes and transport airplanes. The Board acknowledges the existing requirements for stall warning, but challenges the premise that stall warnings and flightcrew vigilance provide adequate low airspeed awareness. The Board states that a low airspeed alert, which would be activated at some airspeed higher than stall warning, would provide additional protection against low airspeed conditions that may lead to stall. The Board noted the existing installation of a low airspeed alert in the Embraer 120. The FAA required this alert as an interim solution until Embraer redesigns the stall warning system to account for icing conditions adequately. Many current transport airplanes include additional cues on airspeed indicators. These cues are intended to provide improved low airspeed awareness. While not alerts, these color-coded symbols indicate the low airspeed region (the maneuver margin, typically at about 1.3 Vstall) in which the airplane is approaching the stall warning speed. As noted by the Board, such displays are now becoming available for use in less sophisticated general aviation airplanes. Additionally, the Board has recognized that there are unresolved technical, operational, and human factors issues that will need to be carefully evaluated and addressed in connection with the design and implementation of a low airspeed alert system. On January 21, 2004, the Board provided the FAA with more complete information on the 18 accidents cited by the Board to support	

these safety recommendations. The FAA will include a review of these 18 accidents in determining what action needs to be taken to address the safety issue. The FAA will also consider efforts already accomplished or in progress under the Safer Skies programs and other initiatives dealing with airspeed awareness. I will keep the Board informed of the FAA's progress on these safety recommendations.

**Response Date:**

1/12/2005

**From:**

NTSB

**Response:**

The FAA reported that it shares the Safety Board's concern regarding flight crew awareness of low airspeed situations. The FAA also outlined several alerts or other cues that presently exist on some airplanes. The FAA requested, and the Board provided, more complete information regarding other accidents that support these recommendations. The FAA reports that it will review these accidents and consider efforts already in progress in determining what action needs to be taken to address this safety issue. The Safety Board appreciates the FAA's agreement that low-speed awareness is an ongoing safety issue. However, there is no information regarding planned actions by the FAA. Since these recommendations were issued a year ago, the Board would appreciate an expedited response regarding the FAA's intended actions regarding these two safety recommendations. Pending this information, Safety Recommendations A-03-53 and -54 remain classified "Open--Await Response."

**Response Date:**

10/3/2006

**From:**

Addressee

**Response:**

Letter Mail Controlled 10/11/2006 2:41:26 PM MC# 2060500: Marion C. Blakey, Administrator, FAA, 10/3/06 In consideration of the Board's reiteration of these recommendations, the FAA has formed an internal team of experts to assess the feasibility of new low airspeed alerting systems. If outside expertise is needed, the team will consult with representatives from the National Aeronautics and Space Administration or other organizations, as appropriate. We will provide a status update by November 17, 2006.

**Response Date:**

4/3/2007

**From:**

NTSB

**Response:**

Shortly after these recommendations were issued, the FAA asked for more information about the 18 aircraft accidents, referenced in the letter that transmitted these recommendations to the FAA, that are the basis for these recommendations. On January 21, 2004, the Safety Board supplied this information to the FAA. On April 12, 2004, the FAA stated that it shared the Safety Board's concern regarding flight crew awareness of low airspeed situations, and outlined several alerts or other cues that presently exist on some airplanes. The FAA stated that it would review the list of accidents supplied on January 21, 2004, and consider efforts already in progress in determining what actions to take in response to these recommendations. On January 12, 2005, the Safety Board replied that the FAA had supplied no information regarding planned actions. At that time, the recommendations were already a year old, and the Board asked for an expedited response regarding the FAA's intended actions. Pending that information, Safety Recommendations A-03-53 and -54 remained classified "Open--Await Response." In the intervening 2 years, no further information has been received from the FAA regarding any actions being taken in response to these recommendations. In its October 3, 2006, letter, the FAA indicated that because these recommendations had been reiterated, the FAA had formed an internal team to assess the feasibility of low airspeed alerting systems. Although the FAA's letter indicated that a status update would be provided by November 17, 2006, the FAA later advised the Safety Board that this information would not be available until March 2007. The FAA recently indicated that it would not be able to supply this information before July 2007. Although the FAA has not taken action in the 3 years since these recommendations were issued, the Board is encouraged that the FAA has formed a team to begin addressing the recommendation. Accordingly, Safety Recommendations A-03-53 and -54 are classified Open Acceptable Response.

**Note:**

Please note that the Addressee's incoming letter's text is not posted until the NTSB's outgoing letter is posted as well.