



REASSESSMENT OF RESPONSES TO AVIATION SAFETY RECOMMENDATION A00-08

BEECH KING AIR AVIADESIGN LANDING GEAR MODIFICATION

Background

On 16 July 1998, the Beech A100 King Air, serial number B-103, departed Ottawa MacDonald-Cartier International Airport at 0830, Eastern Daylight Saving Time, on an instrument flight rules (IFR) training flight to North Bay, Ontario, with 2 flight crew members on board. At North Bay, the crew conducted a radar-vectored back-course approach to Runway 26 with a touch-and-go landing followed by 2 visual flight rules touch-and-go landings, then a full-stop landing. The flight crew switched seat positions in the aircraft and departed on a return IFR flight to Ottawa. At Ottawa, when the landing gear was selected down, the crew observed an unsafe landing gear indication in the cockpit and requested and received overshoot instructions from air traffic control. Visual observation from the ground during the overshoot confirmed the landing gear was not extended. The flight crew carried out the emergency landing gear extension procedure, but still observed an unsafe landing gear position indication for the right main landing gear; however, the landing gear appeared to be extended when observed from the ground. The flight crew discussed how the landing would be carried out, requested emergency rescue services for the landing, and proceeded to land on Runway 25. On the landing roll, the right main landing gear collapsed and the aircraft went off the right side of the runway. There were no injuries. The accident occurred during the hours of daylight in visual meteorological conditions.

The Board concluded its investigation and authorized the release of report A98O0184 on 01 March 2000.

Board Recommendation A00-08 (12 April 2000)

The safety actions taken by Transport Canada (TC) Aircraft Services Directorate (ASD) have possible continuing airworthiness operational implications for the fleet of similar aircraft operating elsewhere in Canada and in other countries. These actions include permitting a single, in-flight reset of the electric hydraulic pump motor 60-amp circuit breaker, relocating the 60-amp circuit breaker to the cockpit, and installing a mirror to provide a means for the pilot to observe the nose landing gear position from the cockpit. Dissemination of this information to other King Air operators in Canada and around the world for the purpose of possible similar safety actions by other operators would reduce the risk of similar accidents.

Annex 8, *Airworthiness of Aircraft*, to the *Convention on International Civil Aviation* contains provisions urging the State of Registry of an aircraft to notify the State of Design about information that might cause adverse effects on the continuing airworthiness of an aircraft. It seems appropriate that the changes to the configuration and operating procedures for the TC King Air fleet should be brought to the attention of the Federal Aviation Administration (FAA) in the United States, the State of Design, for possible fleet-wide safety action. Therefore, the Board recommends that:

The Department of Transport notify the United States Federal Aviation Administration, in accordance with Annex 8, "Airworthiness of Aircraft," to the *Convention on International Civil Aviation*, about the circumstances of this accident and the safety actions taken, with the view toward wider application of the safety actions.

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Transport Canada's Response to A00-08 (05 July 2000)

In its response, TC indicated that a letter had been sent to the FAA outlining TC's concerns regarding the Aviadesign Supplemental Type Certificate (STC) SA 0313WE.

Board Assessment of A00-08 (13 June 2001)

Although the letter to the FAA did indicate TC's concerns about the STC, the letter did not inform the FAA of the safety actions being taken by TC ASD. TSB staff has determined that this information was not included because TC does not believe that it would be of any use in preventing further incidents of this type.

Since the receipt of TC's response letter to this recommendation, TC has informed operators about the circumstances of this accident in their *Feedback* newsletter. In order to determine the extent of the problem, the newsletter solicited input regarding incidents of tripped landing gear motor circuit breakers (for both hydraulic and mechanical landing gear) on Beech 90, 99, 100, 200 and 1900 aircraft. TSB staff has determined that TC intends to use this feedback to help resolve the airworthiness status of the circuit breaker and the STC.

Because this action addresses the underlying cause of such incidents, TC's response is assessed as "**Fully Satisfactory**".

Next TSB Action (13 June 2001)

Nil.

This deficiency file is assigned an **Inactive Status**.