



Interagency Aviation Lessons Learned



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Subject: Beechcraft King Air B200 Pitch Trim Malfunction

Area of Concern: Flight Controls

Distribution: All Aviation Operations.

Discussion: The following lesson was extracted from [SAFECON 25-0282](#). Earlier this year, a pilot was repositioning a Beechcraft King Air B200 with a second pilot onboard but not part of the aircrew.

Upon arrival at the destination, the pilot was cleared to descend to 10,000ft MSL and given vectors for the RNAV approach. While on the vector, the pilot noticed a very brief (less than one second) illumination of a yellow "Up Elevator" annunciator indication on the aircraft's Primary Flight Display. Once cleared for the approach, the pilot proceeded inbound. Upon reaching 500' Above Ground Level (AGL) and in Visual Meteorological Conditions (VMC), the pilot received the aural "500 ft" call out and proceeded to disconnect the aircraft's autopilot with the aircraft being fully configured for landing.

Upon deactivation of the aircraft's autopilot, the aircraft pitched up approximately 5-7 degrees and began to climb. The pilot increased forward pressure on the flight controls in an effort to maintain glideslope and attempted to use the electronic elevator trim to relieve control pressure. As the pilot was pressing forward on the electronic elevator trim buttons, he looked at the elevator trim control wheel and noticed that it wasn't moving as expected. The pilot thought the electronic elevator trim was inoperative so he attempted to manually trim the aircraft using the elevator trim control wheel. It was at this point that the pilot realized the aircraft's elevator trim was completely seized as neither electric nor manual inputs would cause the trim wheel to move.

The pilot then elected to initiate a go around which was performed uneventfully despite having to override the control forces of an untrimmed aircraft. Once properly configured, the pilot entered left traffic for landing only to discover that he was still unable to manually manipulate the elevator trim wheel. The pilot continued to apply more force on the pitch trim wheel and after some effort, felt the elevator trim wheel release allowing him to regain control over the aircraft's pitch trim condition. Once satisfied with the controllability of the aircraft, the pilot advised tower that he was ready to accept another attempt at landing and, once cleared to do so, performed an uneventful landing.

Maintenance later determined that a pitch trim servo had failed. A pitch trim servo failure on a King Air B200 can manifest as an uncommanded pitch up movement, a sudden and potentially uncontrolled pitch down, or a binding elevator trim where the elevator trim will seize. Well done to the two pilots that were aboard the aircraft for an excellent job responding to the atypical condition and working through the problem while continuing to safely pilot the aircraft. Exceptional crew resource management (CRM) between the two pilots was critical to ensure a safe outcome.

Another consideration for managing flight control issues is to climb in VFR conditions to an altitude that would provide adequate time to resolve any additional degradation that could result in a loss of control.

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