



SAIB: CE-11-04

Date: December 2, 2010

SUBJ: Wings – Wing Spar

This is information only. Recommendations aren't mandatory.

Introduction

This Special Airworthiness Information Bulletin (SAIB) informs owners, operators, and maintenance personnel of wing skin repairs causing inadvertent damage to the spar on Hawker Beechcraft Corporation King Air Models L23F (65), A65, A65-8200, 65-80, 65-A80, 65-A80-8800, 65-B80, 65-90, U-21(65-A90), 65-A90, B90, C90, C90A, E90, F90, T44A(H-90), 100, A100, U21F(A100), U-21J(A-100), and B100 airplanes.

At this time, the airworthiness concern is not an unsafe condition that would warrant Airworthiness Directive (AD) action under Title 14 of the Code of Federal Regulations (14 CFR) part 39.

Background

The FAA recently discovered repairs to King Air series aircraft that were improperly done. The repairs were to correct cracks in the fuselage keel skin aft of the wing main spar. Doublers were installed to reinforce the cracked skin. In some cases holes were drilled through spar caps causing structural damage to this primary structural element. These nonconforming repairs deviated from the FAA-approved repairs.

Two known approved drawings are applicable to the models noted above:

- Cotney Aerospace Inc. “Repair; Fuselage Lower Surface Skin Crack” Sketch No. U71-R02; and
- Raytheon Aircraft Company “Standard Repair – Cracks in Fuselage Keel Skin Aft of Wing Main Spar at End of Spar Cutout,” Dwg. No. SR-KA-00008.

Recommendations

The FAA recommends that you do the following:

- Review aircraft repair history for the referenced models and determine if a repair has been installed to the wing lower surface skin in the area of the fuselage keel and wing main spar intersection, approximately at left or right B.L. 15. The repair will be on the exterior of the wing lower skin at the location where the spar cap becomes exposed and will be installed between the skin and the existing external stringer strap.
- Visually inspect (one-time) the repair and the surrounding structure if such repairs have been done. This inspection is recommended no later than the next scheduled inspection of the wing center section. The Hawker Beechcraft Structural Inspection and Repair Manual defines a general visual inspection of the area every 3 years or 1,000 hours time-in-service (TIS).

- During that visual inspection, gain internal access to the forward spar lower cap by removing the access panels and flooring.
- Conduct a detailed inspection of the existing internal doublers on each affected side, installed on the aft side of the spar lower cap. The doubler on each side extends approximately between B.L. 15 and 21. Remove any sealant, if present, on top of each doubler to gain access to the upper surface for inspection. The doubler should only be installed with two rows of fasteners: one row common to the lower cap and one row common to the skin. No other fasteners or fastener holes should be used through the doubler. Remove sealant as necessary and visually inspect the aft side of the lower cap internally on each affected side for improperly installed fasteners or mis-drilled holes.
- Remove sealant as necessary and visually inspect the forward side of the lower cap internally on each affected side, approximately between B.L. 12 and 17, for evidence of mis-drilled holes or improperly installed fasteners through the lower flange of the lower spar cap. Holes or improperly installed fasteners may be too close or overlapping the original holes or fasteners (double-drilled or figure-eight holes)..
- Using a borescope, examine the gap between the lower surface of the lower spar cap and the skin on each affected side. Look for fasteners installed through the gap and into the lower cord of the spar or for evidence of drill marks or gouges into the lower flange of the spar cap. Only fasteners common to the skin with no damage to the lower flange of the spar cap should be used. If damage is detected, contact Hawker Beechcraft Corporation for instructions to repair damage.

For Further Information Contact

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For Related Service Information Contact

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