



FAA
Aviation Safety

SPECIAL AIRWORTHINESS INFORMATION BULLETIN

SAIB: NM-11-48

Date: August 22, 2011

SUBJ: Ice and Rain Protection: Wing Transverse Duct Assembly

This is information only. Recommendations aren't mandatory.

Introduction

This Special Airworthiness Information Bulletin (SAIB) advises registered owners and operators of **certain Learjet Inc. Model 31, 31A, 35, 35A (C-21A), 36, and 36A airplanes** of the need for inspection and replacement (if necessary) of the wing transverse duct assembly due to possible restricted airflow through the duct, which could lead to diminished anti-ice capability of the wing leading edge—in particular, on the right-hand side.

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 Aviation Regulations (14 CFR) part 39.

Background

A number of instances were reported where the wing anti-ice transverse duct was found to be partially crushed. The effect of this condition is to limit the flow of hot bleed air to the right wing leading edge, which in turn can result in ice accumulation when flight is conducted in icing conditions.

In the wing anti-ice system, a transverse duct in the aft cabin routes bleed air from the supply duct on the left side of the fuselage to the diffuser tube in the right wing. After repeated heating and cooling cycles, the aluminum material may gradually soften, allowing cabin pressure to distort the duct and restrict bleed air flow to the right wing.

Learjet Inc. addressed this condition by providing a new stainless steel transverse duct that will eliminate the distortion. See the Recommendations section below for service bulletin information.

Additionally, due to design differences among various Learjet airplane models, the wing temperature indicator alone may not provide adequate information to the flight crew if the wing transverse duct is compromised. Flight crews are encouraged to remain vigilant during flight in icing conditions by visually observing the condition of the wing leading edges.

Recommendations

The FAA recommends that all owners and operators of Learjet Inc. Model 31, 31A, 35, 35A (C-21A), 36, and 36A airplanes comply with the actions outlined in the following service bulletins:

- Learjet Service Bulletin 31-30-6, Revision 1, dated February 12, 1999 (for Learjet Model 31 and 31A airplanes having serial numbers 31-002 through 31-158).
- Learjet Service Bulletin 35/36-30-10, Revision 1, dated February 12, 1999 (for Learjet Model 35, 35A (C-21A), 36, and 36A having serial numbers 35-002 through 35-676 and 36-001 through 36-063).

For Further Information Contact

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For Related Service Information Contact

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