



**Fairchild SA 227 DC aircraft trailing edge flap  
actuator failures**

**AWB** 27-007      **Issue :** 1  
**Date :** 14 March 2007

## 1. Applicability

Fairchild SA 227 DC aircraft trailing edge flap actuators, all manufacturers, all part numbers.

## 2. Purpose

To alert operators to the continuing failures, including several in-flight, of the trailing edge flap system and provide guidance regarding preventive action.

## 3. Background

A survey of CASA SDR's indicates that all of these actuators, regardless of manufacturer and part number, develop hairline cracks in the body and base - particularly around the ram - resulting in loss of hydraulic fluid and subsequent system failure.

CASA analysis of a number of SDR's on this component indicate that cracking and leaking is apparent above 8000 cycles or 4000 hrs TIS whichever occurs first.

Investigation shows that the cracks are initiated by stress raisers introduced by the internal machining process during manufacture of the actuator bodies.

## 4. Recommendation

It is recommended that operators of all Fairchild SA 227 DC aircraft consider changing the aircraft system of maintenance to incorporate an NDT inspection of the trailing edge flap actuators at 8000 cycles or 4000 hrs TIS.

Treat all hydraulic leaks from the trailing edge flap actuators as cause for further investigation.

- Any cracked actuator housing should be removed from service immediately.
- Submit an SDR to CASA on any defects found.



# AIRWORTHINESS BULLETIN

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## 5. Enquiries

Enquiries with regard to the content of this Airworthiness Bulletin should be made via the direct link e-mail address: [AirworthinessBulletin@casa.gov.au](mailto:AirworthinessBulletin@casa.gov.au)

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