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No. CF-87-13

AIRWORTHINESS DIRECTIVE

The following airworthiness directive (AD) may be applicable to an aircraft which our records indicate is registered in your name. ADs are issued pursuant to Canadian Aviation Regulation (CAR) 593. Pursuant to CAR 605.84 and the further details of CAR Standard 625, Appendix H, the continuing airworthiness of a Canadian registered aircraft is contingent upon compliance with all applicable ADs. Failure to comply with the requirements of an AD may invalidate the flight authorization of the aircraft. Alternative means of compliance shall be applied for in accordance with CAR 605.84 and the above- referenced Standard.

This AD has been issued by the Continuing Airworthiness Division (AARDG), Aircraft Certification Branch, Transport Canada, Ottawa, telephone (613) 952-4357.

CF-87-13 SAUNDERS

Applies to all Saunders ST-27 aircraft.

Compliance is required as indicated.

On June 21, 1987, British Aerospace issued Mandatory Technical News Sheet No. W19 concerning the aileron mass balance weight assemblies of Heron 114 aircraft, in response to a reported case of severe internal corrosion of a mass balance weight assembly. The aileron assemblies of the Heron were retained in the aircraft's conversion by Saunders to the ST-27.

The following inspections are therefore required to preclude failure of the aileron mass balance weight assemblies due to corrosion.

1. Within 14 days of the effective date of this Directive, perform the following procedures:
 - (a) visually inspect the aileron mass balance weight assemblies for any external evidence of internal corrosion, and for any external corrosion more than 0.020 inch (0.051 cm) deep, and
 - (b) where any evidence of internal corrosion is found, or of external corrosion beyond 0.020 inch (0.051 cm) deep, replace the corroded aileron mass balance weight assembly with a serviceable assembly before further flight.
2. Where no visible evidence of corrosion is apparent:
 - (a) within 28 days of the effective date of this Directive, perform a radiographic inspection of the mass balance weight assemblies, as shown in Figure 1 below, to detect internal corrosion in the double-tube-construction mass balance weight assembly arms, and
 - (b) where evidence of internal corrosion is found by radiographic inspection, replace the affected mass balance weight assembly with a serviceable unit before further flight.

The radiographic inspection of 2(a) above must be performed by a radiographer qualified to CGSB Standard 48-GP-4M, Level II.

Table I of this Directive provides details required for the radiographic inspection. Figure 1 shows X-ray film and tube head positions for the inspection.

Alternative means of compliance with the requirements of this Directive may be used if approved by the Director, Airworthiness Branch, Transport Canada, Ottawa.

This Directive becomes effective November 16, 1987.

Position	Angle of Beam to film	S.f.d.	kV	mA	Time [min.]	Filters on Tube	Screens Pb	Film	Size [in]
1	90°	36"	100	4	1.5	Be	0.004 in. front	Dupont NDT 75	8 x 10
2	90°	36"	120	4	2.5	Be	0.006 in. back SAME	or equivalent SAME	SAME

TABLE I: Film Exposure Details

Notes:

- The radiographic inspection may be performed with the assembly in situ or removed from the aircraft.
- Shots may be taken from inboard or outboard of the assembly arm.
- The mass balance weight assembly material is steel. A spruce plug and lead compensator weights are contained within the balance weight.

