

COMMONWEALTH OF AUSTRALIA

DEPARTMENT OF TRANSPORT

AIRWORTHINESS DIRECTIVE - GLIDERS

GFA/AD 8/SCHWEIZER 1

GLIDER TYPES AFFECTED: Schweizer 1-26

This Airworthiness Directive was originally issued in February, 1971, as Airworthiness Directive GFA/Schweizer 1/73/1.

Background:

It has been suspected for some time that all information relating to glider defects from overseas was not being received in Australia; enquiries to overseas Aviation Authorities has led to receipt of a considerable number of Airworthiness Directives, Service Bulletins, and Advisory Notices.

Schweizer Aircraft Corp., Service Bulletin No. 102-26-7 dated Feb.11, 1971, applies to Schweizer 1-26 gliders operated in Australia.

SERVICE BULLETIN NO. 102-26-7

MODELS AFFECTED: SGS 1-25B and C, Ser. No.'s 289 thru 399 which have Swept-back Vertical Tail Surfaces

SGS 1-26D, Ser. No.'s 400 thru 475

SGS 2-33 and 2-33A, Ser. No.'s 1 thru 196

SUBJECT: Rudder Hinge, Lower, Attachment to Fin Spar

A report from the field has been received indicating failure of both AN3-7A bolts attaching the lower rudder hinge to the fin spar. This report was from one aircraft only.

One bolt only, of the two which failed, was found and, under a 50X magnification, an apparent defect in the bolt itself was noted. Whether this bolt was the first to fail, leading to the failure of the second, is not known. However, it was stated that a rudder lock was not used during periods of tie-down which may have been a contributing factor, as flight loads are very low on these bolts.

To assure that a similar failure has not occurred on ships in service -

1. Preflight inspect the aircraft to assure the bolts are in place.
2. Accomplish the following at the first 100-hour or Annual Inspection, whichever occurs first. One at a time, remove each AN3-7A bolt (these bolts have a one quarter inch long, 3/8 diameter x .090 wall, aluminum bushing under the bolt head). Solvent-clean and inspect, especially at the thread and shank intersection, for damaged threads or cracks. Magnetic particle inspection is recommended, if available. Otherwise a magnifying glass of 3.5X to 5X should be used.

Replace the bolts with new bolts, when:

- a. Inspection equipment is not available.
- b. Aircraft has been in service for more than either 200 hours, or three years.
- c. Inspection reveals any defect in the bolt (s).

Use a torque-value of 20 to 25 inch-pounds when reinstalling the bolts, and insure that the bushings are transferred to the new bolts.

RECOMMENDATION: Since wind-gust loads are usually much greater than flight loads, it is strongly recommended that control chocks be used during all periods of tie-down.

SCHWEIZER AIRCRAFT CORP.

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