

VIII.1 Inspection Program to extend Service Life

Introduction

Fatigue tests on GRP/CFRP wings and GRP/CFRP wing spars have shown that a service life expectancy of at least 18000 hours may be achieved for these components. However, as this test program did not examine an entire aircraft made of CFRP and GRP, this service life of 18000 hours can be achieved only if the long-term airworthiness of each individual glider is demonstrated in a special multi-stage inspection program (over and above the mandatory annual C of A inspections).

Time Limits

1st Stage:

When the sailplane has reached a service life of 3000 and 6000 hours respectively, tests must be carried out in accordance with the Inspection Program for the ASK 21, Issue 2 dated 28.04.92, as laid down by Messrs. Schleicher.

If the results of these tests are positive, or if any defects discovered have been correctly repaired, the service life of the sailplane will be increased after the 6000 hours-inspection by 3000 hours, i.e. to a total of 9000 hours.

2nd Stage:

When a service life of 9000 flight hours has been reached the above Inspection Program must be repeated. If the results are again positive, or any defects found have been correctly repaired, the service life may be increased to a total of 12000 flying hours.

3rd Stage:

Before reaching a service life of 12000 flight hours an inspection in accordance with TN no.29 must be accomplished. Depending on the results of this inspection, as well as on the history of the aircraft and the evidence of the percentage of aerobatics being below 12.5 % as compared to the total flight time, Messrs. Schleicher will decide on a release to service for up to 15000 hours.

The Inspection Program must then again be repeated and on the condition that the results are again positive, or any defects found have been correctly repaired, the aircraft may be approved for increase of service life up to 18000 hours.

It will be decided at a later date whether an extension of service life beyond 18000 hours may become possible. A research program which is intended to clear the preconditions of this aim, has already been started with the BMVBW (Federal Ministry of Transport).

Inspection Program

Please contact SCHLEICHER in order to obtain the Inspection Program for the ASK 21, Issue 2 dated 28.04.92, or any later issue effective.

The inspections must be carried out only by the manufacturer, or by an appropriately licensed aircraft repairer.

The results of the inspections must be entered into the Inspection Program which is at the same time the report of findings, where each item must be annotated with a comprehensive comment, as laid down.

If the inspections were carried out by a licensed aircraft repairer, a copy of the filled in Inspection Program (report of findings) which must be signed by the inspector, must be returned to SCHLEICHER for the purpose of evaluation.

On receipt and examination of such Inspection Program Report SCHLEICHER will issue an "Acknowledgement of Receipt" and send this back to the operator of the sailplane. Only on receipt of this "Acknowledgement" the inspector may certify the extension of the service life as laid down in the Inspection Program, into the logbook and the relevant sailplane's inspections papers.

The need for annual Certificate of Airworthiness inspections and overhauls (for German registered gliders § 27 (1) LuftGerPO applies*) is not affected by this rule.

*) LuftGerPO = Aeronautical Products Examination Order