

Subject: Extension of service life beyond 12000 operation hours.

Serial number applicability: All ASK 21, German TC Document No. L-339, FAA TC G 47 EU.

Compliance: None, only when reaching 12000 hours of operation.

Reason: Applicable fatigue tests on sailplane components and fatigue strength calculations for the ASK 21 have been compiled in an expertise, delivered by a competent DLR-specialist. The expertise demonstrates that the ASK 21 sailplane model can be operated - after thorough inspection and exchange of fatigue-sensitive metal parts - beyond 12000 service hours, i.e. in intervals of each 3000 hours up to 18000 service hours

Action: The appropriate "Inspection Program to Extend Service Life" must be obtained from the manufacturer - in the edition as may from time to time be established. This program will list all necessary inspection and maintenance works which must be accomplished. If the accomplishment of the inspection program reveals repair areas in the high-loaded primary structure, the service life must not be extended and the respective components must be replaced. The high-loaded primary structure of the ASK 21 includes: the spar stubs, the wing root, the main spar in the wing between root and air brakes, as well as the horizontal stabilizer. If the percentage of aerobatics flown exceeds 12.5 % of the total flight time, an extension of the service life is currently not possible. Therefore, the percentage of aerobatics of the total flight time must be determined by an analysis of the flight hours listed in the log book or relevant operation records. In order to be able to determine the percentage of aerobatics done, as well as which repairs have been accomplished, it is required that the records of the aircraft provided are complete and comprehensive (service / maintenance record filer incl. all inspection records, reports of all repairs, as well as all the logbooks).

The following metal fittings must be replaced for new parts after 12000 service hours:
Both wing main pins, Part no. 210.51.0002 ^{A)},
both drag lift pins, front, Part no. 210.11.0002 ^{B)} and
both flanged pins in the T-fitting of the horizontal tail, Part no. 210.33.0007 ^{B)} = Standard Part No. 99.332.0092.

^{A)} It is recommended to replace also the main pin bushings if these are worn.

^{B)} For these items oversize pins are available and permissible; the relevant bushes must be reamed accordingly.

The Maintenance Manual pages 43e and 43f must be exchanged against new ones with the revision entry „TN 29 / 25.07.2003 Juw“. The exchange must be documented in the "Amendments Record" of the manual.

For the FAA-approved US-Edition of the manuals this applies equivalently to the pages 45e & 45f in the "Instructions for Continued Airworthiness" and must be documented on the pages „Log of Revisions" and "Pages included" respectively.

Important Note for changes to the manuals: in case that any manual page referred to herein, has already been changed in your manual by a previously issued revision (as eg: because of a Technical Note accomplished); then the previous revised manual page(s) remain valid. And the pages under this TN must be inserted in addition!

The report of findings of the 12000 hours inspection program must be submitted to Messrs. Schleicher for evaluation. Considering the results of this inspection and the service life history of the individual aircraft the exchange of the metal fittings is done and the aircraft approved within the prescribed intervals for the service life of 18000 hours.

Material and drawings: See para „Action“ above.

**Weight (Mass)
and Balance:**

The differences in weight owing to the exchange of the metal fittings and the resin preservation are so minor that a weight and balance procedure is not necessary. If entire components are exchanged a new weight and balance procedure must be done.

Notes:

The Manual pages may be exchanged by the owner/operator of the sailplane himself.

The 12000 hour inspection with the involved structural action, as well as the following 15000 hour inspection, must only be done by the manufacturer of the sailplane (Alexander Schleicher) or by an appropriately licensed aviation repair station.

The entire action / accomplishment of this mod must be checked by a licensed aviation inspector within the scope of a 'major mod', and must be certified by him in the aircraft's log-book, Flight and Maintenance Manual, and in the aircraft's inspection records.

Poppenhausen, July 25, 2003

Alexander Schleicher
GmbH & Co.

by order
(Lutz W. Juntow)

The German original of this Technical Note has been approved by the LBA under the date of September 10, 2003 (signed by RONIG).

The translation into English has been done by best knowledge and judgement; in any case of doubt the German original is controlling.