



British Gliding Association
Aircraft Inspection

Mandatory

Number: 042/07/2004	Issue: 1
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Date: 22 July 2004

- Subject:** Structural inspections
- Applicability:** Schleicher Ka 1, Ka 2, Ka 2B, Ka 3, Rhönlercher II (Ka 4), Ka 6 series, K7, K7 conversions, K8 series, K9, K10, ASK 13 series, ASK 14, ASK 16, ASK 18 series and all variants of each type.
- Accomplishment:** K7 and K7 conversions:
Parts 1, 2 & 3 Before next flight
Satisfactory inspection results on K 7 and K 7 conversions will restore normal flight status.
- All other aircraft: Part 1 prior to 1 October 2004 or next C of A inspection if earlier
Part 2 & 3 by next C of A inspection
- Reason:** The AAIB investigation into the recent accident in which a K 7 suffered an in flight wing failure, is not yet complete. However, the BGA Technical Committee has been briefed on the progress of the investigation and the information has been exchanged with the German Authorities. With the information now available, this BGA Mandatory Inspection has been produced. It will be seen that, in addition to checks required on K 7 aircraft, to restore flight status, it will also be necessary to inspect other Schleicher types with similar construction features.
- Instructions:** **Part 1:**
(a) General inspection
Carry out a very thorough general external inspection of the entire aircraft. Pay particular attention to creases in the fabric or paint cracks, which may indicate an underlying or internal structural problem. Pay particular attention to the wing lower surfaces if a heavy landing or other ground incident may have occurred.

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Note: Mandatory inspections must be recorded in the aircraft log book, unless specified, and certified by an appropriately rated BGA inspector.

Optional inspections should be entered into the D.I. book or log book as appropriate. Optional inspections may be certified by a BGA Pilot.

Alternative methods of compliance will be considered providing an equal level of safety is accomplished. Contact BGA for authorisation.

Inspection continued:

(b) Outboard Wing Inspection

Through the aileron drive inspection hatch located forward of the aileron (or if preferred, cut suitable access hole) inspect the internal structure of the wing using a torch and mirror or suitable inspection equipment. Check the integrity of at least one rib by checking that the semi circular "biscuits" and "sticks" are firmly attached.

CAUTION: do not apply too much force, as the "biscuits" are only 1mm ply.

Note: it may be possible to pass a small hand through the aileron drive inspection hatch.

If any evidence of glue failure is observed, remove more fabric from the wing underside to investigate further. Unless the failure can be shown to be an isolated example, capable of being repaired using standard procedures, then the aircraft is not airworthy and a complete survey must be carried out. An inspection report must be submitted to the CTO for further instructions.

Part 2:

(a) Wing Structural Inspection

Note: If the aircraft has undergone a wing structural inspection and recover within the past 5 years part 2 (a) may be deemed as being satisfied and need not be repeated.

Make 4 access holes in the fabric approximately 2" (50mm) square (2 upper surface and 2 lower surface) at the following locations:

Single seat aircraft: Adjacent to the rear face of the main spar immediately inboard and outboard of the air brake box. See fig 1.

Two seat aircraft: Adjacent to the rear face of the main spar immediately outboard of the air brake box and at the drag spar intersection with the main spar. See fig 1.

Through the inspection holes, inspect the internal structure of the wing trailing edge using a torch and mirror or suitable inspection equipment. Pay particular attention to the air brake box and drag spar attachment to the main spar.

Check the integrity of all visible glue joints. Check the adhesion of the D box and other ply skin as accessible, visually and by the following method.

Using a 005/010" (0.12/0.25mm) feeler gauge, try to insert into the glue joint parallel to the wing top surface. See fig 2.

Check for cracks running into the spar booms by trying to insert the feeler at 45° to the spar. Apply a force of approximately 1 lb. (1/2 Kg) See fig 2.

Continued....

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Inspection continued:

If the feeler gauge can be entered more than 3/16" (4mm) or any evidence of glue failure is observed the aircraft must not be flown. All the fabric must be removed and a complete structural survey carried out. An inspection report must be submitted to the CTO for further instructions.

The inspection holes may be temporarily repaired with cloth tape and permanently repaired with fabric by next C of A.

Temporary repairs must be inspected at each DI.

(b) D box Leading Edge inspection

Cut approximately 1½" (40mm) diameter hole in the centre of the leading edge root closure rib, taking care not to damage any internal members. Ensure that the inspection holes are free from sharp edges and splinters.

Note: On K7 low wing conversions (K7/13) it will be necessary to cut the inspection hole in the outer and original inner angular closure rib. Only the outer closure rib will require closing after the inspection.

Through the inspection holes, inspect the internal structure of the wing leading edge using a torch and mirror or suitable inspection equipment. Look for signs of any degradation of the structure or glued joints.

Using suitable mechanical fingers or lightweight rod, apply gentle pressure to the rib "biscuits" and "sticks"

CAUTION: do not apply too much force, as the "biscuits" are only 1mm ply.

If any evidence of glue failure or degradation is observed the aircraft must not be flown. All the fabric must be removed, additional access into the D box made and a complete structural survey carried out. An inspection report must be submitted to the CTO for further instructions.

The inspection holes may be closed with ply or fabric as desired to prevent moisture ingress.

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Inspection continued:

Part 3:

Elevator rib 1 inspection (Annual inspection)

BGA Mandatory inspection 043/07/2004 details this inspection and increases the frequency of the inspection period.

On all aircraft, except those with all moving tailplanes, carry out the requirements of AD 72-7/3 and the applicable Schleicher Technical Note. Details on the AD and TN.

As this inspection is now to be carried out annually, it is permissible, optionally, to seal the area with suitable paint rather than the fabric specified. The paint is to be inspected and renewed annually as necessary. There must be no cracks in the paint in the area of the glue joint being inspected.

It is recommended to apply a small load to each elevator input arm in the direction of operation. This action will assist in identifying if a problem with the glue joint exists.

Record compliance and findings in the glider log book.

Feedback: In addition to those aircraft reported as failing the inspection for whatever reason, the general condition and any minor defects noted during this inspection should be reported either separately or on the General Comments section of the BGA267 Airworthiness Report form.

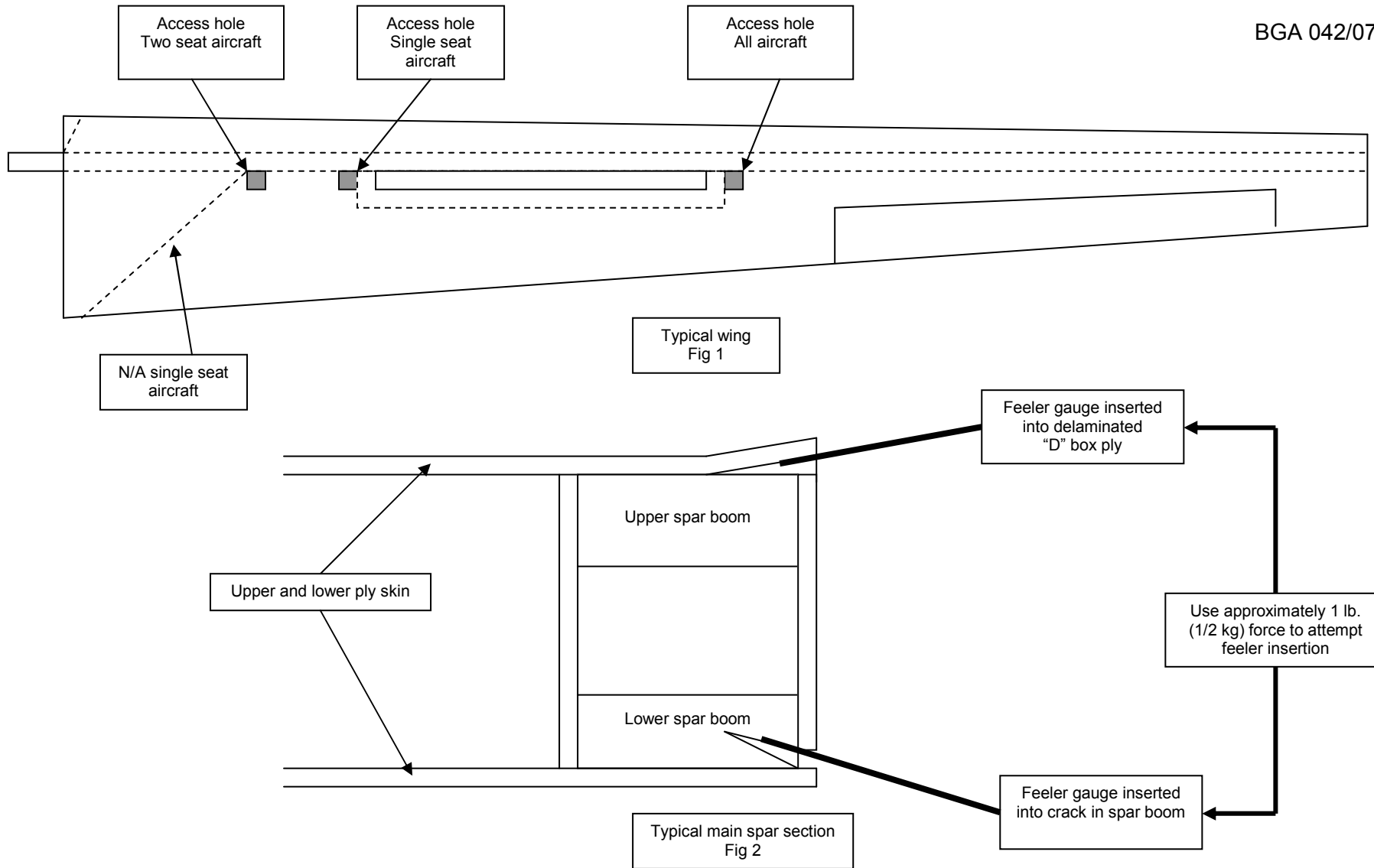
Approved By
Jim Hammerton, Chief Technical Officer

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DRAWINGS NOT TO SCALE AND ARE GENERAL REPRESENTATION ONLY

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