SLINGSBY AVIATION LTD

TECHNICAL INSTRUCTION

Issue No. 1

TITLE

INSPECTION OF SKYLARK GLIDER AFT FIN SPARS AT LONGERON CUTOUTS

T.I. No. 107/T50

CLASSIFICATION

The CAA has classified this TI mandatory for all UK certificated Skylark gliders. Gliders other than those used for public transport or aerial work, do not require a certificate of airworthiness in the UK and no such certificate is currently in force for any Skylark series glider.

COMPLIANCE

1. Before further flight, if any of the following conditions exist or are suspected at any time:

   i. Gliders that have suffered heavy tail impact during take off and landing.

   ii. Gliders that have been ground looped.

   iii. Gliders on which previous repairs have been carried out in the area to be inspected on this TI.

2. At or before the next annual inspection for all other gliders.

OBJECTIVE

To establish the continuing airworthiness of all affected sailplanes.

JUSTIFICATION

Following an accident to Skylark 4 Works No.1403 (BGA No. 1137) (BGA New Sheet TNS/5/6/87 (Item 1.6) refers) where during a winch launch the fin separated from the fuselage. On subsequent investigation it appeared that the sternpost had failed where the longerons are reset into the sternpost members.

APPLICABILITY

Specific to Slingsby T50 Skylark 4 sailplanes but should be carried out on T41 Skylark 2 and T43 Skylark 3.

ACTION

a) Gain access, see Fig. 1, Sheet 3, to the forward face of the base of the sternpost, to inspect for damage generally and specifically where the longerons pass through the fin spars. See Note 1.

ISSUED BY : B Mellers

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b) Apply an equal transverse load (approx. 25 lbs) ref. Fig.2 Sheet 4, alternatively in both directions to the top of the fin and check for equal movement each side. Also check for movement or noises in the affected areas, particularly on fin spar longeron connection. See Note 1.

c) Inspect the sternpost in the area of the lower rudder hinge, for signs of plywood separation, compression shakes, de-bonding or damage inflicted by overtravel of the rudder. See Note 1.

d) Check that the rudder cable stops limit the travel of the rudder at full deflection, port and stbd see relevant manuals for correct movement, and not the rudder contacting the fin post thus transferring loads into the fuselage. In particular inspect for signs of contact between lower rudder hinge mounting block on fin post and rudder leading edge.

Additionally check the condition of the stops on cable and fuselage (Note there should be 2 fairlead blocks fore and aft of members port and stbd).

Note: When rudder cable stops are clamped to cable they should show no sign of moving when loaded. See Note 2.

e) Inspect the forward fin structure in the area of the tailplane cut-away, for signs of plywood separation or compression shakes etc. See Note 1.

CONSEQUENTIAL LIMITATIONS:

Note 1) If there are any indications of structural damage or excessive fin movements the aircraft must be grounded until repair is carried out.

2) If rudder is contacting fin and or rudder stops suspect aircraft must be grounded until rectification action is carried out.

Note new parts may be obtainable from Slingsby Aviation Ltd.

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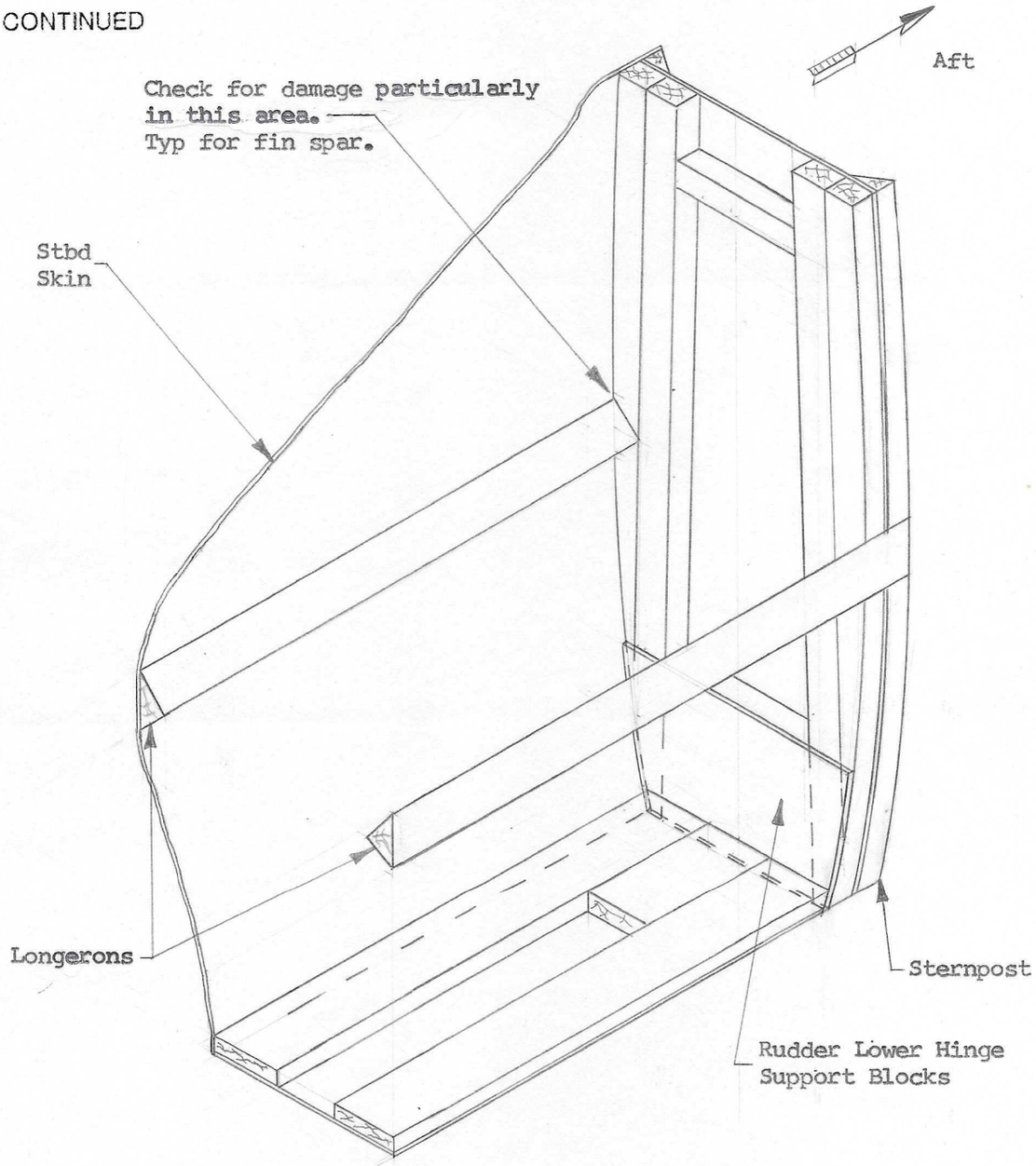

FIG. 1

VIEW ON FRONT FACE OF STERNPOST
FIN POST SIMILAR

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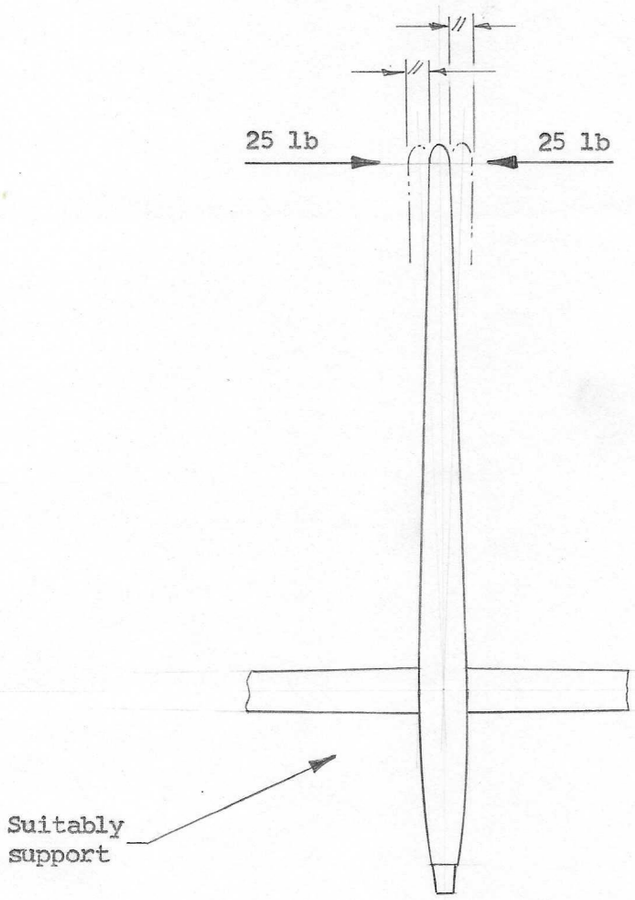

FIG. 2

VIEW LOOKING FWD