Alexander Schleicher Segelflugzeugbau 6416 Poppenhausen

Correction of Lateral Stability

Observation:

Sailplane turns to the right stickfree; this means that the stick must be pushed to the left to maintain a straight flightpath.

Reason:

- 1. Bellcrank for aileron differential movement is not correctly installed. This problem is solved following the instructions of attached fig. 1.
- 2. The wings are slightly twisted against each other. Measures:

 The straight pins at the fuselage wingroot are exchanged for eccentric ones in such a way that the twist of the wings is reduced. The exchange of the pins is described in the Manual on page 28.

A flight test must show whether the bad lateral trim is due to reason 1 or 2.

During a test flight (yaw string on top of the canopy) at about 160 km/h (100 mph; 90 knots) the ASW 19 is flown straight. Turning is avoided by sideways stick pressure. Now look out to the ailerons.

If both ailerons are deflected up the same way (approx. 5 mm or 1/4 inch) because of the aerodynamic forces, reason 1 (misadjusted differential bellcrank) is likely.

If the ailerons' deflections are different, reason 2 (wings twisted against each other) causes the trouble.

Naturally also a combination of reason 1 and 2 may be possible.

You will notice yourself that very calm weather is required for your tests. The very low friction of the aileron control circuit is the primary cause that such a fine adjustment (or readjustment because of FRP postcuring) may become necessary.

Poppenhausen, March 1, 1978

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