

AIRWORTHINESS DIRECTIVE

TYPE AFFECTED:

SCHLEICHER K7

SUBJECT:

Change of speed limit placards and amendment to Flight manual.

BACKGROUND:

In the process of re-issuing K7 Cs. of A. following 20 year surveys it was found that there was discrepancy between the speed limitations on the original specimen C. of A. issued by the then DCA, the speeds quoted in the GFA copy of the Flight Manual and the position error graph in that manual.

Correspondence with the manufacture revealed that the position error graph in the Flight Manual was for an early pitot static system not fitted to Australian examples of the K7. An up-to-date position error graph was supplied and the Flight and Maintenance manual amended accordingly.

Pages of the manual using imperial units have also been amended.

ACTION REQUIRED:1. Before next flight

Remove existing speed limit placards from sailplane and fit new placards with the following values so that they are fully visible to both pilots.

Maximum speed smooth air	=	97 knots (IAS)
Maximum speed rough air	=	73 knots (IAS)
Maximum manoeuvring speed	=	70 knots (IAS)
Maximum aerotow speed	=	73 knots (IAS)
Maximum winch/autotow speed	=	56 knots (IAS)

2. Add page 1a to the Flight and Maintenance Manual and exchange pages 2,3,6,6a, 7, 8, 9, 14 and 14a, all dated 14/2/1986. (Pages attached).

IMPLEMENTATION:

1. Placards to be fitted by operator or any GFA glider inspector and A.D. compliance recorded in the sailplane logbook.
2. Manual pages can be changed by any competent person.

COMPLIANCE:

The requirements of this Directive are mandatory. This Airworthiness Directive is issued pursuant to Air Navigation Regulations under the delegated authority of the Secretary of the Department of Aviation.

Issued by:

Chief Technical Officer,
Airworthiness

21.4.1986

For an on behalf of:

GLIDING FEDERATION OF AUSTRALIA

Sheet 1 of 1

AMENDMENTS TO MANUAL



14/2/86 1a

A) Main data:

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Weights: Maximum flying weight

821084

Maximum weight of
non lifting parts

320kg

Empty weight approx.

278kg

Speeds:

Maximum smooth air

97kts IAS

Maximum rough air

73kts IAS

Maximum manoeuvring

70kts IAS

Maximum aerotow

73kts IAS

Maximum winch

56kts IAS

Permitted aerobic manoeuvres:

For gliders with airbrakes supported
by two arms - None permitted.

For gliders with airbrakes supported by three arms - Loops, chandelles, lazy eights and spins.

Stressing category:

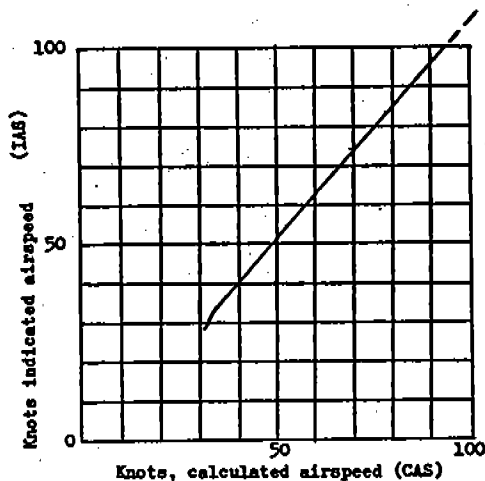
2 B.V.S.

AIRSPPEED INDICATOR SYSTEM ERRORS

Errors in indicated airspeed caused by pitot/static pressure errors may be read from the chart below.

- Pitot port - in the nose of the fuselage
- Static ports - both sides of fuselage, 145mm behind frame No. 1.

All airspeeds shown in the manual are indicated airspeeds (IAS) as registered by the ASI.



14/2/1986

B) Minimum equipment:

Safety-belt and shoulder-harness. Airspeed-indicator ranging from 25-100 knots in both seats. Altimeter in front-seat. Back-cushion with firm filling, 100mm thickness (when compressed), if no parachute is taken along Trimming-plan. Data-plate.

C) Adjusting data:

The adjusting- and wash-out angles as well as deflections of the control surfaces are shown in outline-drawing.

At repairs take care that the tolerances are being observed.

By the particular kinematic of the control mechanism the aileron deflection will be influenced by the elevator. With normal stick the aileron must be balanced (stand normal). With pulled stick they are a little bit zoomed.

14.2.1986

E) Flying:

Trimming:

The glider can be flown in front-seat with pilot weight (incl. parachute) of 65 kg up to 100kg. The weight-span is for two-seated 55-100kg in the front seat. In this range a weight trim is not necessary. Persons of less weight have to carry ballast (lead-sheets as seat-pad). The installed Flettner-trim serves as trimming for various flying-speeds only within the permitted locations of c.g. Especially the attention is drawn to the fact that it is dangerous to correct a tailheavy glider with the Flettner-trimming.

Adjusting of rudder-pedals:

Fetch back pedals with heels, and adjusting limb in control-cable to be put into click-stop. Adjusting is also possible during flight.

Winch-tow:

Weak link Min 856 kg Max 1090 kg Max. speed 56 kts I.A.S. Note: in winch-tow pulling means speed-increase. At take off push a little.

Best pitch-ratio with stick in normal position, in last part of tow a little pulled. Winch-tow only at the c.g. hook.

Aerotow

Weak link - min 490 kg Max 734 kg Max tow speed - 73 knots I.A.S.

Before every take-off

Make sure that the canopy is locked and the dive brakes are closed and locked.

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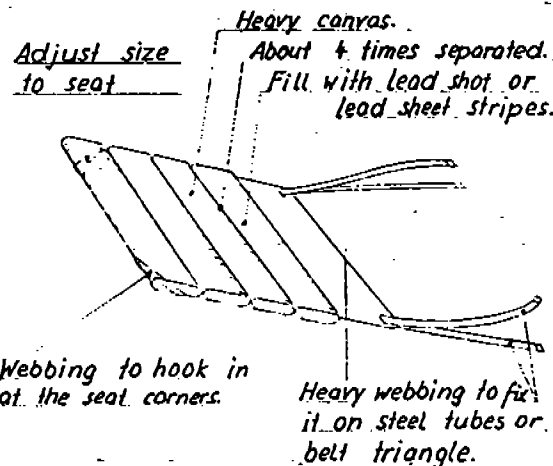
- X 7 - Handbook

E I) Supplement to the trim plan:

With very light pilots in the front seat there is ballast necessary. It should be noted that this ballast is to be fixed to prevent blocking of the controls.

It is recommended to use a lead cushion prepared after the sketch below.

The weight of the ballast cushion should be 10 or 15kg. This weight is to be considered when using the trimplan.



Approval of translation has been done by: DVL - PPL approved 25.4.1983

14/2/1986

6a

FREE FLIGHT

Stalling speed at 360 (450) kg flying-weight
= 29 (32) knots IAS

The lowest sinking speed in straight flight is at 32 (37) knots IAS

The best gliding angle at 40 (46) knots IAS

In turns the speed at best sink will be higher in relation to bank.

Landing:

Approach with about 40 (45) kts IAS with the air brakes the gliding angle can be adjusted well.

Touch down will be done best with the wheel alone, the glider will not bound. Braking will be done by pushing down on the skid.
(figures in brackets: two-seated.)

Stalls and spinning:

The glider can be held with the rudder in stalled flight with pulled stick. Spinning will be introduced by strong rudder deflection. With foremost c.g. the glider soon will go into a spiral dive. With normal and backwards c.g. an unobjectionable spinning will ensue. Spinning with back c.g. must be avoided, possibly, because the come out will take a little longer (about 1/2 after-turn.)

14/2/1986

In high-speed-flights the speed-limits are to be followed exactly. As soon as a speed of 74 kts IAS has been exceeded involuntarily the air brakes are to be opened slowly. Note: at higher speed the lever-power will work into direction of opening.

Reindrops, hour-frost and icing can disturb the wing-surfaces so much that other flight-characteristics will follow. Therefore, a particular care is necessary by landing in rain; enough overspeed.

F. Maintenance

Humidity is the greatest enemy of a wooden plane. Also the steel-tube-fuselage is to be kept dry well. Take care always that no water will remain in the corners. On suspicion that water came into the wings bring them into a dry room and turn every day.

14/2/1986

The following ranges of flight position of c.g. are tested:

- a.) max. forward position: 50mm behind wing leading-edge at rib 2
- b.) max. aft position: 275mm behind wing leading-edge at rib 2

Pay attention to c.g. when additional equipment will be installed, at repairs and revarnish. One can take it as a rule, that the gliders become heavier during their life and become tail-heavy. Therefore it is advisable to have a new weight regulation of the parts and c.g. at the yearly overhauls.

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Trim by weight:

Fixing the 8kg standard trim weight at the forward foot board will compensate for 10kg pilot weight.

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