

AIRWORTHINESS TEST STATION

Alexander Schleicher
D-6416 Poppenhausen
LBA - Anerkennung
Nr. 1 - B 1

Extra copy

Airworthiness Test Report for Glider

Type of Test: Final Inspection

Page 1 to 2

Applicant : Schleicher Sailplanes for America Inc., Port Matilda, USA
 Glider { Type Description . . . : ASW 20, L-314
 Manufacturer's Number: 20013 Year of construction: 1977
 Manufacturer : A. Schleicher, Poppenhausen
 Owner : Ben Greene, Dublin Road, Elizabethtown, N.C. 28337, USA
 Reason for Test : Release inspection
 Date and Place of Test . . . : on 04.07.77 at Poppenhausen
 Owner's Representative . . . : A. Schleicher, Poppenhausen
 Test Station Representative . . : L. Krönung, Poppenhausen

Weight determined by . . . : Weighing
 Structural Weight . . . : 580,0 lbs with aircraft equipment
without
 Permitted Maximum Load: 245 lbs
 Permitted all up Weight : 1001 lbs
 Permitted Weight of non-lift-developing members : 235 lbs

Individual Weights		lbs
<small>(fuselage, right/left wing, struts, tail unit components, canopy, under-carriage)</small>		
fuselage and cockp.		235,0
right wing		154,5
left wing		152,8
tailplane		21,4
rudder		6,8
instruments		6,6
safety belts		2,6

Permitted Maximum Number of Passengers : 1
 Wing warping rate of Oscillation: ≈ 101 / min. 1 101

Centre of Gravity of Structural Weight
 Horizontal datum line . . . :
 Structural Weight at weighing: 580 lbs
 Position of Centre of Gravity: 25,9 inches behind ~~before~~ leading edge of wing

Trimming plane located within the aircraft: yes ~~no~~

Test Flight { Pilot : Edgar Kremer
 Observer/co pilot . . . :
 Date : 06.07.77 ; Time of take-off 12⁴²
 Duration of flight . . . : 23 min.

Test included : (A) wing unit (B) fuselage (C) tail unit (D) under-carriage
 (F) controls (G) aircraft equipment.

Faults not found (see p.)

Identification Marks: (type, position, number of marks, number):
 On both wing and stabilizer root ribs, at the cockpit side bord, at the inner ribs of the aileron and camber flaps

The airworthiness test revealed no contravention of safety regulations.
 Schleicher LBA-Nr. 1 - B 1 (Krönung).

Poppenhausen, the 04.07.77
 Place and Date



[Signature]
 for Test Station

AIRWORTHINESS TEST STATION

Alexander Schleicher
D-6418 Poppenhausen
LBA - Anerkennung
Nr. 1 - B 1

Airworthiness Test Report for Glider

Aircraft Type: ASW 20, L-314

Manufacturer's Number . . . : 20013

Test on : 04.07.77

Elevator angle of incidence . . : 0° measured in relation to wing chord on rib no.

Movement of Control surface :	upwards	downwards	distance measured from control surface pivot-point
right aileron :	16,0° inches	14,5° inches	3,1 inches
left aileron :	16,7° inches	13,8° inches	3,1 inches
elevator :	23,0° inches	16,5° inches	6,3 inches
rudder :	r. 29,7° inches	l. 29,7° inches	12,2 inches

Type of towing coupling . . . : Tost-Sicherheitskupplung G 73 43028

Position of attachment point for towing as determined by centre of gravity . . : inches before/behind wing leading edge on horizontal wing chord

Check-list of equipment . . . : 1 safety belts and shoulder harness manufacturer Gadringer s.Nb. 773438, 772810

Specification sheets referred to for test:
Origin, date and no. of plan or other data: test stamp on the sheets?

Miscellaneous:

Place and Date: Poppenhausen, the 04.07.77


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for Test Station

EIRI AVION	Title	Subject
	Report	Sheet
	A. SCHLEICHER ASW-20	MODIFIED WEIGHT & BALANCE
	N 46811 SER NR 20013.	Sheets ONE OF 013

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NOTE: DATA OF APRIL 1, 1981

Item #3 ALL UP WEIGHT = 801.00 LB @ 14.06" CG.

$$X_{CG} = \frac{(801.00)(14.06) + (9.00)(29.00) - (8.25)(6.00)}{801.75}$$

$X_{CG} = 14.31"$

RANGE = 9.45" TO 14.17"

THEREFORE THE SAILPLANE WOULD BE BEYOND THE AFT CG LIMIT BY $14.31 - 14.17 = \underline{0.14"} (SLIGHTLY OVER \frac{1}{8}')$

THE ABOVE IS WITH THE 14 VOLT BATTERY AND NEW BATTERY BRACKET. -

NOW ASSUME O₂ BOTTLE & REGULATOR (12.25 LB.)

INSTALLED WITH NEW BATTERY ARRANGEMENT.

NOTE TO 30A BOTTOM:

$$X_{CG} = \frac{(801.75)(14.31) + (12.25)(3.15)}{814.00} = \underline{14.14} \text{ INCHES.}$$

THEREFORE: WITH THE NEW BATTERY ARRANGEMENT AND THE O₂ SYSTEM INSTALLED THE FLYING CG VALUE IS BROUGHT BACK INTO THE CG FLYING ENVELOPE.

FROM THE PRACTICAL POINT OF VIEW: YOU SHOULD BE OK WITH THE O₂ BOTTLE IN OR OUT IF YOU INSTALL THE NEW BATTERY SYSTEM.

Tom Smith

04-27-81

CLINTON, N.Y.

Prepared by	Checked by	Approved by
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