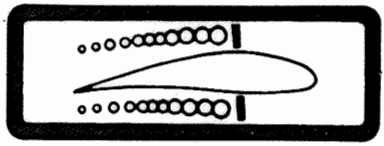
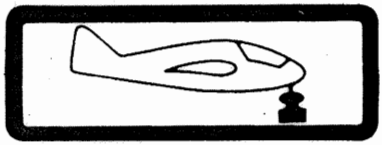
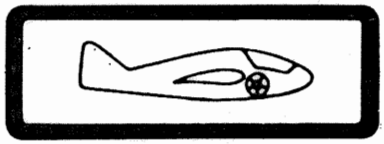


Air brakes (spoilers) : Blue lever on LH cockpit wall. Extending of air brakes by pulling lever backwards.

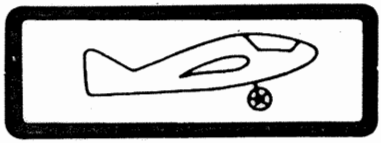


Trim noseheavy:
press together the green trim knob(left cockpit wall) and push forwards.

Trim tailheavy:
press together the green trim knob and push backwards.



Landing gear retracted : Black handle on lower LH cockpit wall pulled back.



Landing gear extended

Tow release : Yellow knob LH of stick

Open canopy : Move white knobs LH and RH on upper side of canopy frame forward.

To jettison canopy:
Pull red handle above instrument panel; the normal canopy locking mechanism must be opened before !!!

Therefore, one has to face a stiffening of the controls which is leading to blocked controls in extreme cases.
After one climb above the freezing level with a dry sailplane no stiffening of the controls is to be expected even if the leading edges of wings and control surfaces show severe icing.
With water ballast flights above freezing level shoulc be avoided because of the risk of icing-up of the tank ventilation.

Aerobatics
The 16,59 m span version of the ASW 20 L is not approved for aerobatics. For aerobatic maneuvers with the 15 m span version see page 32.

Seating position:
1. Do not use soft seat or back cushions which are thicker than 2 cm.
2. The backrest must be adjusted such that the pilot is seated with his head just below the canopy and as far forward as possible. When the stick ist in the normal position (trim 10 mm off the front edge of the slotted gate), the upper arm should rest against the body while the elbow rests an the upper thight. Such a comfortable seating position is preventive against PIO (pilot induced oscillations).

   Extreme Pilot Sizes
   Tall pilots may fly without the adjustable seat rest, however, they have to use a stiff cushion that levels the edge of the tow hcok fairing and the box of the wheel.
   Prior to the first start the sailplane must be put on stands an - with a pilot sitting in the cockpit - it has to be checked that the parachute does not press so hard against the cockpit rear wall that the landing gear can only be pulled up by severe forces. If this is the case, the rear wall must be reinforced by a piece of wood from the outside.
   Tall pilots should also use gym shoes with heels as low as possible so that they can use the most forward pedal position.
   Small pilots should check prior to start if they can apply full rudder deflections and if they cannot fall off the pedals with their feet.
   If necessary, a board with a support for the heels can be installed on the pedals.

Do not use soft (lead or sand) seat cushions. We recommend to use only trim weights in the fuselage nose and seat cushions made from a foam which cannot be compressed (Styrofoam, Conticell or safety foam like Dunlopillo etc.).

Limit Load Factors	Span 16,59 m	15,00 m
max. positive load factor + 5.3	165 km/h	175 km/h
max. negative load factor - 2.65	89 kn.	94 kn.
reducing proportionally with airspeed to		
max. positive load factor + 4.0	250 km/h	265 km/h
max. negative load factor - 1.5	135 kn.	143 kn.

1.4.

Weight and Balance Information

Payload in cockpit (pilot plus parachute) :
minimum 70 kg (154 lbs)
maximum 115 kg (253 lbs)
For possible exceptions see page 35 !

If the useful load is below the minimum, the shortfall below the minimum payload must be made good by the addition of trim weights in the fuselage nose (this is available as an optional extra, see page 22).

We recommend that unexperienced pilots and/or pilots who fly this model for the first time, do not make their first flights with the rearmost C.G. position, i.e. they should not go for a just still acceptable minimum payload, but should stay approx. 10 - 15 kg above the minimum useful load in the pilot seat.
Light pilots should fix about 4 trim discs more than the actually required minimum.

Loading of Water Ballast

(only for 15 m span version)

The maximum all up flying weight of 454 kg (1000 lbs) must not be exceeded. For the determination of the proper amount of water ballast the following table may be used :

The control hinge bearings must be dismantled and relubricated at the annual inspection.

The Pitot and Static Pressure Ports

must be sealed off by taping for the transport on an open trailer provided that the instrument manufacturers allow this.

The Safety Harness

must be regularly checked for tears and corrosion spots.
If the safety harness installed is the asymmetric Autoflug type (Boberg), it must be checked that the short lap belt is installed on the right cockpit wall (in flight direction).

2.6. Overhaul

The tow coupling must be removed after every 2000 launches or every 3 years at the latest and has to be sent to the manufacturer for reconditioning.

For the Tost combi-release some facilities are valid (see accompanying paper in the log-book).

The rudder cables are to be renewed as soon as any wear spots are noticed.

2.7. Repairs

Smaller repairs on fiberglass components can be effected by the owner in accordance with the guidelines as set forth in the Repair Manual for the ASW 12, ASW 15, ASW 17, and the ASW 19.

All major repairs and overhauls have to be effected by the manufacturer. In case of doubt information and advise can be obtained from the Schleicher Company.

2.8. Notes for the Inspection

The inspection of control deflections and C. of G. weighing is done in the 15 m span version.
The dive brake boxes have no water drain.