

## 2.1. Rigging

All pins and fittings including the ball pip fitting are to be cleaned and lubricated. The right wing ( 2-prong spar end ) is inserted from the side into the fuselage tunnel, then the left wing is inserted from the opposite side. Align the main fittings, push in the main pins and safety. Now the wing tips can be released.

Connect ailerons and dive brakes and double-check the connection by trying to pull the push-pull rods away from the ball fittings.

After cleaning and lightly greasing the plug-in elevator connections, the tailplane is fitted onto the fin from the front. Both elevator panels must be fitted into their connectors simultaneously. The tailplane is now pushed back until the Allan bolt at the leading edge can be screwed in; this should be screwed in tightly until the spring-loaded safety pin snaps out over the screw head as far as the socket.

The taping of the wing-fuselage junction with a plastic tape brings about a lot of performance with but small expenditure ( 1-2 points on the L/D). Also the inspection hole cover must be taped so that it does not open under high airloads.

Do not tape the canopy gap, otherwise any emergency exit is jeopardized. It is recommended to wax the taping area prior to taping so that the tape can be removed later on without pulling the lacquer finish off.

### Loading of the Water Ballast

Water ballast must only be filled into the rigged glider.

On page 10 of the Flight Manual the maximum allowable amount of water can be determined.

Take care that both wings get the same amount of water. This may easily be verified by leveling the loaded glider.

## ASW 19 - Operations Manual

For operation beyond 6000 flight hours, certain requirements will be established at the proper time.

3. The relevant test program is to be obtained from the manufacturer.
4. The inspections may only be carried out by the manufacturer, or by a technical aviation company with appropriate authorization.
5. The results of the inspection are to be listed in a report, and every measure is to be commented upon. If the inspections are carried out by a technical aviation company, then a copy of the report is to be sent to the manufacturer for assessment.
6. The annual inspection required by § 27 (1) of the LuftGerPO (= Aircraft Examination Rules) is not affected by this rule.

### Checking and securing the L'Hotellier quick-close connections of the control circuit

#### 1. Securing

The experience of the past shows that mostly the connection of the elevator was incorrectly fitted or even worse simply was forgotten.\* A sticker on the fin serves to remind the pilot of the correct connection; in addition the securing by means of a spring pin is recommended.

To do this on older ASW 19 gliders the check hole must be drilled to 1,2 mm in diameter.

Aileron, flap and airbrake connections in the fuselage can be safetied by the same method.

**\*) Not applicable with the automatic elevator connection mod as per T.N. no.22 !**

On major repairs of the control surfaces one risks that they become heavier and that the Center of Gravity of the control surfaces moves back. This can lead to flutter. It is, therefore, recommended to make a light weight repair. The maximum static tailheavy balance of the ailerons is 11.5 cmkp or 9.98 inch-pounds.

The maximum static tailheavy balance of the rudder with horn balance is 13 cmkp or 11.28 inch-pounds.

The maximum static tailheavy balance of the rudder without horn balance is 11 cmkp or 9.55 inch-pounds.

Permissible moment of the left and right elevator panels with actuator is between 6,0 - 9,0 cmkp.

If these data are exceeded the manufacturer must be consulted.

After repairs of control surfaces, painting jobs like anti-collision colours, competition numbers or advertising paintings etc., determinations of the static balance are absolutely necessary. For that see figur on page 34 of this Manual.

The strong springs in front of the pedal ( 5 kg, 11 lbs tension unexpanded and  $c = 1.5 \text{ kg/cm}$ , 8.4 lbs per inch ) must not be exchanged to weaker ones, as they are required for sufficient high rudder circuit frequency because of flutter prevention. Weak springs must be replaced by new ones.

## 2.9 Appendix

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