

- Kind : Improvement.
- Subject : Conversion of the ASW 19 from FAI Standard Class glider into a Club Class variant and vice versa.
- Effectivity : All ASW 19s.
- Accomplishment : None; optional.
- Reason : Some ASW 19 owners want to use their glider in both FAI Standard Class and Club Class. For this reason a conversion kit has been developed by means of which the conversion may be done alternatively.
- Instructions : Conversion from Standard Class variant into Club Class variant.
1. Water ballast
- The use of water ballast is not allowed for the Club Class. In order to avoid any trouble with the regulations, the water bags are taken out of the wings. For this purpose the wings are derigged from the fuselage, the airbrakes are opened and the nylon string which pulls the bags tight inside the wing is disconnected from the airbrake arms inside the airbrake boxes. Now the water bag can be taken out by pulling the big drain pipe through the large hole in the wingroot rib. The nylon string is tied up tightly at the root rib and at an airbrake arm. It is recommended to take the water bags out of the wing at a temperature higher than 15°C, since then the PVC-bag is more flexible and therefore there is less danger of leaks.
2. Landing gear
- a. The landing gear doors including bungees are removed. To do this the hinges on the fuselage side are unriveted.
- b. As to the moving landing gear parts the two small struts, the H-strut, the pushrod to the cockpit, the handle and the guiding tube for the handle are removed. For this work it is necessary to remove the seat panel, the rear cockpit panel and the safety harnesses. The spring which retracts the landing gear is removed, too. So only the wheel and the wheel fork remain inside the fuselage.
- c. Instead of the H-strut and the small struts the two rigid struts P/N 190.21.0024 are installed.

3. FRP-fairings

As soundproofing and dust protection the inner fairing for the wheel (P/N 190.11.0173) is screwed from inside to the fuselage by using M5 bolts. For the installation of this part the rigid struts must be disconnected temporarily at the upper ends and are folded forward. Where the fairing has to be screwed on to the fuselage structure, inserts must be fixed into the fuselage. Their positions follow from the holes in the fairing.

The outer fairing for the wheel (P/N 190.11.0174) is also screwed on to the fuselage by M5 bolts (counter sunk bolts 15 mm in length) using special washers. Here also insert nuts have to be fixed to the fuselage. When fitting the fairing please take especially care that the automatic release ring of the towing hook is always at least 2 mm free of the fairing edge; if necessary, the fairing must be sanded off.

All bolts and nuts of the fairings must be carefully greased so that they do not corrode with the inserts. Landing gear parts are exposed to dirt and moisture much more than other parts.

The cutout in the seat panel where the landing gear handle usually travels is taped. This is important to avoid draft in the cockpit.

4. Data placard

The ASW 19 Club Class variant corresponds to the ASW 19 respectively 19 B model and, therefore, is operated within the limits of these models. Since the fixed landing gear does not necessitate operational restrictions, the operational limits need not be changed.

Because of the prohibition on water ballast loading in the Club Class only a max. all-up weight of 365 kg is possible. This weight adds up from the unchanged weight of 230 kg for the non lift producing components and the average weight of 2 x 67,5 kg for the wings without water bags. By the side of the Data Placard on the cockpit wall an additional placard must be fixed running as follows :

ASW 19 - Club Class variant
1. Max. all-up weight 365 kg
2. Water ballast prohibited.

The Data Placard must also be changed according to the new C.G. weighing (see next page - max. and min. cockpit useful load).

5. Flight Manual

For the operation of the ASW 19 Club Class variant page 5a is added to the Flight Manual. This page contains all altered data and deviations from the manual. On page 3 of the manual the amendment as to page 5a has to be documented as follows :

No. / TN 14, optional operation in Club/Std. Class / page 5a / Date / Signature.

For those sections on pages 6, 10, 13, 20, 21 and 26 where other data become effective for the Club Class variant an asterisk (*) has to be set written by hand and at the bottom of the respective page a note written by hand must be entered saying : "(*) For Club Class variant see page 5a" .

Material :

See instructions.

Weight and balance :

Because of the removal of the water bags each wing becomes lighter by approx. 1,75 kg and because of the parts being removed from the fuselage this one becomes lighter by about 1 kg. So the empty weight is reduced by approx. 4,5 kg.

As the empty weight C.G. and with that the min. and max. cockpit useful load are changed, a weight and balance procedure must be done. If the glider is re-converted to the original variant, a new weighing is not necessary.

Notes :

1. The conversion may be done by the glider owner himself using original Schleicher parts.
2. For the conversion from Club Class variant into Standard Class variant - where all above-mentioned measures are taken back - special attention has to be paid to the exact adjustment of the dead lock of the moving struts. The middle hinges (between H-strut and the two small struts) must be placed 3 mm in front of the line between upper and lower hinge of the wheel fork. This adjustment can be done very exactly by turning out or in the ball joint of the landing gear pushrod leading into the cockpit.

3. Because of the C.G. and weight changes each conversion must be approved by a licensed inspector or a licensed repair station (e.g. during an annual inspection). The current state of conversion must be entered in the logbook and the current C.G. and weight values must be documented on page 20 of the Flight Manual noting the state of conversion (e.g. "converted to Club Class variant").
4. It is recommended to order along with the original factory parts for the conversion some spare data placards.

Drawings :

For this TN 14 the following drawings are new made :

190.21.0024 (rigid strut)
190.11.0173 (inner fairing for wheel)
190.11.0174 (outer fairing for wheel).

Poppenhausen, Sept. 12, 1979

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The German original of this TN is approved by LBA under the date of February 1, 1980, and is signed by FRIES.

Translation has been done to the best of the translator's knowledge and belief. In any case of doubt the original text in German is authoritative.