

Subject: New Winglets

Serial number applicability:

ASW 27, Document Number 389,
Serial Numbers 27105, 27109 & 27110, 27113, 27115 & 27116 and as off Serial Number 27119 in serial production.
Optional modification for Serial Numbers 27001 through 27104, 27106 through 27108, 27111, 27112, 27114, 27117 & 27118 .

Compliance:

None, optional exchange of the 0,275 m high winglets against new ones.
For new production the serial versions are 0,45m high "Darlington-Winglets", or, optionally 0,4m high "Maughmer-Winglets".

Reason:

Installation of new 0,45m high "Darlington-Winglets", which were designed by use of "Panel Method", verified in wind tunnel tests.
Alternatively somewhat smaller 0,4m high "Maughmer-Winglets" may be used, which are aerodynamically equivalent.
ASW 27 Flight- and Maintenance Manuals have been corrected and amended.

Action:

Produce winglets according to approved drawings and fit them into new wing side pockets, using adjustment templates in order to achieve the correct span. Install the winglet safety screw.
In the Flight Manual pages 0.4; 1.4; 1.5; 4.3; 4.6 & 4.23 and in the Maintenance Manual pages 0.4; 0.5; 1.2; 1.4; 7.7 & 7.8 have to be exchanged against new ones having the same page number however including the correction note "TN 4 / 15.04.99 Juw".

Material and drawings:

270.51.1018/19 "Winglet 0,45 m nach Darlington" (0,45 m Darlington Winglet)
270.51.1014/15 "Maughmer-Winglets 0,4 m"
270.51.1022 "Trennstelle Winglet-Flügelrandbogen" (Winglet Intersection at Wing Tip)

Weight (Mass) and Balance:

The mass of one winglets is limited to $0,28 \pm 0,04$ kg ($0.62 \pm 0,09$ lb).
The change in mass for the new winglets are so small and so close to the in flight c.g. that a mass and balance procedure is not necessary.

Notes:

Because of the molds necessary for production as well as for the need of adjustment templates the new winglets can only be installed by the factory or a repair station approved by Schleicher (or M&H).
Action as given in the chapter above must be documented by an inspector authorised for such work in case of new production when issuing the C of A, or, for exchange must be documented as a "Major Modification" in the sailplanes log book and inspection logs as well as in the Flight Manual and Maintenance Manual.
The marginally smaller 0,4 m high Maughmer-Winglets are equivalent aerodynamically as well as in structure and therefore covered by the substantiation for the "Darlington Winglet".

Poppenhausen, April 15, 1999

Alexander Schleicher
GmbH & Co.

(Lutz-Werner Juntow)

The German original of this Technical Note has been approved by the LBA under the date of May 19, 1999 (signed by Jung).

The translation into English has been done by best knowledge and judgement; in any case of doubt the German original is controlling.