ASH 26
Maintenance Instruction A
Issue III

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Subject: **Replacing the elastic fairing tape at the control surface gaps of vertical & horizontal tail, aileron, flaps and at the gaps of the engine bay doors.**

Position of the turbulators on horizontal and vertical tail and winglets

Affected: ASH 26 – all production series

Reason: All serial Nos. of the ASH 26 production series are fitted as standard with an elastic fairing tape at the control surface gaps and at the gaps of the engine bay doors. The gaps at the aileron, flap and at the elevator are sealed in addition by means of a Teflon sealing/slip tape.

For the removal of control surfaces, e.g. for any maintenance or repair work, it is necessary to remove the relevant elastic fairing tape.

Action: If the elastic fairing tape needs to be removed only for maintenance or repair purposes, please observe the following:

For the purpose of disassembly of flap or aileron:
The elastic fairing tape and the sealing/slip tape need to be removed only on the under side (where the control surface hinges are located).

For the purpose of disassembly of elevator:
The elastic fairing tape seal and the sealing/slip tape need to be removed only on the upper side (where the control surface hinges are located).

Disassembly of the rudder:
It is not necessary to remove the elastic fairing tape at the fin.

Disassembly of the engine bay doors:
It is not necessary to remove the elastic fairing tape.

1. Carefully remove the old elastic fairing tape in order to avoid any delaminations of the layers in this area. Remove any adhesive residue from the recessed step by means of synthetic resin thinners.

2. Accomplish any required inspection, maintenance or repair work at the control surfaces themselves and / or their hinges.

3. Cut the new elastic fairing tape and the sealing/slip tape into appropriate lengths (refer to the table under point "Material").

Note:

All surfaces must be completely clean, dry and free from dust and grease!

This can best be tested by sticking a Tesa tape strip to the cleaned surface and then pulling it off again to check that no further dust particles adhere to it

Wing under side and horizontal tail upper side:

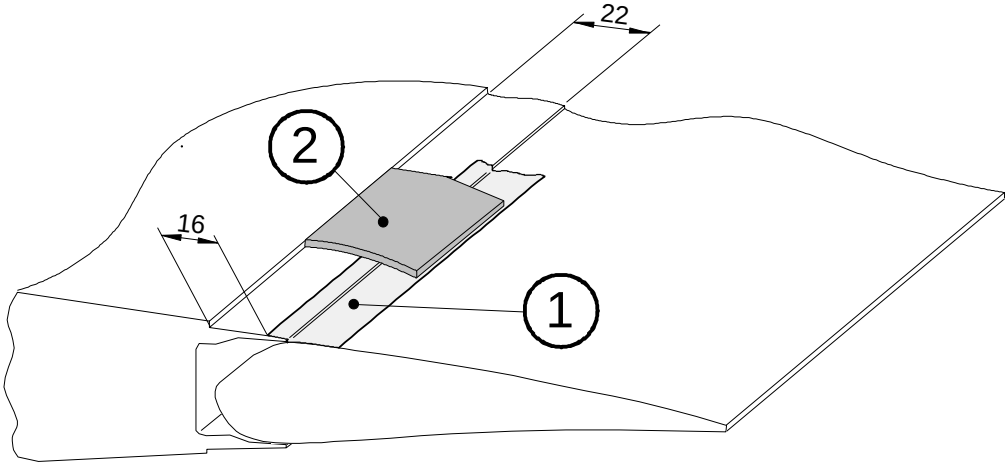


Fig. 1 (Wing under side)

Apply the sealing/slip tape [1] (3M Scotch Teflon Tape 30 mm wide) with a clearance of 16 mm to the front edge of the recessed step (22 mm wide). Be careful that the sealing/slip tape lies slack over the gap and that flap and aileron are set to maximum negative deflection (whereas the elevator must be set to maximum positive deflection) so that later the Teflon sealing/slip tape is not stretched during normal full control deflections, so as to prevent full deflections.
Apply full deflections several times so that the sealing/slip tape [1] fits well into the gap; it must be firmly rubbed down on to the surface!
Then peel the protective backing from the elastic fairing tape [2] (Mylar foil, 38-15 mm wide) and firmly stick it on abutting the front edge of the recessed step in the wing and stabilizer respectively, by means of its adhesive film layer.

Finally, press the adhesive zones of the elastic fairing tape firmly down on the surface by means of a soft wooden block (e.g: Balsa) or a hard rubber roller!

For the **horizontal tail** in addition, a protective adhesive tape [3] is applied over the abutment of the front edge of the elastic fairing tape [2] and the step in the stabilizer. This tape should be as thin and moisture proof as possible; an example of a suitable tape would be white Tesa film No.104, 25 mm wide (see Fig. 2).
This protective tape serves to prevent the detachment of the front edge of the elastic fairing tape (elastic lip seal) which might result in dangerous flight characteristics.

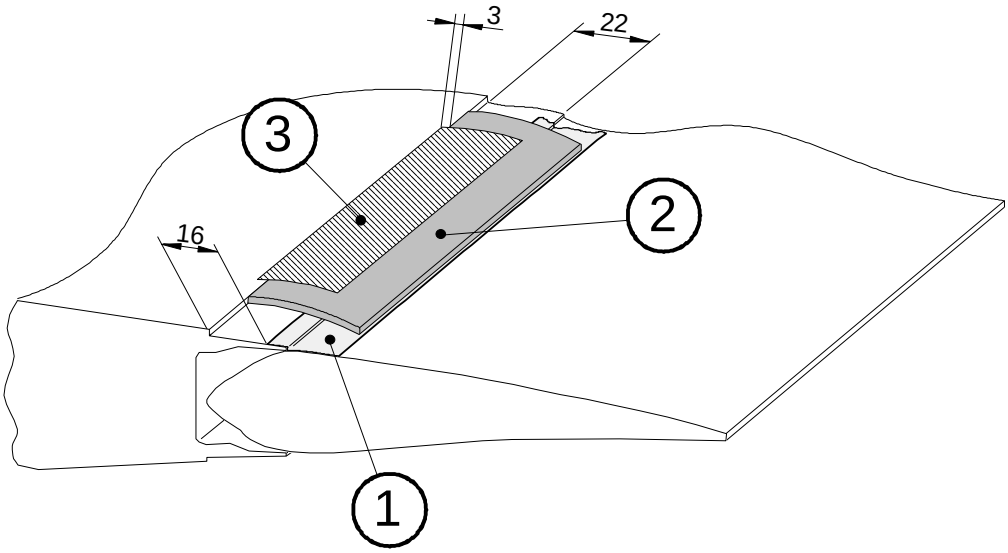


Fig. 2 (Horizontal tail upper side)

Wing upper side and horizontal tail lower side:

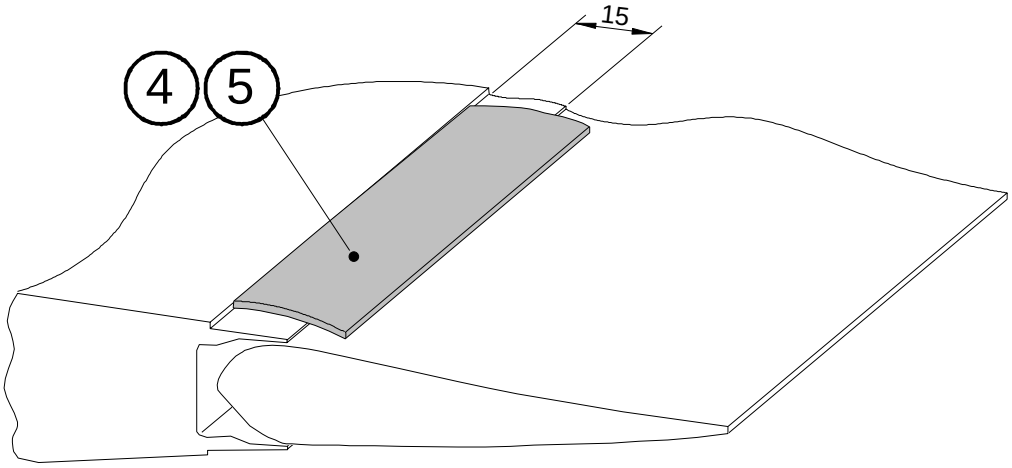


Fig. 3

Remove protective backing from elastic fairing tape and stick it on abutting the front edge of the recessed step (about 15 mm wide) in the wing upper side and stabilizer lower side respectively, by means of its adhesive film layer. The correct width for the elastic fairing tape to be used: horizontal tail 22-15 mm wide [4], and for the wing 25-12 mm wide [5].

Finally, press the adhesive zones of the elastic fairing tapes firmly down on the surface by means of a soft wooden block (e.g: Balsa), or a hard rubber roller!

Only for the **stabilizer** in addition, a protective adhesive tape [3] is applied over the abutment of the front edge of the elastic fairing tape [4] and the recessed step in the stabilizer (pictured in Fig. 2).

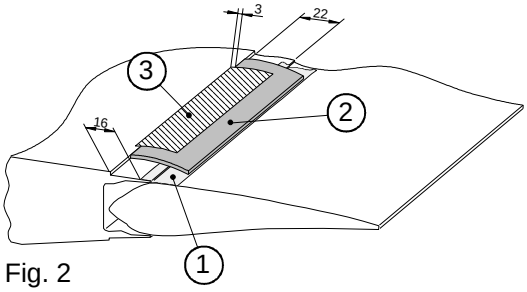
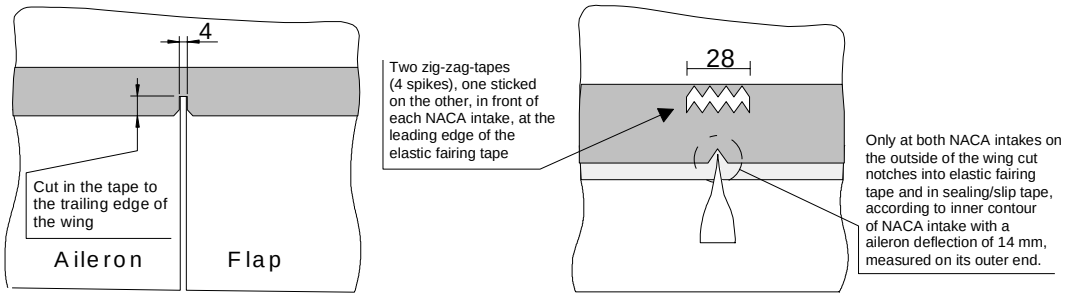


Fig. 2

No protective adhesive tape [3] is required on the **wing**.

Particular notes for the wing:

Particulars notes for the junction of elastic fairing tapes on the control surfaces at the wing and at the both NACA intakes on the outside of the wing.



Vertical Tail:

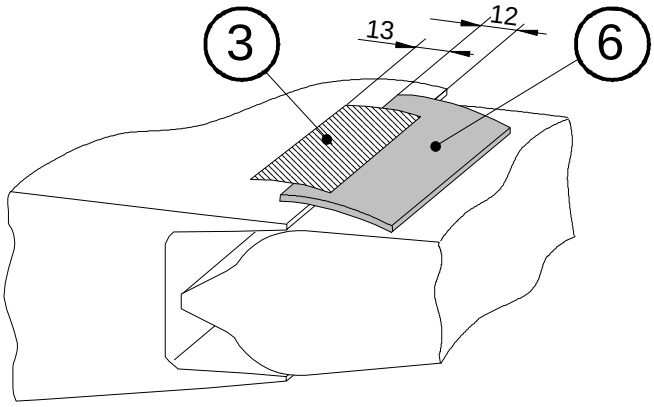


Fig. 4

There are no recessed steps at the fin. As shown in Fig. 4 the elastic fairing tape [6] (Mylar foil, 30-12 mm wide) is stuck on over the rudder-fin transition at the left and right side, then pressed firmly down on the surface, and secured against detachment by sticking on a protective adhesive tape [3] over the abutment of the front edge of the elastic fairing tape.

Material:

	Wing upper side	Wing lower side	Horizontal Tail upper side	Horizontal Tail lower side	Vertical Tail L & R
[1] Sealing/slip tape 3M Scotch Teflon Tape, 30mm wide		2 x 8,50 m	1 x 2,60 m		
[2] Elastic fairing tape Mylar foil, 38-15 mm wide		2 x 8,50 m	1 x 2,60 m		
[3] Protective adhesive tape Tesafilm No. 104, white, 25 mm wide			1 x 2,60 m	2 x 1,30 m	2 x 1,20 m
[4] Elastic fairing tape Mylar foil, 22-15 mm wide				2 x 1,30 m	
[5] Elastic fairing tape Mylar foil, 25-12 mm wide	2 x 8,50 m				
[6] Elastic fairing tape Mylar foil, 30-12 mm wide					2 x 1,20 m

The materials required can be obtained from Messrs. **Alexander Schleicher**.

Engine bay doors:

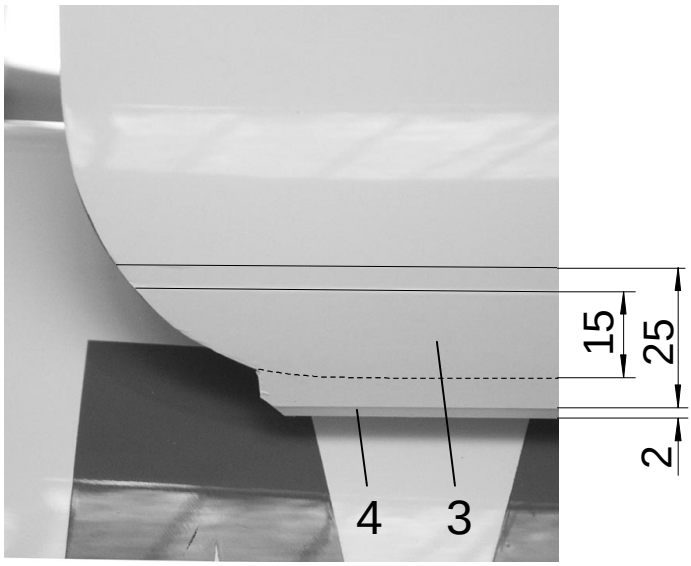


Fig. 5 Engine bay doors, rear end

Fig. 6 Engine bay doors, front end

The elastic fairing tape [4] (Mylar foil 22-15 mm wide) is adhered along the lower edge of the engine bay door with an overhang of 7 mm (only the 15 mm wide adhesive film of the elastic faring tape is on the engine bay door). The protective adhesive tape [3] is positioned 2 mm backwards to the edge of the elastic fairing tape.

At the kink of the engine bay doors, the elastic fairing tapes will be cut to miter. The protective adhesive tape [3] overlaps the miter cut about 5 mm.

The end of the elastic fairing tapes will be cut off as shown in Fig. 5 and 6

	Engine bay doors L & R
[3] Protective adhesive tape Tesafilm No. 104, white, 25 mm wide	2 x 1,80 m
[4] Elastic fairing tape Mylarfolie, 22-15 mm wide	2 x 1,80 m

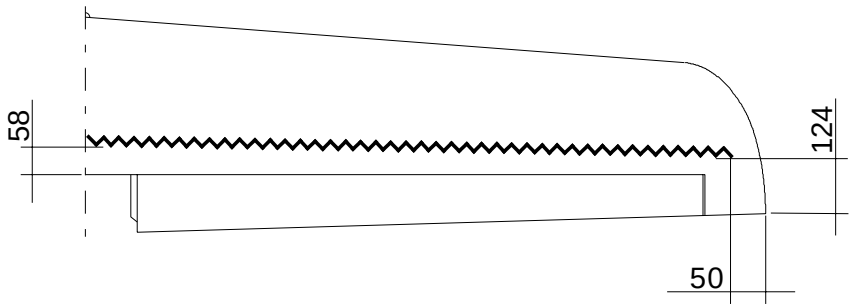
Notes:

1. The actions under points can be accomplished by a competent person.
2. Ensure that the elastic fairing tape is in tight contact even when the control surfaces and flaps are fully deflected. The secure and firm adhesion of the elastic lip must be checked.
3. For fixing or replacing the zig-zag tapes on horizontal and vertical tail refer following drawings for their location.

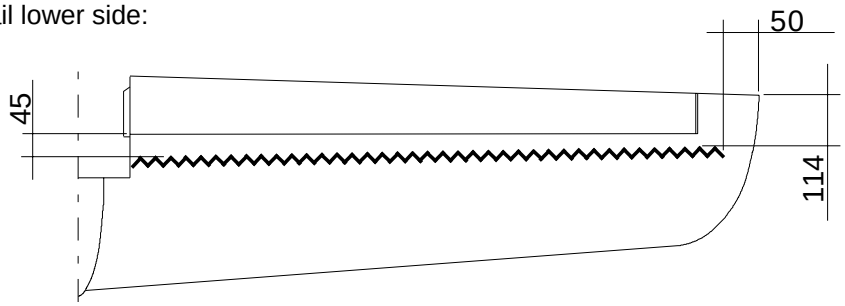
   When gluing on the zig-zag-tapes DO NOT flatten the front teeth (in the direction of the flight) by pressing them too far down into the glue film, otherwise their turbulator effect will be reduced!

Location for zig-zag tapes

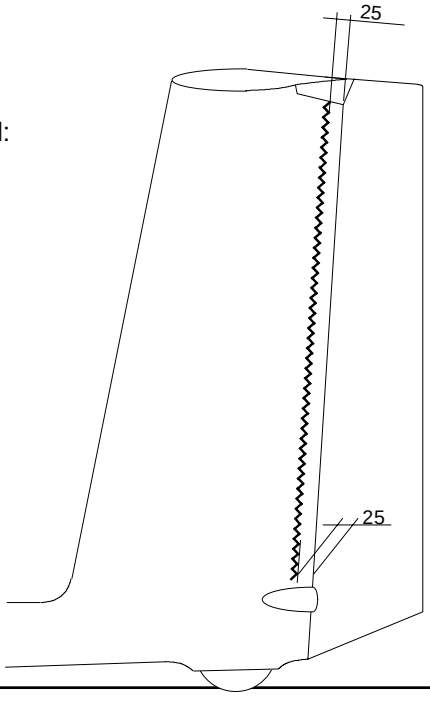
Hrizontal tail upper side:



Horizontal tail lower side:



Vertical Tail:



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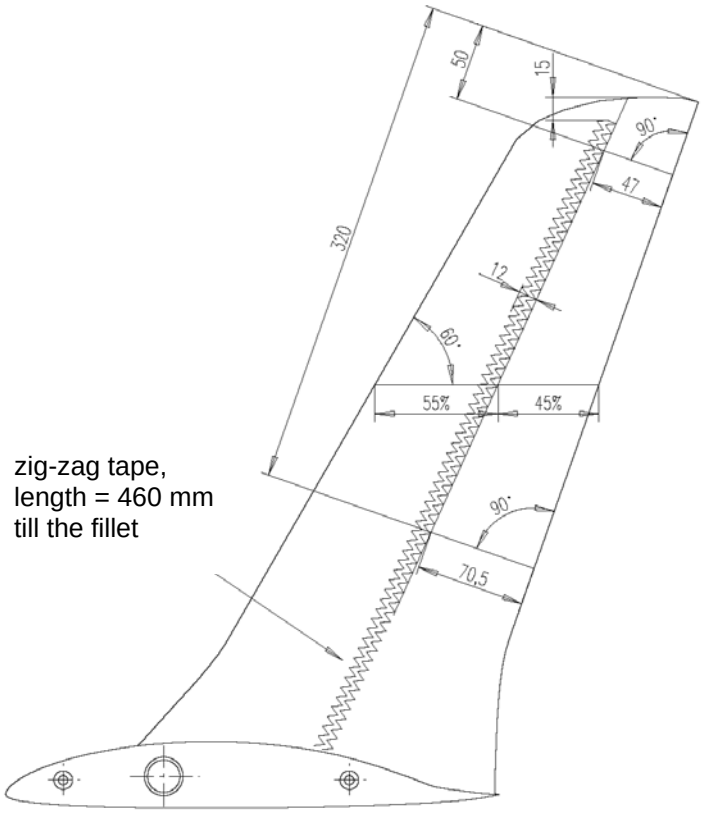
Winglet:



zig-zag tape,
length = 460 mm
till the fillet

Material:

	Horizontal Tail upper side	Horizontal Tail lower side	Vertical Tail L & R	Winglet	in front of NACA-intakes
zig-zag tape 0,5 mm thickness, 12 mm wide	1 x 2,80 m	2 x 1,35 m	2 x 1,20 m	2 x 0,46 m	0,6 m

Poppenhausen, July 31, 1995 (Issue I)
Poppenhausen, February 14, 2000 (Issue II)
Poppenhausen, June 26, 2003 (Issue III)

Alexander Schleicher
GmbH & Co.

by order

(M. Münch)