



ATEC bulletin No. 1/2007

Horizontal tail attachment modification

Applicable on: UL aircraft made by ATEC v.o.s., type ZEPHYR, ZEPHYR 2000 and their kits.

Reason: Eliminating the probability of a rear HT hinge damage by incompetent methods or malpractice (loss or change of polyamid spacers), which can cause enormous increasing of pretension in a rear HT hinge, ineligible clearances or wrong tail-setting angle.

Requested activity: Modification of a rear HT hinge by filling the gap between the hinge and the composite covering, reinforcing the covering and attaching fixed spacer. Detailed instructions are attached to this bulletin.

Realized by: The owner of the aircraft.

Term of acquital: On receipt of this bulletin.

Correctness of the realization shall be checked by competent authority.

In case of any doubts with the realization please contact us. We will provide personal consultations, photos, or (by agreement) repairing at our company workshop. Contacts are at the footer of this bulletin.

Attachement to bulletin No. 1/2007

1. Place the HT upside down, insert the polyamid spacer into its hole, check the height of PA spacer overlapping the HT cover (see fig. 1) and remove the spacer again. This dimension (marked as „V“ at fig. 1) is important for preserving the tail-setting angle after the modification.

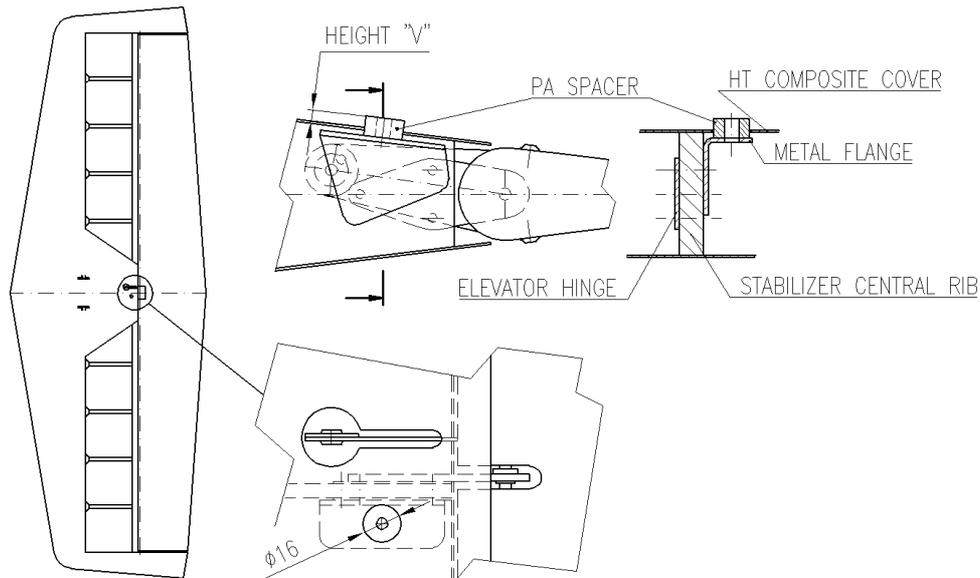


Fig. 1

2. Roughen the surrounding composite cover in dimensions according to the wooden rectangles (20x40 mm - see the next steps).

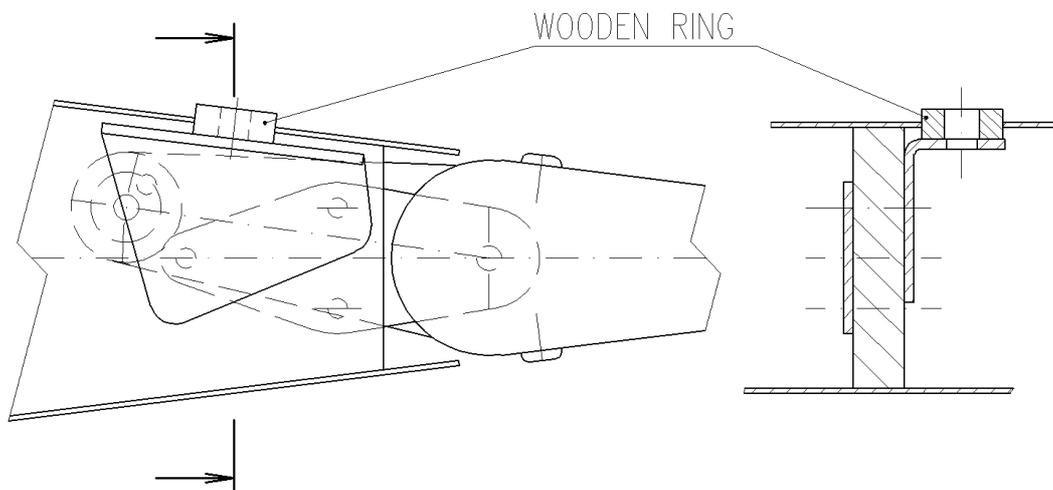


Fig. 2

3. Put the wooden ring th. 6 mm into the hole d 16 for the PA spacer, and grind off the overlapping material. See fig. 2 and fig. 3.

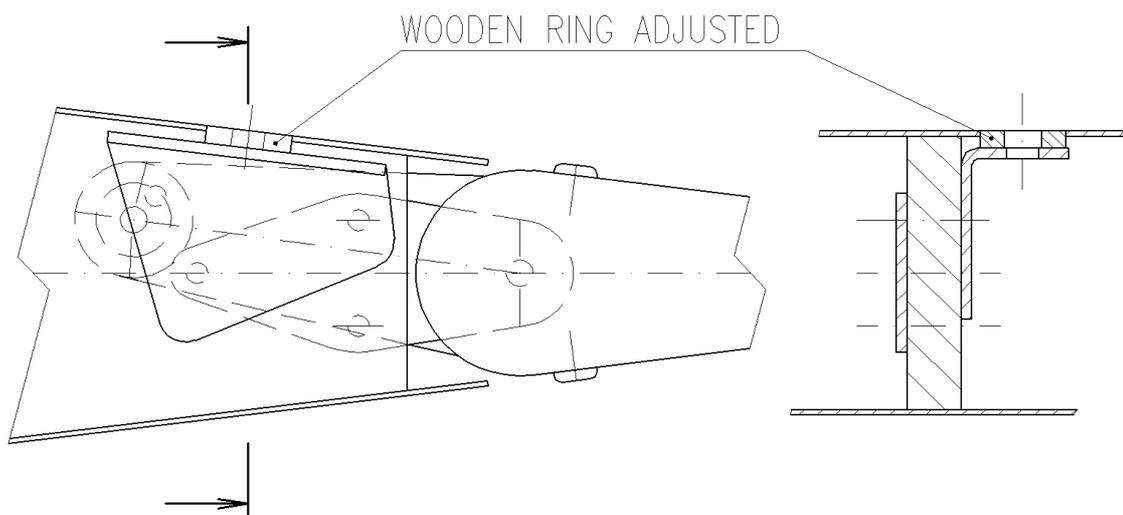


Fig. 3

4. Glue the wooden ring into the hole d 16. It must be glued both to the metal flange and to the composite cover. Use epoxy resin EPOXY CHS 371 or ARALDITE AW 106.
5. Now glue on the wooden rectangle th. 6 mm (see fig. 4) and when properly hardened, adjust its height to the dimension measured at step 1 (fig. 5).

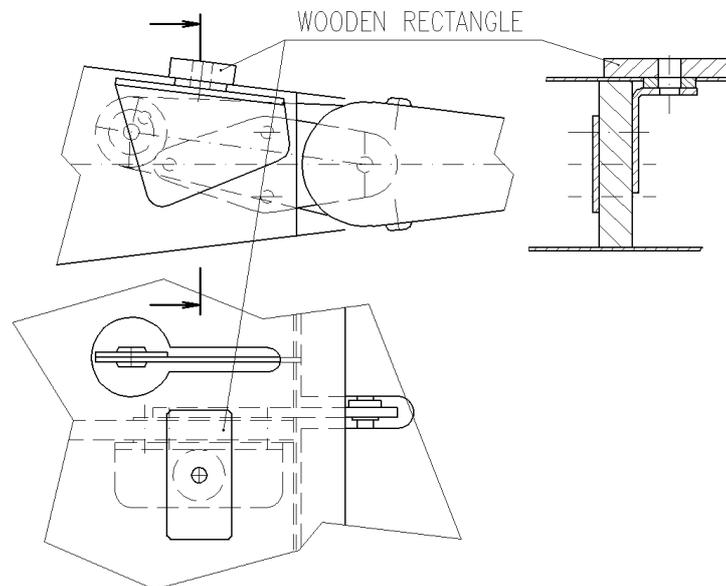


Fig. 4

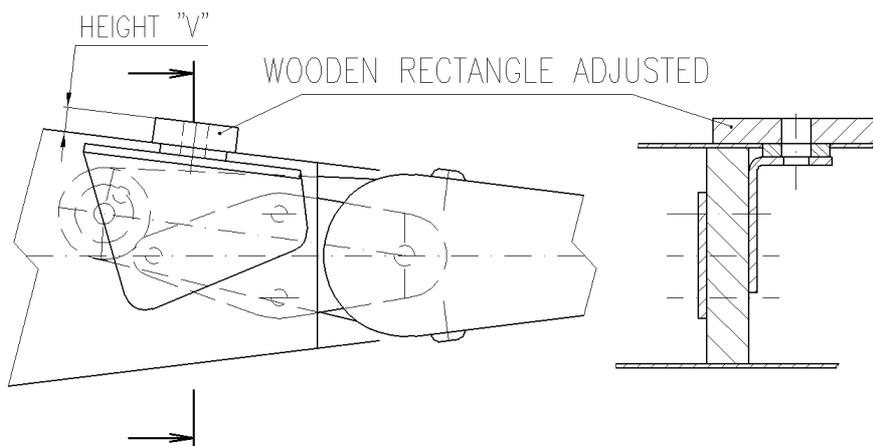
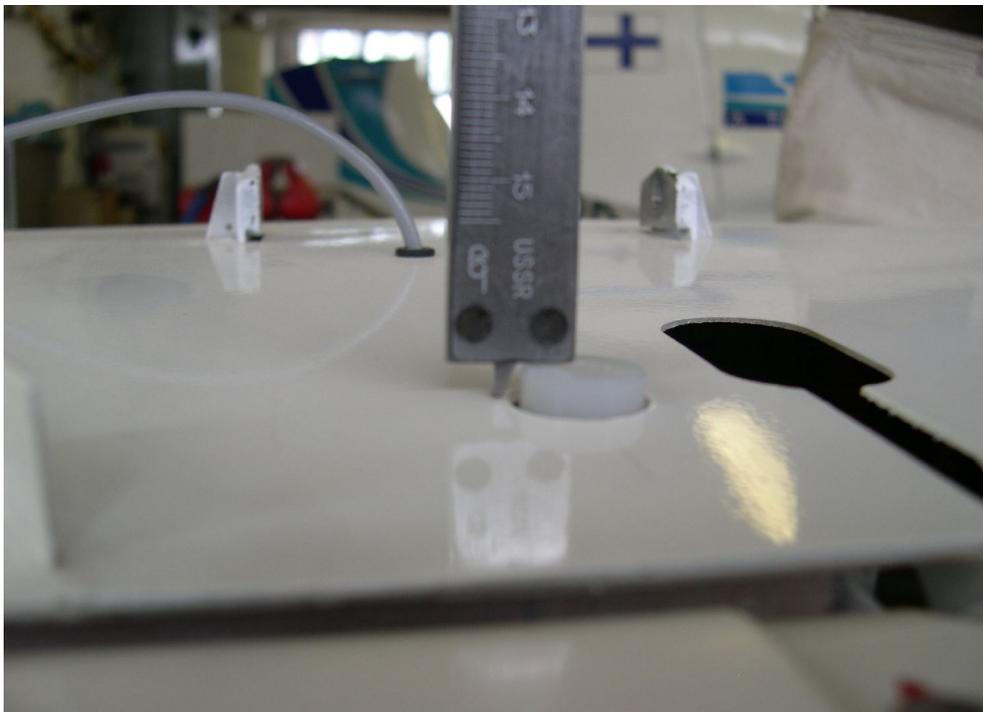


Fig. 5

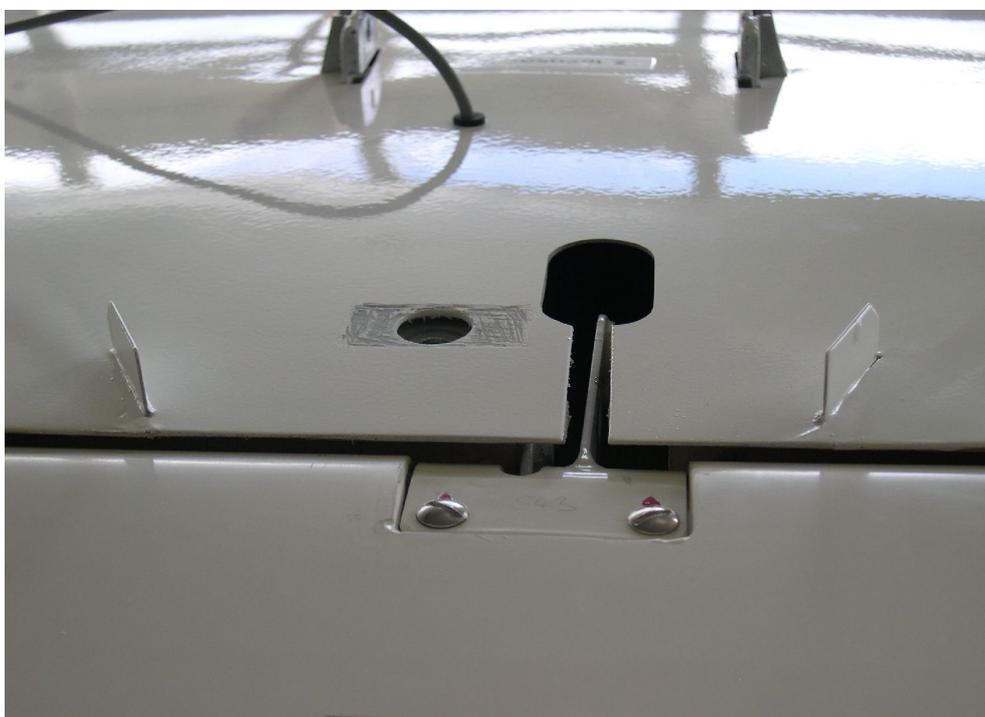
6. Mount the HT on the fuselage and check whether thus made wooden spacer fits the metal rudder flange. It may not occur that the bolt's heads obstruct correct fitting. If so, adapt the wooden spacer carefully, e.g. with sharp knife.
7. Coat this wooden spacer with an exterior paint.



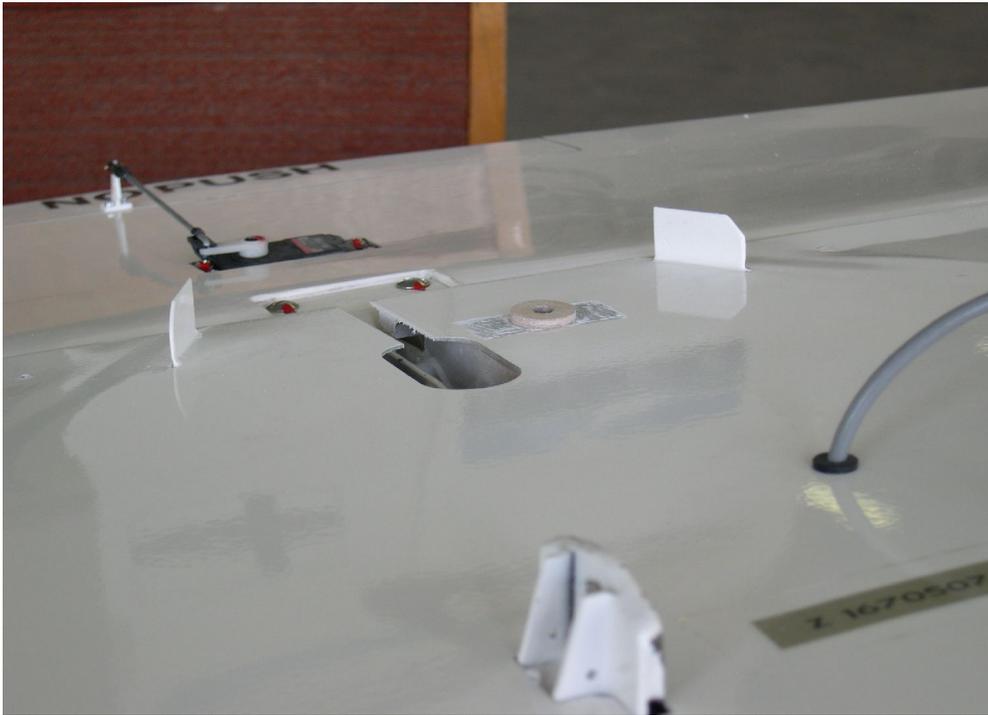
Attachement to bulletin No. 1/2007 – Photos



Step 1. - measuring the height "V"



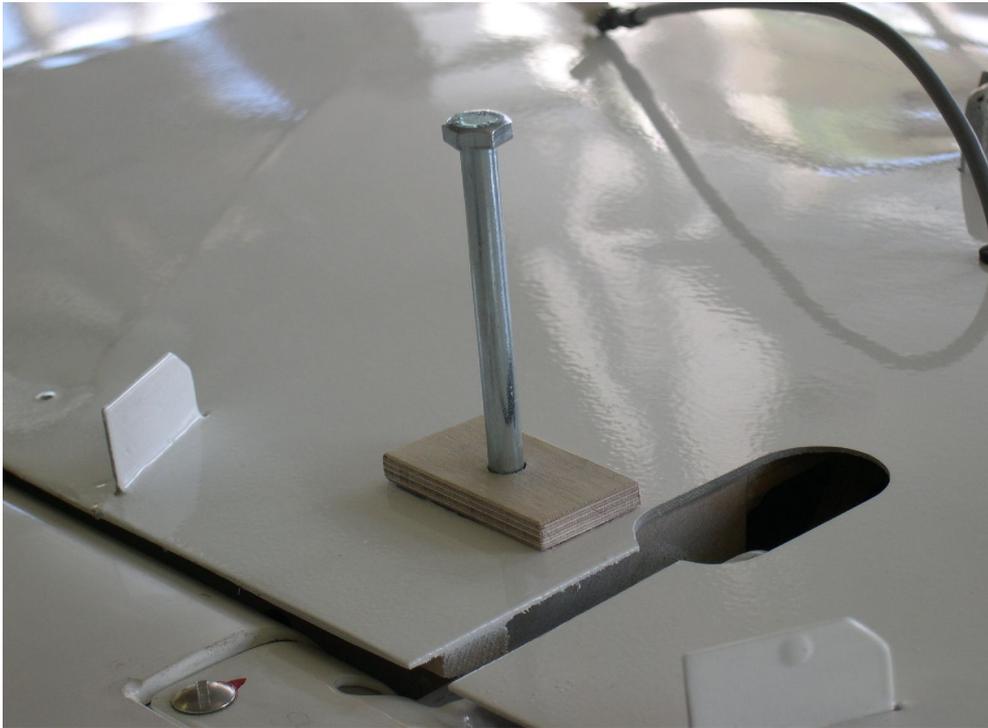
Step 2. - Roughening the composite surface



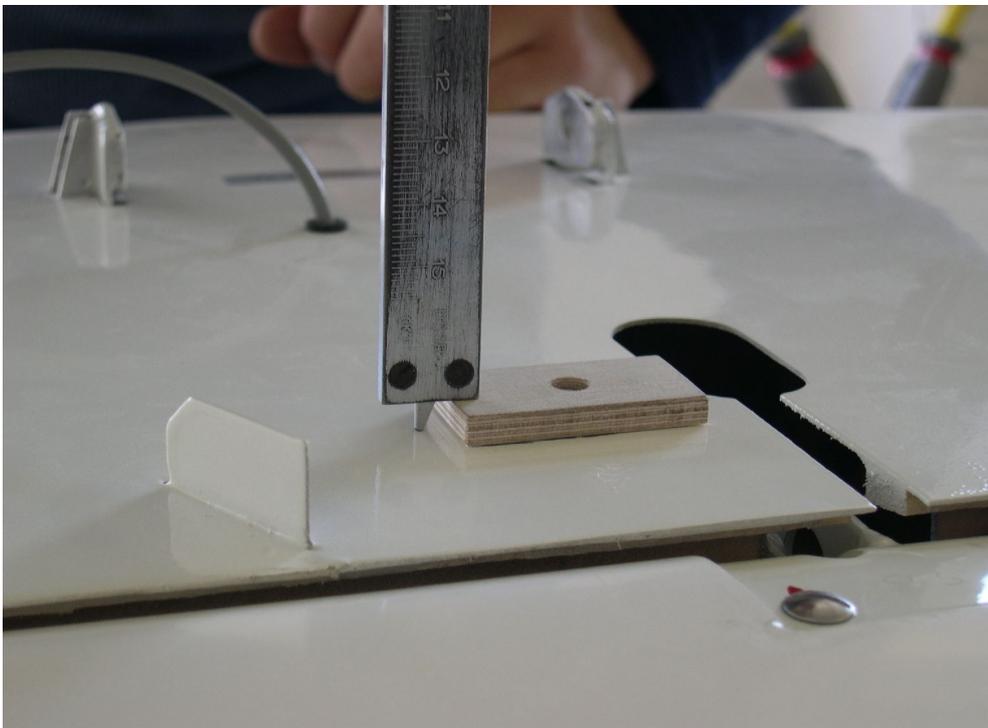
Step 3. - inserting the wooden ring



Step 4. - glueing the wooden ring into the hole



Step 5. - gluing the wooden rectangle (using the bolt as a centering pin)



Step 5. - adjusting the height of the new spacer