

Following instructions are related to ATEC 321(322) FAETA with wingtanks, but in general the basic methodics (besides several few differences) is applicable also to other ATEC models.

Aircraft assembly and disassembly

- ⇒ At least two people are needed for assembly/disassembly. One for assembly and one (or better two) assistant(s) to assure careful handling with appropriate parts and to avoid their fall and damage. (follow the manipulation instructions described in the Art. a) and b))
- ⇒ All parts necessary for assembly are delivered together with the aircraft.
- ⇒ Do not push hardly on any surface during manipulation to avoid cracks of the gel-coat (especially in the area of dividing lines, edges, not-stiffened areas).
- ⇒ Clean, grease and then secure all pins before you start assembly.
- ⇒ Pay attention to correct adjustment of ailerons and flaps, which is carried out by shortening/lengthening of pushrods (screw/unscrew adjustable end).
- ⇒ After aircraft assembly:
 - carry out deflections adjustment by levelling record
 - test the engine run, check both fuel tanks and fuel indicators correct function.
- ⇒ For each next assembly, it is necessary to replace locking nuts and split pins with new ones.

a) Horizontal Tail (HT) Assembly / Disassembly

At least two people are needed for HT assembly/disassembly. Third person is recommended to push the fuselage tail down to the ground to enable better access to HT fittings.

Pay attention to avoid a fall of small parts into the inner space of the tail fin during manipulation!!

Horizontal tail assembly

•Elevator pushrod connection

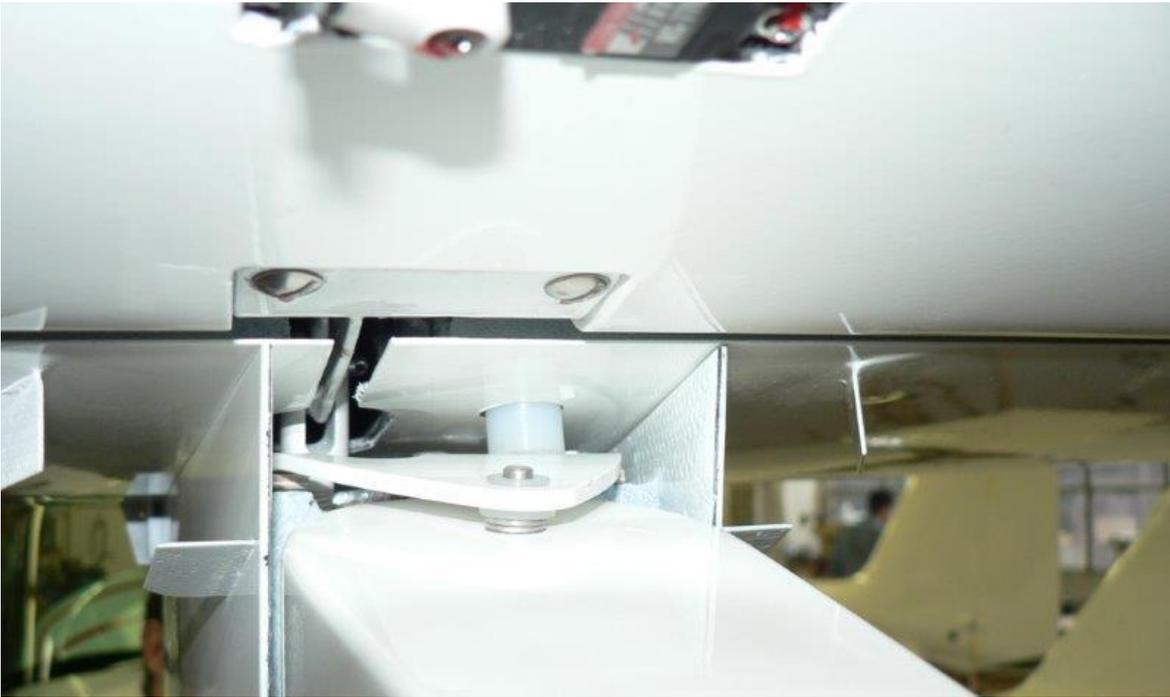
Deflect the control stick to the fully „pushed“ position and secure (block) it softly to avoid its movement during assembly. This enables better access to the elevator pushrod, which is then protruding from the tail fin.

Then the assistant pushes the fuselage tail down to the ground holding it in such position during all the process of assembly to enable better access to HT fitting.

Take the HT and place it over the siderudder in such a position to keep an access to the pushrod end protruding from the tail fin. Then the second assistant will hold it with the elevator maximally deflected in „up“ position, so that the elevator control lever is protruding from the HT surface.



Connect the pushrod with the elevator control lever by the pin of $\varnothing 5\text{mm}$ and spacer + split pin.
Connect the cable connector of the servo (in case of electrical trim option).



• **Fixing the HT to the fuselage**

Settle the HT on the fuselage tail and screw two main fitting screws M8, but do not tighten them fully yet.



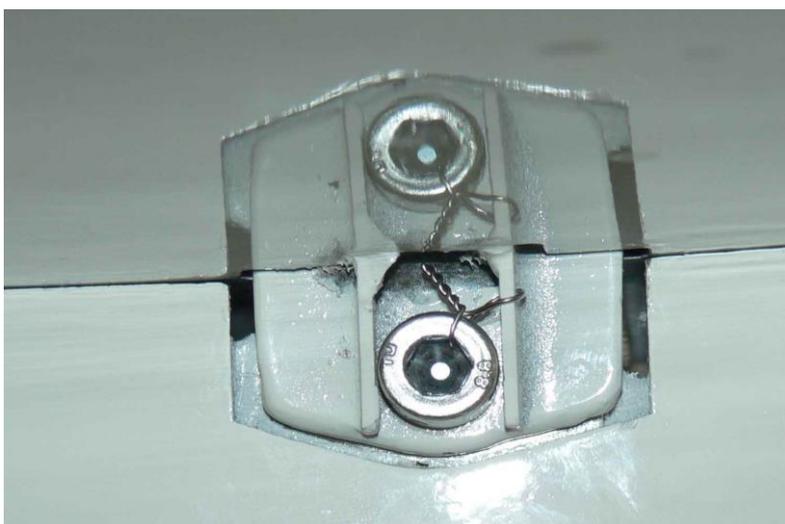
Insert the vertical screw M6 (with nylon) into the hole on the upper side of the HT and tighten it fully with adequate power.



Come back to both main fitting screws M8 and tighten them fully.

• **Screws securing**

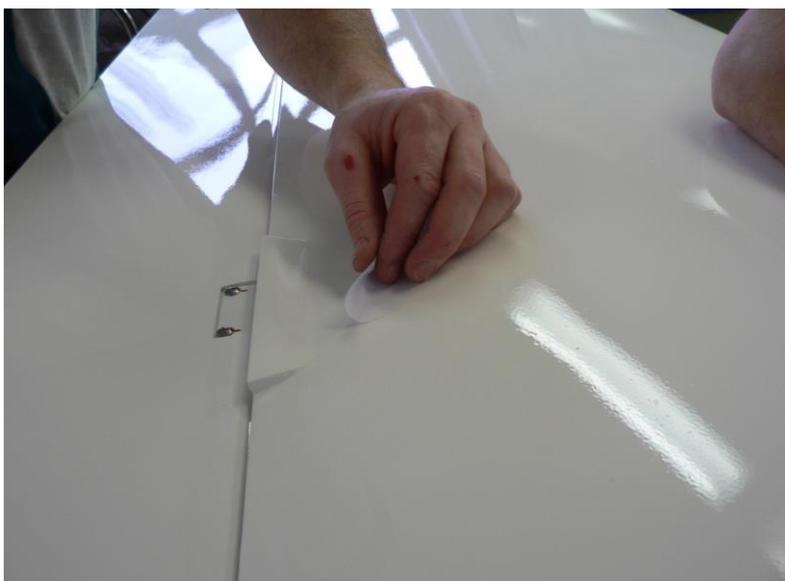
Secure both M8 screws with a binding wire. Appropriate holes for binding wires are situated in the main fitting and four holes are in the head of the screw.



Secure the vertical nylon-screw with a binding wire too. One hole is drilled in the horizontal tail body and two holes are in the screw head.

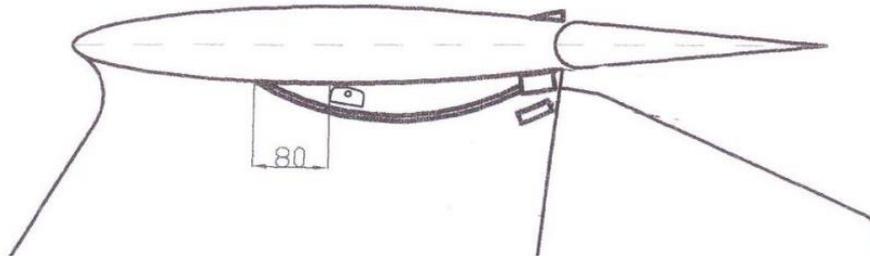


Finally, cover the hole on upper side of the HT with a white plastic sticker (to avoid water intrusion).



•HT fitting covers assembly

HT fitting covers help to avoid vibration occurrence in flight. Apply the HT fitting fiber-glass covers (obtained with double-side tape) according to following picture:



Horizontal tail disassembly

Remove the fiber-glass covers of HT fitting. Pay attention not to damage them as these will be needed for a future assembly.

Release and unscrew M6 screw, which is adjusting the position of HT, on upper side of the HT.

Release and remove M8 screws of the main HT fitting.

Tilt the HT so that it is possible to disconnect the pin of HT pushrod.

Remove the HT and secure the ball bearing with a binding wire.

Store the HT on safe and dry place with stable temperature. The HT needs to be enough secured and prevented from structural and surface damage.

b) Wings Assembly/Disassembly

At least two people are needed for wings assembly/disassembly. One for assembly and one (or better two) assistant(s) to hold and support the wing to avoid its fall and damage.

Your assistant takes the wing on the wingtip and you take it on the root. (The second assistant which can hold the wing on flap would be helpful). Pick the wing up and then lay it down on any smooth, soft pad (e.g. mattress).

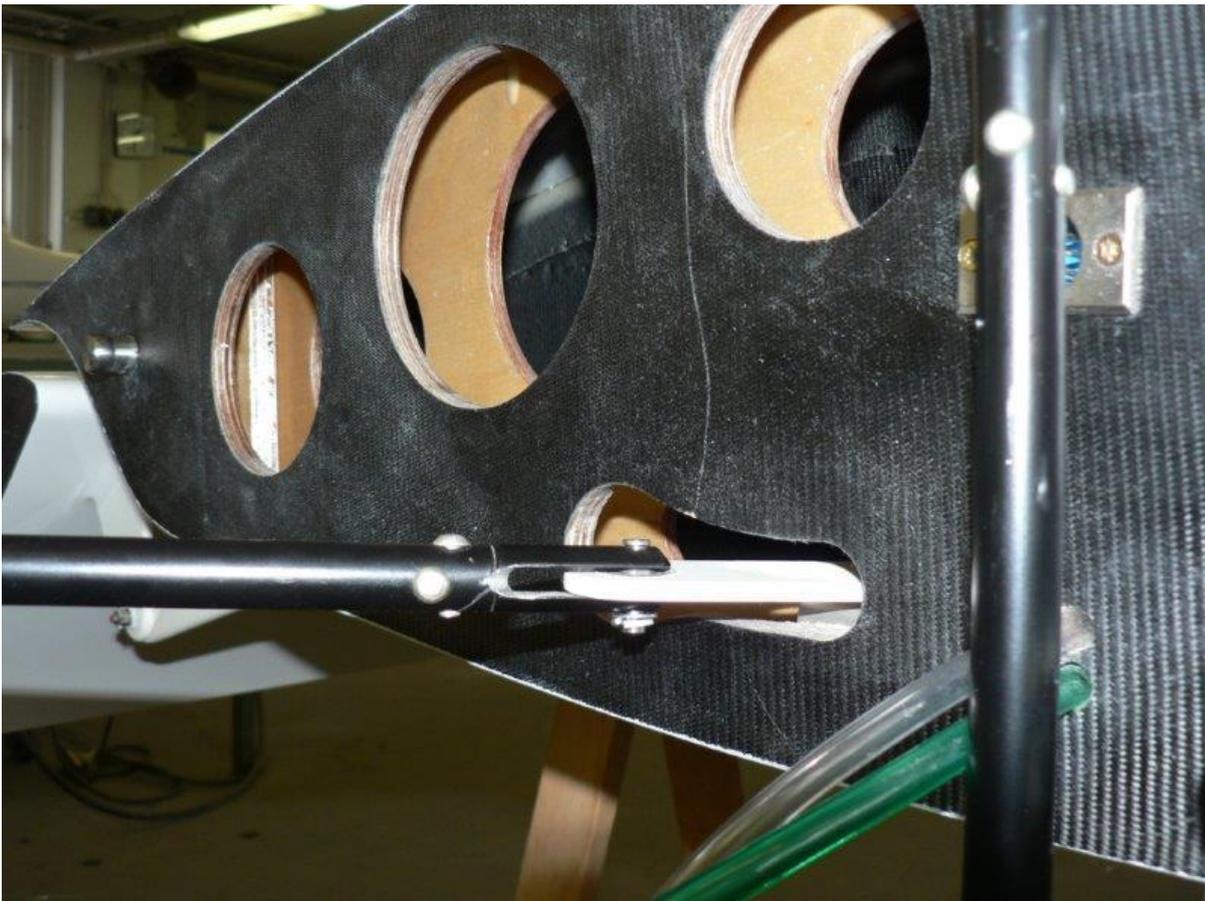
Wings assembly

(same for both left and right wing)

•Flap pushrod preparation - connection into the wing

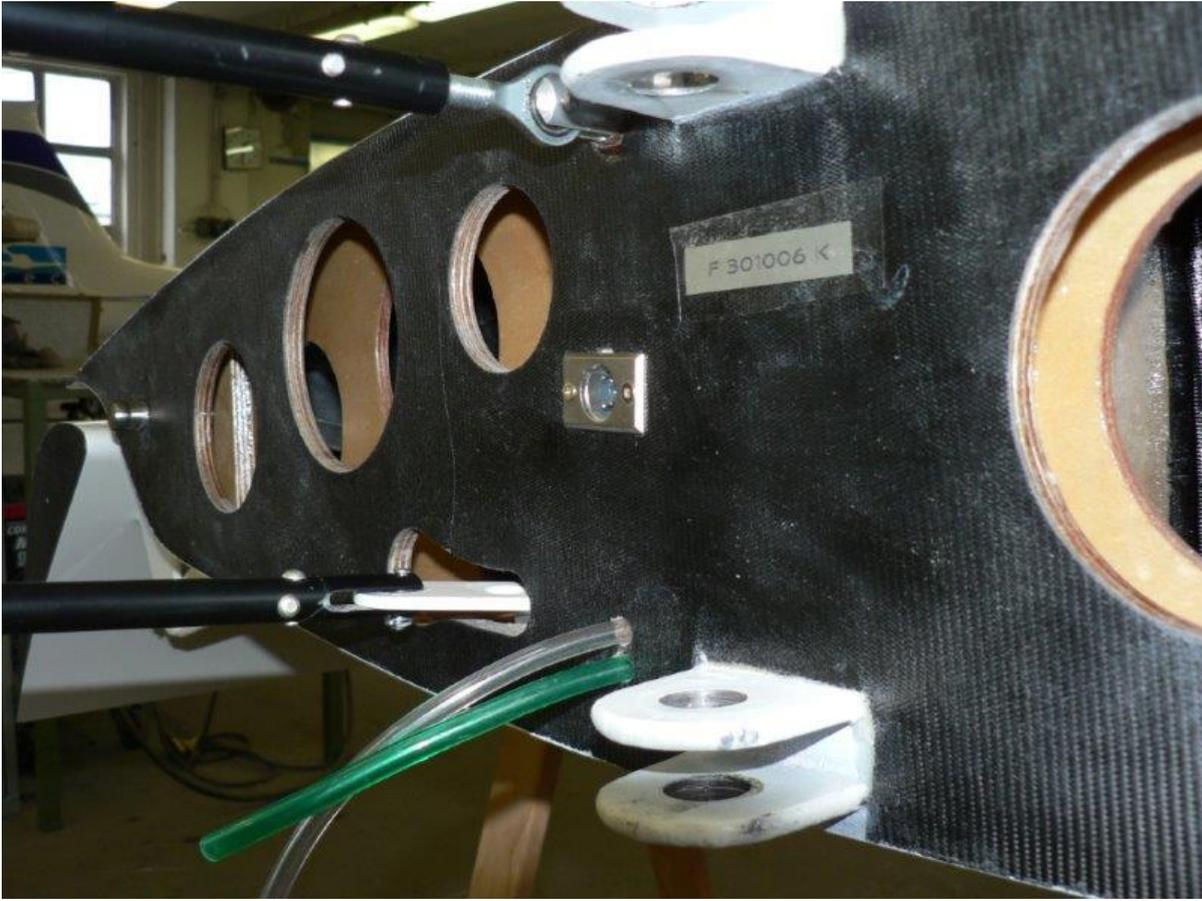
Put the wing into the position by its leading edge down (on the soft pad). Hold the wing together with your assistant, who deflect the flap and so the rod lever will protrude out. This enables you better access to connect the flap pushrod with the flap lever.

Pay attention to install the correct pushrod (LEFT („L“) or RIGHT („R“)) to appropriate wing. Pay attention to correct pushrod position (its non-adjustable end leads into the wing and the adjustable one towards the fuselage (the sticker with letters L/R will be on upper side). Fix the connection by the pin of $\varnothing 5\text{mm}$ and spacer + split pin (all such parts delivered attached on the pushrod).



● **Aileron pushrod preparation - connection into the wing**

Screw the aileron pushrod to the adjustable end protruding from the wing. Pay attention to install the correct pushrod (LEFT or RIGHT) to appropriate aileron. Exact tuning will be adjusted later.



● **Wing connection to the fuselage**

Prepare two of main wing pins. Lubricate them with an appropriate quantity of vaseline. Pay attention to their correct position - UPPER wing pin is WITHOUT thread, LOWER wing pin is WITH thread.

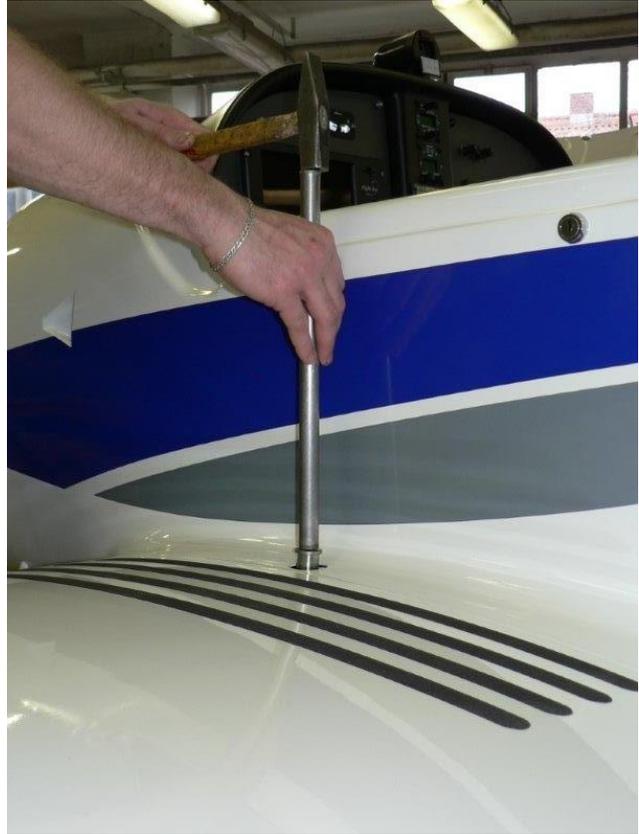
Your assistant holds the wing on the wingtip and you hold it on the root. (The second assistant which can hold the wing on flap would be helpful).

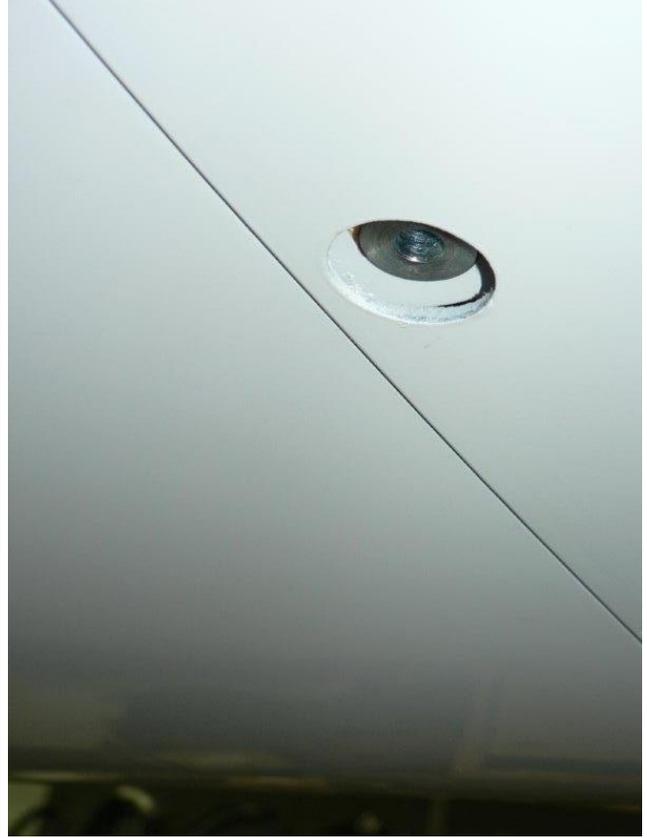
Pick the wing up and attach it close to the fuselage so that pushrods (aileron and flap) enter the fuselage through the appropriate holes, but keep the space between the wing and fuselage yet to reach enough access to connect the rest of the equipment. All of you are still holding and supporting the wing against fall. Then you support the wing by your knees (at the area of wing root) and connect (or you just hold the wing and some next assistant can help you to connect):

- static and dynamic pressure hoses of Pitot tube (just on the left wing)
Note: Pay attention not to interchange the hoses of Pitot tube during assembly.
- quick couplings of fuel hoses
- cable connector of the fuel gauge
- cable connector of the strobes/position lights (if equipped with)



Push the wing towards the fuselage to attach it completely without any play between the wing and fuselage. Insert the main wing pins into the hole with fittings (wing attachment) inside. Insert the upper pin (without thread) first and then insert the bottom pin (with thread). This operation requires careful use of the hammer and auxiliary metal rod (\varnothing 18mm) to beat the pin into the hole. During this operation, the assistant (holding the wing on the wing tip) pays attention to keep the correct dihedral angle. If needed, he can slightly lift the wing to fit the fittings exactly with the hole in correct position and so to enable pins easily pass through the fittings. Both pins must be inserted to their fully beaten position. Then the assistant can leave the wing.



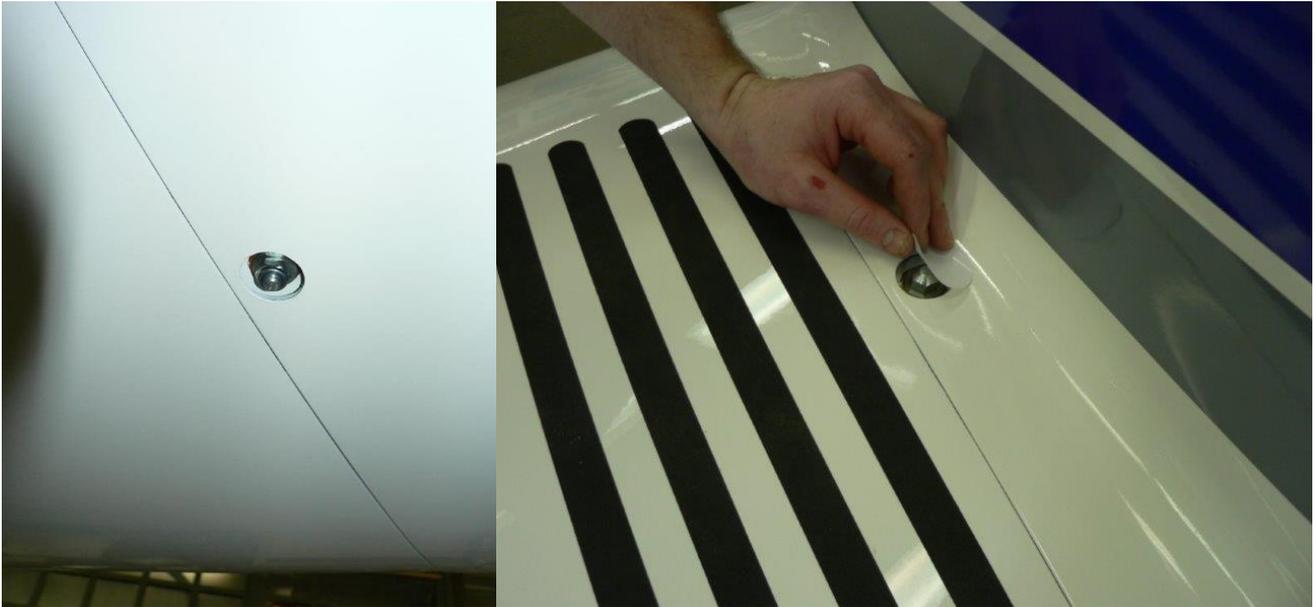


Secure the pin from upper side by the bolt – tightening moment is approx. 25 Nm.



Install the M10 locking nut from the bottom side, so that the wing connection is properly secured.

Cover the holes with any plastic white sticker (to avoid water penetration).



• **Flap pushrods connection inside the cockpit**

Take the seats out of the cockpit to have an access to the flap steering lever situated in the central tunnel. Connect pushrods to the flap lever using the pin \varnothing 5mm and spacer + split pin (all parts delivered attached to the pushrod). You can insert the pin \varnothing 5mm from the bottom side (better accessibility for the spacer and split pin assembly). Install seats back.



•Aileron pushrods connection inside the cockpit

Screw the pushrods to the control stick until their fully tightened position. Then loosen it again by a number of turns indicated on the pushrod. This ensures correct neutral position of ailerons. Secure the connection with the pin \varnothing 5mm and spacer + split pin (all parts delivered attached to the pushrod).



Wings disassembly

First of all, drain off the fuel from both wing tanks.

Disconnect ailerons pushrods (from the control stick) and flaps pushrods (in the central tunnel) inside the cockpit.

Release and remove the locking nuts of wing pins bolts. Screw the bolts out by approx. 2cm.

Beat out the bottom pin by light tapping on the head of the bolt by the hammer. Unscrew the bolt and remove the bottom pin.

The assistant (holding the wing on the wing tip) can slightly lift the wing if needed to enable pins to be pulled-off more easily.

Beat out the upper pin by the hammer with a help of any metal rod of \varnothing 18mm.

After pins removal, your assistant holds the wing on the wingtip and you hold it on the root. (The second assistant which can hold the wing on flaps would be helpful).

Partially pull the wing out of the fuselage, so that you reach the space between the wing and fuselage to have enough access to disconnect the equipment. All of you are still holding and supporting the wing against fall.

Then you support the wing by your knees (at the area of wing root) and disconnect (or you just hold the wing and some next assistant can help you to disconnect):

- static and dynamic pressure hoses of Pitot tube (just on the left wing)

Note: Pay attention not to interchange the hoses of Pitot tube during their next re-assembly.

- quick couplings of fuel hoses

- cable connector of the fuel gauge

- cable connector of the strobes/position lights (if equipped with)

Store the wings on safe and dry place with stable temperature. Wings need to be appropriately secured and prevented from structural and surface damage.