

# Savage Cub RTF Assembly Manual



Aircraft Type & Model: Savage Cub 912 100hp

Aircraft Registration Number: 24-0000

Aircraft Serial Number: 07-1234

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## *How to connect fuselage and wing - Guide*

- 1) It is necessary 3 people assistance while assembling wing and fuselage.
- 2) Dismount transportation holders



- 3) Two people lift up the wing and put it in to the fly position.
- 4) Third person secures safe insertion of Teleflex, fuel hoses and steel ropes on the correct position. **Mind the skin ! Watch out for penetration !**



- 5) a) Step nr.1 – insert the bolt in rear wing suspension.  
b) Step nr.2 – insert the bolt in front wing suspension.  
c) Step nr.3 – Get the strud ready for mounting ( and supporting ) the wing by inserting the bolt in to the strud – fuselage connection on the lower side of the fuselage



- 6) While first person keeps holding the wing in the position, others connect the strut by bolt with fuselage and then by 2 bolts with wing. Assembly the strut triangle. Do the same on the other side.

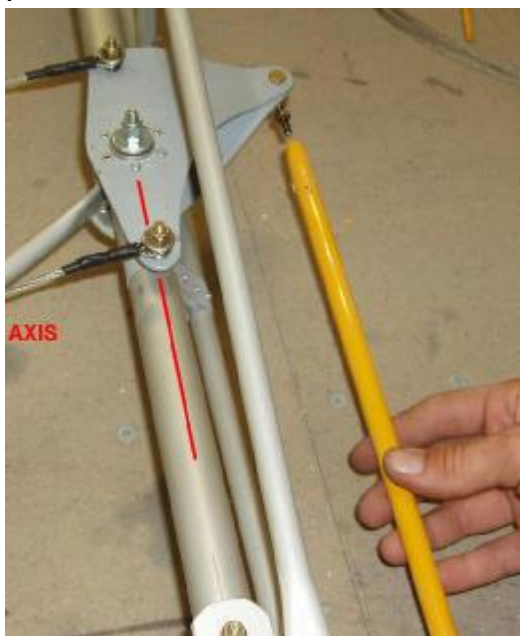


- 7) Tight up all screws and mark with red dot.

## ***Flaps & Ailerons assembling guide***

### **Ailerons – How to set the ailerons in to the main position:**

- 1) Set the inside-wing-flap control mechanism in to the neutral positions (both bolts with screwed nuts are in the centre of tube it is mounted on – on the axis).



- 2) Fix the ailerons with wing tips in neutral positions. To long them use thread on the heim rod end bearings on the both sides of the wing.



- 3) Use the rubber rope - (we suggest ) to keep the control stick in the center position and tie the control steel ropes by screwing 3 tie rods inside the cocpit. After you do so check that ailerons are in the neutral position !



- 4) Control-steel-ropes are tied so much that when you press them from a side by 3 kg, the control steel ropes move about 2 cm. Make sure that the whole mechanism runs free.



- 5) Limitation of whole mechanism is done by 2 screws behind the first pilots control stick under his the seat.

**Note !!!** The flaps control connection (Teleflex) must be banded the way that no sharp radius appears ! Always try to manage smooth radius on Teleflex. Not accurate radius results in different level one or both flaps that must be re-set by nut(s) at the end of Teleflex inside the fuselage.

## Flaps

- 1) Basic flight position is adjusted in the line with ailerons. Setting or changing can be done by screwing or unscrewing the threads on the both sides of the Teleflex (flaps ctr. cable).
- 2) Trailing edge of the flaps must aim in to same place on the both sides of the fuselage. To solve any differences it is possible to use special washers from the top or bottom side of the hinge how on ailerons so and on flaps.



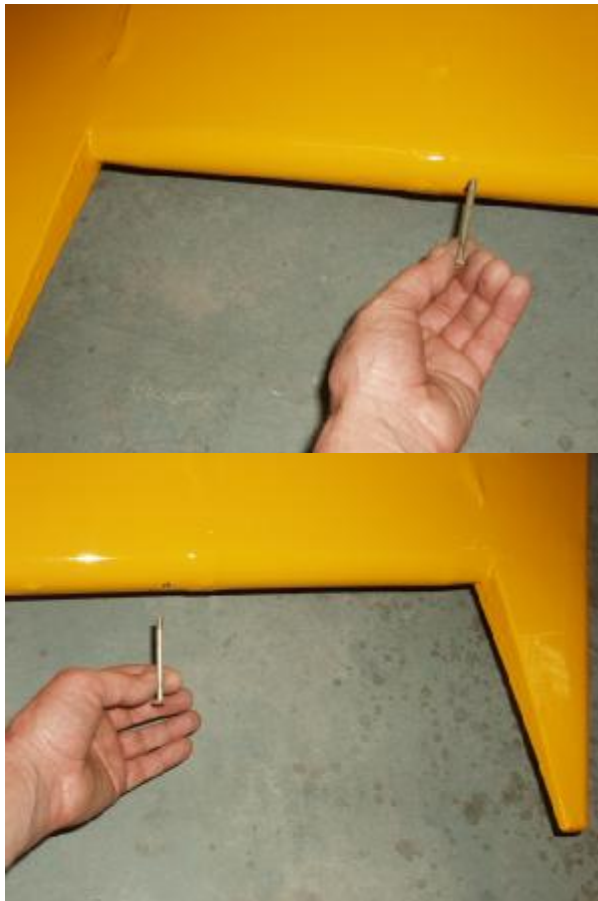
**NOTE:** There is an example of flaps trailing edge level compare to fuselage on two pictures above. In case of difference between left and right side, special washer ! must be put under hinge connecting the wing and the flap and aileron from above or from below. We suggest to use different thickness or shape of washers if necessary.

Results must be :

- 1) The same distance ( marked „a“ on the picture ) on the right and left side.
- 2) Trailing edges of ailerons and flaps must be in line
- 3) Also entering edges are in line - there is no difference ( step ) between entering edge of ailerons and flaps.



**Attention Please :** The closest aileron-hinges bolts to the wing tips are longer than the rest of bolts for wing hinges. MIND not to switch them !!!



3) Both flaps together can be set by tie rod on the rope behind the flaps control stick.



4) Size of flaps trajectory is not possible to change.

5) Back stroke is done by rubber rope. The tightness of that rope sets the force pilot will have to develop.



**NOTE:** It is important that both teleflex are secured with safety wire inside the fuselage.

## Chapter of wing geometry settings

- 1) Set the fuselage (horizontal axis) into a water level.



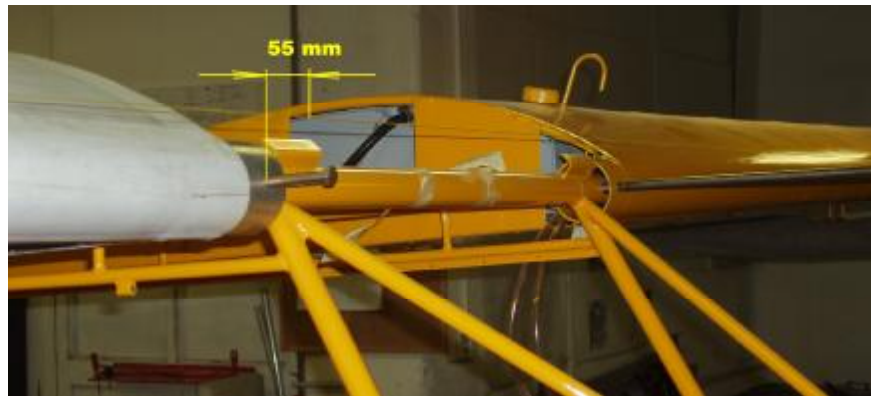
- 2) The wing's dihedral angle must be the same at the both (sides) ends of the wing. Check is done by laser beam.



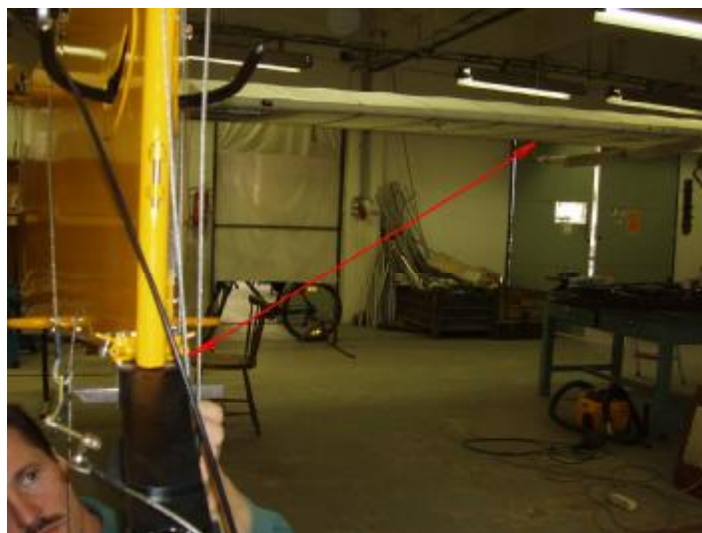
- 3) Dihedral angle of the wing is defined as a distance between the centre (longitudinal axis position) and the wing tip and it is 55 mm.



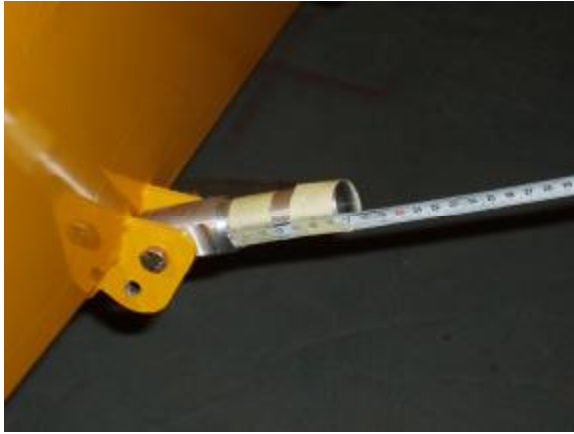
- 4) The sweepback angle is set as a distance of 55 mm between the transversal axis of the wing and the wing tips.



- 5) Important note: The lengths of cords strung from the top-ends front struds to the tail wheel landing gear must be the same !



- 6) When the geometry of the wing is set and fixed - cut the aerodynamic profile for the front struds.



- 7) Geometry of a negative twist of the wing is shown on the picture below. If we define the plane by the axis going through the wing hinges then the top-ends of the rear struts must be raised 6 mm higher up.



- 8) Finally measure the length of aerodynamic profiles for rear struts that hold the wing in the correct negative twist. In the next step only first hole is drilled as shown on the picture.

