

# PSYCHO INSTRUCTION MANUAL



**Important:** This instruction manual is exclusively for the optional all-inclusive steering package, which is sold separately in the shop. It is not included in the kit.

# INTRODUCTION

The Psycho is a modern update of the proven Pilf model. This new design significantly optimizes the structure by both refining and simplifying the construction. The aircraft is ideally suited as both a hotliner and a speeder, impressing with its precise flight behavior.

# TECHNICAL SPECIFICATIONS

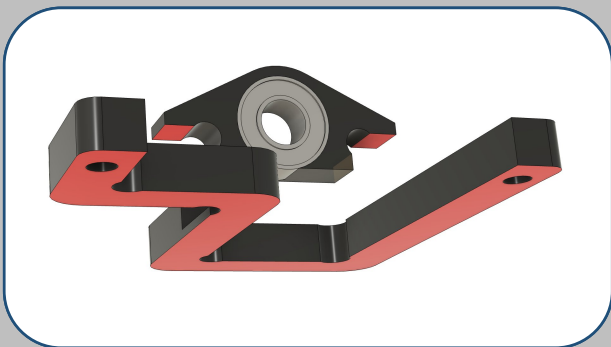
<b>Wingspan:</b>	<b>1400mm</b>
<b>Length:</b>	<b>935mm</b>
<b>Spinner Diameter:</b>	<b>38mm</b>
<b>Center of Gravity:</b>	<b>45-50mm (From the leading edge)</b>
<b>Aileron Deflections:</b>	<b>5-7mm</b>
<b>Elevator Deflections:</b>	<b>3-5mm</b>
<b>Elevator to Wing Distance EWD:</b>	<b>0 Degree</b>
<b>Assembly Time:</b>	<b>8-12h</b>

# WING ASSEMBLY

## STEP 1

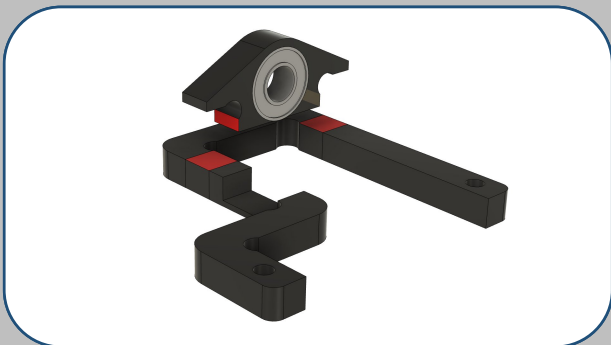


Remove the milled parts from the milled plates (**marked in red**) and deburr them.

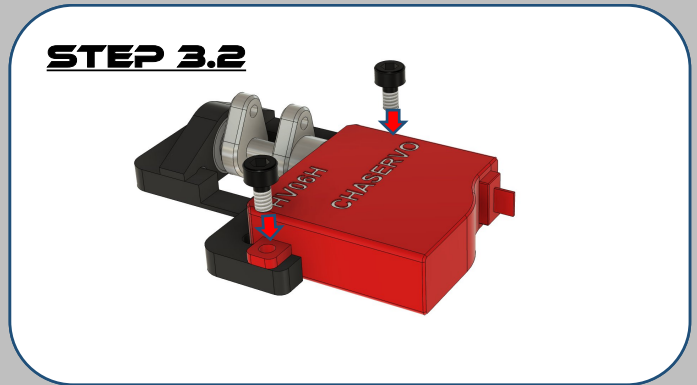
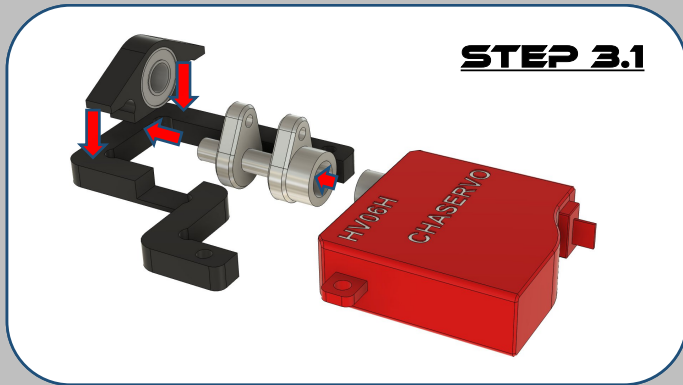


## STEP 2

Roughen the servo frame and control horn at the bonding points (**marked in red**) with the included sandpaper, and then degrease.



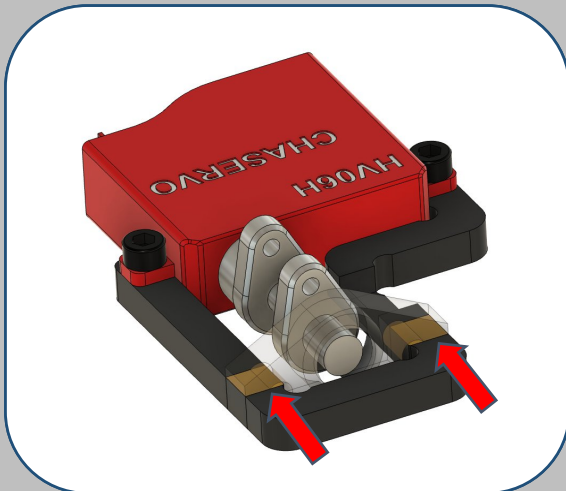
## STEP 3



Assemble the servo frame and the servo with all attachment parts outside of the wing, then screw the servo in place.

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## STEP 4



Apply light pressure to the ball bearing holder towards the servo and use a pinpoint of superglue on the tip of a knife to let the glue flow into the gaps (marked in yellow) between the ball bearing holder and the servo frame.

## STEP 5

Cover the servo on the underside with Tesa tape to prevent it from being permanently glued in place later.

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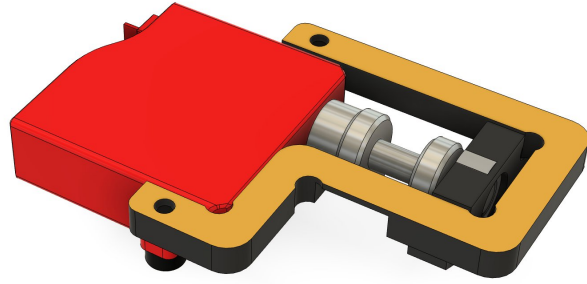
## STEP 6

Solder the servo with the included servo cable so that it later reaches the receiver through the wing's cable channel.

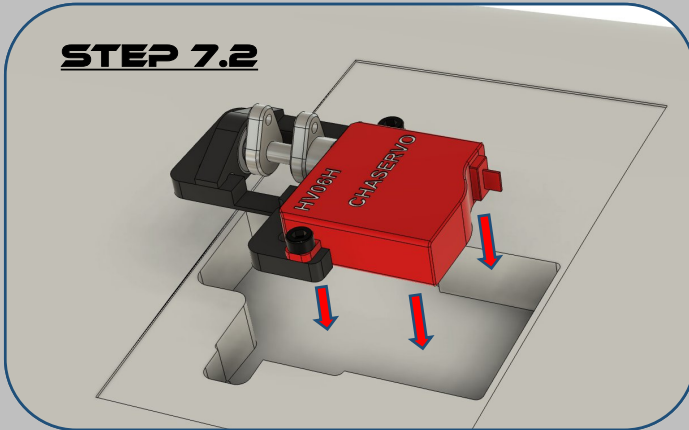
## **STEP 7**

Apply the included two-component adhesive to the bonding area (marked in yellow) of the servo frame.

### **STEP 7.1**

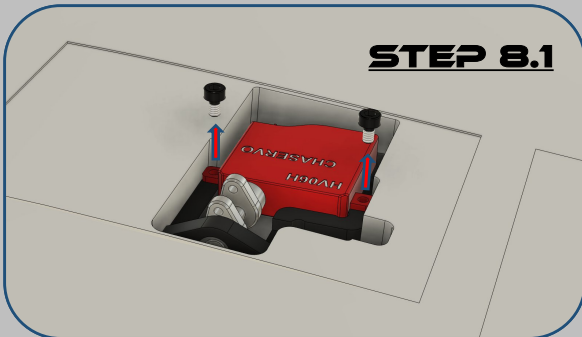


### **STEP 7.2**



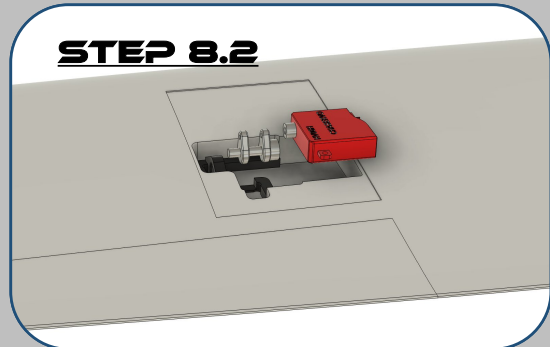
Insert the assembly into the cutout, glue it in place, and apply a weight for 24 hours at room temperature to ensure proper bonding.

### **STEP 8.1**



Loosen the fastening screws and remove the servo from the wing.

### **STEP 8.2**



## **STEP 8**

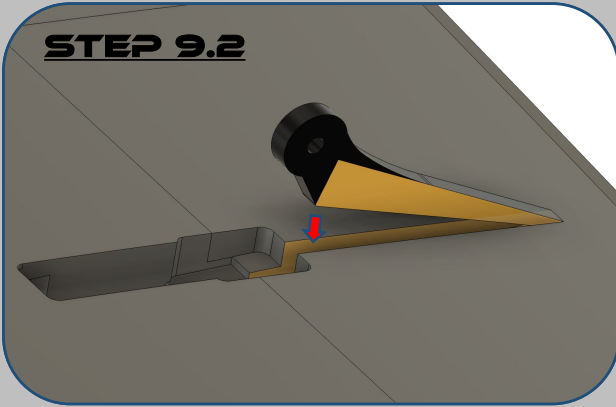
## **STEP 9**

Apply the included two-component adhesive to the control horn cutout and the control horn at the bonding area (marked in yellow).

### **STEP 9.1**



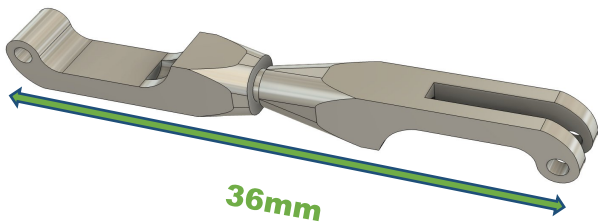
### **STEP 9.2**



**Press the control horn into the cutout and apply light downward pressure. Let it cure for 24 hours at room temperature.**

## **STEP 10**

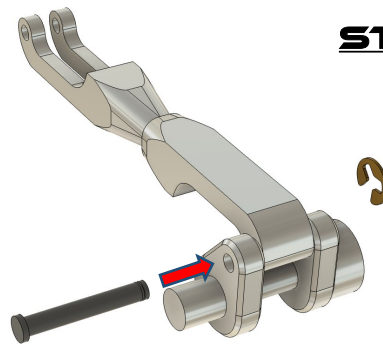
**Screw the clevises (one shortened and one unshortened) onto the threaded rod, which must be cut to 23mm beforehand, to the specified overall length.**



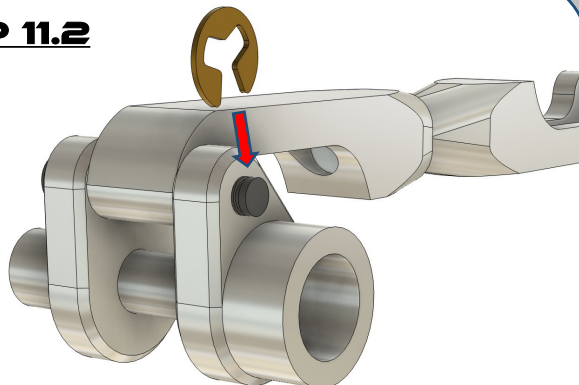
## **STEP 11**

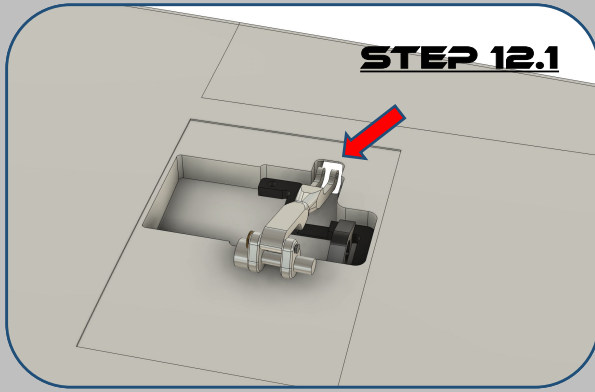
**Assemble the pushrod and servo arm on the shortened clevis side, connect both with the pin, and secure them with the cotter pin.**

### **STEP 11.1**



### **STEP 11.2**

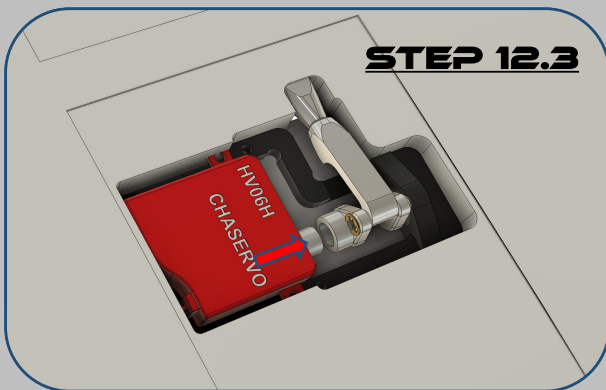
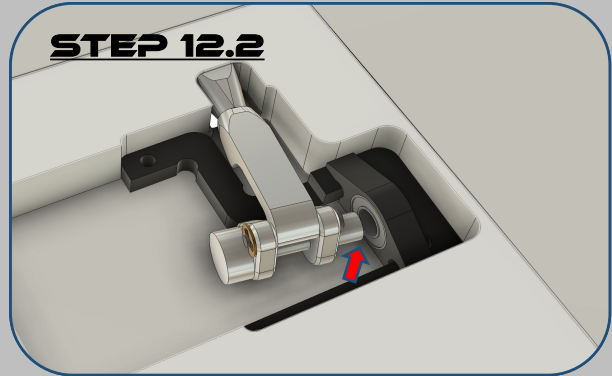




## **STEP 12**

Push the pushrod through the cutout to the upper side of the wing.

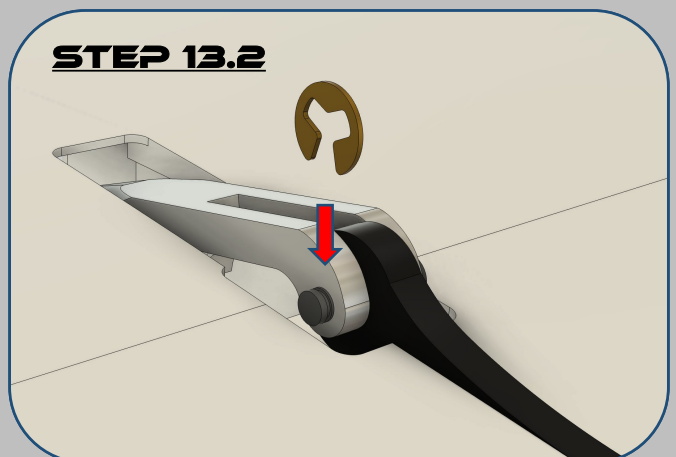
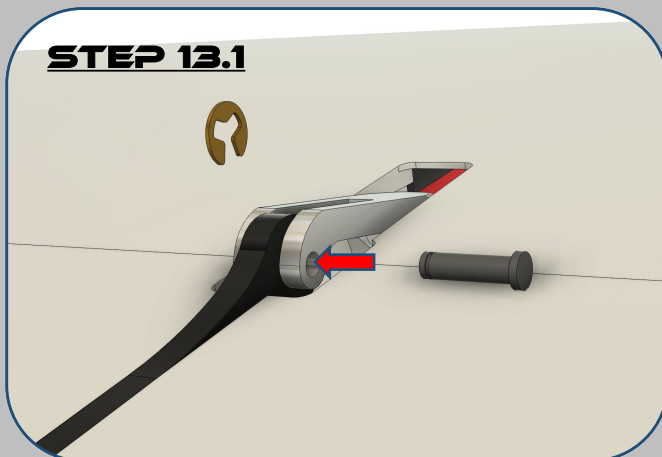
Next, press the servo arm into the ball bearing.



Connect the servo arm to the servo (with the servo in the neutral position) and secure the servo with screws.

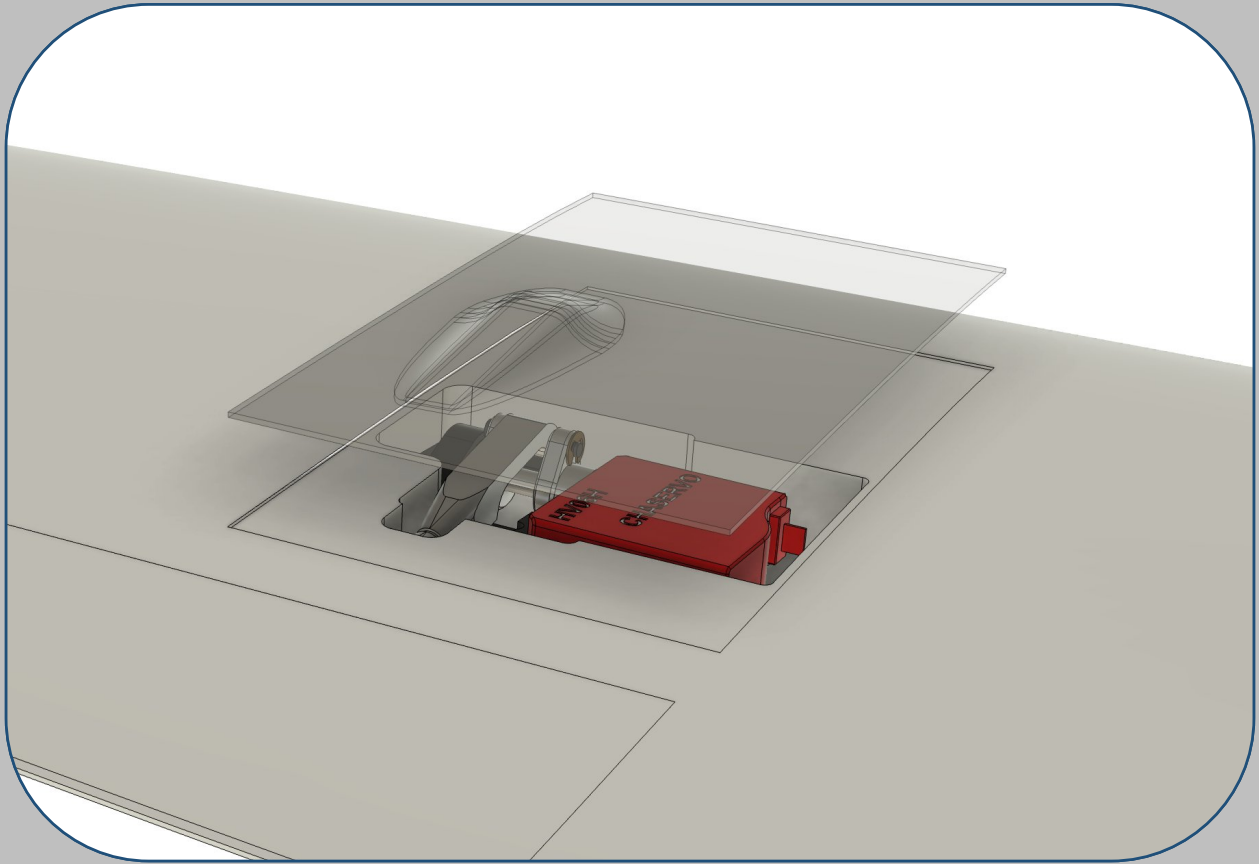
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## **STEP 13**



Push the cotter pin through the clevis on the upper side of the wing and the control horn, then secure everything with the cotter pin.

# **STEP 14**

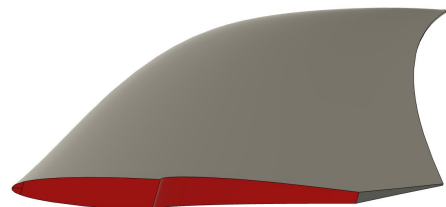
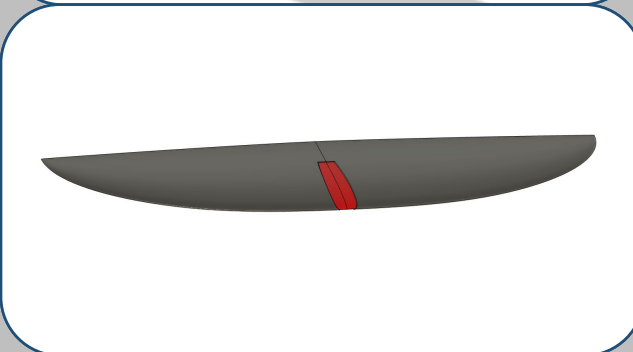
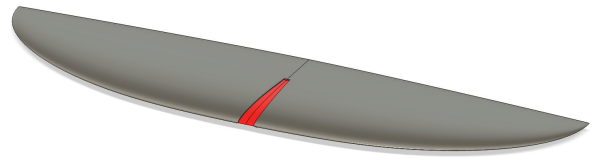
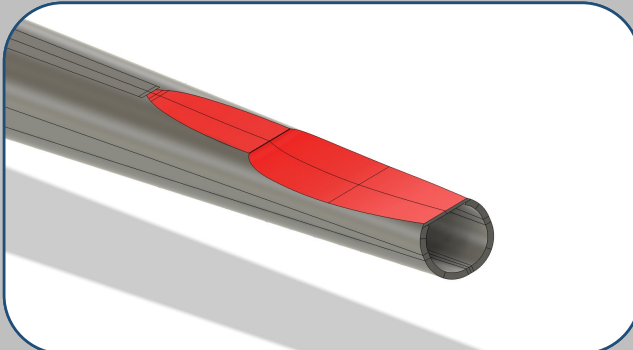
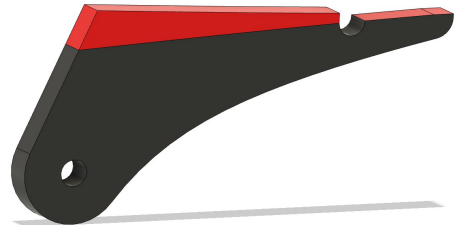


**The servo cover must be cut out with scissors and taped with Tesa along all 4 edges to fit into place.**

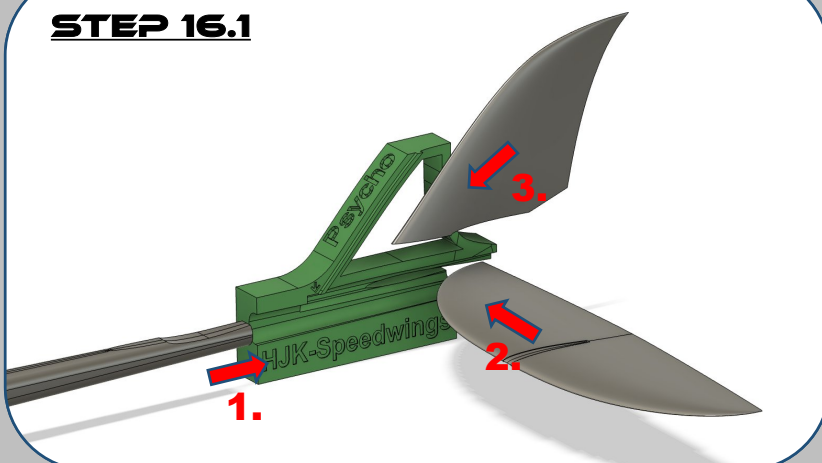
# FUSELAGE ASSEMBLY

## STEP 15

Roughen all the components shown here at the bonding points (**marked in red**) with the included sandpaper, and then degrease.



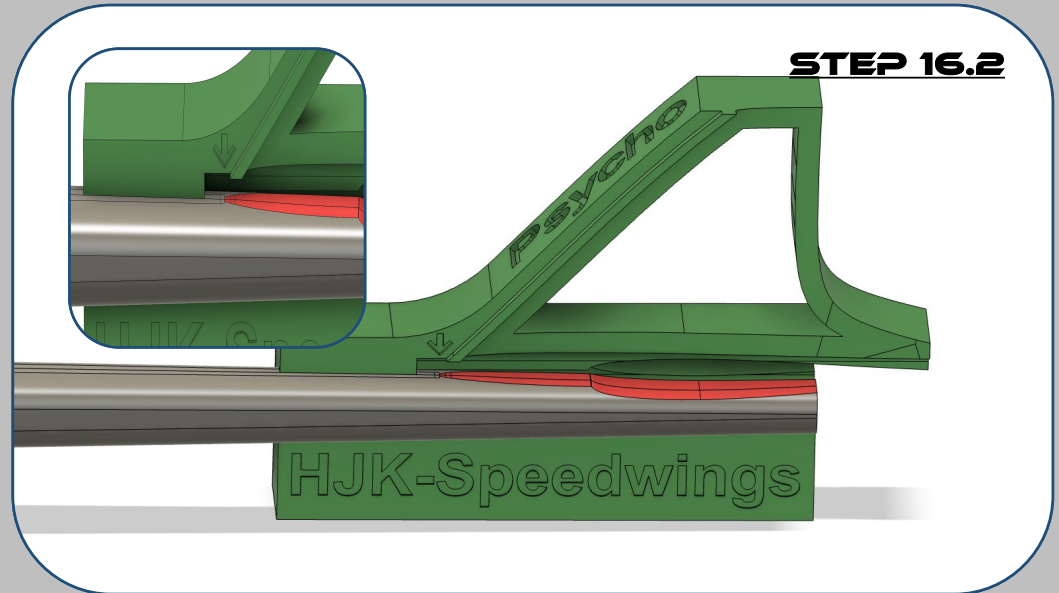
## STEP 16.1



## STEP 16

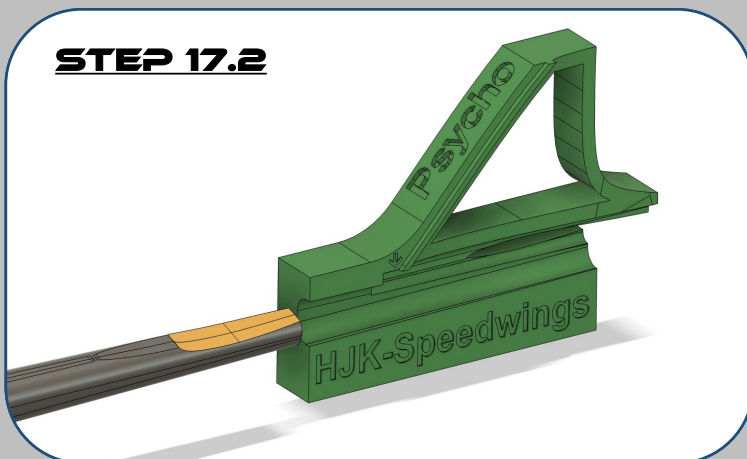
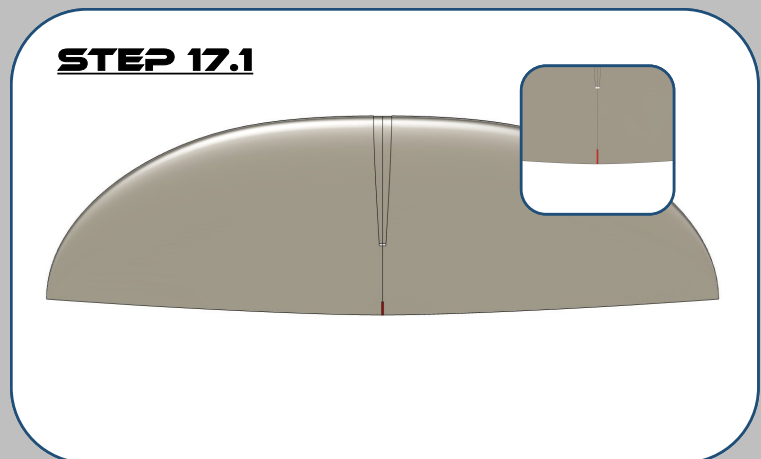
Assemble the depicted parts in the correct order as a test and check if everything fits together like Lego.

When assembling, make sure that the arrow on the 3D printed part points to the beginning of the Horizontal Stabilizer fit on the fuselage.



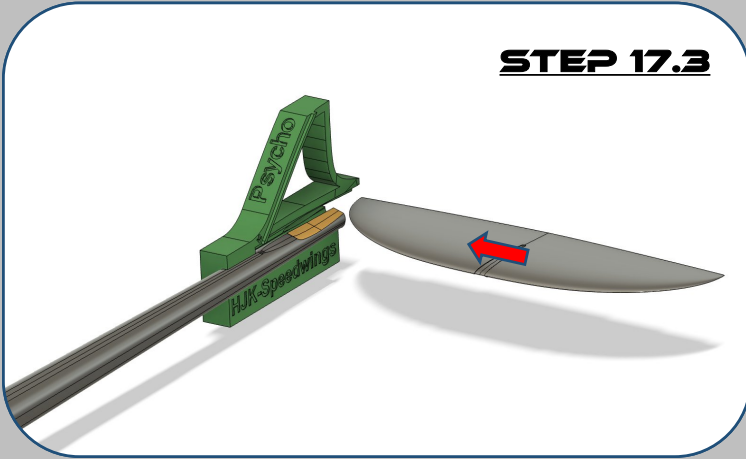
## **STEP 17**

Measure the center of the horizontal stabilizer and mark it on the elevator with a pen for later.



Apply a thin layer of the included two-component adhesive to the bonding area (marked in yellow) on the fuselage, and gently twist it to the right as you slide it into the 3D printed part until the arrow on the 3D printed part points to the beginning of the Horizontal Stabilizer fit on the fuselage.

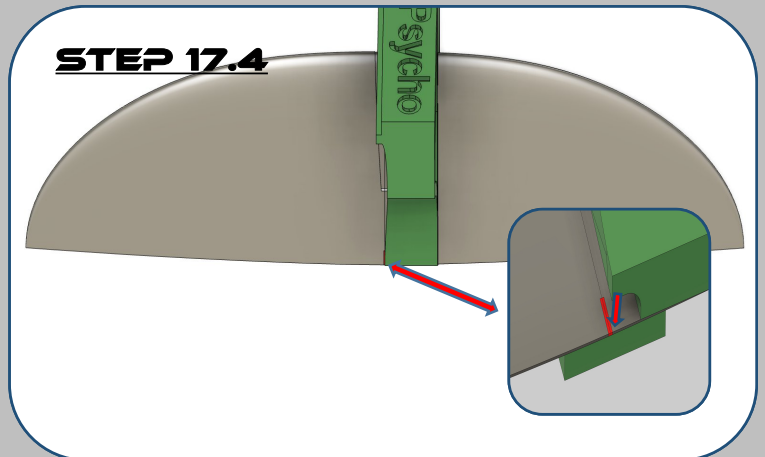
### **STEP 17.3**



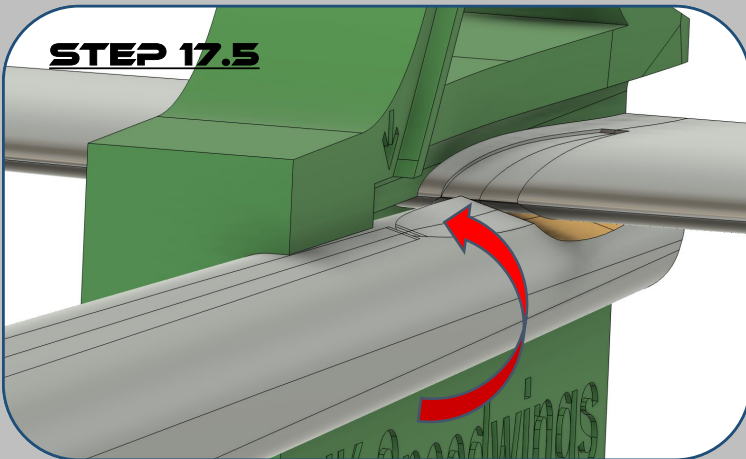
**Slide the horizontal stabilizer into the designated slot in the 3D printed part.**

**Adjust the Horizontal Stabilizer so that the end of the 3D printed part is aligned with the previously marked point on the elevator.**

### **STEP 17.4**



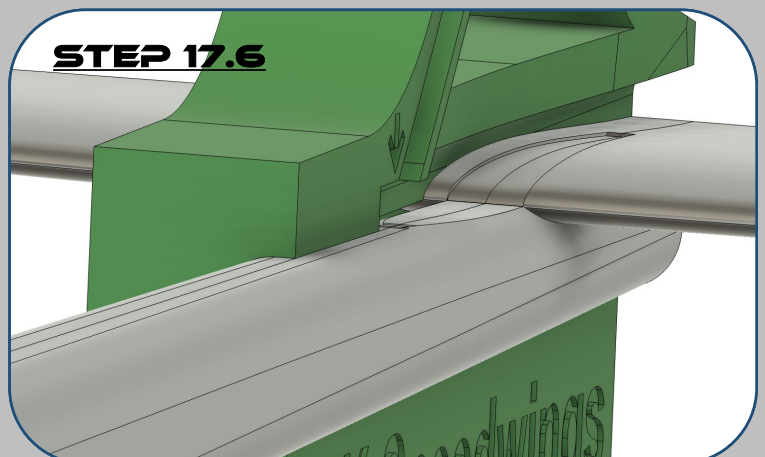
### **STEP 17.5**



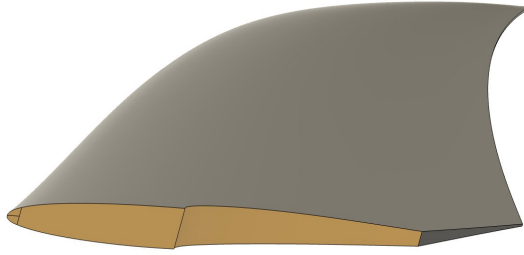
**Turn the fuselage into the correct position so that the fuselage seam aligns with the 3D printed part.**

**Check that the Horizontal Stabilizer fitting is properly seated on the fuselage.**

### **STEP 17.6**



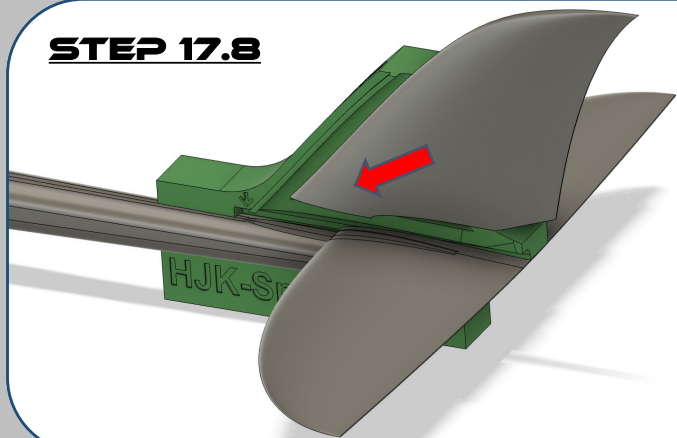
**STEP 17.7**



Apply a thin layer of the included two-component adhesive to the bonding area (marked in yellow) on the vertical stabilizer.

Press the vertical stabilizer into the 3D printed part with light pressure on it, and secure everything with clamps.

**STEP 17.8**

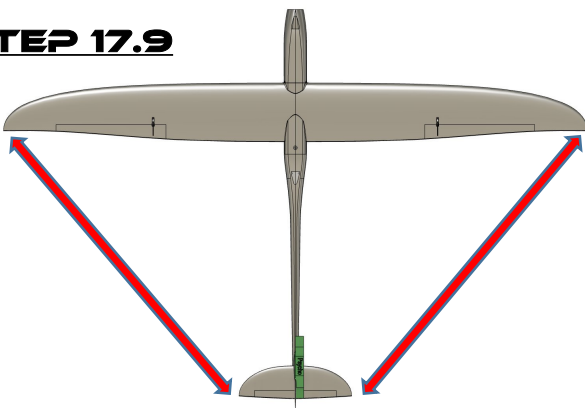


**STEP 17.9**

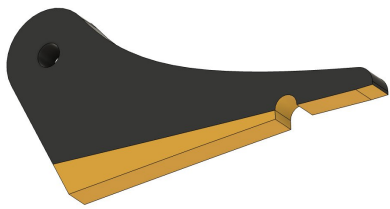


Fix the wing to the fuselage with tape, then check from the front and above to ensure that the wing is aligned with the horizontal stabilizer.

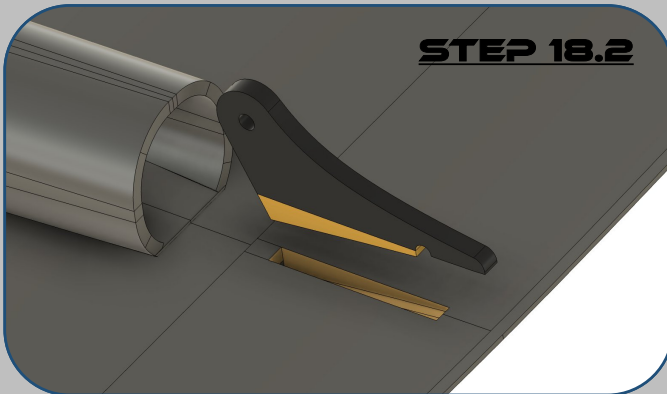
**STEP 17.9**



### **STEP 18.1**



### **STEP 18.2**



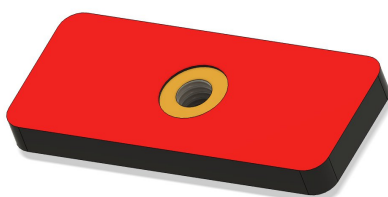
## **STEP 18**

Apply a thin layer of the included two-component adhesive to the control horn and the control horn cutout at the bonding area (**marked in yellow**), then glue them together. Press gently downward and let it cure for 24 hours at room temperature.

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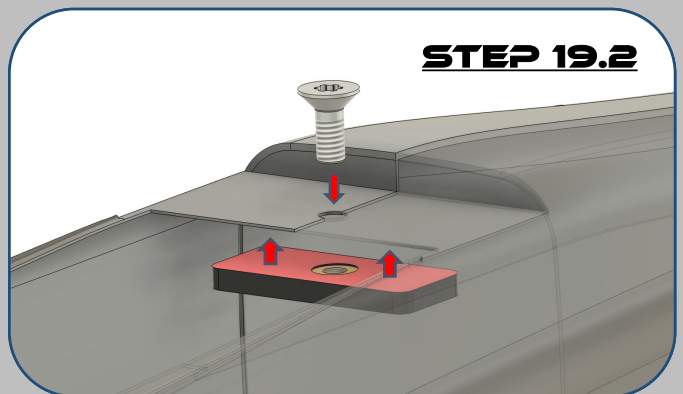
## **STEP 19**

### **STEP 19.1**



Sand the wing mounting plate on the underside (**marked in red**) with the included sandpaper, then degrease.

### **STEP 19.2**



Apply a thin layer of the included two-component adhesive to the wing mounting plate on the underside (**marked in red**), then glue the part into the fuselage as shown in the picture. Tighten it slightly with the wing screw and let it cure for 24 hours.

## STEP 20

### STEP 20.1



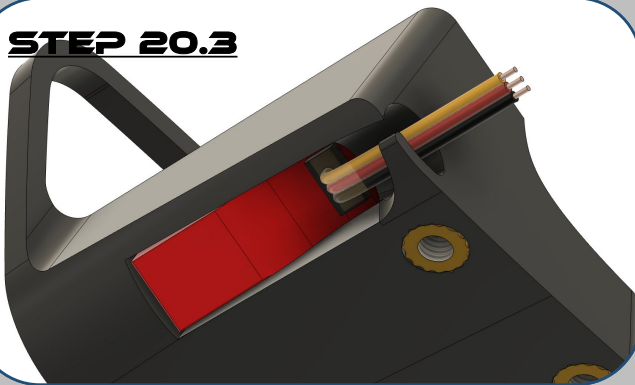
Insert the servo into the 3D printed servo holder and secure everything with the screws included in the servo packaging.

Attach the aluminum servo arm to the servo (with the servo in the neutral position) and tighten the screw.

### STEP 20.2



### STEP 20.3

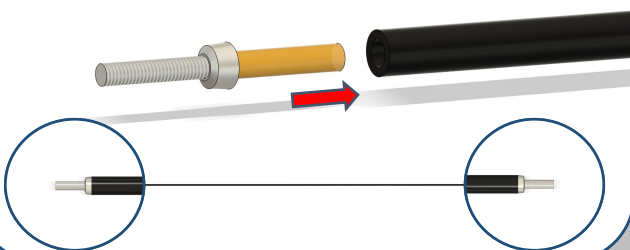


Pull the servo cable into the designated holder. It is designed in such a way that you don't need to cut off the servo plug, as the length of the servo cable is sufficient.

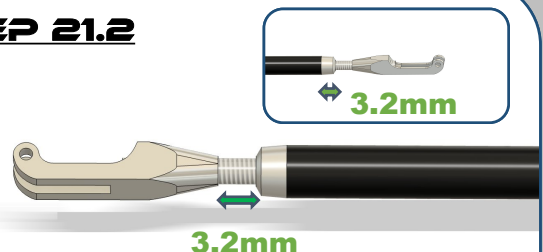
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## STEP 21

### STEP 21.1



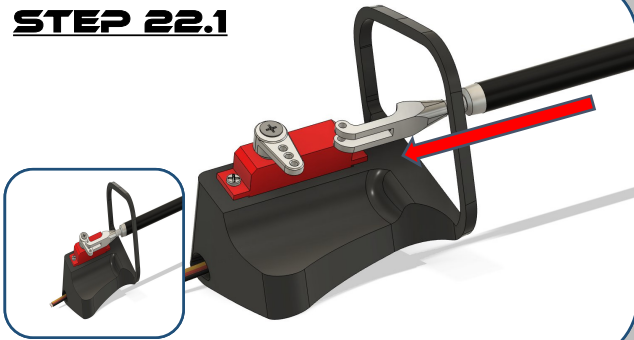
### STEP 21.2



Apply a thin layer of the included two-component adhesive to the threaded inserts at the **yellow-marked area** and glue them to the front and rear ends of the carbon tube (delivered in the correct length). Let everything cure for 24 hours at room temperature. Afterward, screw the clevises onto the threads at the **specified measurement** at both the front and rear.

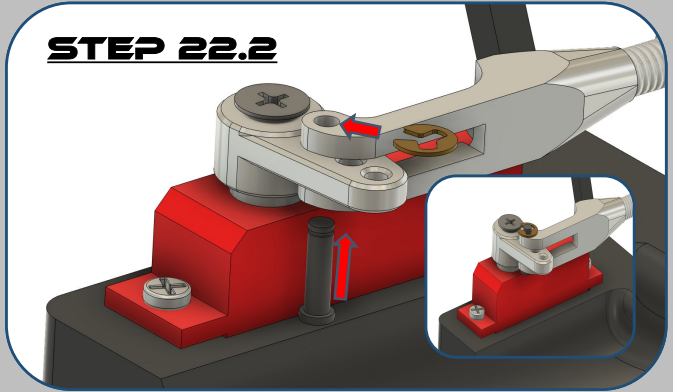
# **STEP 22**

## **STEP 22.1**



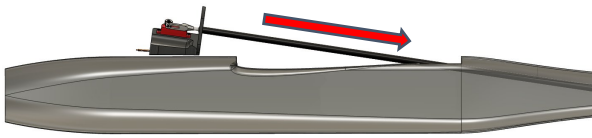
**Hook the pushrod with the clevis into the first hole of the servo arm.**

## **STEP 22.2**



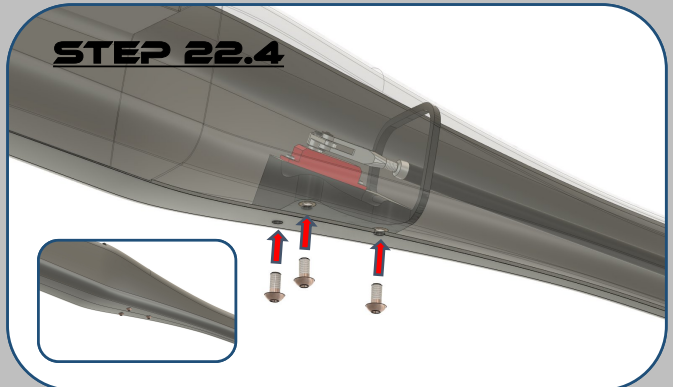
**Secure the front clevis with the pin and cotter pin.**

## **STEP 22.3**



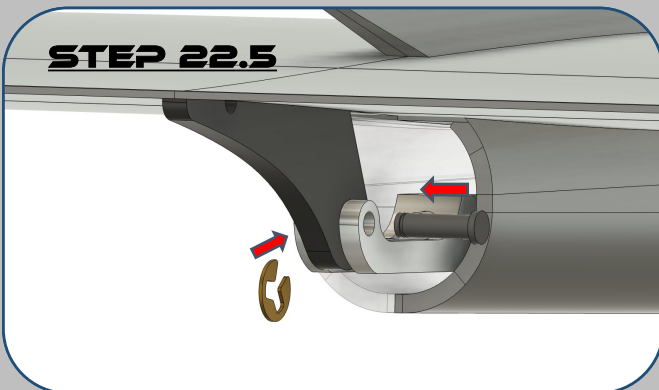
**Place the pushrod with the equipped servo frame into the fuselage and slide it backward until the servo frame fits securely due to its shape.**

## **STEP 22.4**



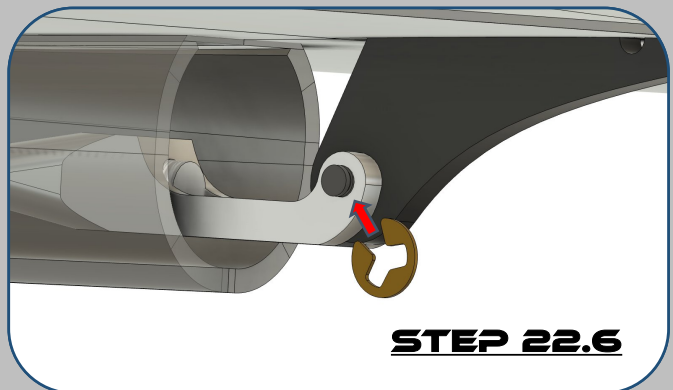
**Apply blue Loctite to the included M3 screws and tighten them through the pre-drilled holes to secure the servo frame.**

## **STEP 22.5**



**Connect the rear clevis and the control horn with the pin.**

## **STEP 22.6**

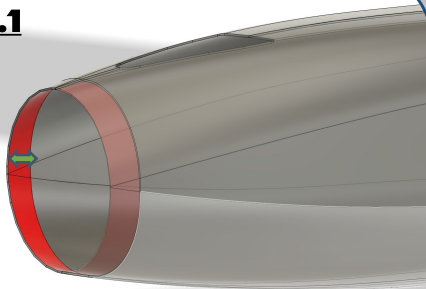


**Secure the pin with the cotter pin.**

# **STEP 23**

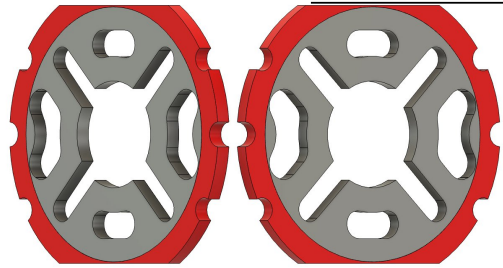
## **STEP 23.1**

5mm



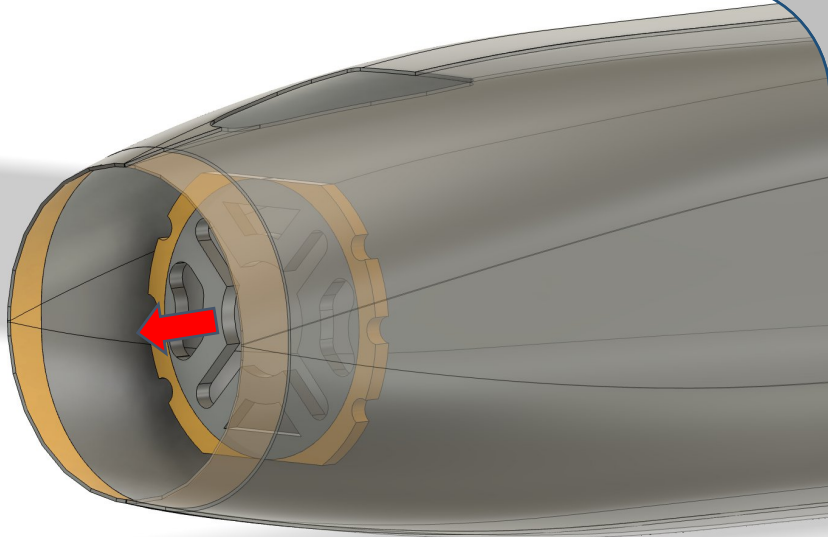
**Roughen the fuselage at the bonding areas (marked in red) with the included sandpaper, then degrease.**

## **STEP 23.2**



**Roughen the motor mount at the bonding areas on the front and rear sides (marked in red) with the included sandpaper, then degrease.**

## **STEP 23.3**

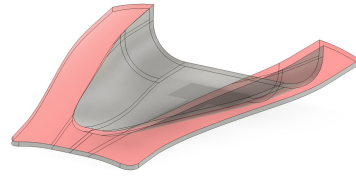


**Apply a thick layer of the included two-component adhesive to the motor mount and the fuselage interior at the bonding area (marked in yellow), and glue them together. Apply extra adhesive at the contact points between the motor mount and the fuselage to ensure a secure bond. Let everything cure for 24 hours at room temperature.**

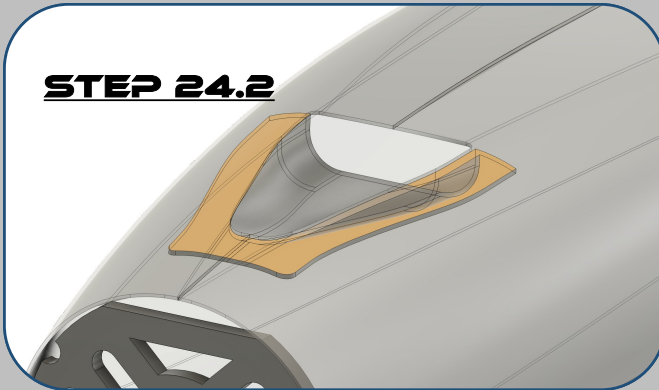
## **STEP 24**

Roughen the NACA duct on the top side (**marked in red**) and on the inside of the fuselage at the contact point using the supplied sandpaper, then degrease.

### **STEP 24.1**



### **STEP 24.2**



Lightly coat the NACA duct and the inside of the fuselage at the bonding area (**marked in yellow**) with the supplied two-component adhesive and bond them together.