RADIO CONTROL MODEL

Dago red

4 Unlimited Air Racer

INSTRUCTION MANUAL

SPECIFICATIONS

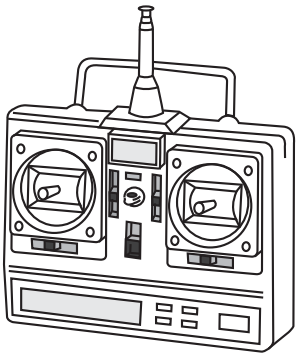
Wingspan.....57.5 in. / 146cm
Length.....50 in. / 127cm
Engine.....46 2T / .70 4T
or Electric equivalent
Radio.....

Almost ready to fly

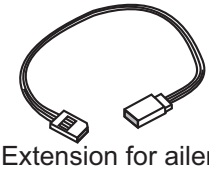
NEXA

WARNING! This radio control model is not a toy. If modified or flow carelessly it could go out of control and cause serious bodily injury or property damage.
Before flying your airplane, ensure the air field is spacious enough.
Always fly it outdoors in safe areas with no debris or obstacles.

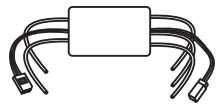
REQUIRED FOR OPERATION (Purchase separately)



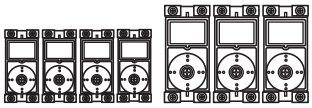
10.5x6 for .40 - 2 cycle engine
11x6 for .46 - 2 cycle engine
12x6 for .60 - 4 cycle engine
12x7 for .70 - 4 cycle engine
13x8 for G-46 HP Motor.



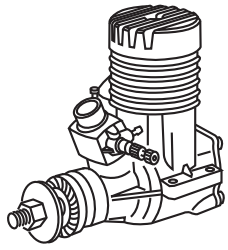
Extension for aileron servo, retract servo.



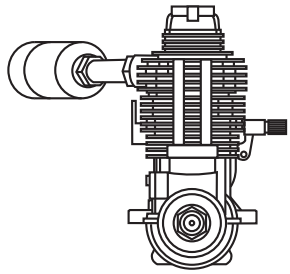
Motor Control



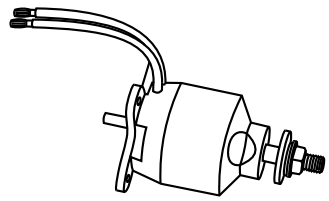
Minimum 7 channel radio for airplane with 7 servos
.Motor control x1
.Elevator x1
.Rudder x1
.Aileron x2 mini servo
.Flap x2 mini servo



.46 ~ .50 - 2 cycle

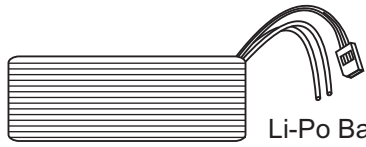


.60 ~.70 - 4 cycle



600-700Watt
Brushless motor

Silicone tube

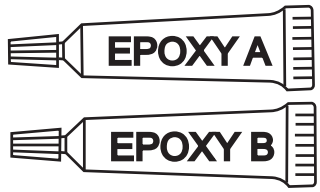


Li-Po Battery, 5 cell 4500mAh.

GLUE (Purchase separately)

Silicon sealer

Cyanoacrylate Glue

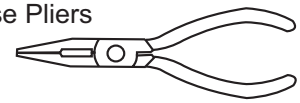


Epoxy Glue (5 minute type)
Epoxy Glue (30 minute type)

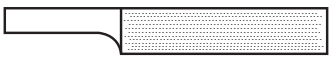
TOLLS REQUIRED (Purchase separately)

Hobby knife

Needle nose Pliers

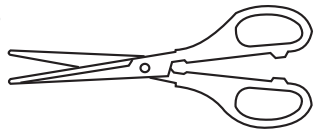


Sander



Phillip screw driver

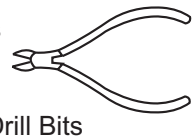
Scissors



Hex Wrench

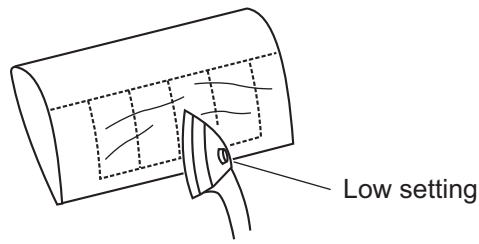
Awl

Wire Cutters



Masking tape - Straight Edged Ruler - Pen or pencil - Rubbing alcohol - Drill and Assorted Drill Bits

The pre-covered film on ARF kit may wrinkle due to variations of temperature. Smooth out as explained right.
* Use an iron or heat gun. Start as low setting. Increase the setting if necsessary. If it is too high, you may damage the film



Low setting

Symbols used throughout this instruction manual, comprise:

Drill holes using the stated size of drill (in this case 1.5 mm Ø)

Take particular care here

Hatched-in areas: remove covering film carefully

Check during assembly that these parts move freely, without binding

Use epoxy glue

Apply cyano glue

Assemble left and right sides the same way.

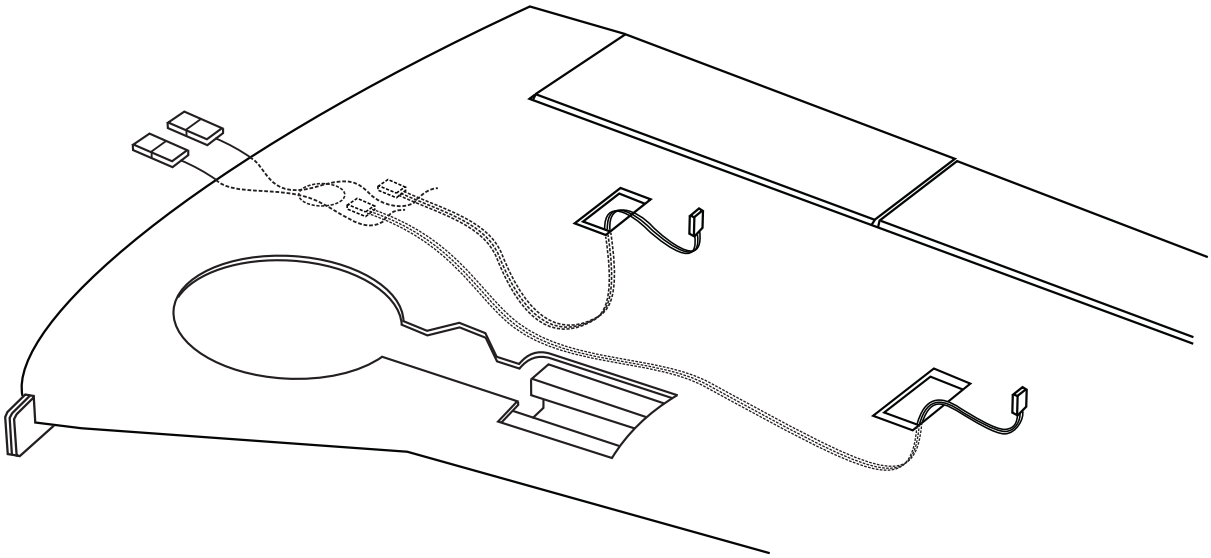
Not included. These parts must be purchased separately

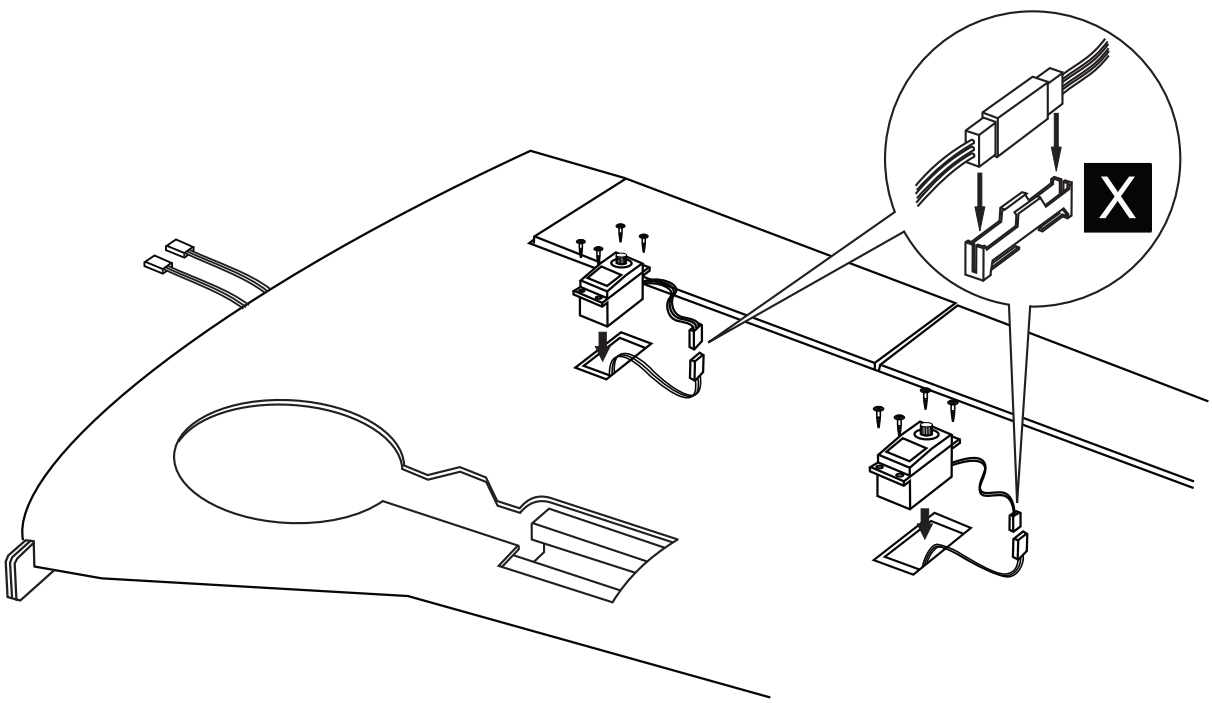
Read through the manual before you begin, so you will have an overall idea of what to do.

CONVERSION TABLE

1.0mm = 3/64”	3.0mm = 1/8”	10mm = 13/32”	25mm = 1”
1.5mm = 1/16”	4.0mm = 5/32”	12mm = 15/32”	30mm = 1-3/16”
2.0mm = 5/64”	5.0mm = 13/64”	15mm = 19/32”	45mm = 1-51/64”
2.5mm = 3/32”	6.0mm = 15/64”	20mm = 51/64”	

P-51 Voodoo 1- Servo & Control horn

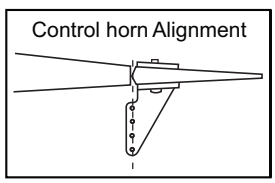


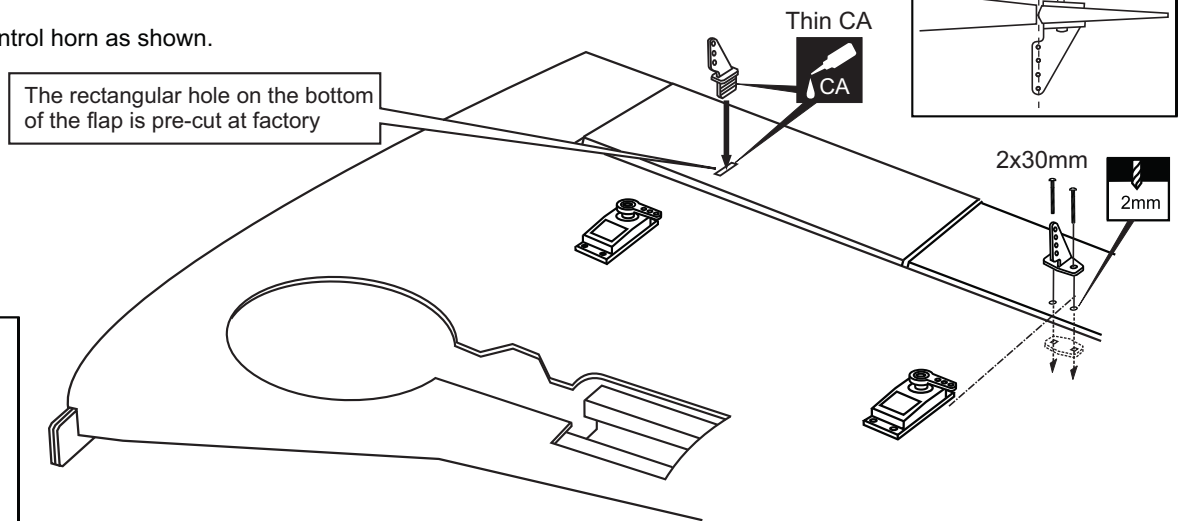


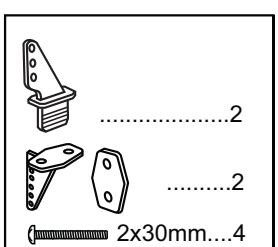
1-Depending on the position of the linkage, determine the location of aileron control horn.
The horn holes must be perfectly aligned with the axis of articulation.

2-Mark the position of the “foot” of the horn on the aileron. Then, with the drill, make the 2 holes.

3-Install the aileron control horn as shown.

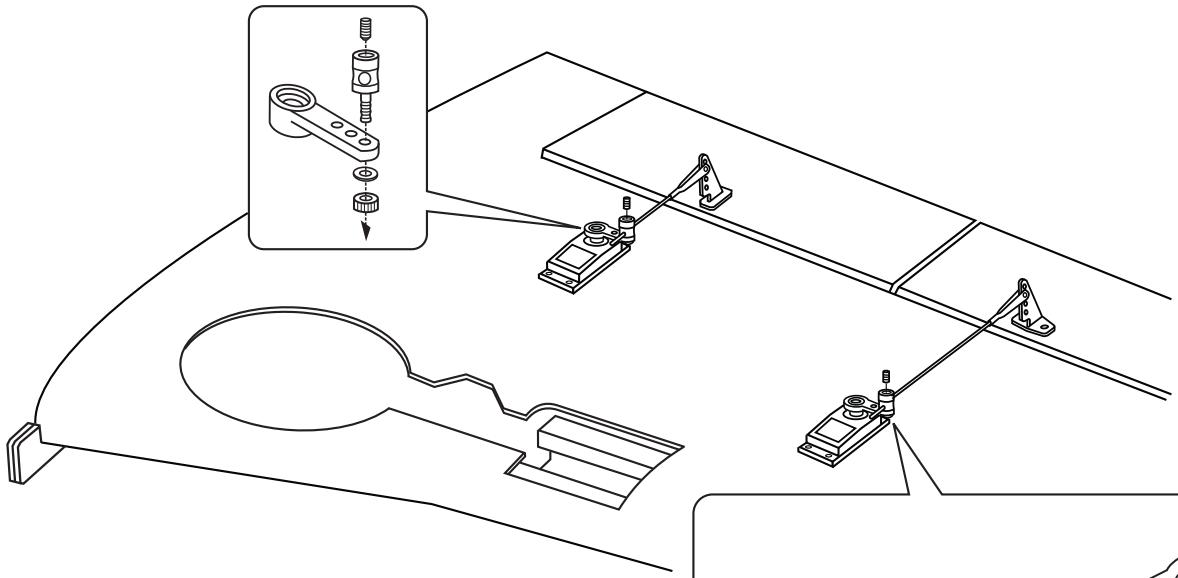




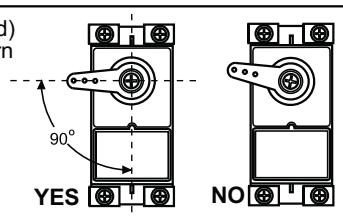


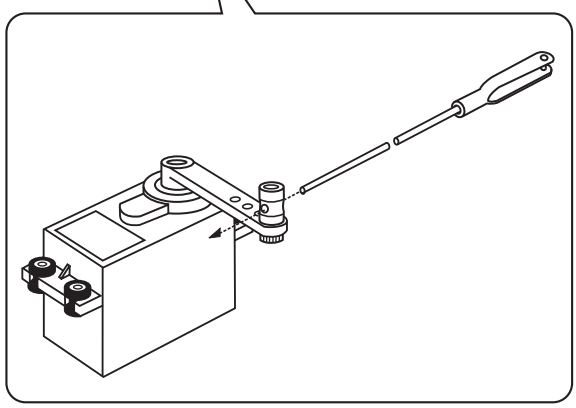
Do the same way with second wing half.

P-51 Voodoo 2- Aileron and flap linkages



-Switch on the radio (trims centered)
Then mount the ailerons servo horn
In neutral position.
-The servo horn should be
Perpendicular to the servo

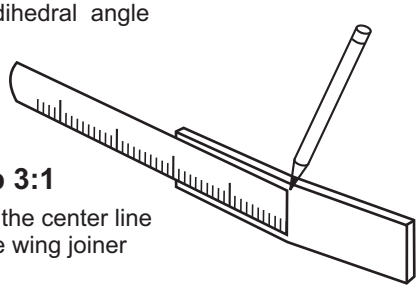




3- Joining the wing

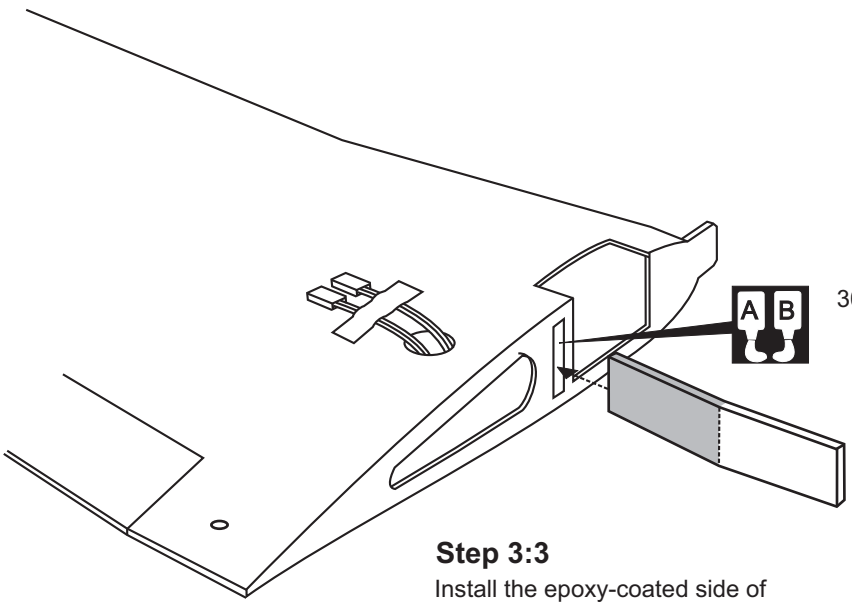
Before gluing:

- Draw the center line on the wing joiner.
- Trial fit each part before gluing . Be certain that there are no gaps. If the parts will join, but with a gaps, sand or trim the parts a little at a time until the parts meet exactly with no gaps.
- Check for the correct dihedral angle



Step 3:1

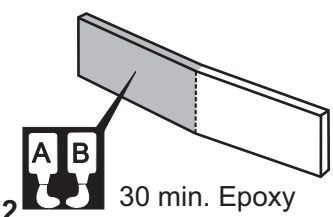
Draw the center line on the wing joiner



30 min. Epoxy

Step 3:3

Install the epoxy-coated side of the dihedral brace into the wing joiner cavity up to the center line.

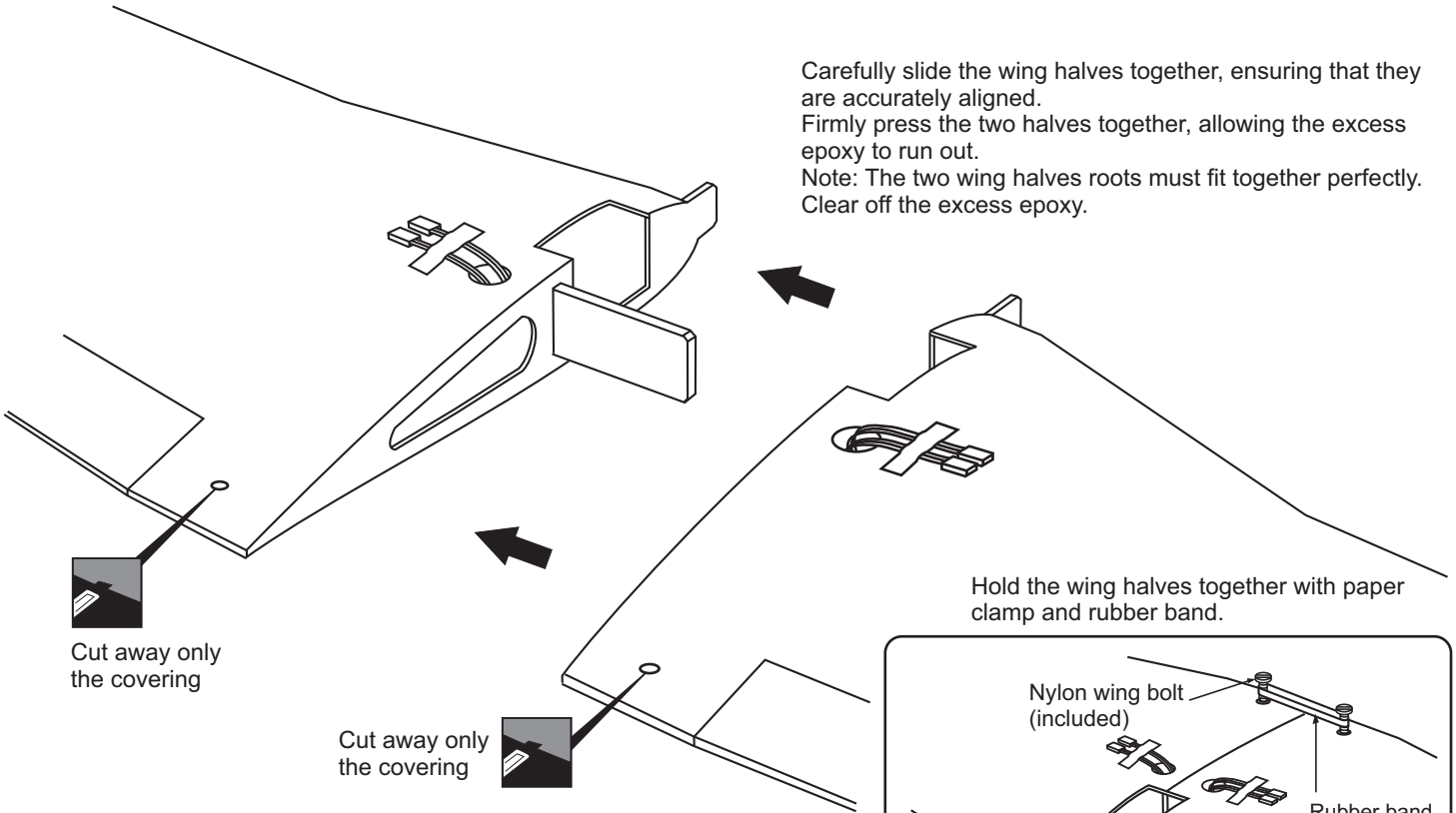


30 min. Epoxy

Step 3:2

Coat one half of the dihedral brace with epoxy up to the center line.

P-51 Voodoo 4- Joining the wing Continued

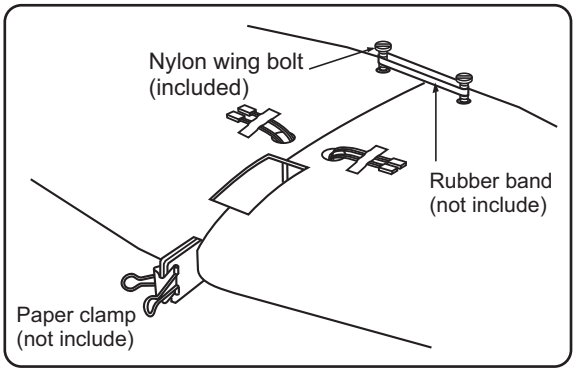


Carefully slide the wing halves together, ensuring that they are accurately aligned.
Firmly press the two halves together, allowing the excess epoxy to run out.
Note: The two wing halves roots must fit together perfectly.
Clear off the excess epoxy.

Cut away only the covering

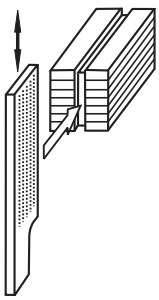
Cut away only the covering

Hold the wing halves together with paper clamp and rubber band.

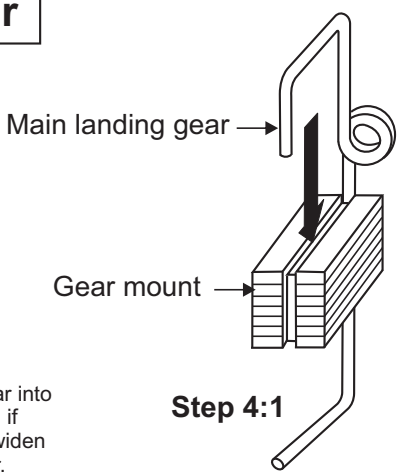


IMPORTANT: Please do not clean off the excess epoxy on the wing with strong solvent or pure alcohol, only use kerosene to keep the colour of your model not fade.

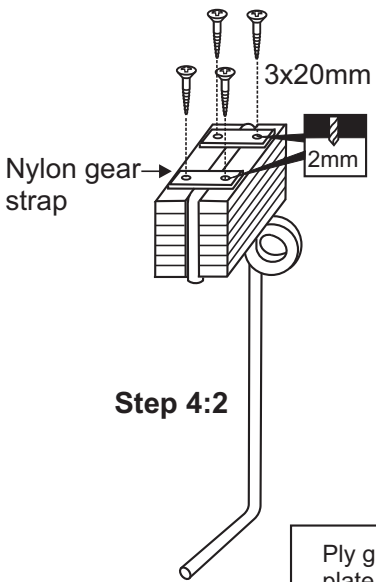
5- Fixed gear



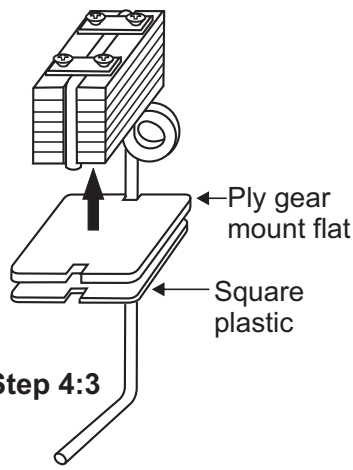
Insert the main landing gear into the slot on the gear mount, if necessary, use sander to widen the slot to make this easier.



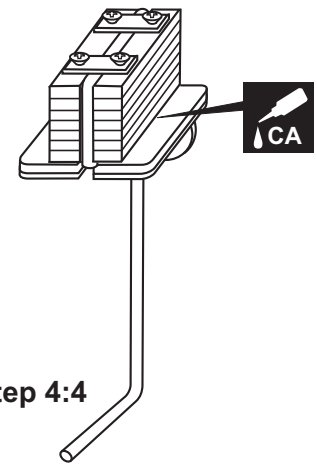
Step 4:1



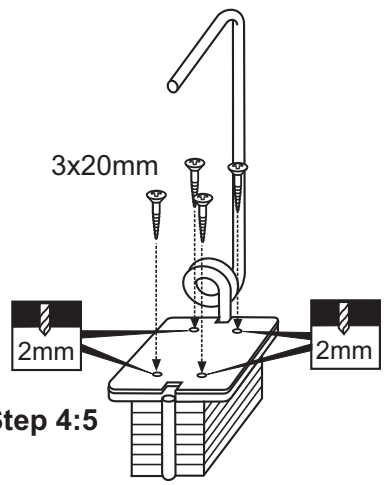
Step 4:2



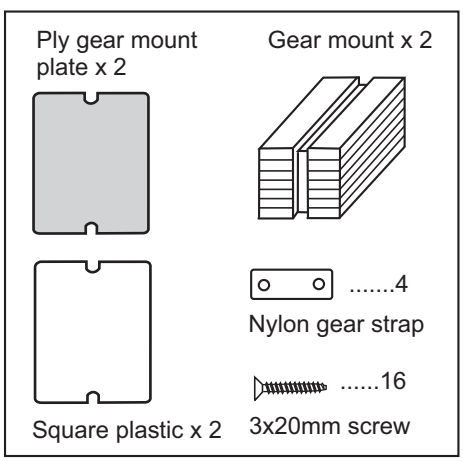
Step 4:3



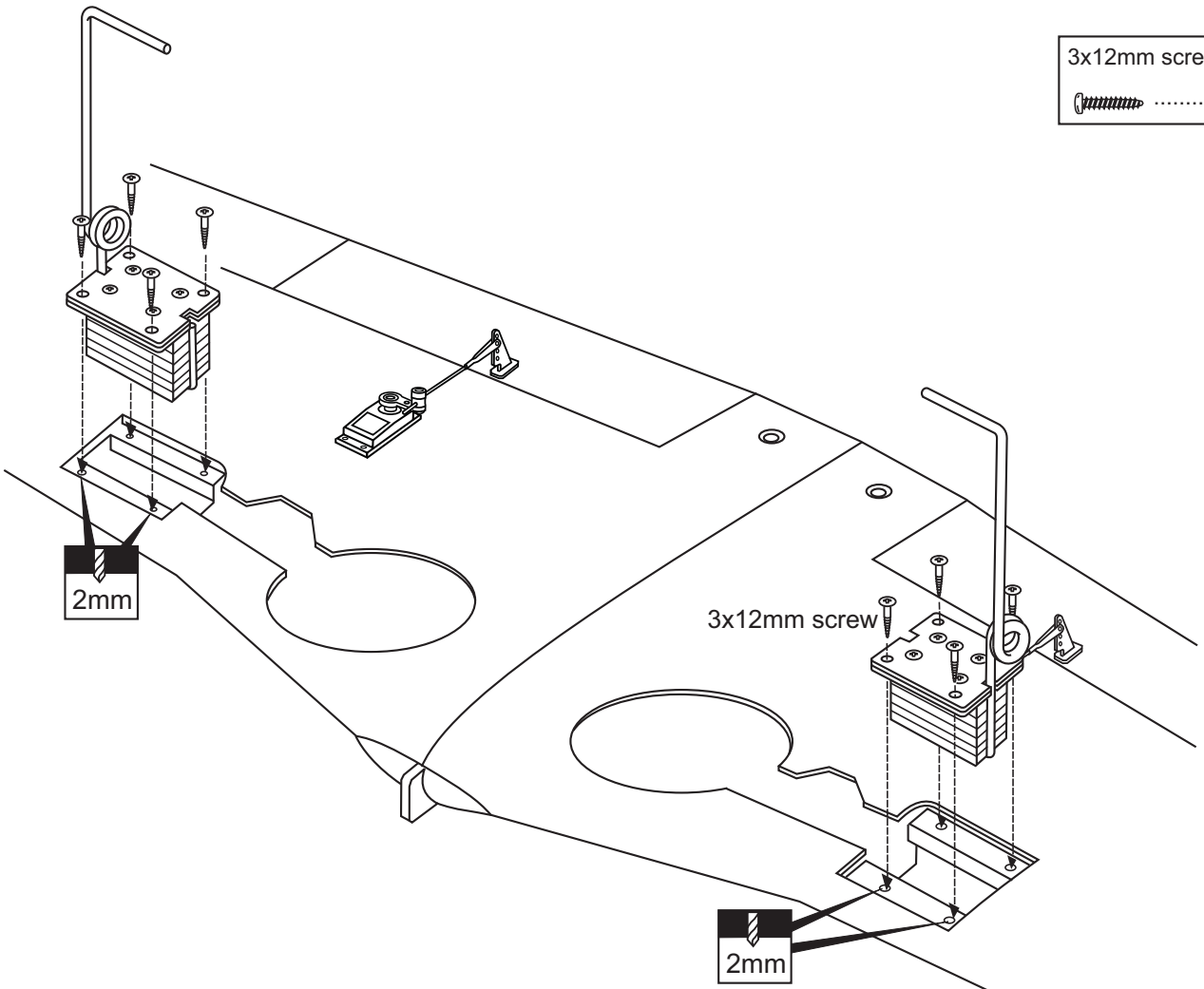
Step 4:4

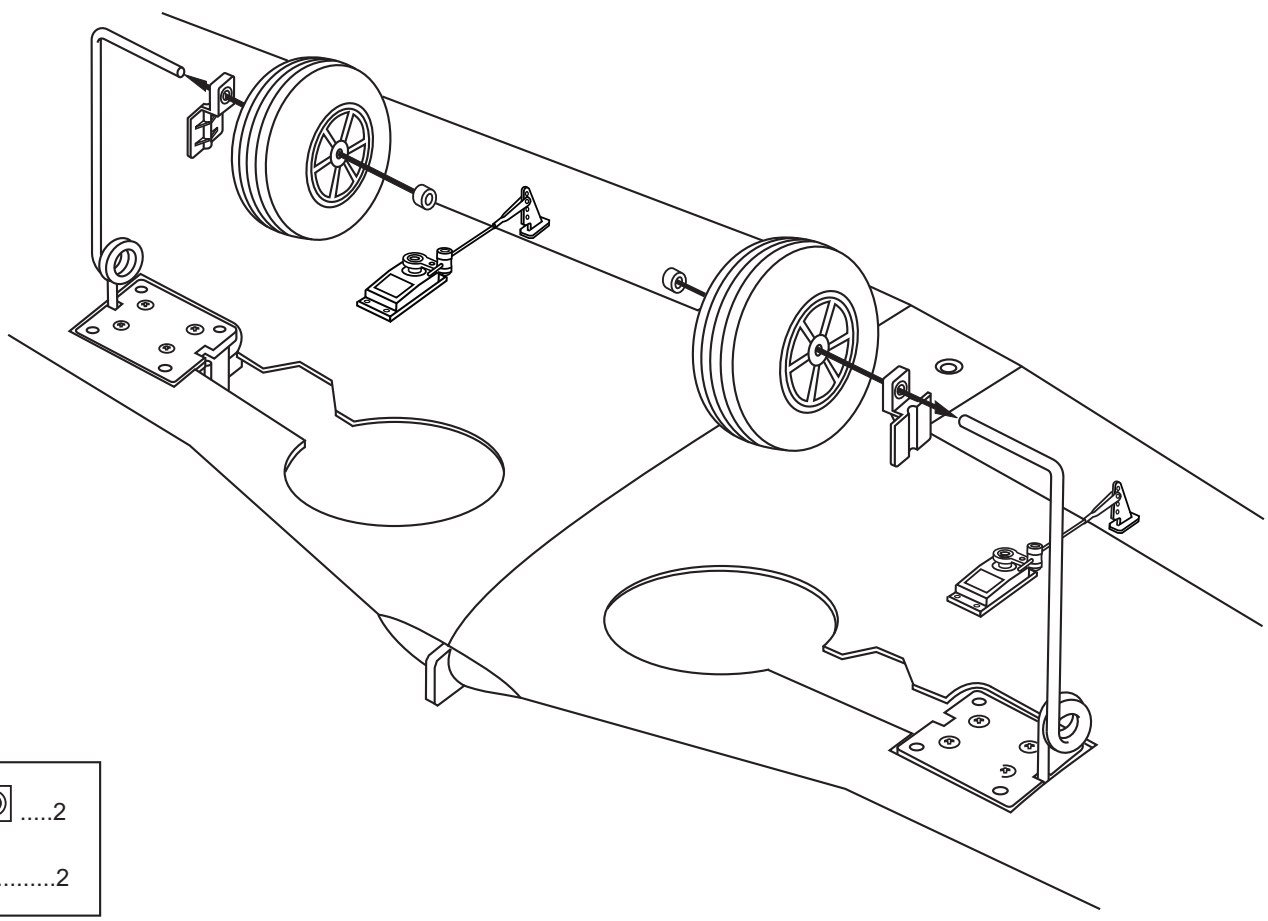


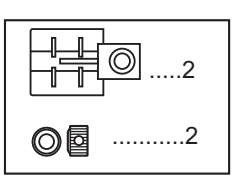
Step 4:5



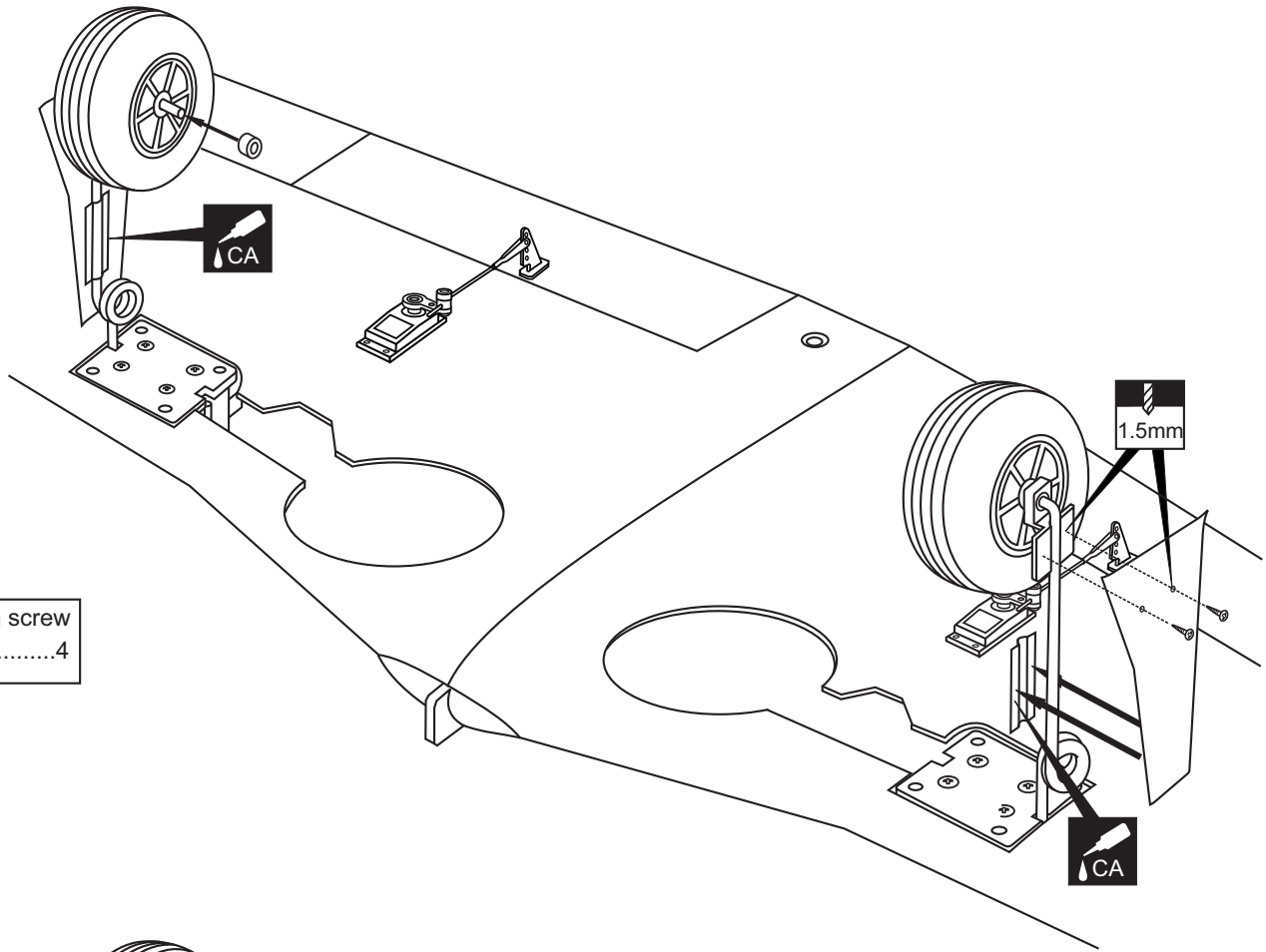
P-51 Voodoo 6- Fixed gear installation



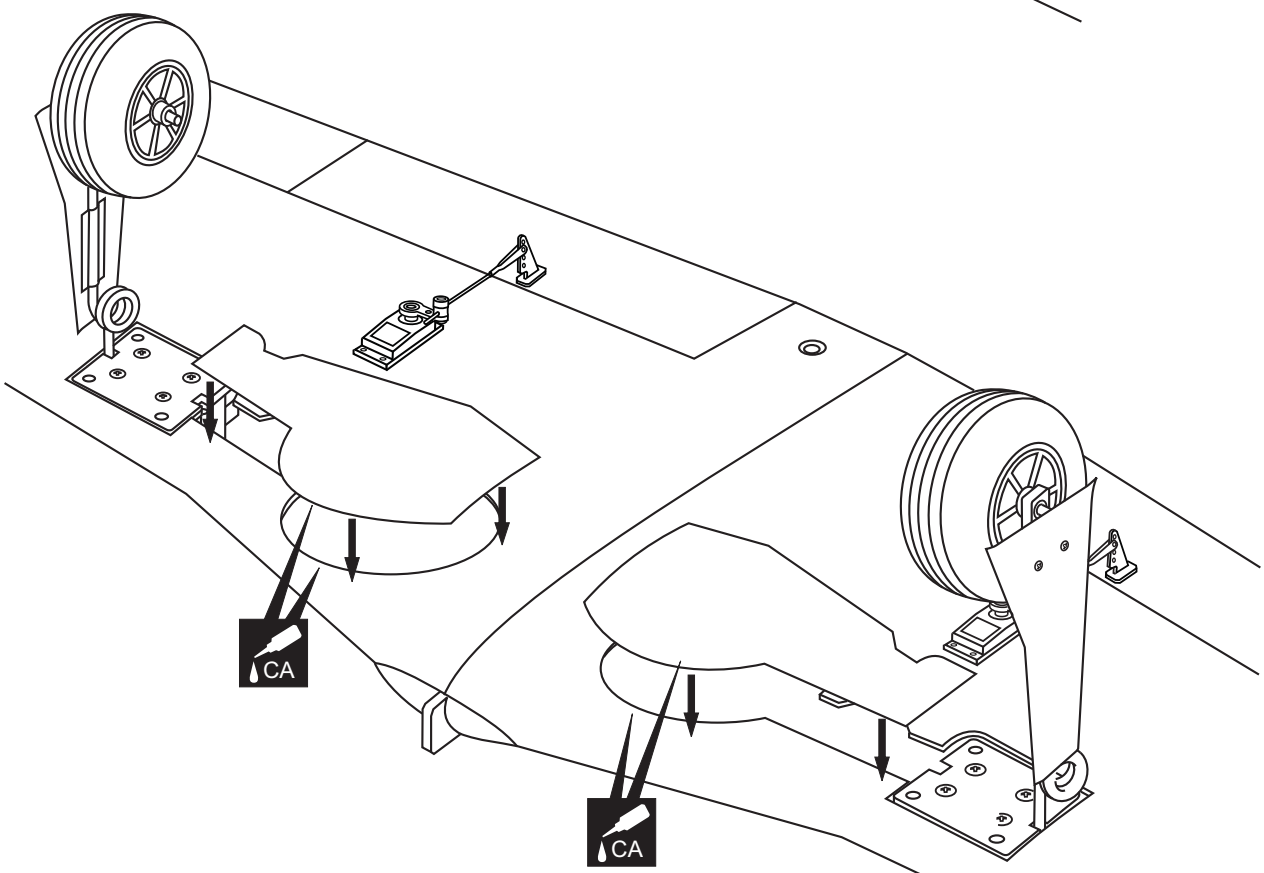




P-51 Voodoo 7- Main wheel



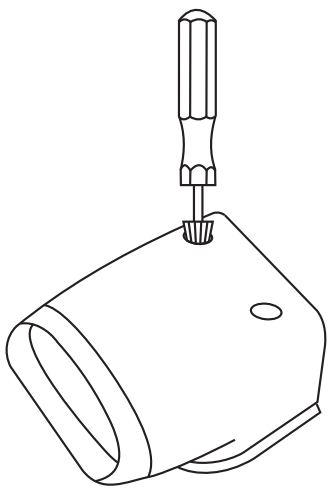
2mm screw
.....4

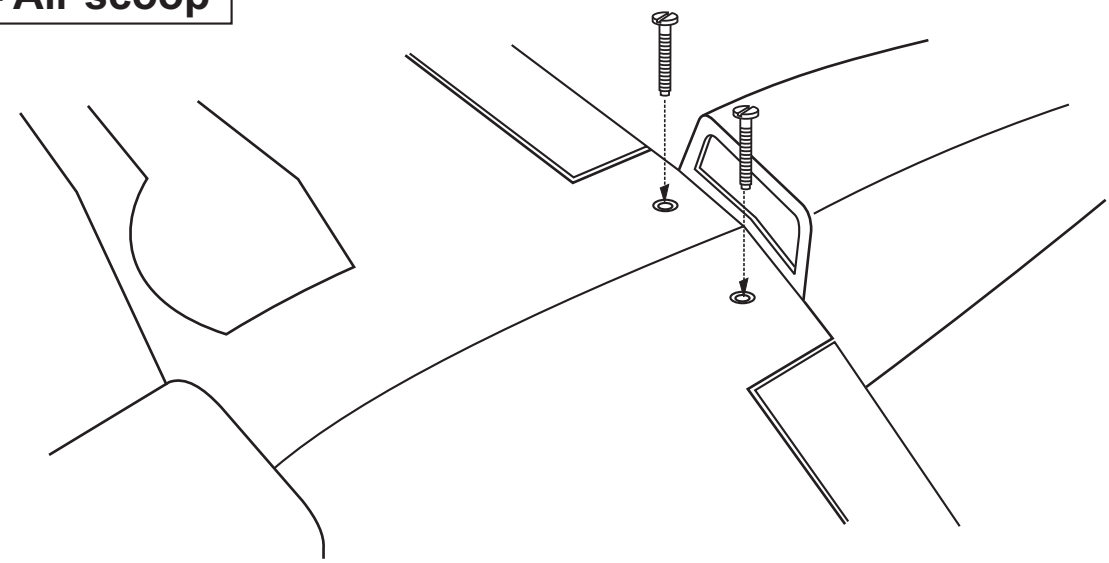


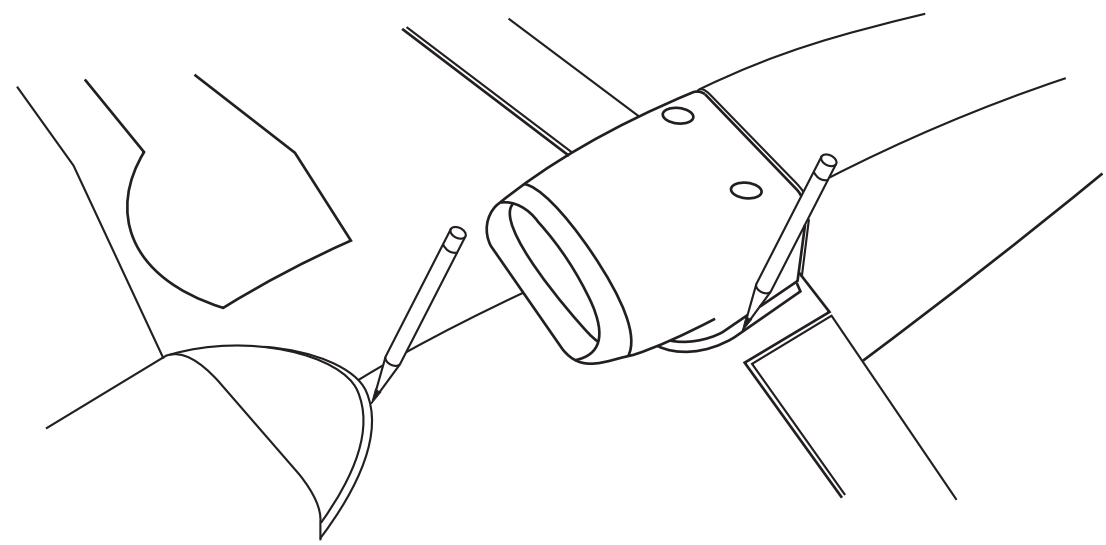
Note: you can use 2x8mm self tapping screws to fix the plastic cover if possible late you can use retract landing gear

P-51 Voodoo 8- Air scoop

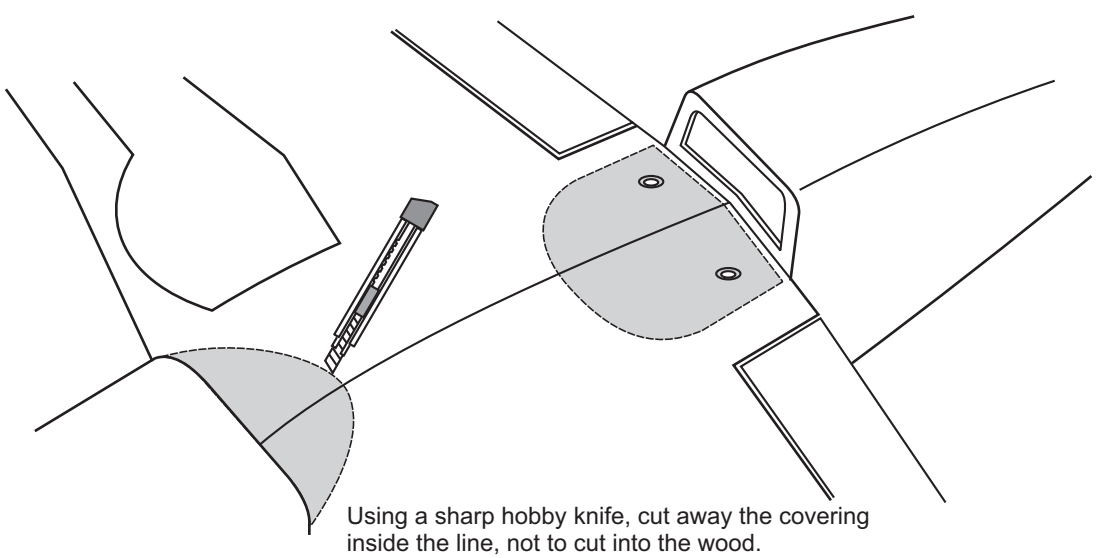
6x40mm nylon bolt 2



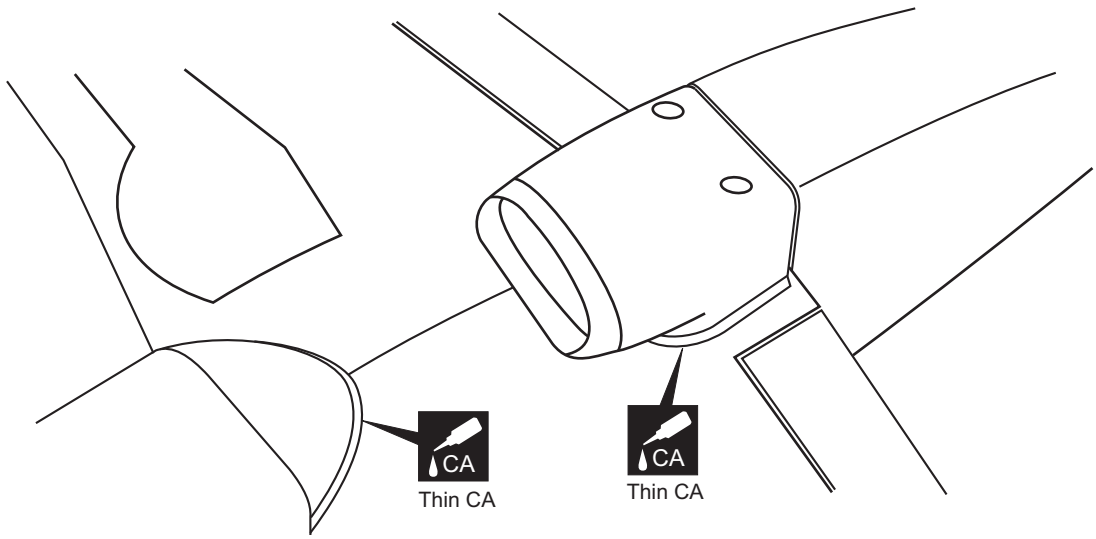




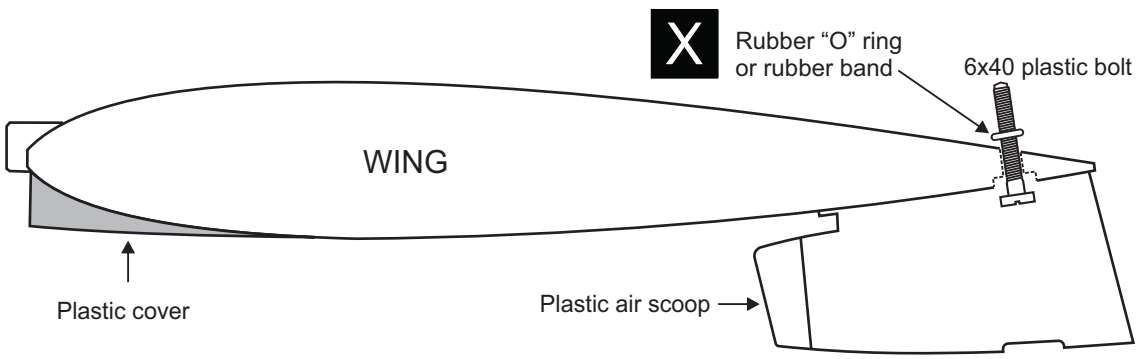
Using the plastic air scoop and wing shield as a template, with the pencil, trace around the outside edge of the air scoop and wing shield. then remove it

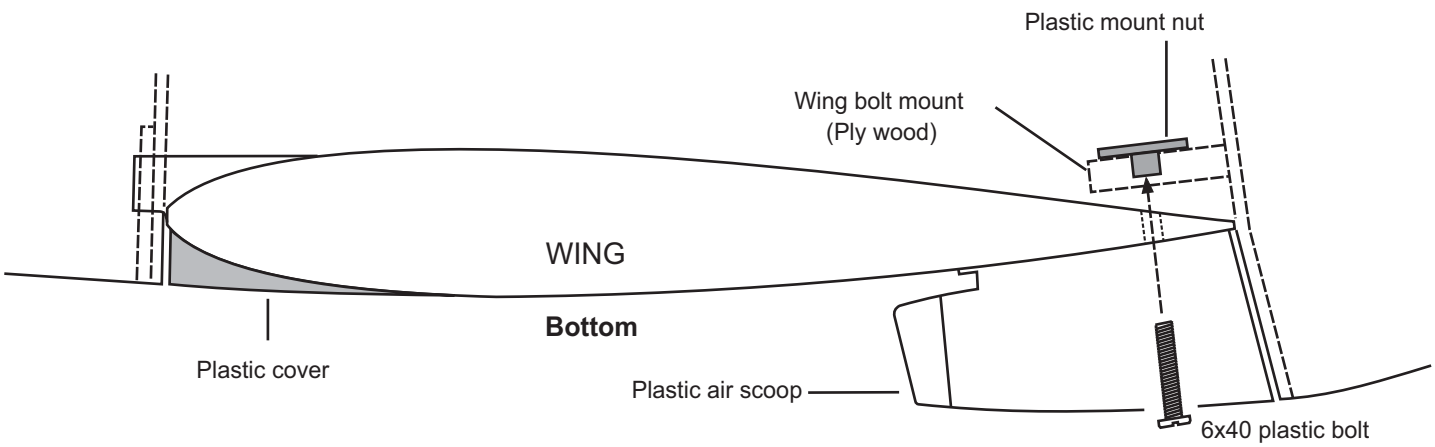


Using a sharp hobby knife, cut away the covering inside the line, not to cut into the wood.



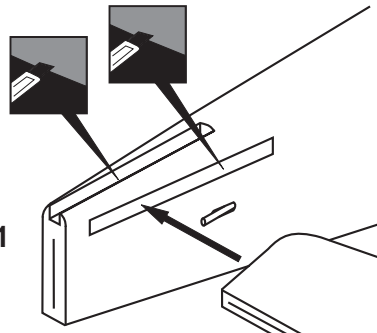
Note: This rubber “O” ring keeps the plastic bolt from coming out of the wing.





P-51 Voodoo 10- Horizontal stabilizer

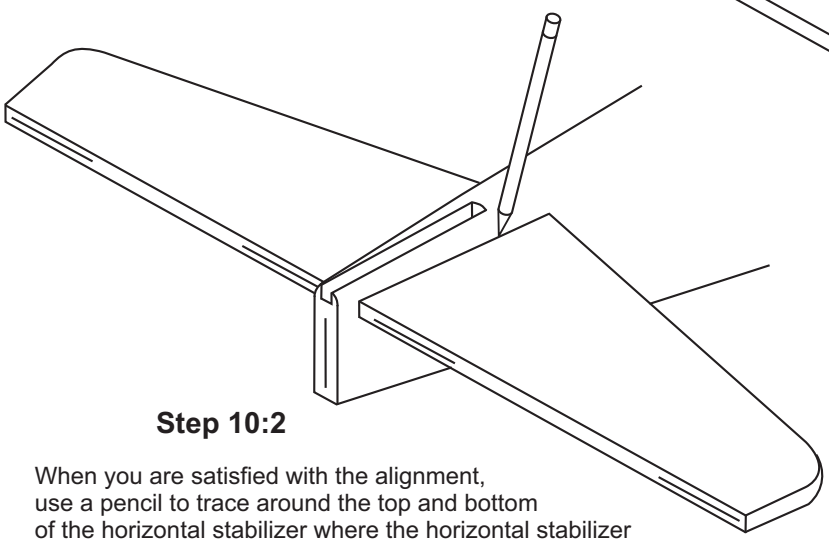
Cut away only the covering both the right and left side



Step 10:1

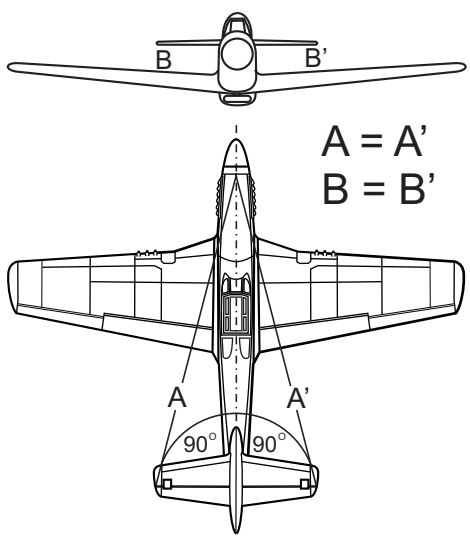
When you insert the horizontal stabilizer into the slot on the fuselage, if necessary, use sander to widen the slot to make this easier.

Trial fit the horizontal stabilizer in place .



Step 10:2

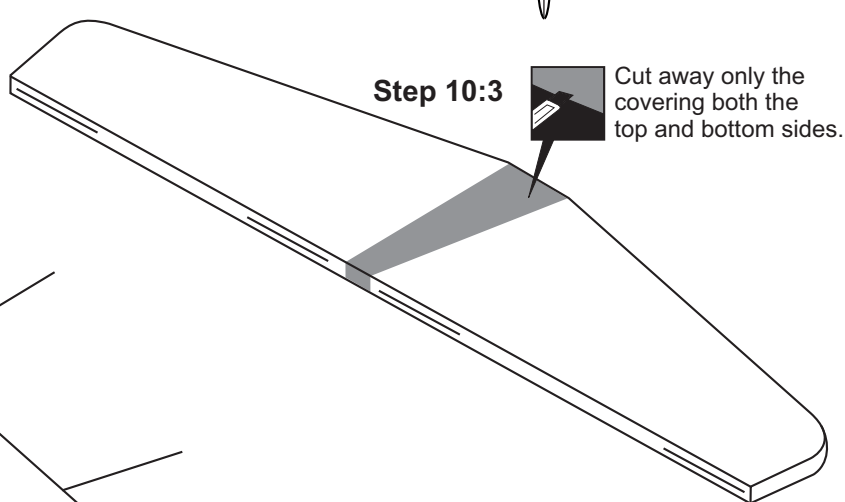
When you are satisfied with the alignment, use a pencil to trace around the top and bottom of the horizontal stabilizer where the horizontal stabilizer meet the fuselage.



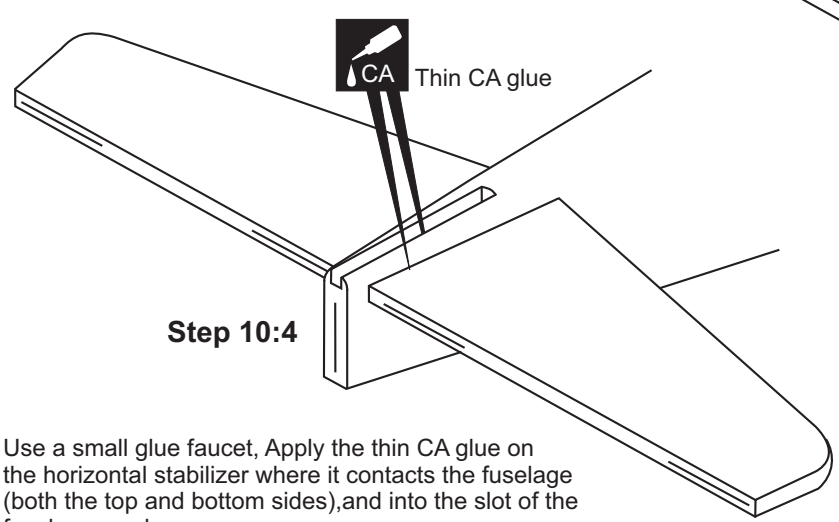
Remove the horizontal stabilizer from the fuselage. Using the sharp hobby knife, carefully cut away the covering **inside the lines** which were marked above.

Be cautious **not to cut into the wood**, this will weaken the structure**.**

Step 10:3



Cut away only the covering both the top and bottom sides.



Thin CA glue

Step 10:4

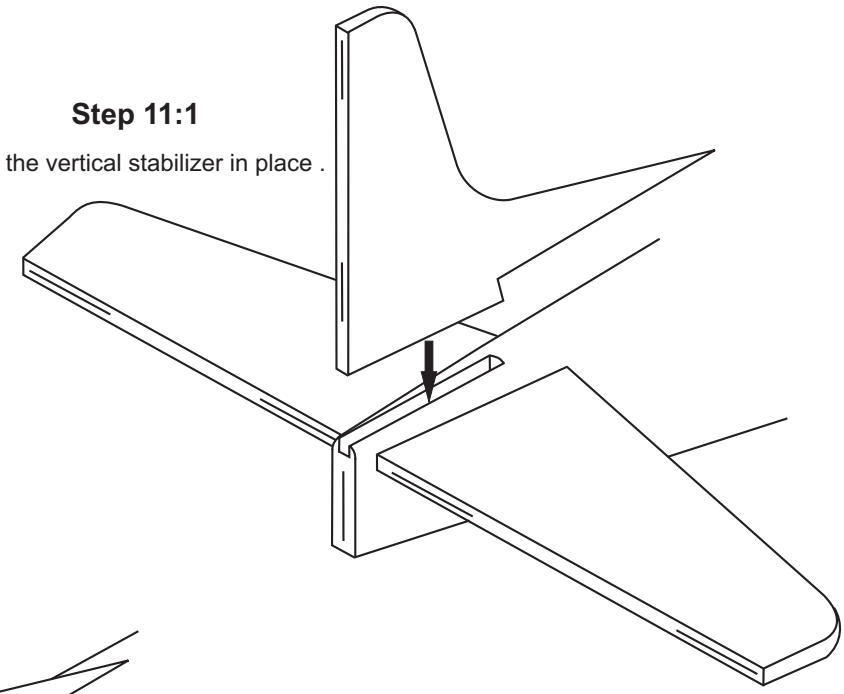
Use a small glue faucet, Apply the thin CA glue on the horizontal stabilizer where it contacts the fuselage (both the top and bottom sides),and into the slot of the fuselage as show.

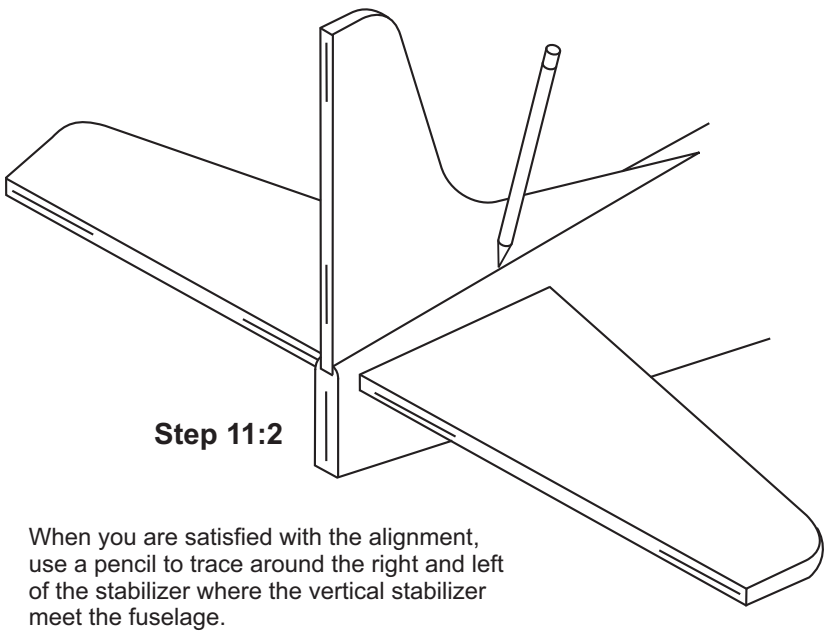
Securely glue together. If coming off during flight, you lose control of your air plane.

P-51 Voodoo 11- Vertical stabilizer

Step 11:1

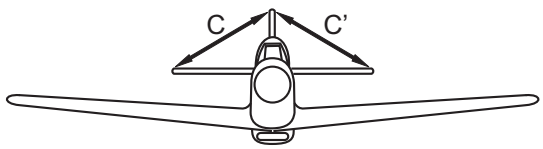
Trial fit the vertical stabilizer in place .



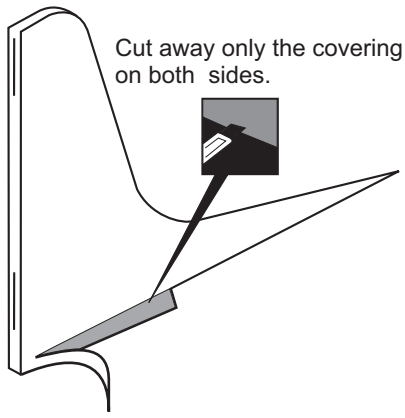


Step 11:2

When you are satisfied with the alignment, use a pencil to trace around the right and left of the stabilizer where the vertical stabilizer meet the fuselage.



C = C'

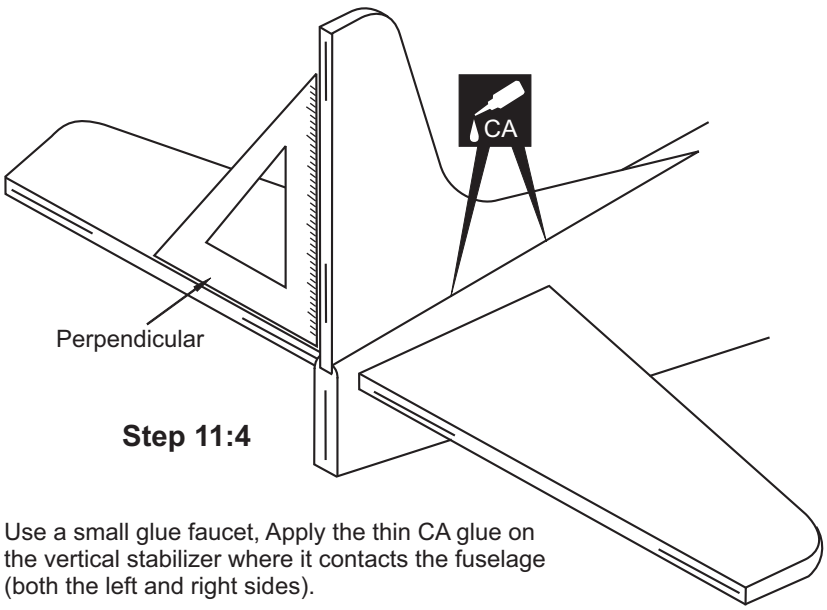


Step 11:3

Cut away only the covering on both sides.

Remove the vertical stabilizer from the fuselage. Using the sharp hobby knife, carefully cut away the covering **inside the lines** which were marked above.

Be cautious **not to cut into the wood**, this will weaken the structure**.**



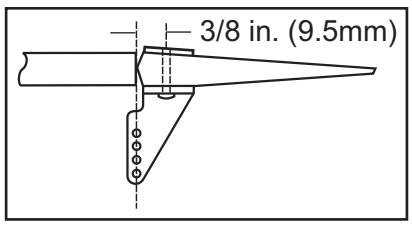
Step 11:4

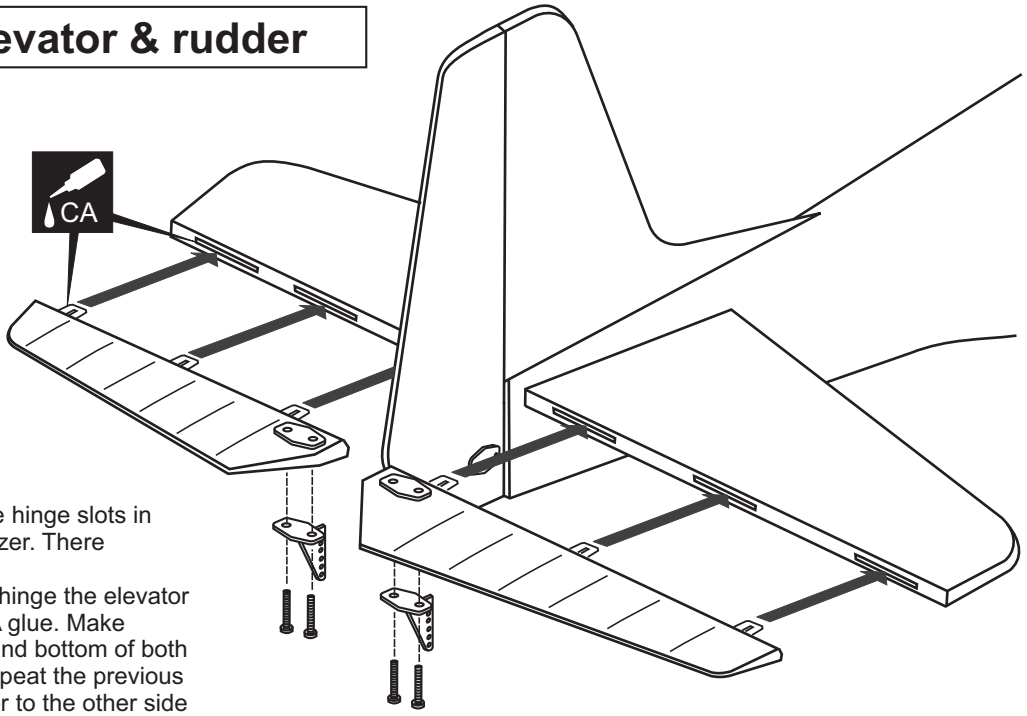
Use a small glue faucet, Apply the thin CA glue on the vertical stabilizer where it contacts the fuselage (both the left and right sides).

Securely glue together. If coming off during flight, you lose control of your air plane.

P-51 Voodoo 12- Elevator & rudder

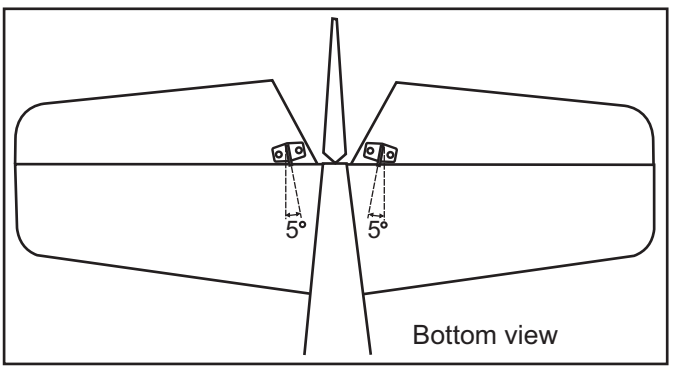
Securely glue together. If coming off during flight, you lose control of your air plane.

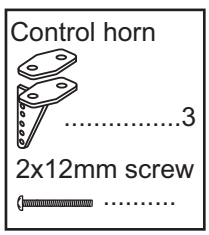


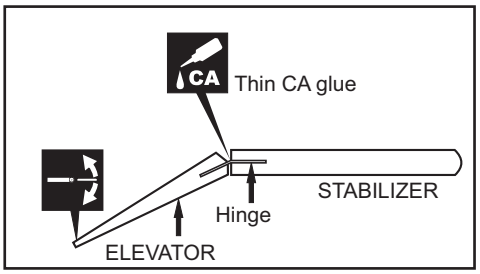


push the elevator and its hinges into the hinge slots in the trailing edge of the horizontal stabilizer. There should be a minimal hinge gap.
When satisfied with the and alignment, hinge the elevator to the horizontal stabilizer using thin CA glue. Make sure to apply a thin CA glue to the top and bottom of both hinges and to inside the hinge slots. Repeat the previous procedures to hinge the second elevator to the other side of the horizontal stabilizer.

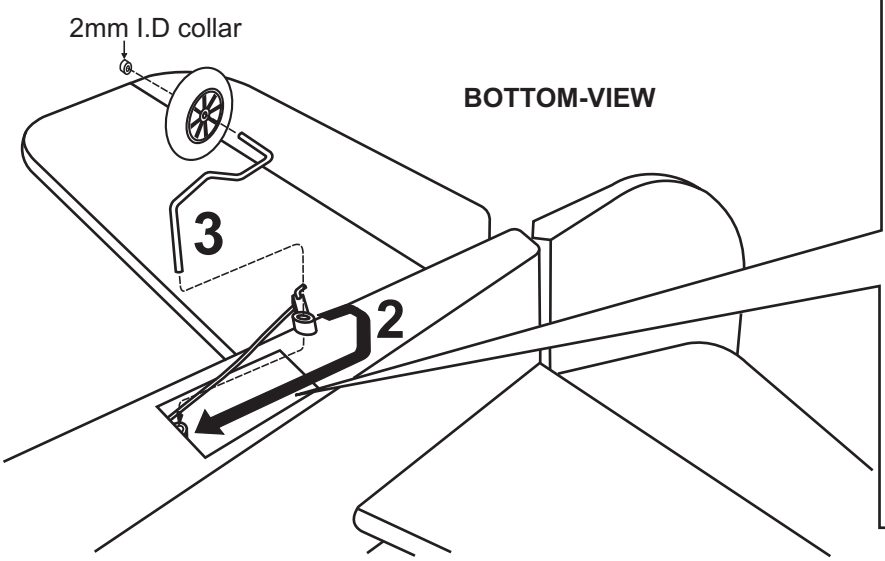
Do the same way with rudder.

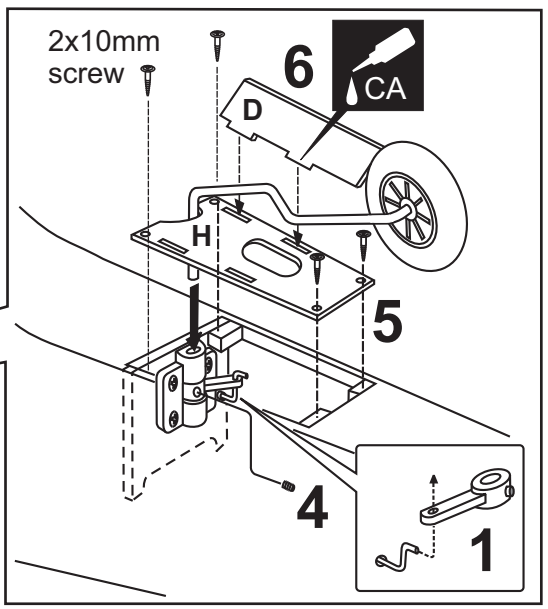






13- Tail wheel





1- Insert the tail wheel pushrod (1.2x800mm with “Z” bend one end) into the hole on the tail gear control as shown.

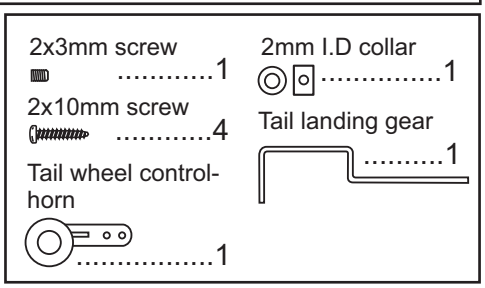
2- Install the tail wheel control horn in place.

3- Instal the tail wheel gear in place.

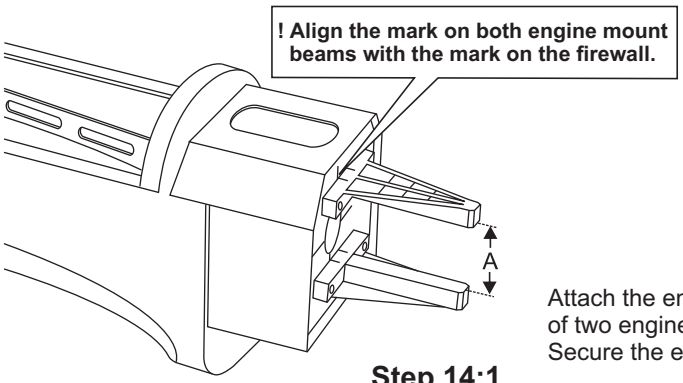
4- Secure the tail wheel control horn in place using a 2mm screw set, Ensure smooth non-binding movement.

5- Installing the tail wheel hatch (H) in place using a four 2x10mm self tapping screws.

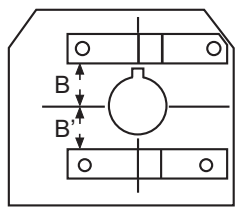
6- Attach the tail wheel doors (D) in place using CA glue.



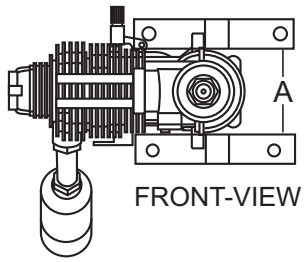
P-51 Voodoo 14- Engine mount & Engine



Step 14:1



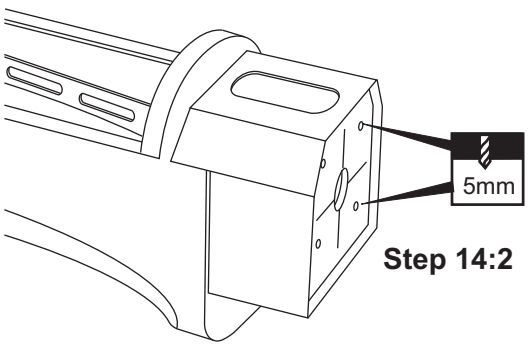
B=B'



FRONT-VIEW

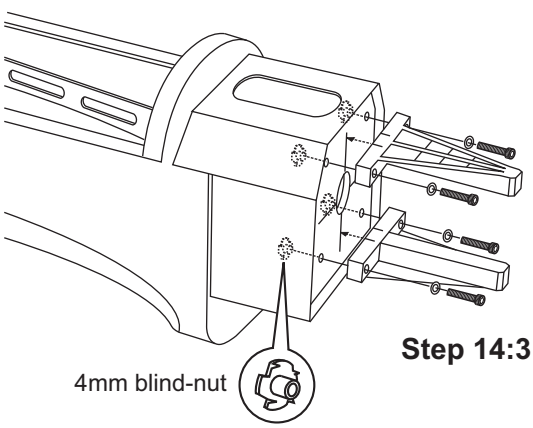
Attach the engine mount beams onto the fire-wall so the distance between of two engine mount beams is "A",and B=B' as show.
Secure the engine mount beams onto the fire-wall with litter CA glue.

Using a pencil or felt tipped pen, mark the fire wall where the four holes are to be drilled



Step 14:2

Remove the engine mount and drill a 5mm hole through the fire-wall at each of the four marks marked.

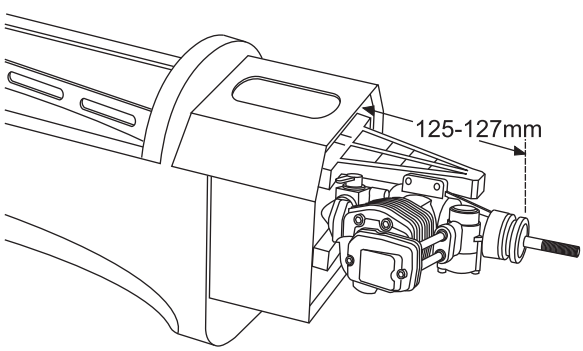


Step 14:3

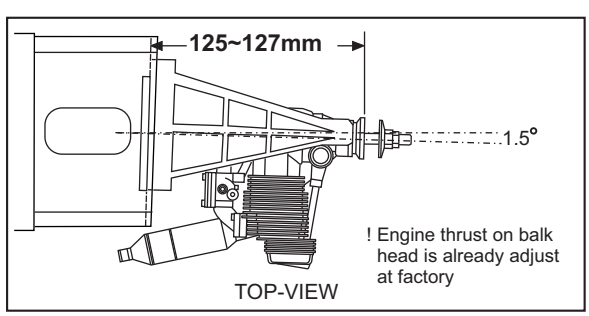
Reposition the engine mounts on to the fire-wall.
Attach the four blind-nut to the fire-wall as show.
Secure them with four 4x25mm hex bolts.

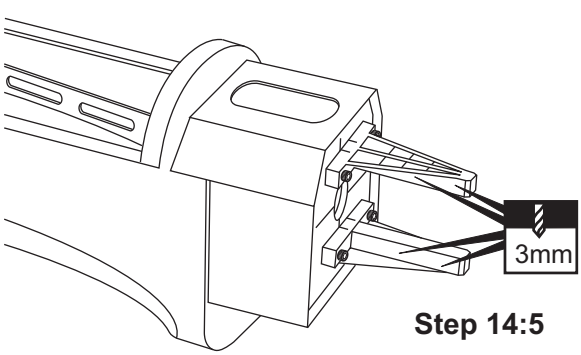
4x25mm hex bolt ...4	3x20mm hex bolt ...4
Blind-nut 4	3mm nut 4

Position the engine on to the engine mounts so the distance from the prop hub to the fire wall is 127mm



Mark the engine mounting plate where the four holes are to be drilled.
Note: Mark the mounting plate through the engine mounting flanges.





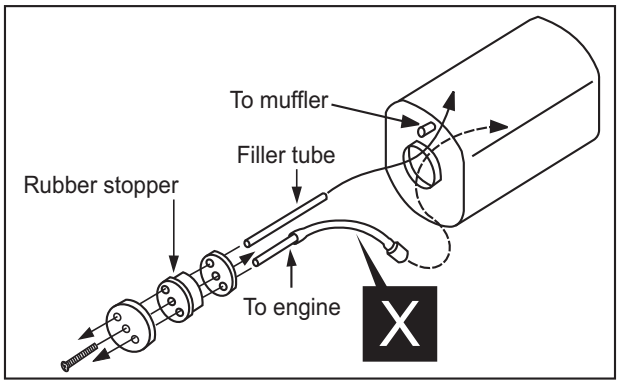
Step 14:5

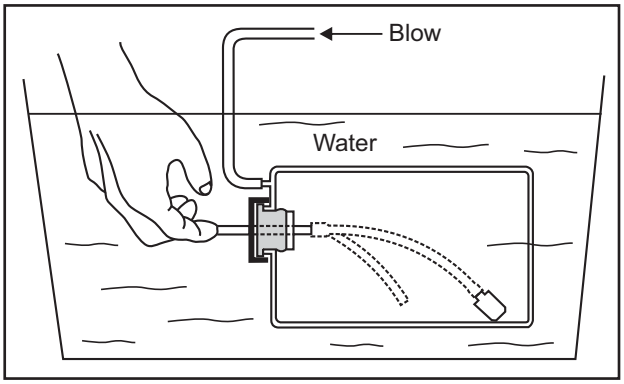
Remove the engine and drill a 3mm holes through the beam at each of the four marks made above.

Reposition the engine on the engine mount beams, aligning it with the holes. Secure the engine to the engine mount using four 3x25mm hex bolts.

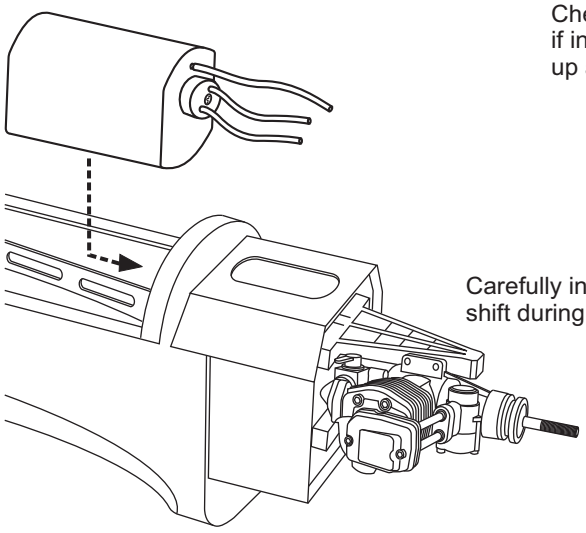
Note: Apply Silicon sealer to each of the 3x20mm hex bolt.

15- Fuel tank



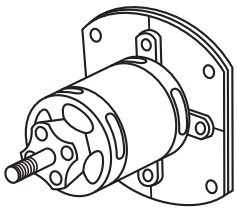


Checking for leaks - block the vents and blow into the feed. if in doubt submersing the tank in a blow of water will show up any problems.



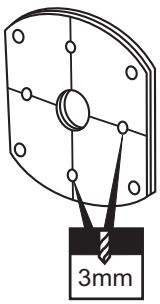
Carefully install the fuel tank to ensure that they will not shift during flight (secure the fuel tank in place using foam padding).

16- Electric motor



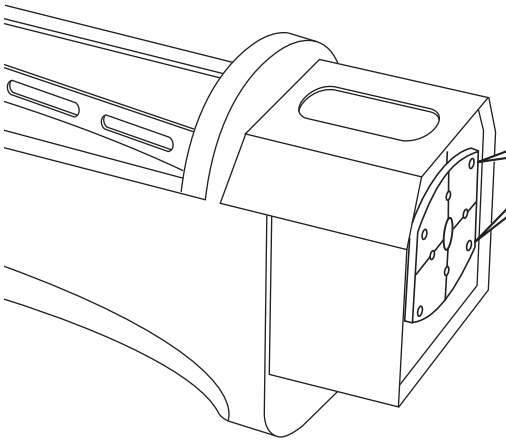
Using a aluminum motor mounting plate as a template, mark the plywood motor mounting plate where the four holes are to be drilled.

Step 16:1



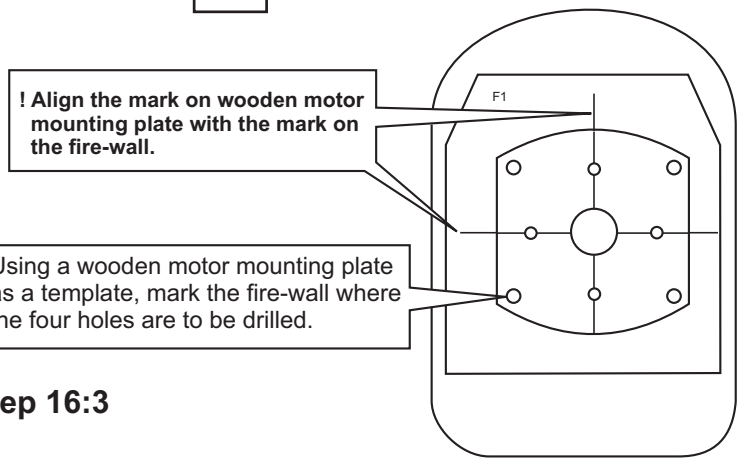
Remove the aluminum motor mounting plate and drill a 3mm hole through the plywood at each of the four marks marked .

Step 16:2



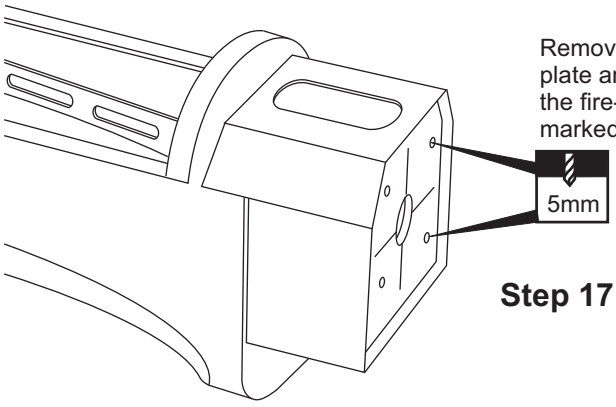
Using a wooden motor mounting plate as a template, mark the fire-wall where the four holes are to be drilled.

Step 16:3



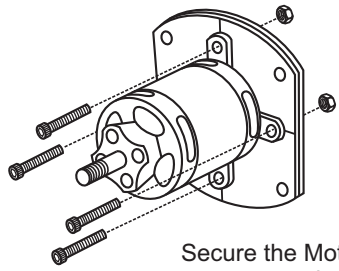
Fuselage - Front-view

P-51 Voodoo 17- Electric motor Continued



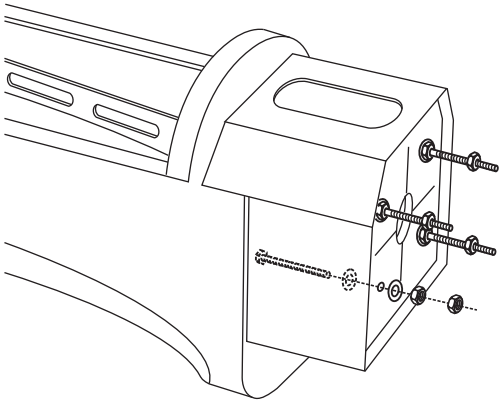
Remove the wooden motor mounting plate and drill a 5mm hole through the fire-wall at each of the four marks marked .

Step 17:1



3mm hex bolt / nut...4

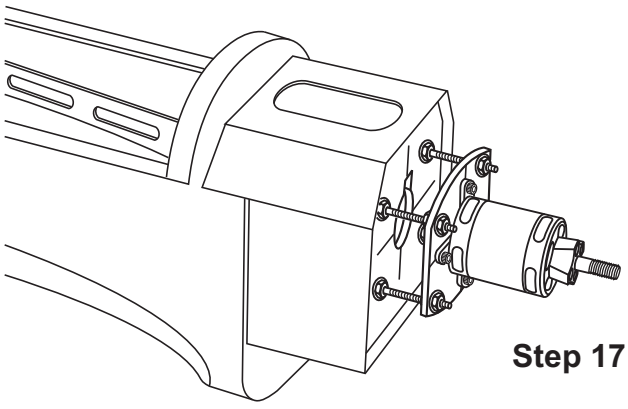
Secure the Motor to the wooden motor mounting plate using the four 3mm hex bolts.



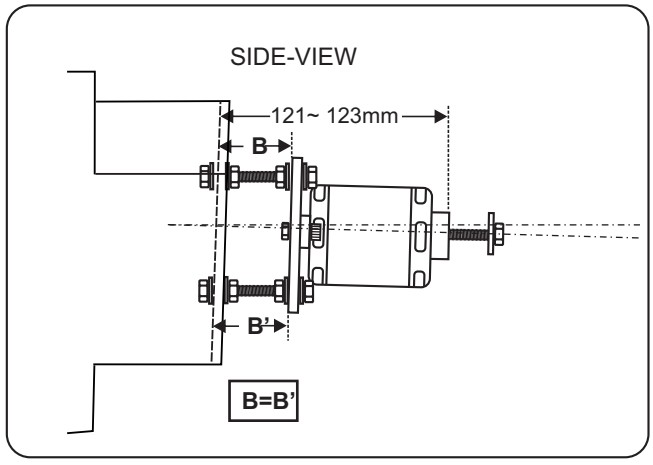
Attach the four 5x70mm bolts and nuts to the fire-wall as shown.

Step 17:2

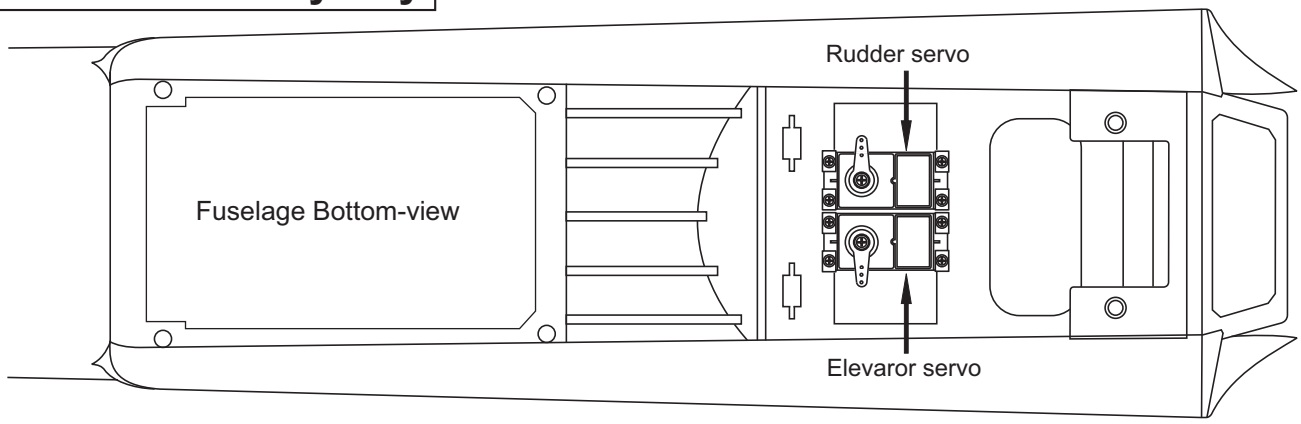
5x70mm bolt.....4
5mm nut.....12
5mm washer...16

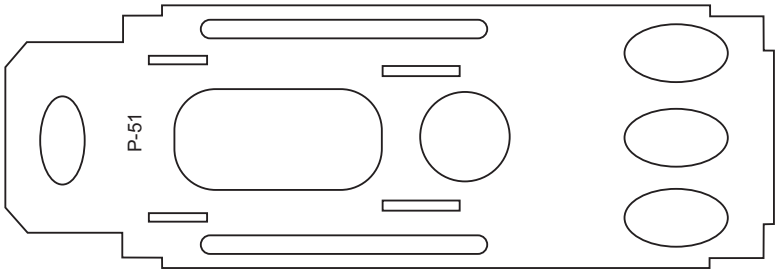


Step 17:3

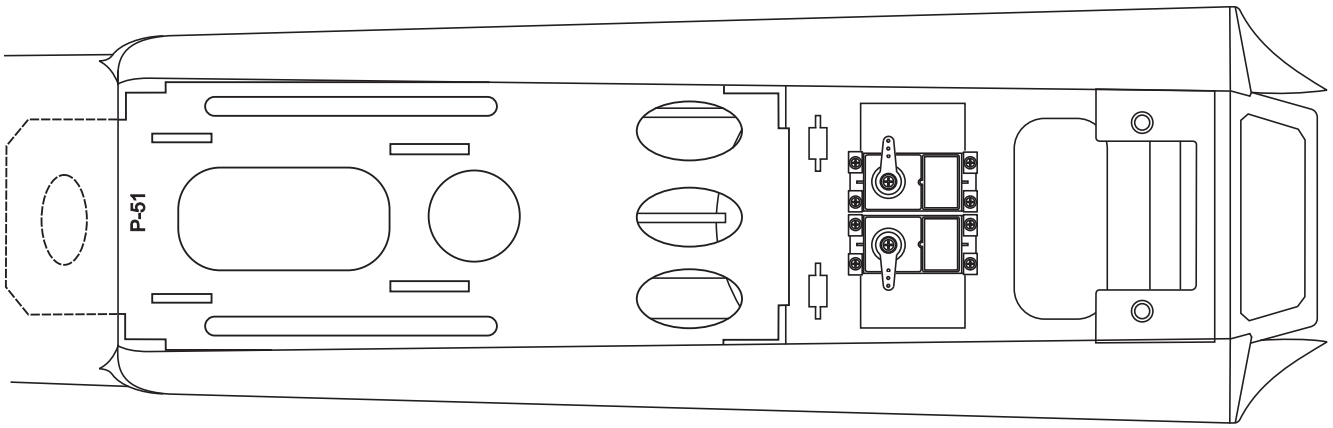


18- Servo & Battery tray

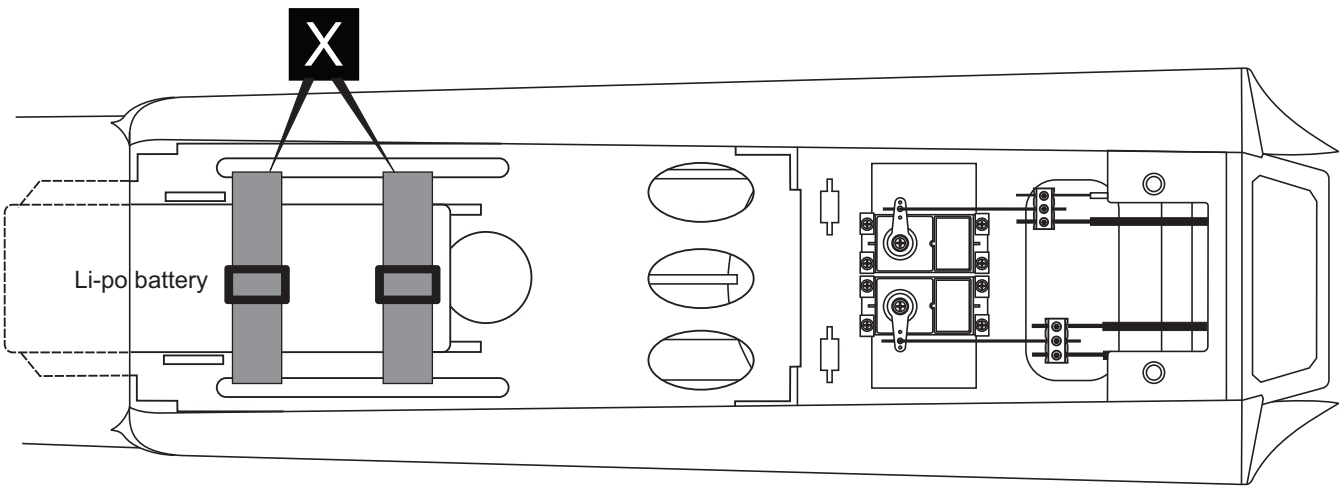


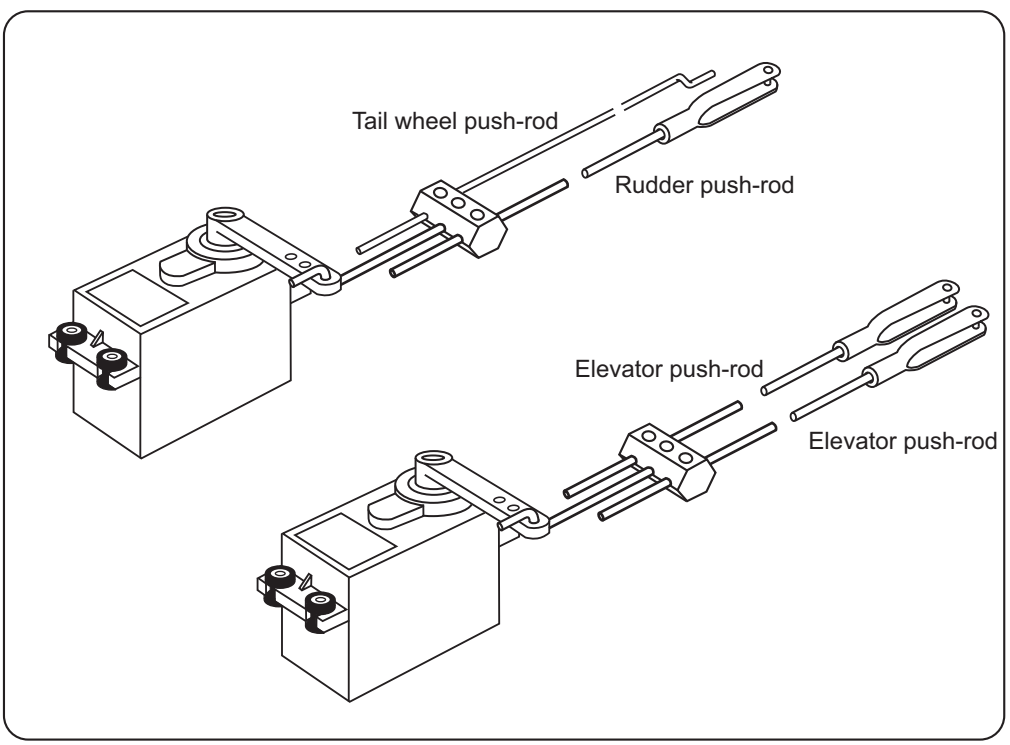


P-51 Voodoo 19- Elevator & Rudder linkages



Insert the Li-po battery tray into the fuselage as shown in the figure.
Secure it in place with CA glue or Epoxy glue.
..





2x100mm pushrod 2

1.2x800mm pushrod 1

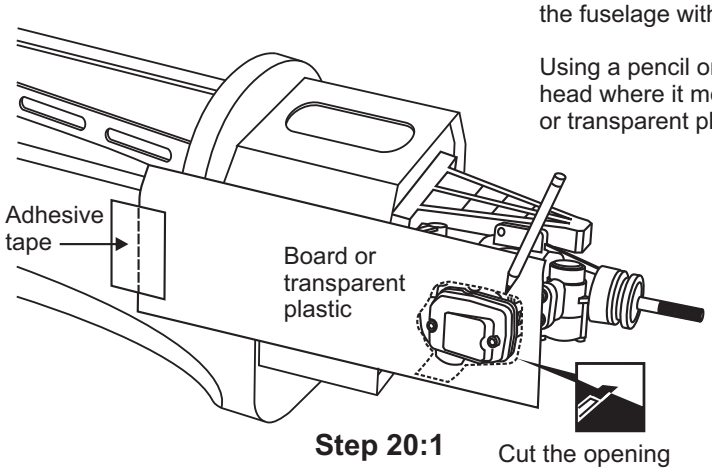
2x950mm pushrod and clevis 3

3 holes connector 2

P-51 Voodoo 20- Cowling

Attach the board or transparent plastic on the side of the fuselage with the adhesive tape as show.

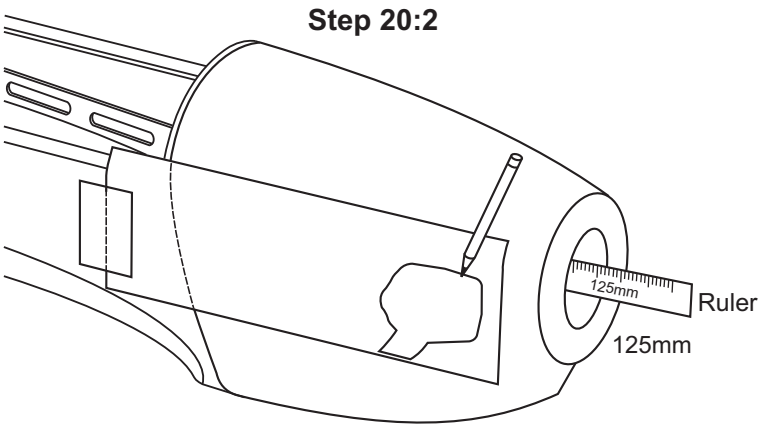
Using a pencil or felt tipped pen trace around the engine head where it meet the cowl. Cut the opening the board or transparent plastic for the engine head as marked before.



Step 20:1

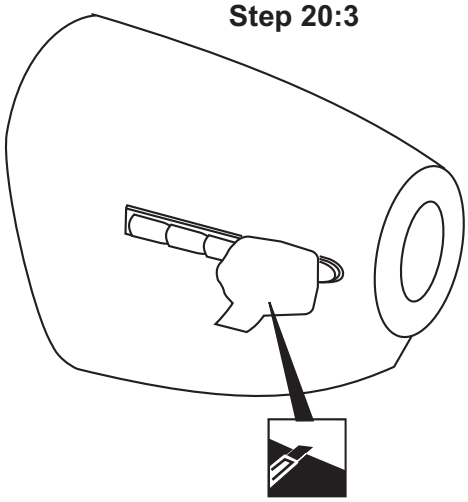
Remove the engine and insert the cowl on to the fuselage so the distance from the fire wall to the front of the cowl is 125mm. Trace around inside the hole on the board or transparent plastic with a pencil.

Step 20:2



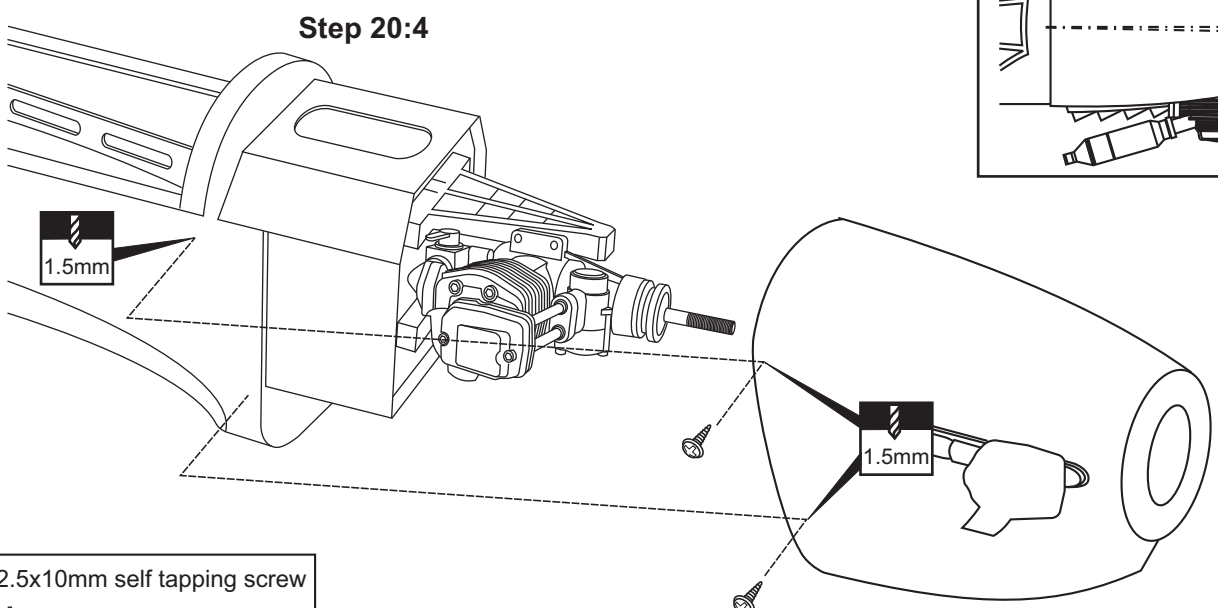
Remove the cowl from the fuselage and carefully cut the opening for the engine head as marked above. Do the same way with the hole for needle-valve.

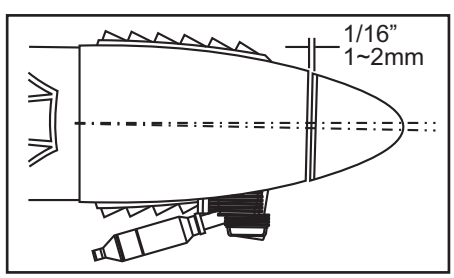
Step 20:3



Again. Insert the cowl on to the fuselage and secure it in place with four 2.5x10mm self tapping screws.

Step 20:4



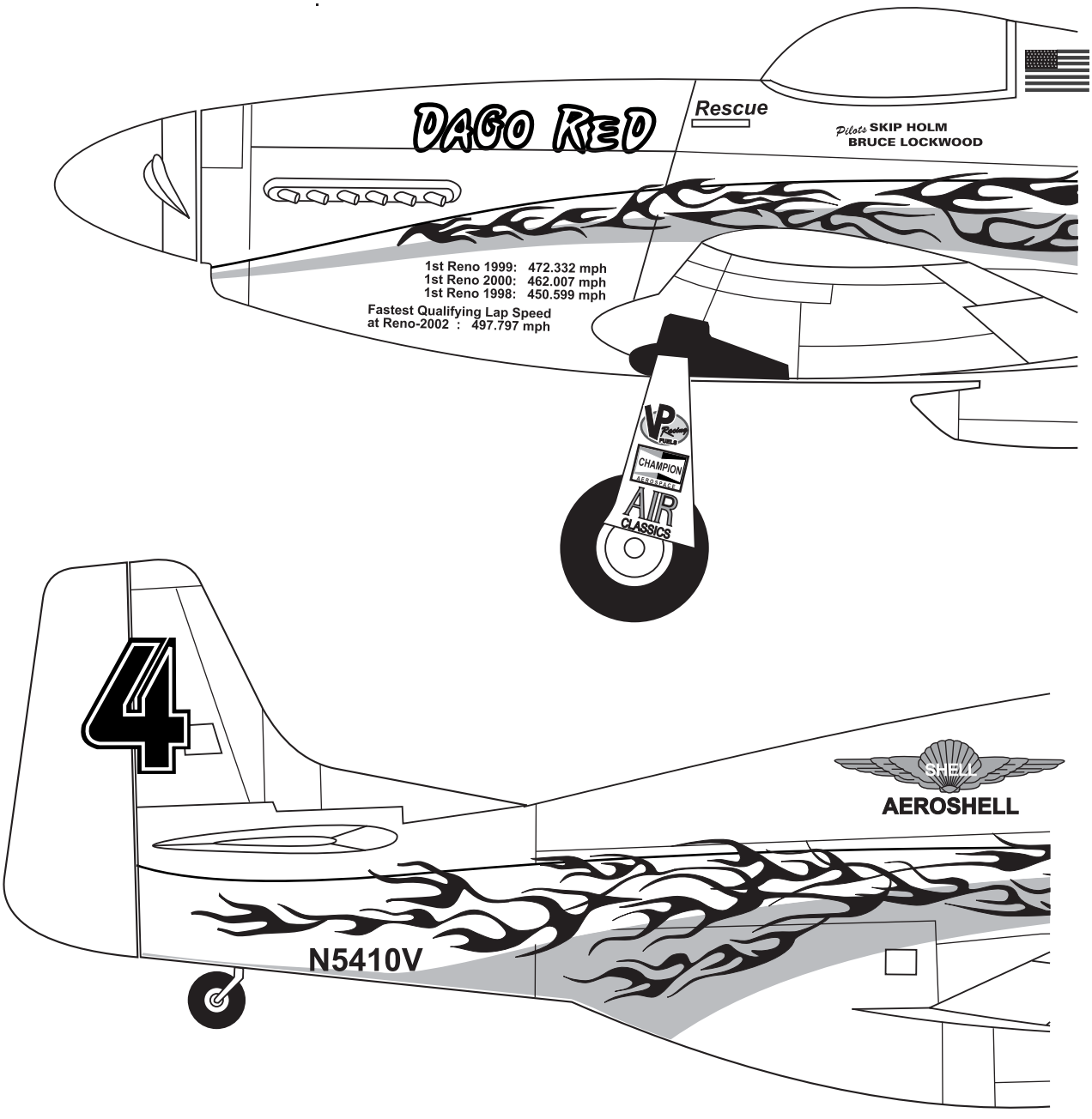


2.5x10mm self tapping screw 4

P-51 Voodoo 21- Sticker

Note: Cut out the stickers and apply them in the proper area. Do not peel the backing paper off all at once.
Peel off one corner of the backing and cut off with scissors.
Arrange sticker on model and when satisfied adhere the corner without backing.
Carefully peel back the rest of the backing while at the same time adhering the rest of the sticker.

Try not to make air bubbles, if there are some, carefully puncture sticker (center of bubble) but not model surface with the tip of the knife or sharp pin and squeeze out the air.
At curves stretch sticker and apply a little heat so that no ceases occur.
Cut off the excess that is produced.

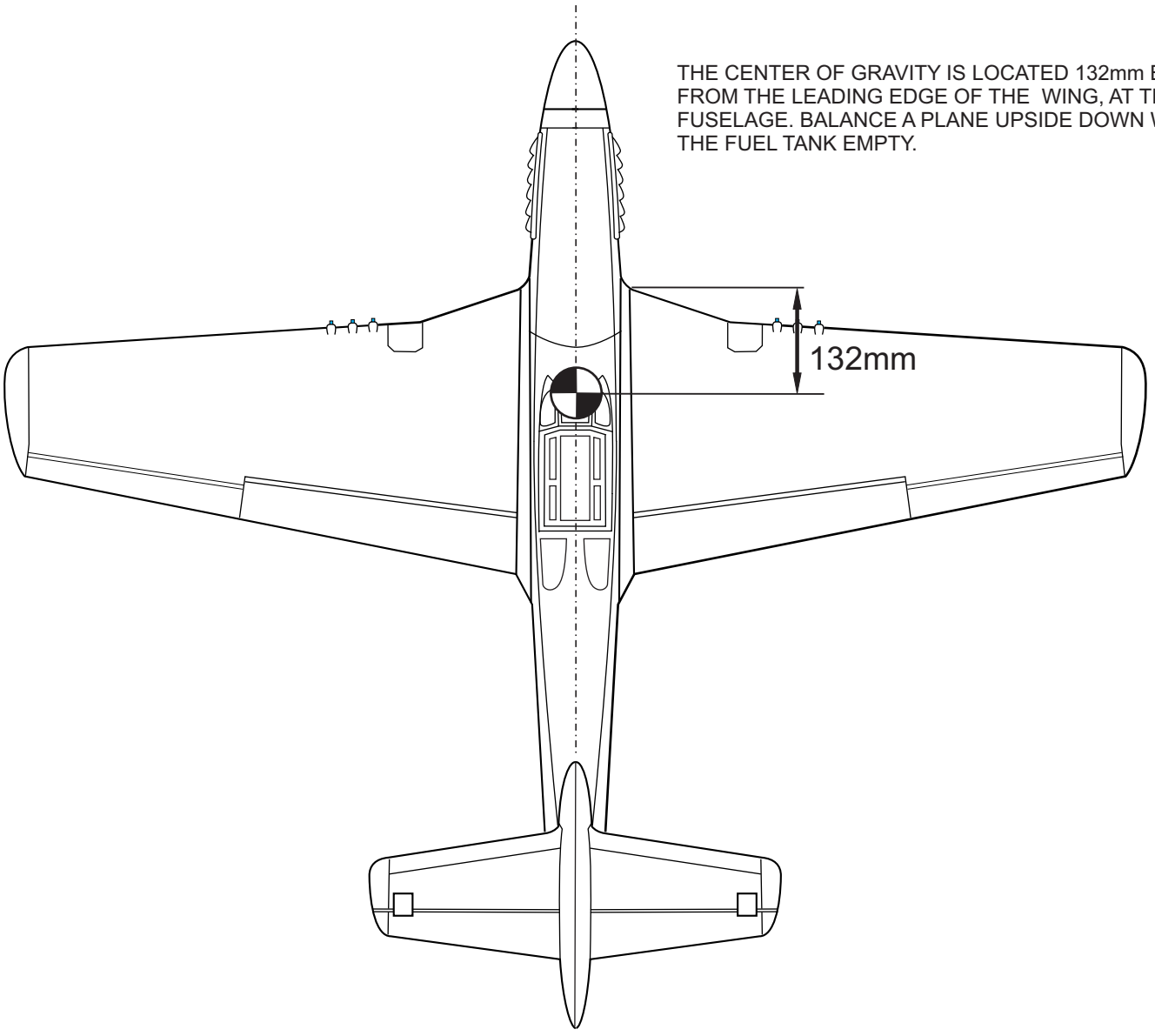


IMPORTANT: Please do not clean your model with pure alcohol, only use liquid soap with water or use glass cleaner to clean on surface of your model to keep the colour not fade.

All details are subject to change without notice !

Technische Änderungen und Irrtümer vorbehalten !

P-51 Voodoo 22- Balance



1- Mount the wing to the fuselage. Using a couple of pieces of masking tape, place them on the top side of the wing (132mm) back from the leading edge, at the fuselage sides.

2- Lift the airplane. Place your fingers on the masking tape and carefully lift the plane.

3- If the nose of the plane falls, the plane is heavy nose. To correct this, move the battery pack further back in the fuselage.
If the tail of plane falls, the plane is tail heavy. To correct this, move the battery forward or if this is not possible, stick weight onto the firewall.
When balanced correctly, the airplane should level or slightly nose down when you lift it up with your fingers.

LATERAL BALANCE:

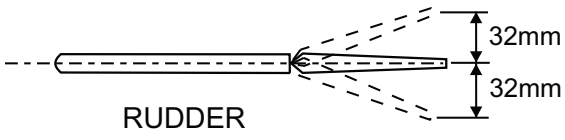
After you have balanced a plane on the CG, you should laterally balance it. Doing this will help the airplane track straighter.

1- Turn the airplane upside down. Attach one loop of heavy string to the engine crankshaft and one to the tail wheel wire.
With the wing level, carefully lift the airplane by the string. This may require two people to make easier.

2- If one side of the wing fall, that side is heavier than the opposite. Add small amounts of lead weight to the bottom side of the lighter wing half's wing tip. Follow this procedure until the wing stays level when you lift the airplane.

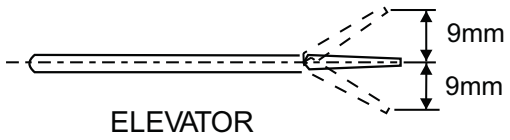
DO NOT try to fly an out-of-balance model !

P-51 Voodoo 23- Control surface

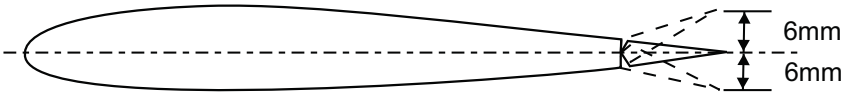


RUDDER

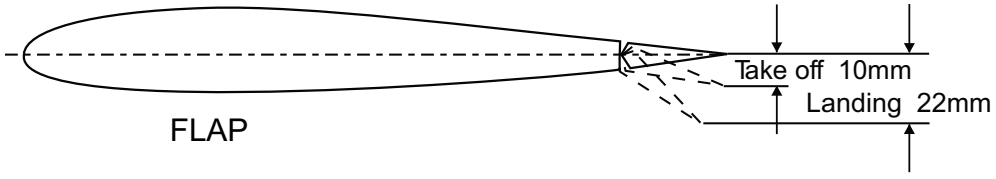
Note: Measure rudder's biggest place



ELEVATOR



AILERON



FLAP

Adjust the travel of the control surfaces to achieve the values stated in the diagrams.
These value will be suitable for average flight requirements. Adjust the values to suit your particular needs.