RADIO CONTROL MODEL

EP-GP

ARF VERSION

VQA170 B-Y
VQA170 N-B

ALL BALSA AND PLYWOOD CONSTRUCTION

VOUGHT F4U CORSAIR

SPECIFICATION

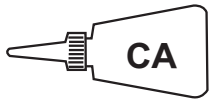
- Wingspan: 1810mm
- Fuselage length: 1380mm
- Weight: 6300-6700gr
- Nitro engine required:
  120 two stroke.
  120-140 four stroke.
- Gas engine required:
  20-26cc two stroke.
  21-30 four stroke.
- Radial engine:
  Saito FG-33 R3
  Saito FA-200 R3

FEATURES

Fully covered in weathered detail.
All balsa and lite-ply construction.
Fiber glass cowling.
Scale Navy pilot.
3D printed rocket.
Control surface pre-hingesand installed.
All mean gear door operation.

GLUE (Purchase separately)

Silicon sealer



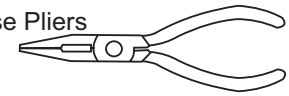
Cyanoacrylate Glue (thin type)

Epoxy Glue
(5 - 30 minute type)

TOLLS REQUIRED (Purchase separately)

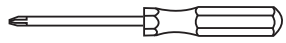
Hobby knife

Needle nose Pliers

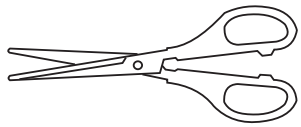


Sander

Phillip screw driver



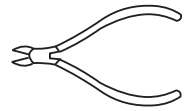
Scissors



Hex Wrench

Awl

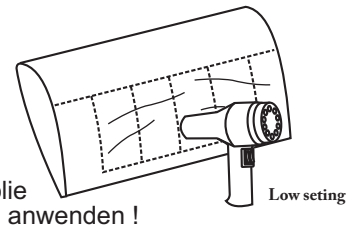
Wire Cutters



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

If exposed to direct sunlight and/or heat, wrinkels can appear. Storing the model in a cool place will let the wrinkles disappear. Otherwise, remove wrinkles in covering film with a hair dryer, starting with low temperature. You can fix the corners by using a hot iron.

Bei Sonneneinstrahlung und/oder Wärme kann die Folie erschlaffen bzw. Falten entstehen. Verwenden Sie ein Warumluftgebläse (Haartrockner) um evtl. Falten aus der Folie zu bekommen. Die Kanten können Sie mit einem Bügeleisen behandeln. Nicht zuviel Hitze anwenden !



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

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”	

CAUTION !

This model construction kit is not a toy and is not suitable for children under the age of 14.
Incorrect use of this material could cause material damage ou personal injury.
You are fully responsible for your actions when you use this model.
Fly at a safe distance from occupied zones.
Be sure that no one else is using the same frequency as you.

SAFETY NOTES BEFORE ASSEMBLING

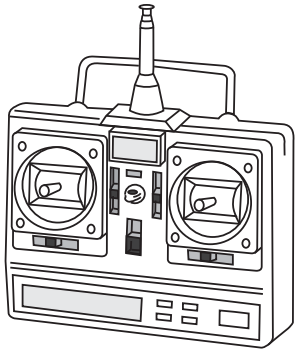
This model is highly pre-fabricated and can be built in a very short time. However, the work which you have to carry out is important and must be done carefully.
The model will only be strong and fly well if you complete your tasks competently - so please work slowly, accurately and check every joints, maybe apply more glue to be safe.

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

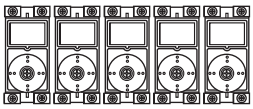
! The painted and plastic parts used in this kit are fueel roof. However, they are nottolerant of many harsh chemicals including the following: paint thinner, CA glue accelerator, CA glue debonder and acetone. Do not let these chemicals come in contact with the colors on the covering and the plastic parts.

! Detail such as pilot’s seat, rockets, instrument panels...are printed from a 3D printer with an environmentally friendly plastic (PLA) made from cornstarch, it will the decompose after about 3 years from the date of produced.

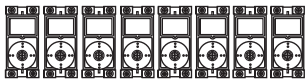
REQUIRED FOR OPERATION (Purchase separately)



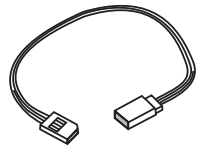
Minimum 9 channels radio
with 12 servos.



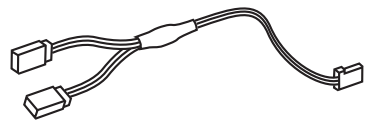
5 standard servos (Hitec HS-625MG)
- Aileron: 2
- Elevator: 2
- Rudder: 1



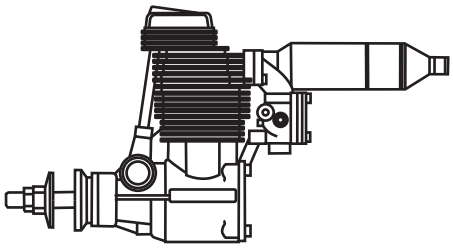
7 mini servos (HS-85MG / Emax ES3054)
- Flap: 4
- Gear door: 2
- Throttle: 1



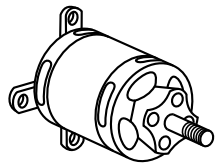
Extension cord for aileron servos: 50cm(x4)
Extension cord for flap (outer wing) servos: 40cm(x4)
Extension cord for flap (center wing) servos: 40cm(x4)
Extension cord for retract servos: 40cm(x2)
Extension cord for Rx battery pack: 30cm(x1)
Extension cord for gear door servo: 40cm(x2)



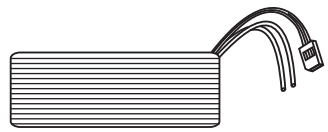
Extension cord “Y” for aileron servos: x1
Extension cord “Y” for retract gear door servos: x1
Extension cord “Y” for Flap (outer wing) servos: x1
Extension cord “Y” for Flap (center wing) servos: ...x1



4stroke engine: 120-140
Radial engine: Saito FG-33R3 / FA-200R3

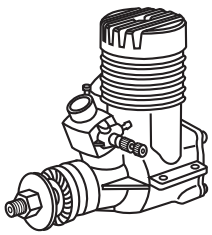


Brushless motor: BOOST 100
ESC:80A

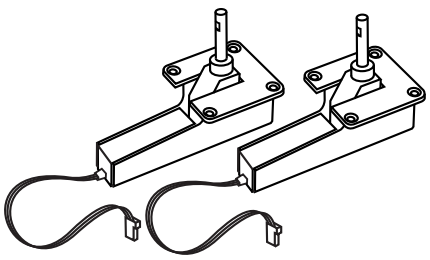


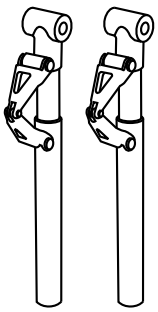
6S - 6000mAh LiPo battery

17-6 / 19-6 or depend of the
engine or electric motor.



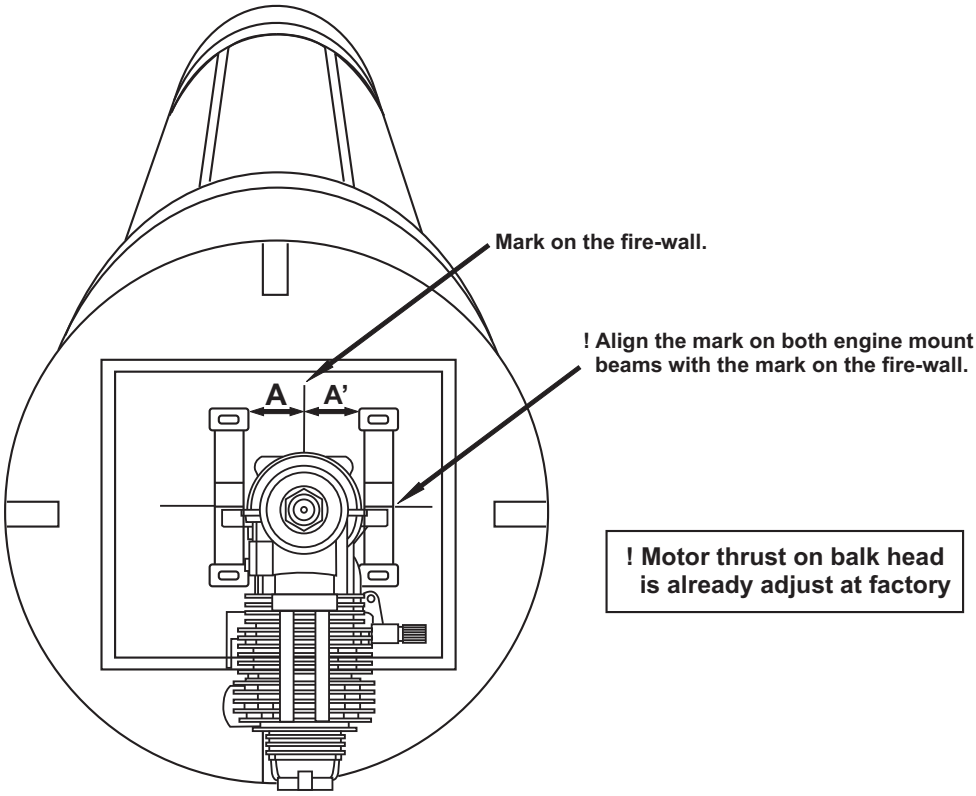
Nitro 2 stroke engine: 120 / 20cc
Gas engine 2 stroke engine: 20cc-26cc





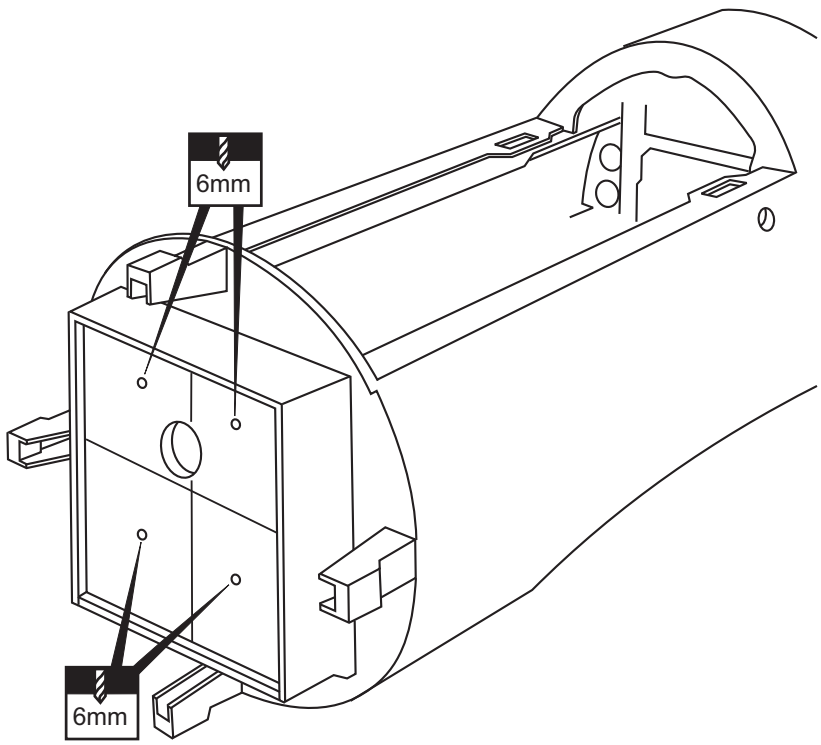
Electric retract (Rotary 90 dregee) with strut.
VQARE33

Prop. nut
(depend of the engine)



Attach the engine mount beams onto the fire-wall so the distance between of two engine mount beams is A=A' 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.

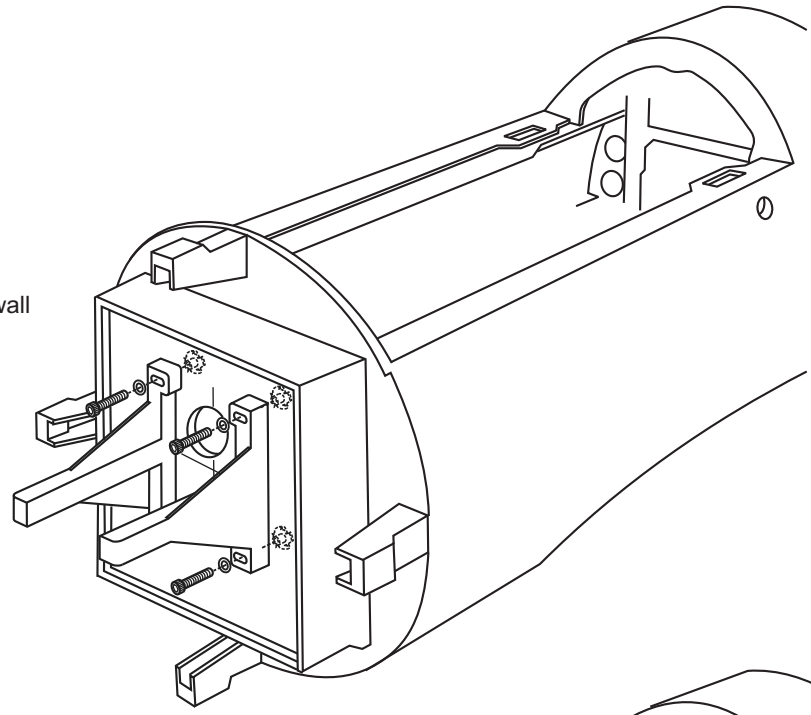


Carefully remove the engine mount beams and drill a 6mm hole through the fire-wall at each of the four marks made above.

F4U CORSAIR 2- Engine mount

Insert the four blind-nuts into the back of the four 6mm holes make above.

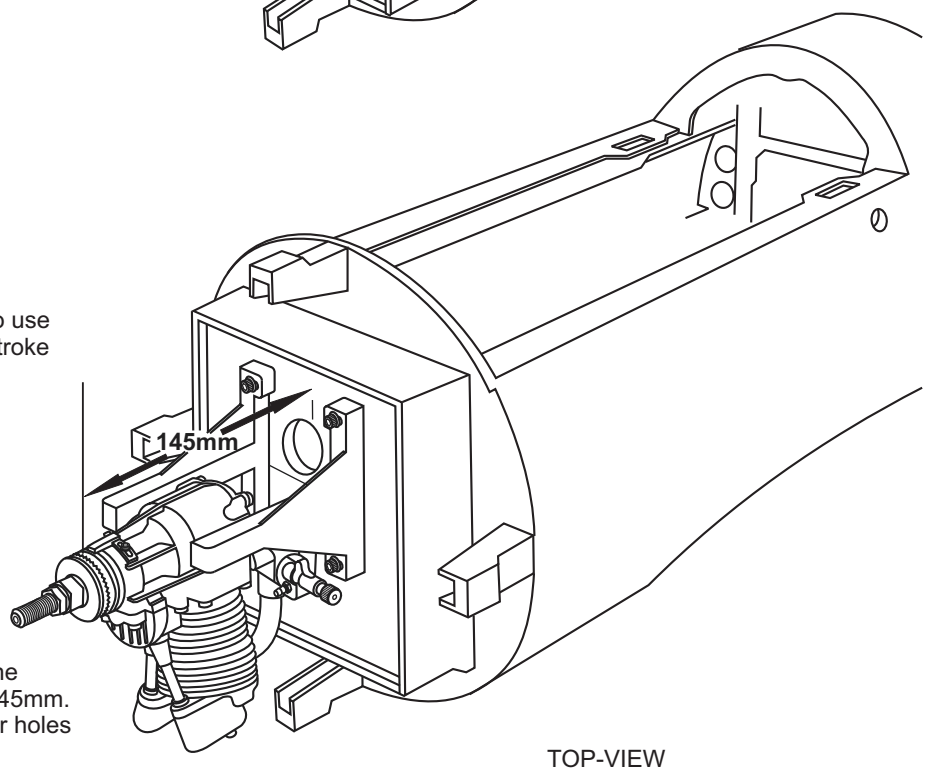
Reposition the engine mount beams on to the fire-wall and secure them with four 4x30mm hex bolt.



4x30mm hex bolt 4

Blind-nut 4

4mm washer 4

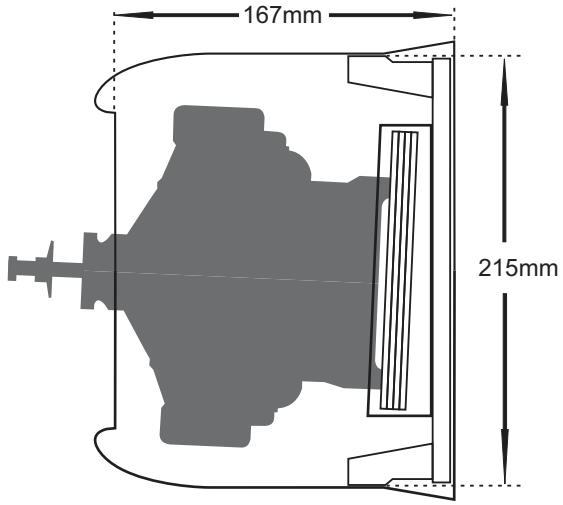


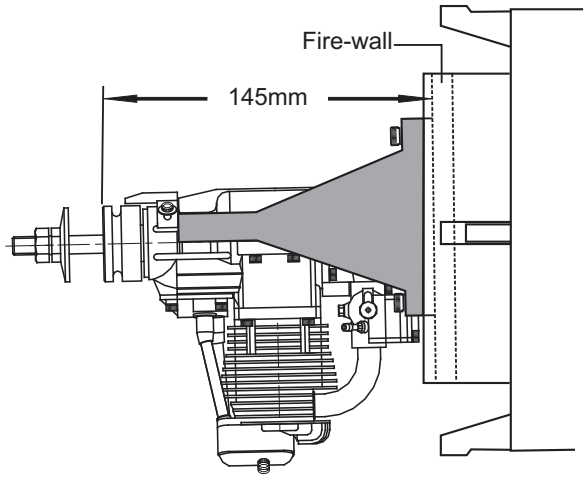
Please Note: This plane was design to use for 20cc gasoline-2 stroke engine or 23cc-4 stroke engine.
Incase you want to use bigger engine, please reinforce the firewall and other connection by Epoxy.

! The tilt angle of the motor shaft has been adjusted in the factory.

Position the engine to the engine mounts so the distance from the prop hub to the fire-wall is 145mm. Mark the engine mounting plate where the four holes are to be drilled.

TOP-VIEW



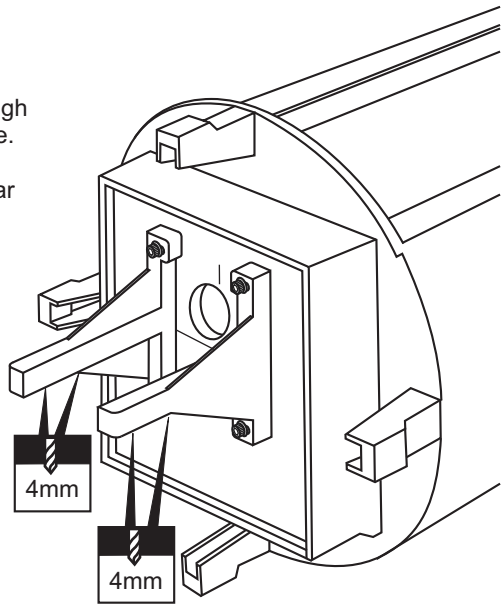


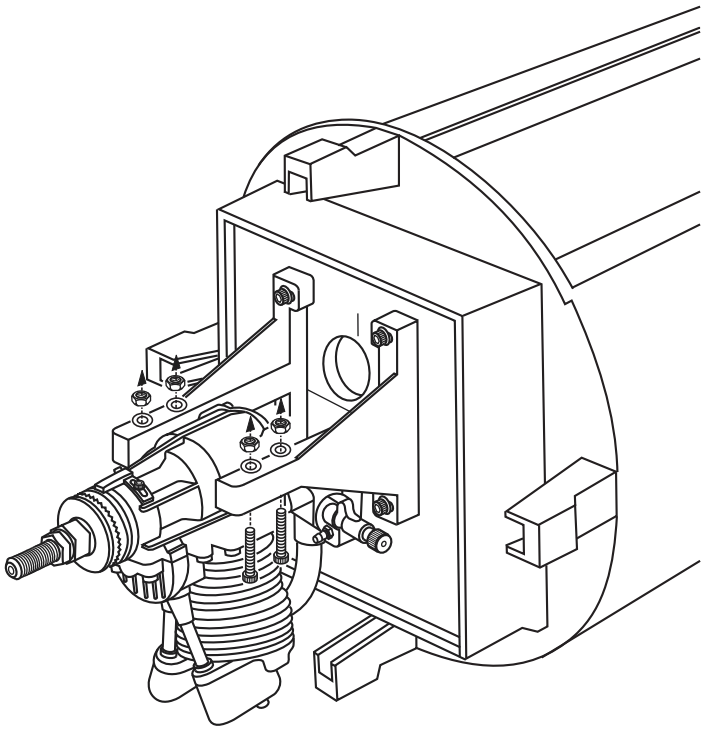
SIDE-VIEW

This plane can use Saito FG-33R3

Remove the engine and drill a 4mm holes through the beam at each of the four marks made above.

Marking sure that you drill the hole perpendicular to the beam of the engine mount.

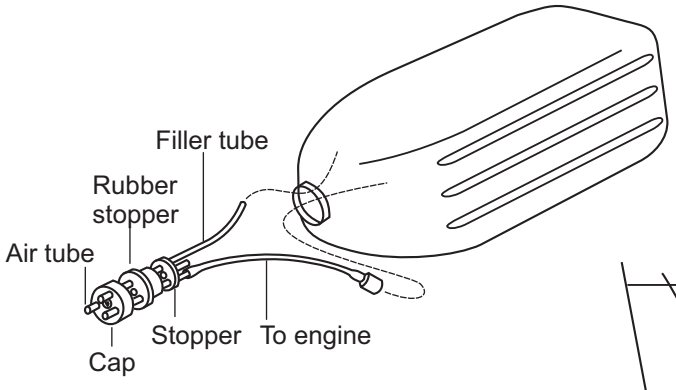




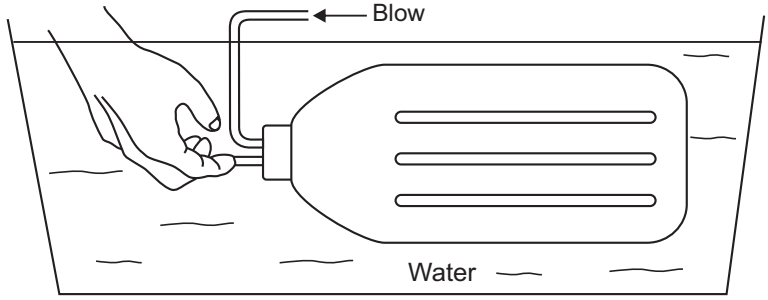
Reposition the engine on the engine mount beams, aligning it with the holes. Secure the engine to the engine mount using four 4x30mm screws.

Note: Apply Silicon sealer to each of the 4x30mm screw.

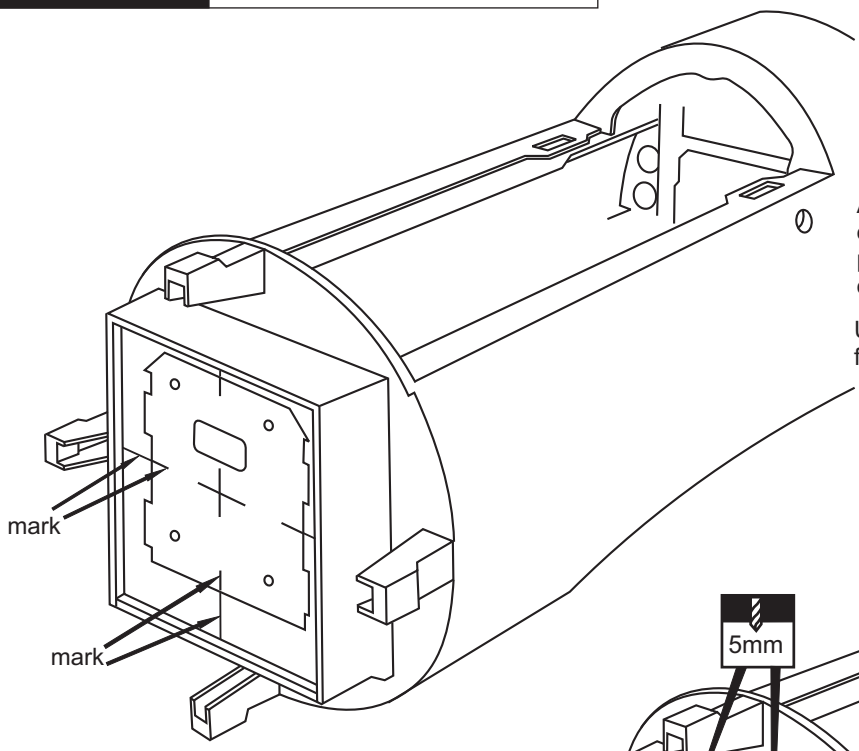
4x30mm screw	4
Washer	4



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.



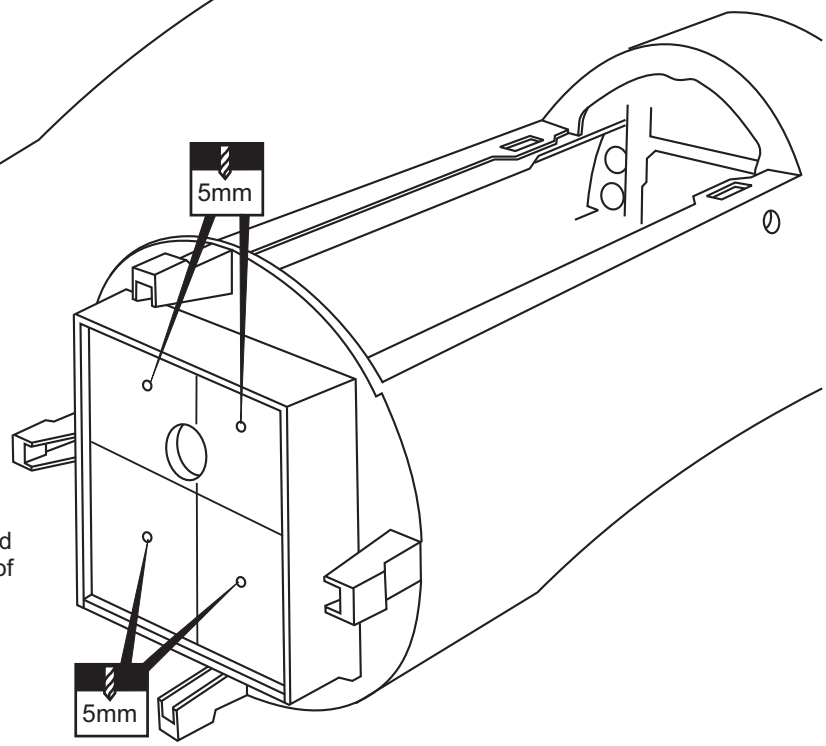
F4U CORSAIR 4- Electric motor mount



Attach the 2mm plywood motor mount templat onto the fire-wall,align the marks on the 2mm plywood motor mount templat with the marks on the fire wall.

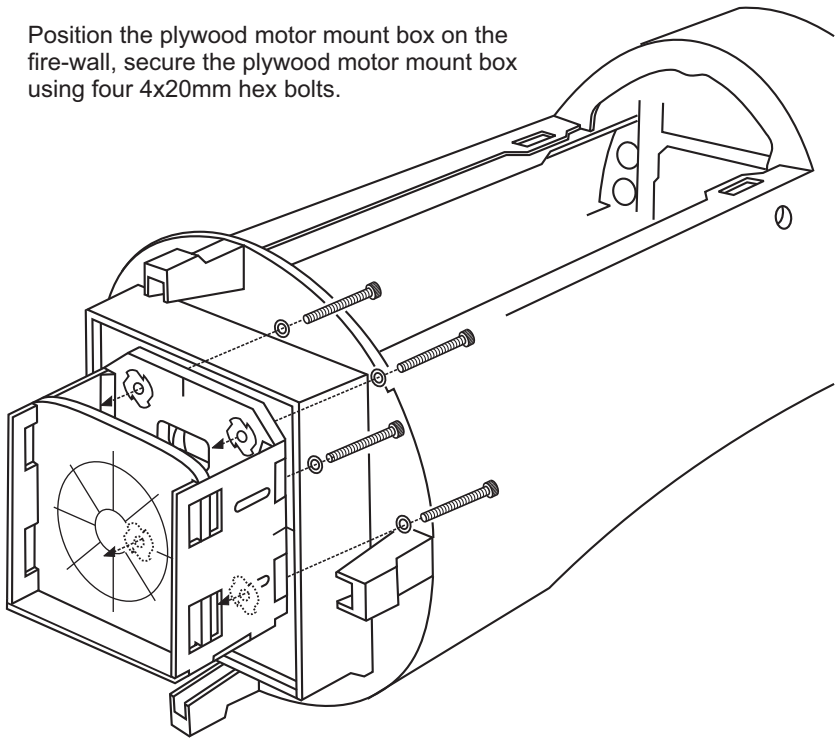
Using a pencil or felt tipped pen, mark the fire wall where the four holes are to be drilled.

! Align the mark on the plywood motor mount with the mark on the fire-wall.



Remove the plywood motor mount templat and drill a 5mm hole through the fire-wall at each of the four marks made above.

Position the plywood motor mount box on the fire-wall, secure the plywood motor mount box using four 4x20mm hex bolts.

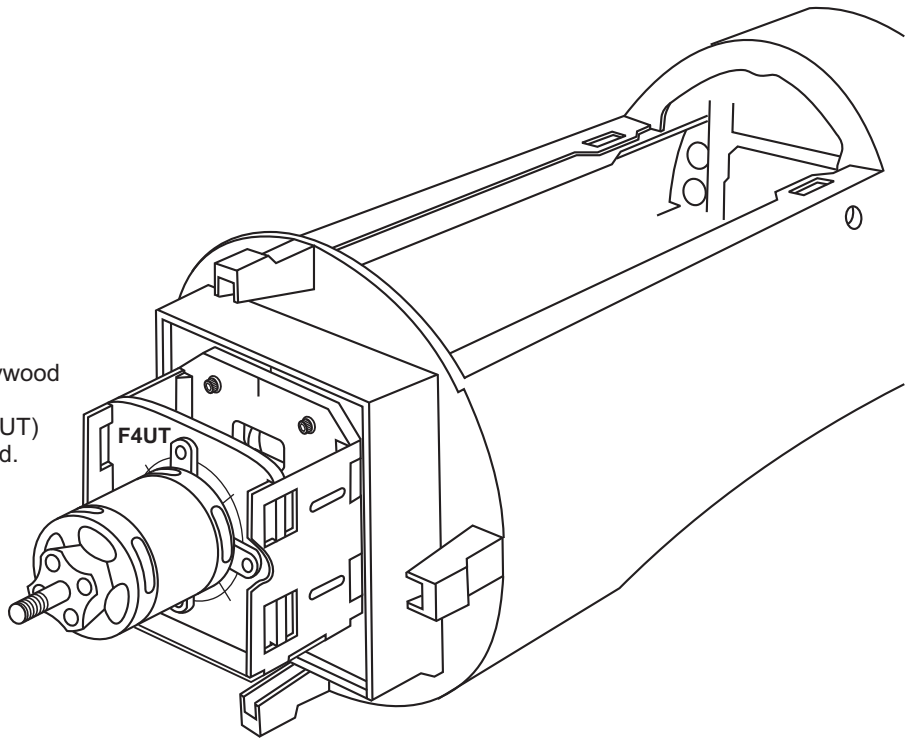


4x30mm hex bolt 4

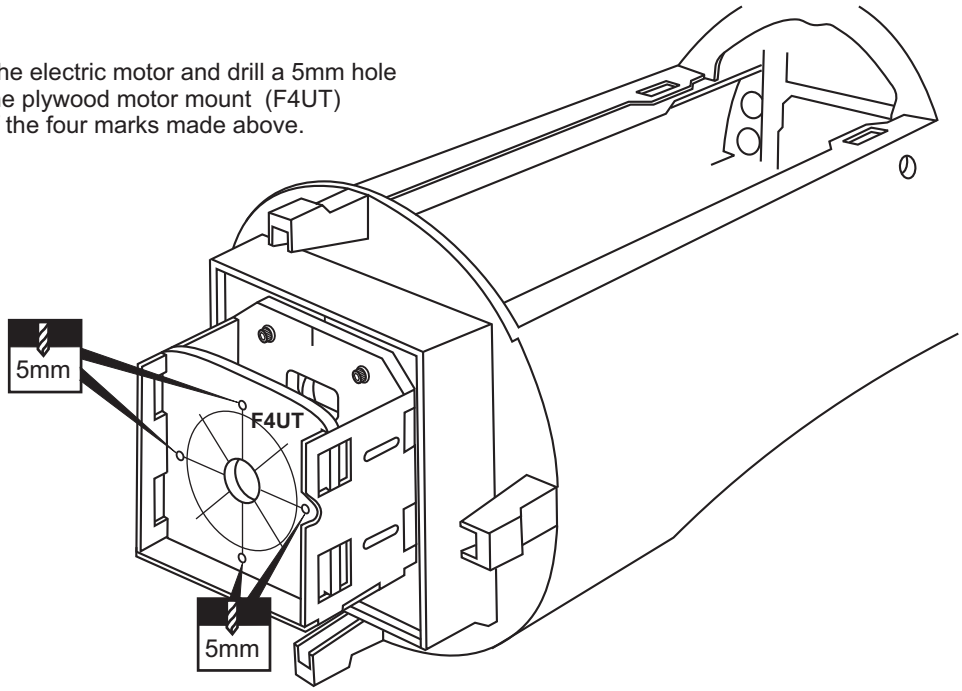
4mm washer 4

5- Electric motor mount

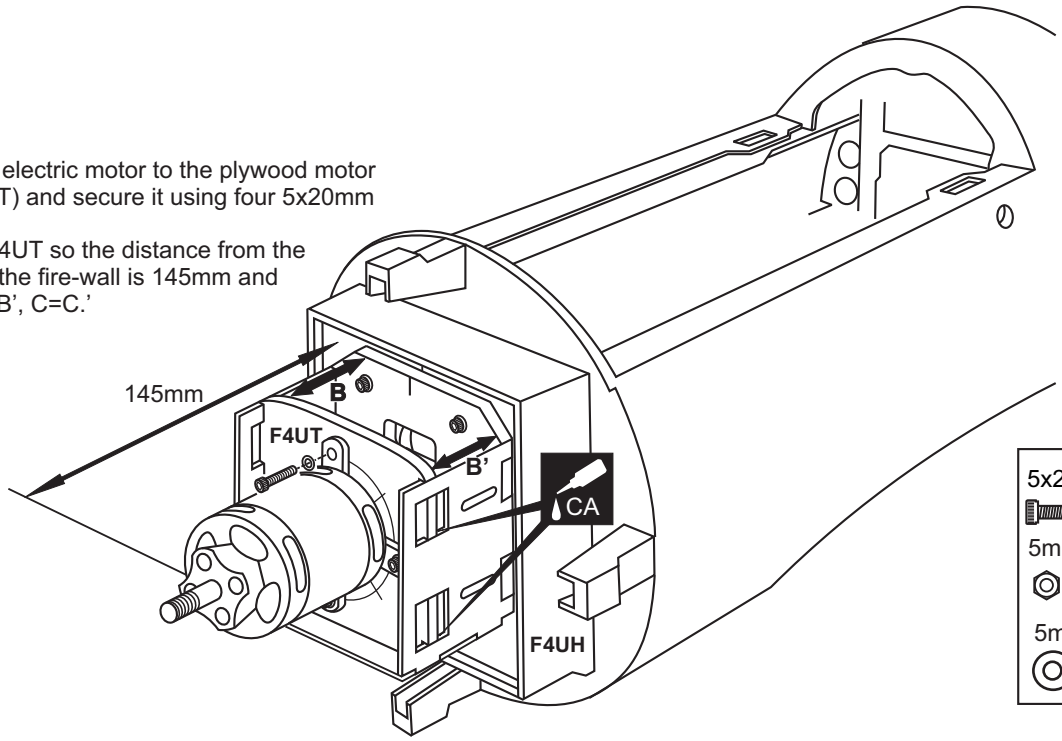
Position the electric motor to the plywood motor mount (F4UT).
Mark this plywood motor mount (F4UT) where the four holes are to be drilled.



Remove the electric motor and drill a 5mm hole through the plywood motor mount (F4UT) at each of the four marks made above.



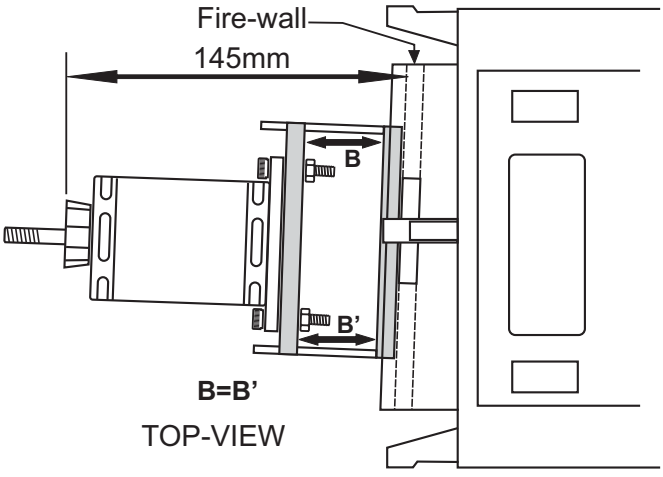
Position the electric motor to the plywood motor mount (F4UT) and secure it using four 5x20mm hex bolts.
Adjust the F4UT so the distance from the prop hub to the fire-wall is 145mm and distance B=B', C=C.'



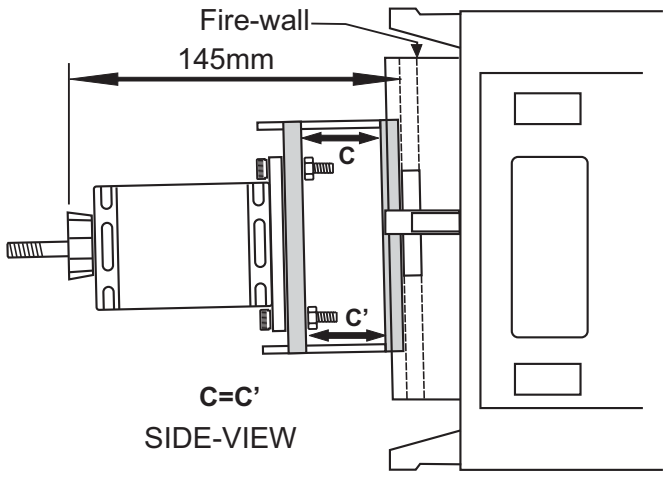
5x20mm hex bolt 4
5mm nut 4
5mm washer 4

When everything is correct, apply the thin CA glue on the plywood motor mount (F4UT) where it meets the two side panels (F4UH).

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

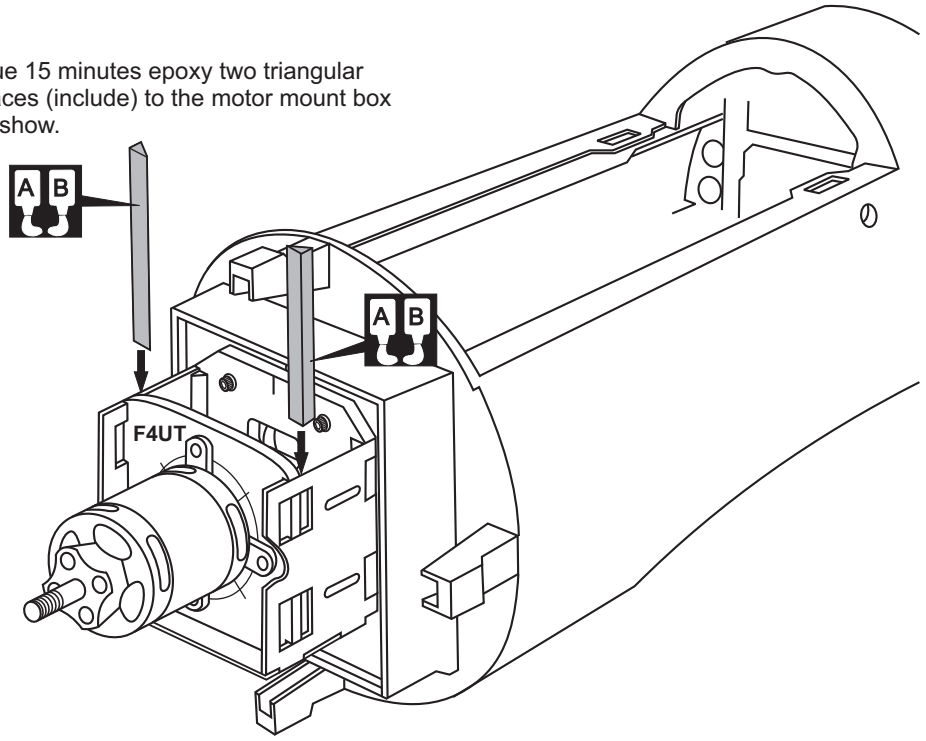


B=B'
TOP-VIEW

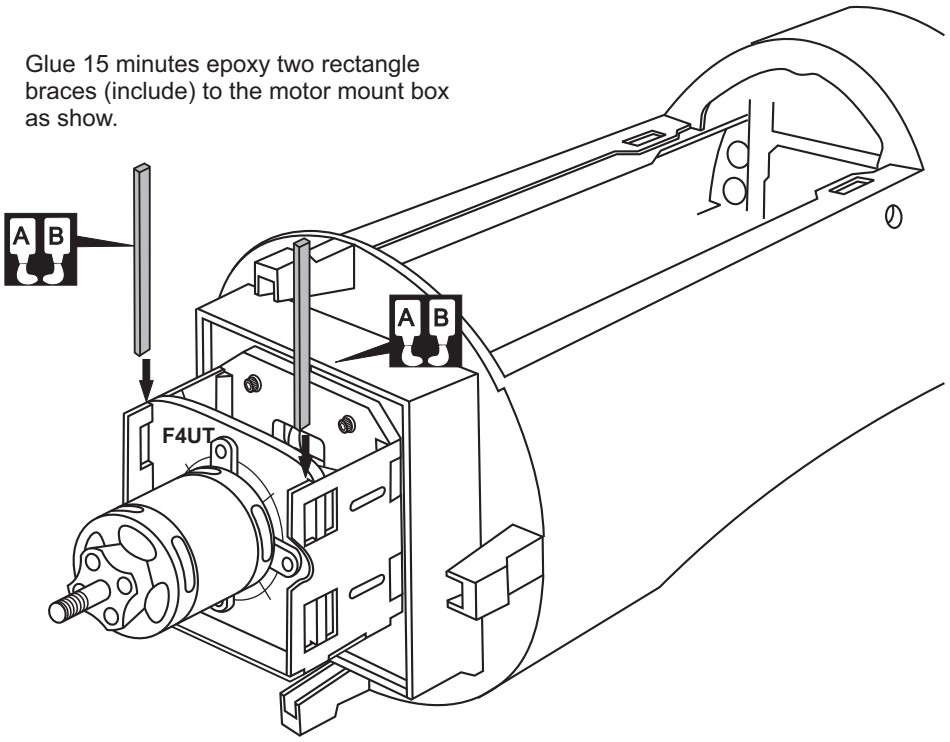


C=C'
SIDE-VIEW

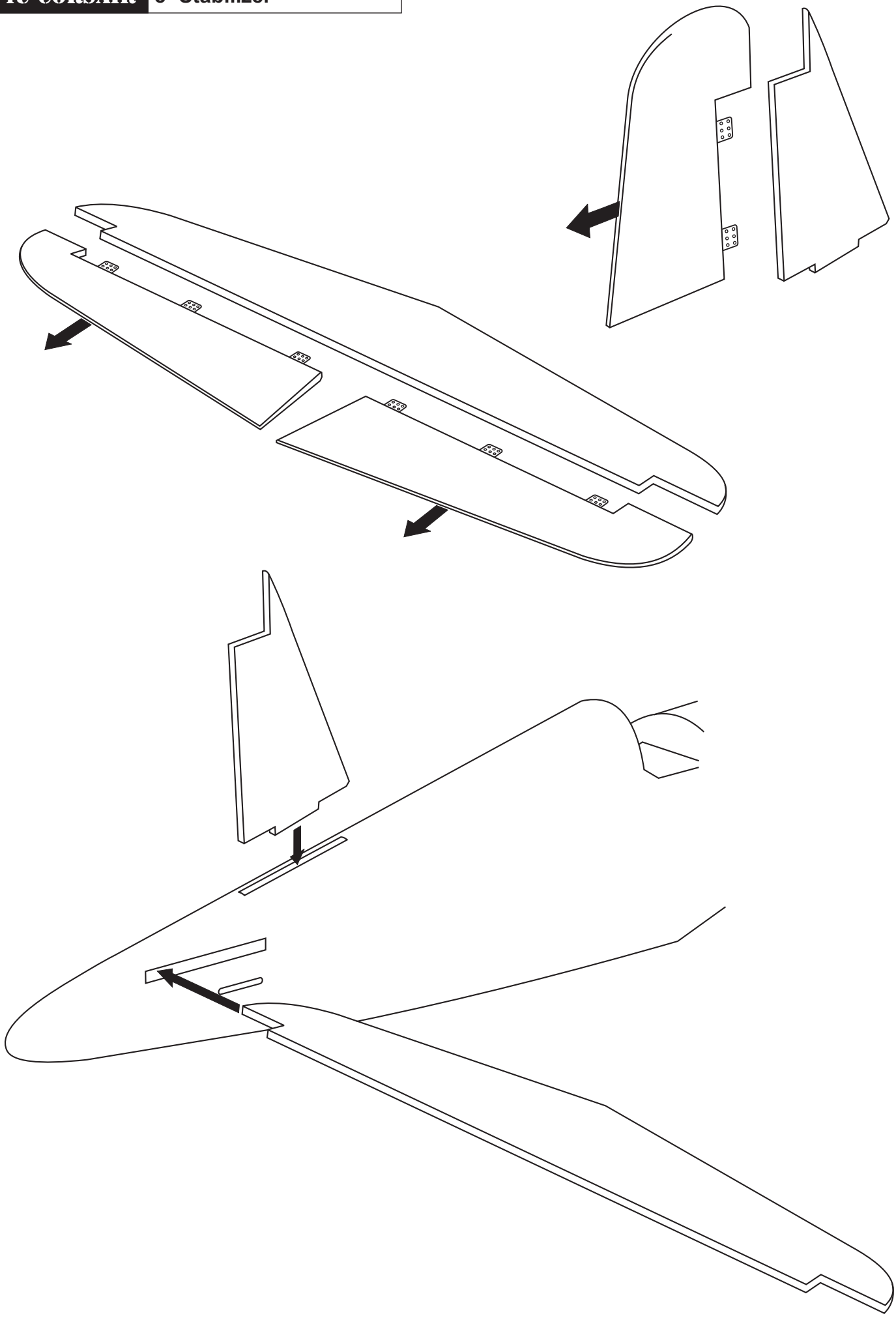
Glue 15 minutes epoxy two triangular braces (include) to the motor mount box as show.

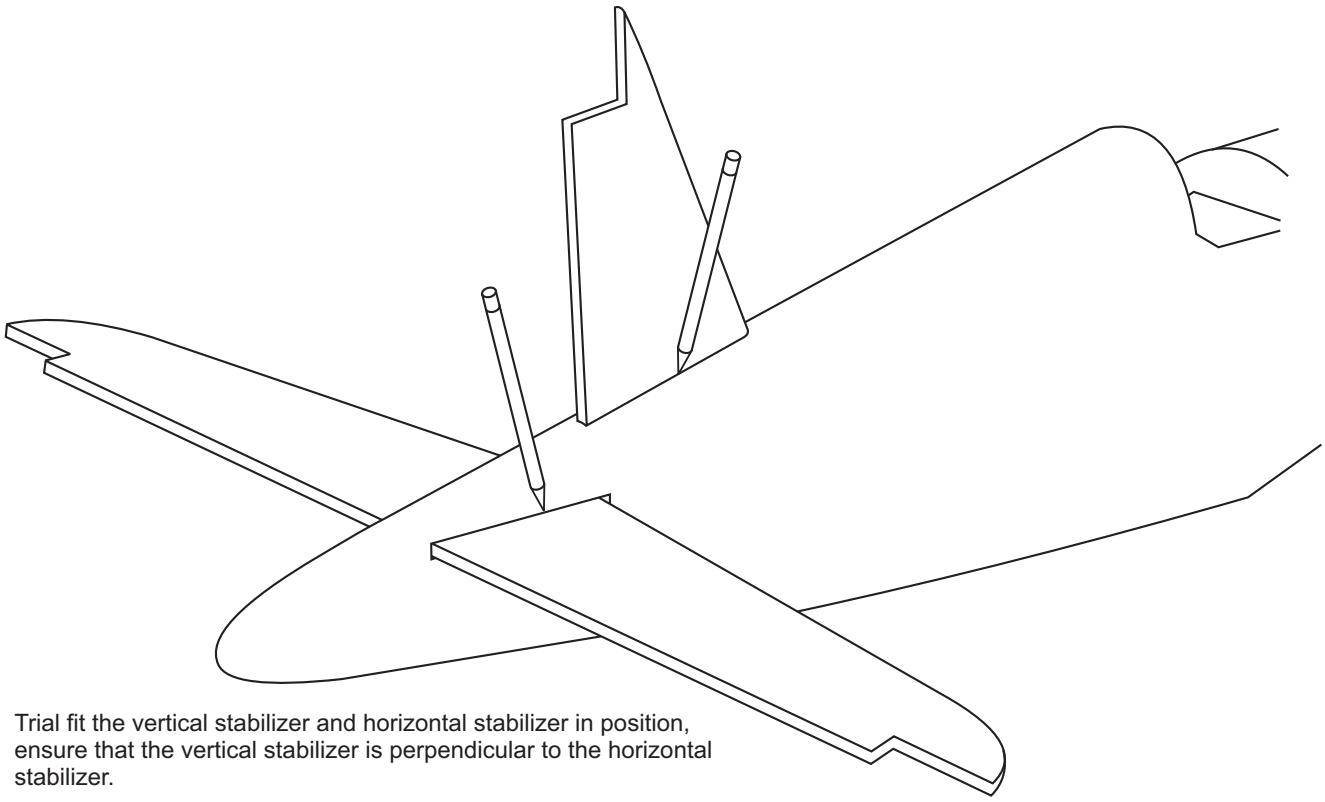


Glue 15 minutes epoxy two rectangle braces (include) to the motor mount box as show.



8- Stabilizer



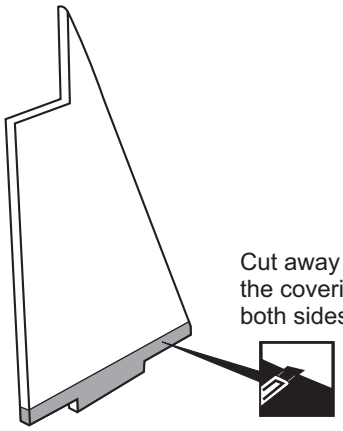


Trial fit the vertical stabilizer and horizontal stabilizer in position, ensure that the vertical stabilizer is perpendicular to the horizontal stabilizer.

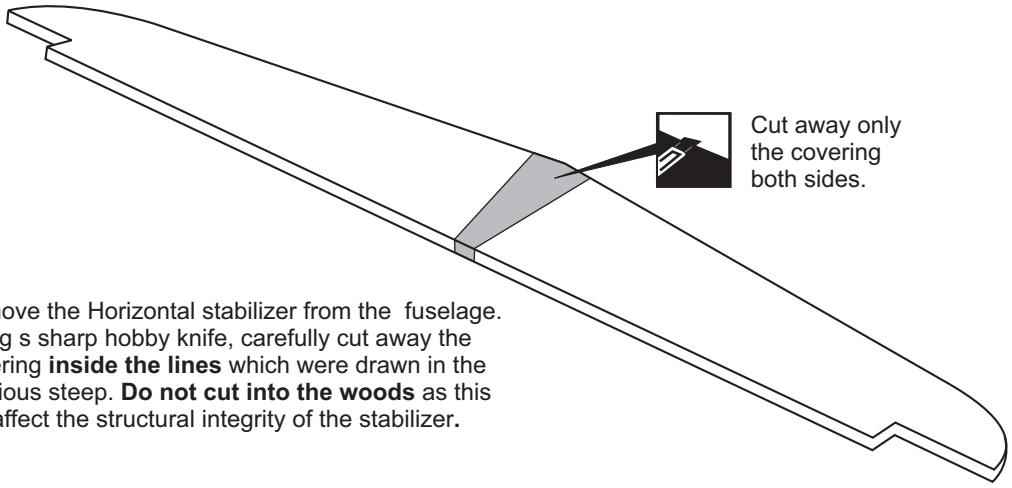
Using a pencil, trace around the vertical stabilizer where it meets the fuselage.
Remove the vertical stabilizer from the fuselage.

Using a pencil, trace around the horizontal stabilizer where it meets the fuselage.
Remove the horizontal stabilizer from the fuselage.

Remove the vertical stabilizer from the fuselage. Using s sharp hobby knife, carefully cut away the covering **below the lines** which were drawn in the previous steep. **Do not cut into the woods** as this will affect the structural integrity of the stabilizer**.**



Cut away only the covering both sides.



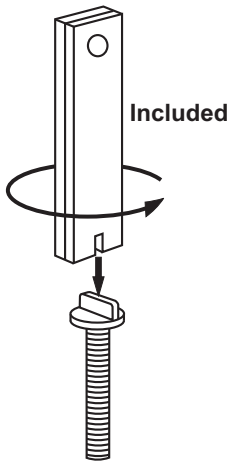
Cut away only the covering both sides.

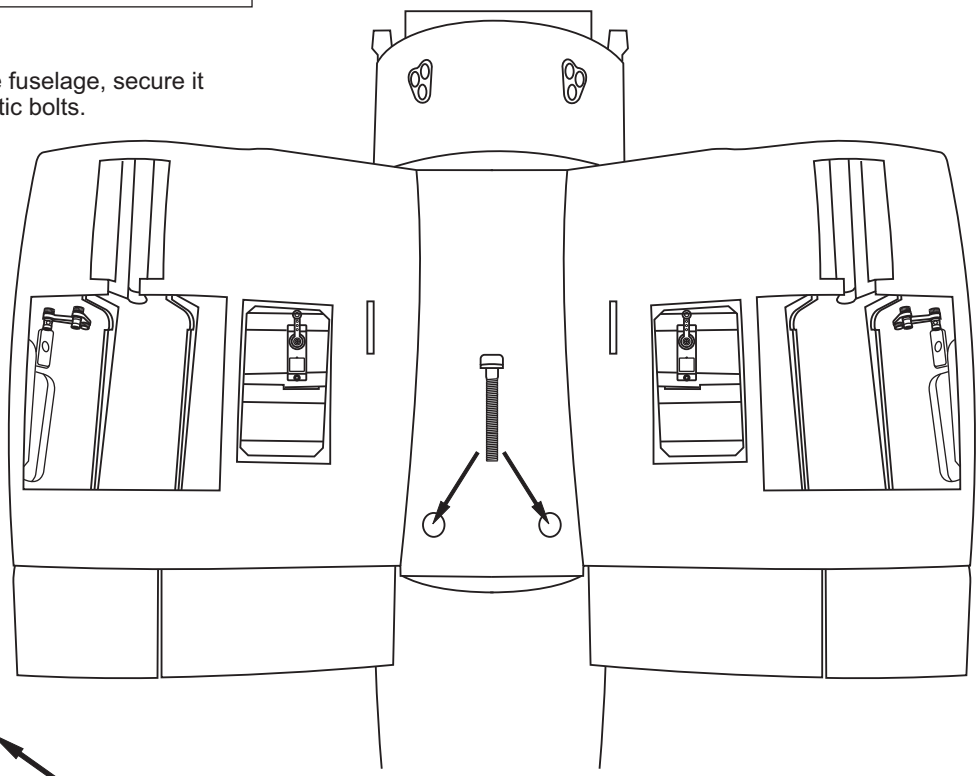
Remove the Horizontal stabilizer from the fuselage. Using s sharp hobby knife, carefully cut away the covering **inside the lines** which were drawn in the previous steep. **Do not cut into the woods** as this will affect the structural integrity of the stabilizer**.**

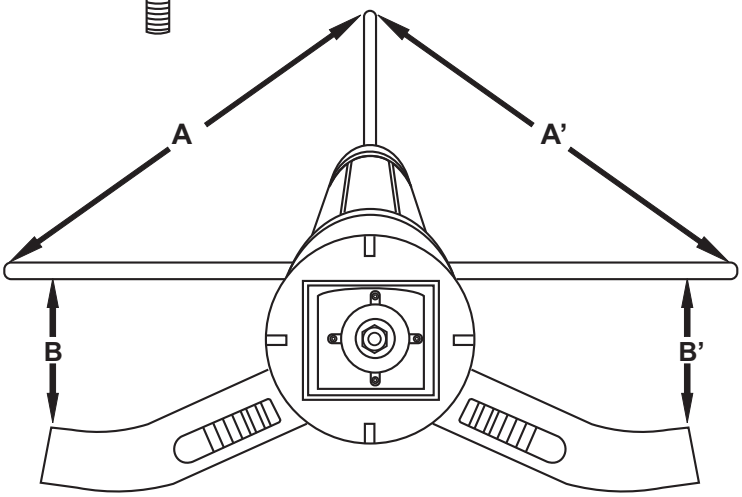
10- Stabilizer

Place the wing in position on the fuselage, secure it in place using two 7x70mm plastic bolts.

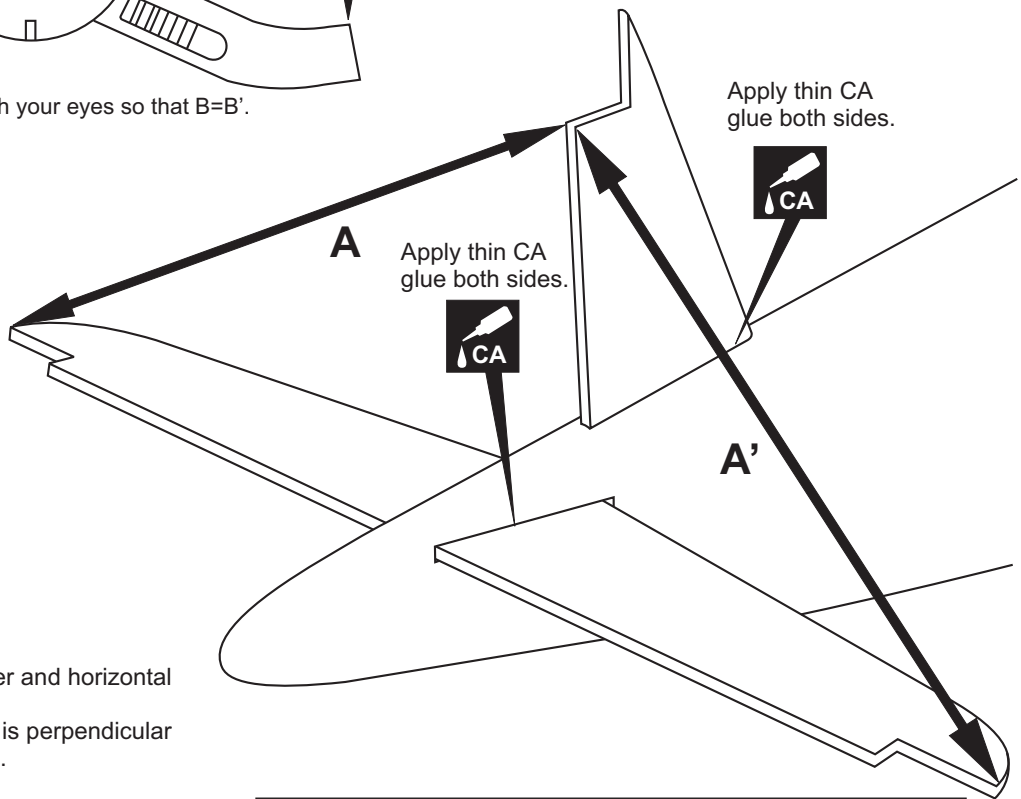
7x70 plastic bolt ...2







You look with your eyes so that B=B'.



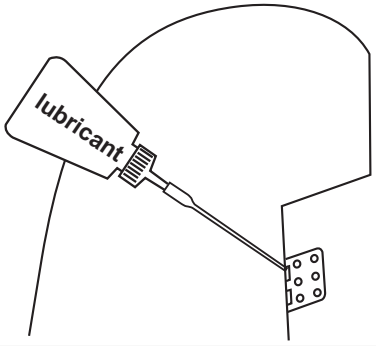
Again, trial fit the vertical stabilizer and horizontal stabilizer in position,
ensure that the vertical stabilizer is perpendicular to the horizontal stabilizer **(A=A')**.

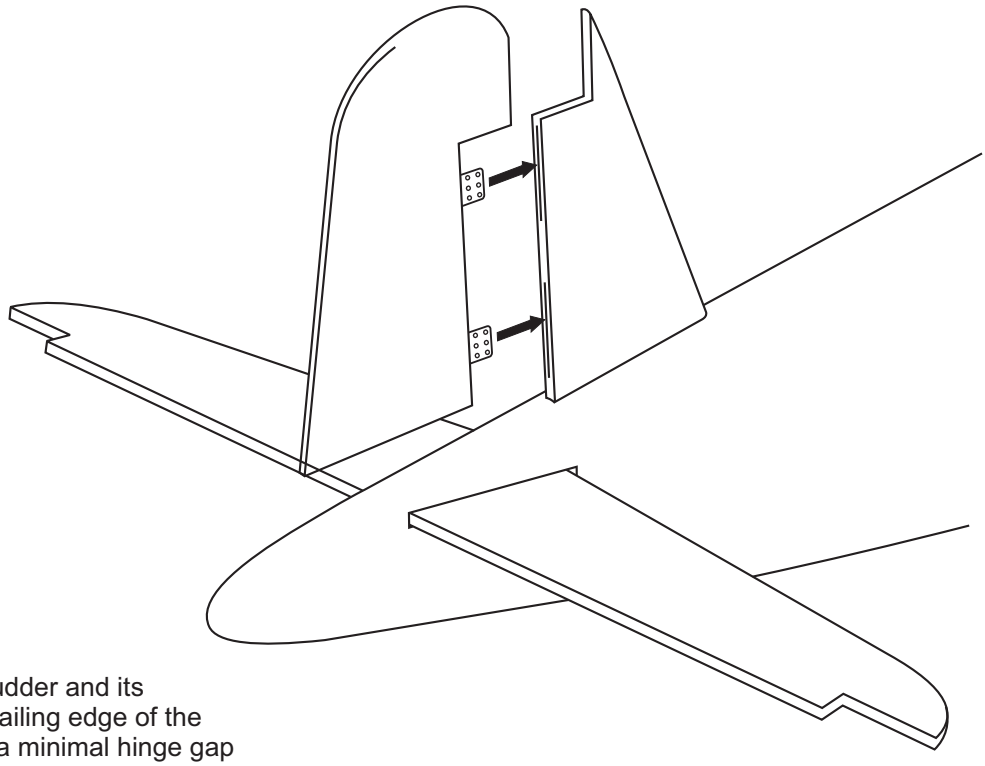
Use a small glue faucet, Apply the thin CA glue on the vertical stabilizer and the horizontal stabilizer where they contact the fuselage.
(both the left and right sides).

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

Use a small faucet, Apply the thin lubricant on the **hinger shaft**.

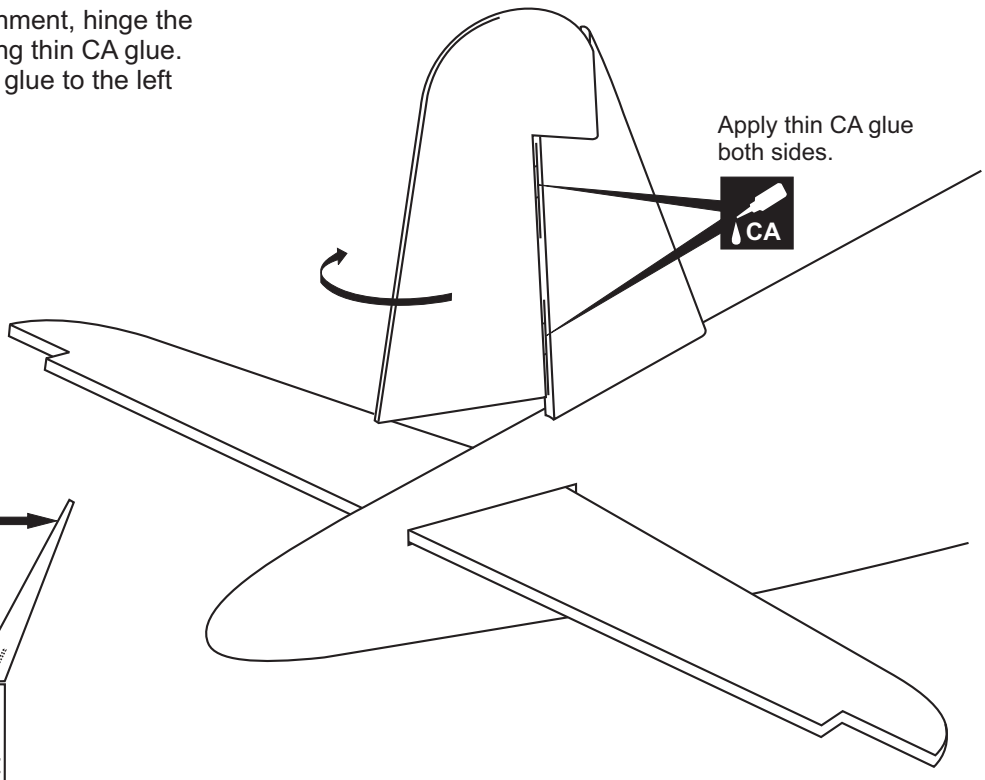
Do not aplly the lubricant to the surface of the hinge.

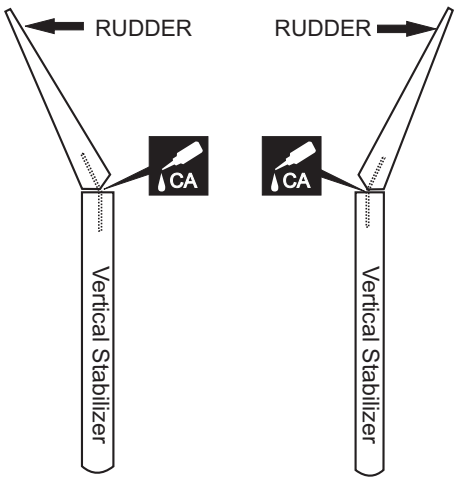




Without using glue yet, push the rudder and its hinges into the hinge slots in the trailing edge of the vertical stabilizer, there should be a minimal hinge gap and the end of the rudder should not rub against the vertical stabilizer.

When satisfied with the fit and alignment, hinge the rudder to the vertical stabilizer, using thin CA glue. Make sure to apply a thin layer CA glue to the left and right of both hinges.

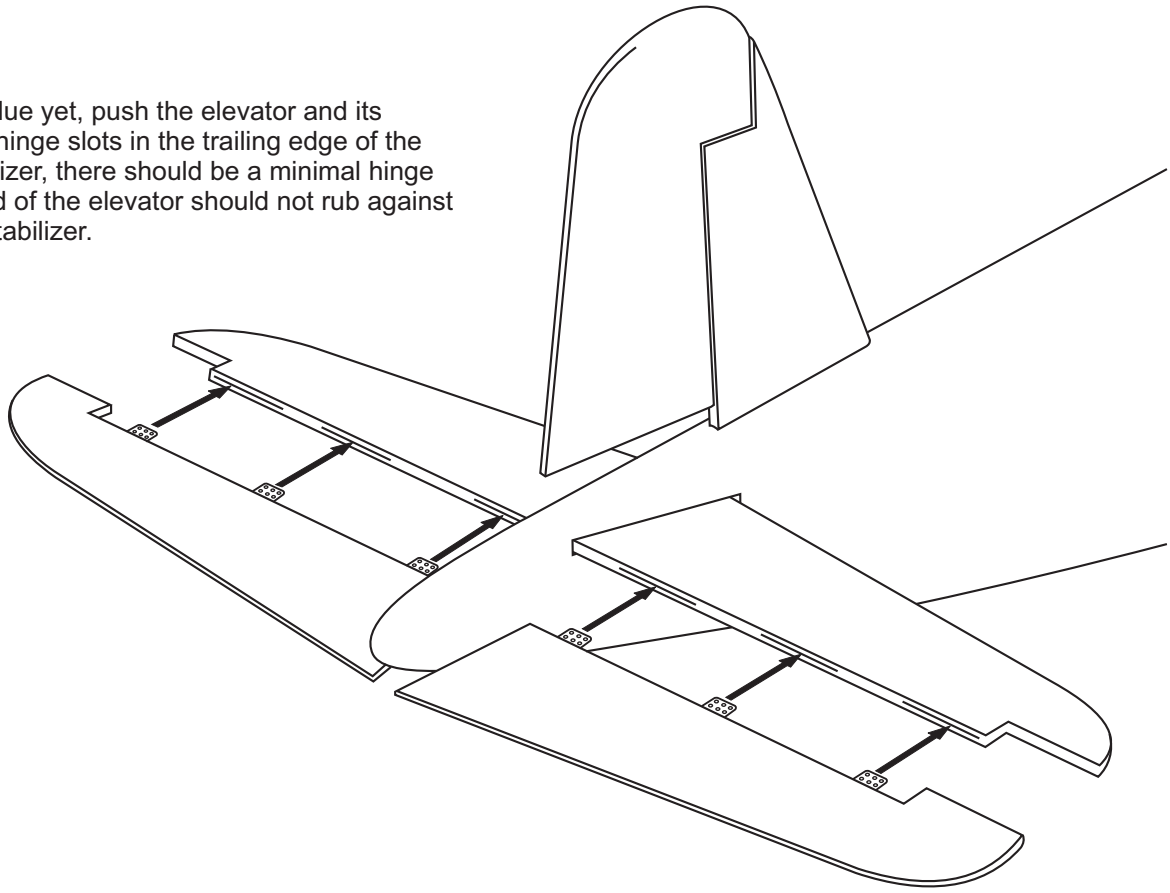


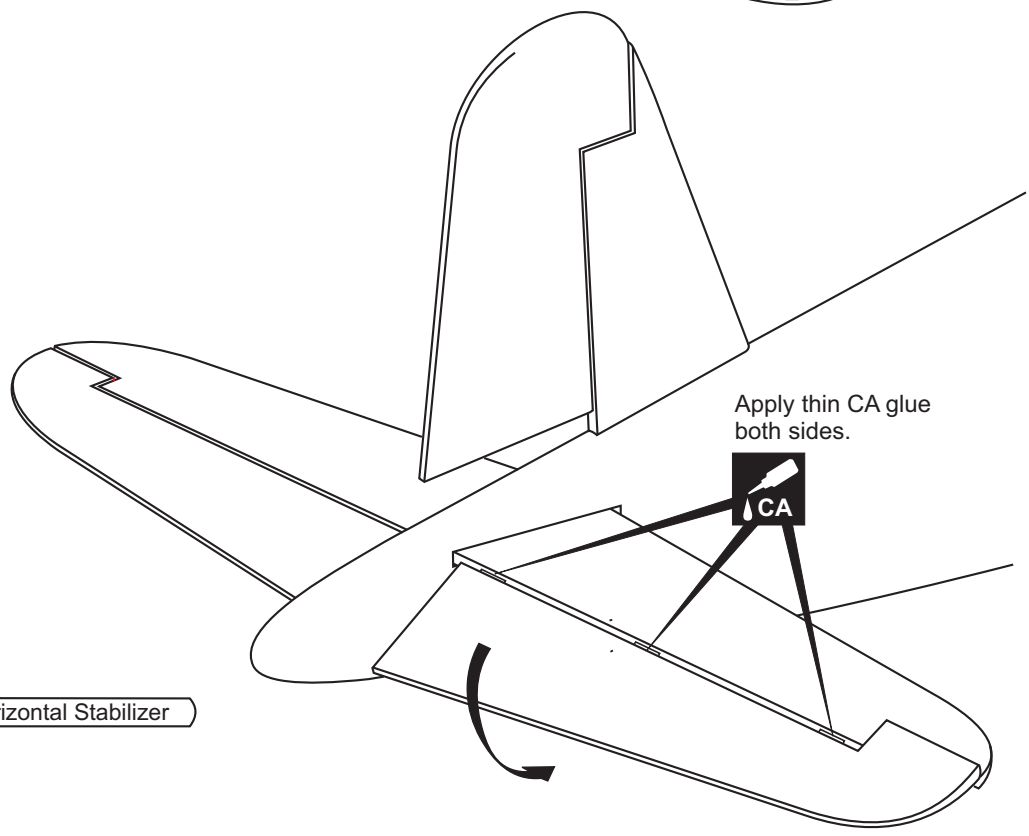


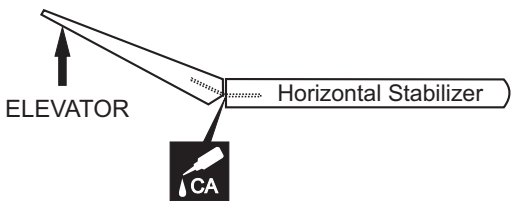
! Securely glue together. If coming off during fly, you lose control of your air plane.

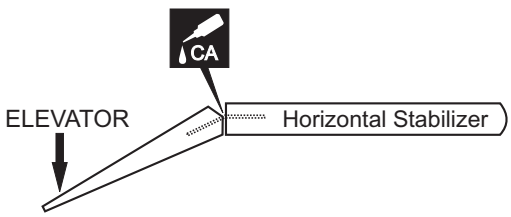
12- Elevator

Without using glue yet, 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 and the end of the elevator should not rub against the horizontal stabilizer.



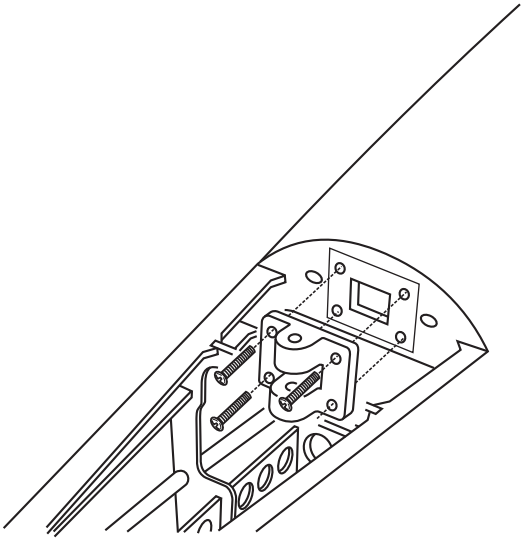


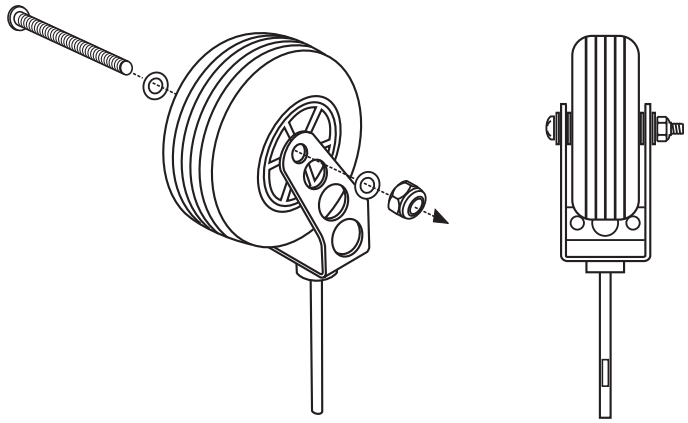


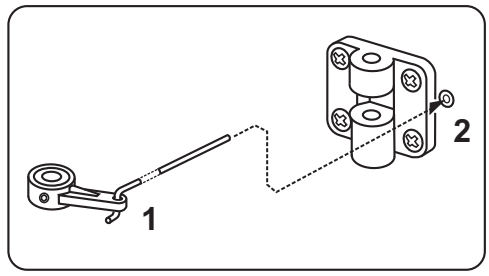


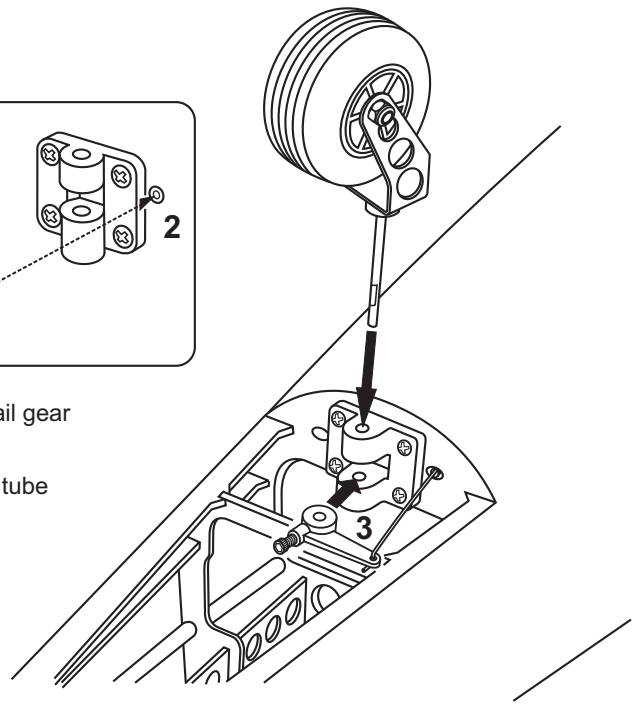
! Securely glue together. If coming off during fly, you lose control of your air plane.

13- Tail wheel









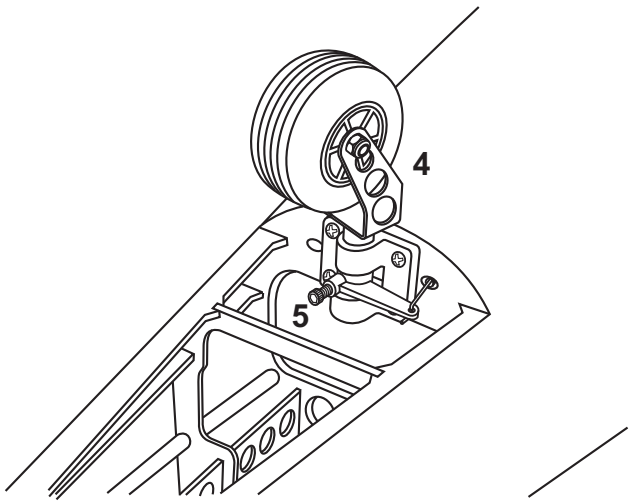
1- Insert the tail wheel push-rod into the hole on the tail gear control horn as show.

2- Insert the tail wheel push-rod into the white plastic tube inside the fuselage.

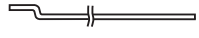
3- Install the tail wheel control horn in place.

4- Instal the tail wheel gear in place.

5- Secure the tail wheel control horn in place using a 3mm screw set, ensure smooth non-binding movement.



2x900mm rod.....1



3x25mm bolt.....1

3x15mm bolt.....4

Tail landing gear..1

Tail wheel control-horn.....1

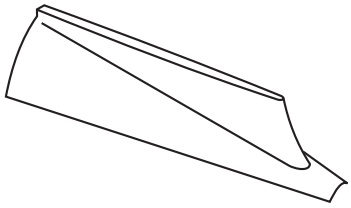
3mm nut....1

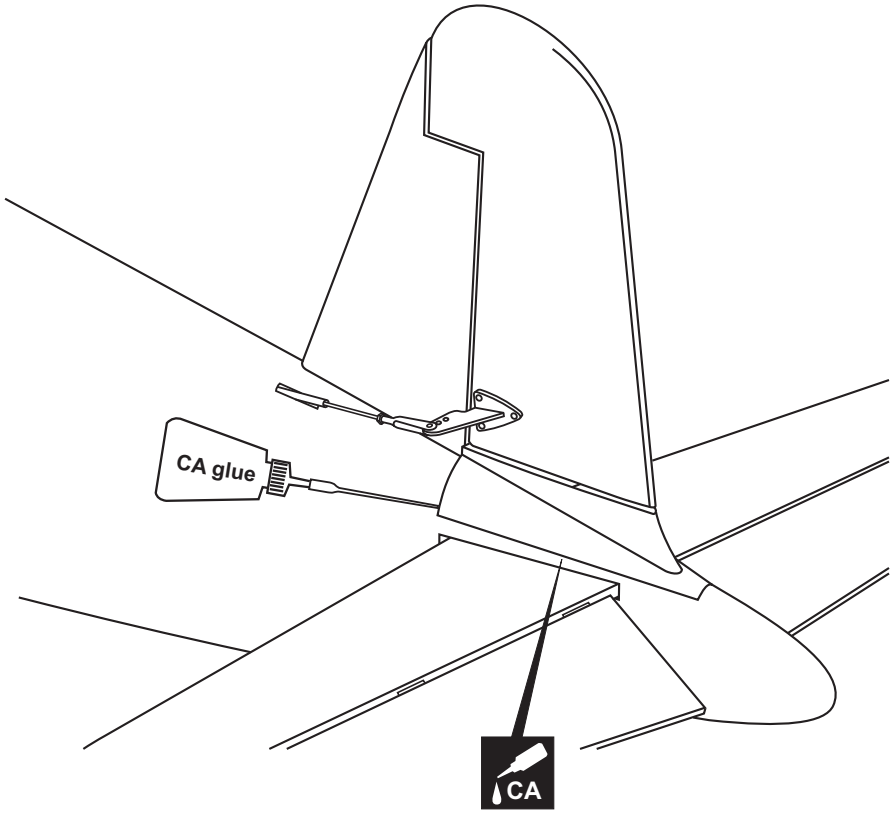
3x15mm hex bolt..1

3mm washer.....4

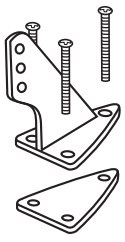
50mm wheel...1

14- Control horn & plastic cover



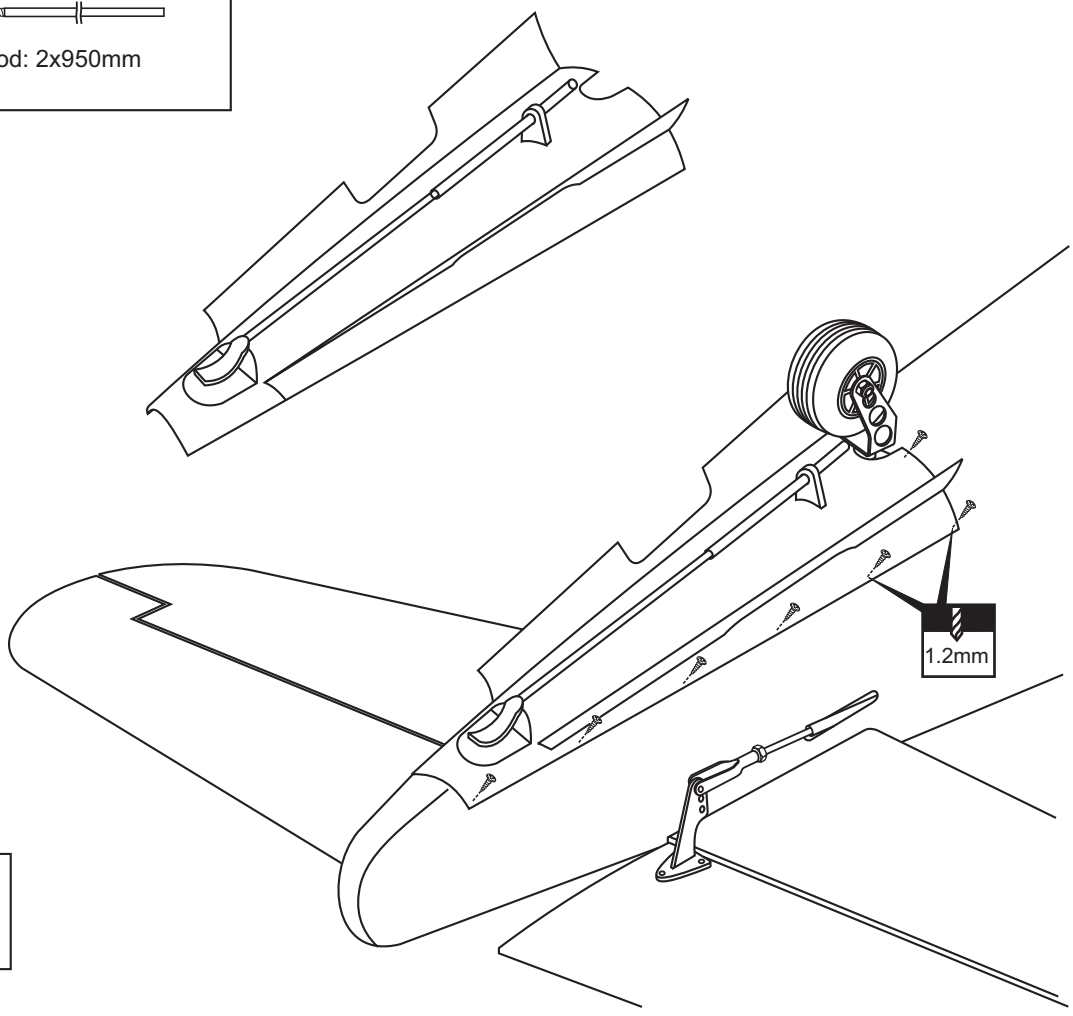


Use a small faucet, Apply the thin CA glue where the plastic tail cover meets the fuselage.

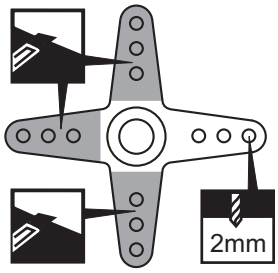


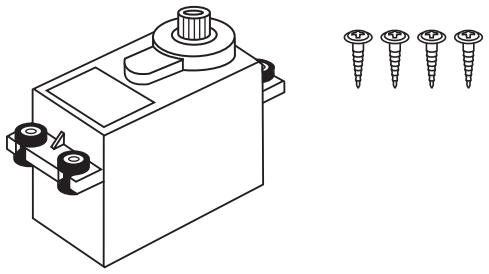
Control horn: 3 set

Rudder push-rod: 2x950mm

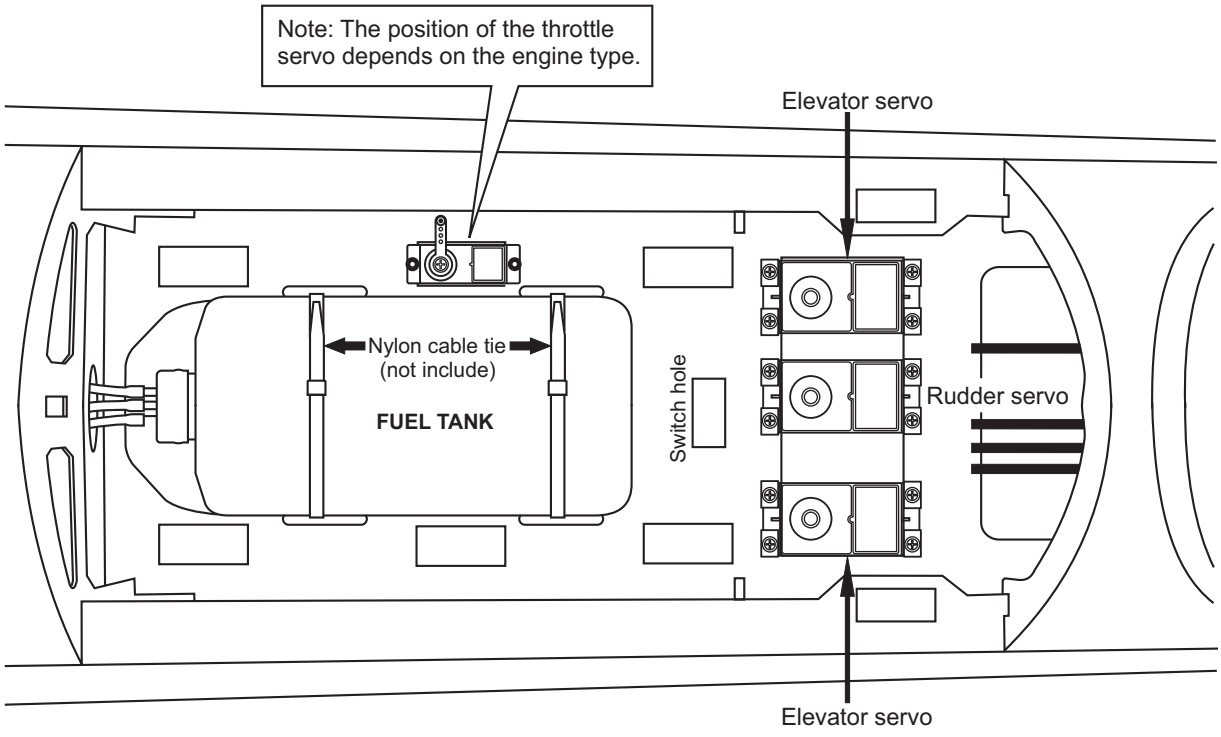


2.5mm screw....14





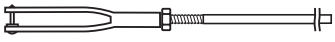
Install the rubber grommets and brass eyelets onto all servos.



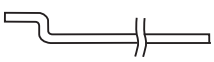
Fuselage - top view

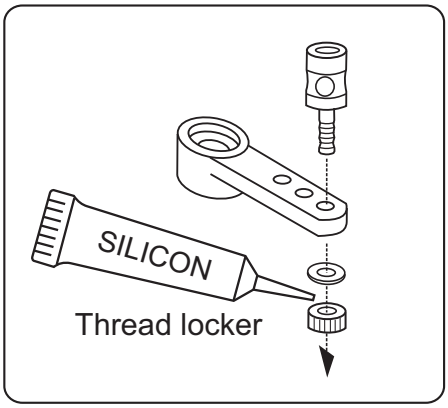
3mm dia.x950mm Elevator push-rod with clevis one end.

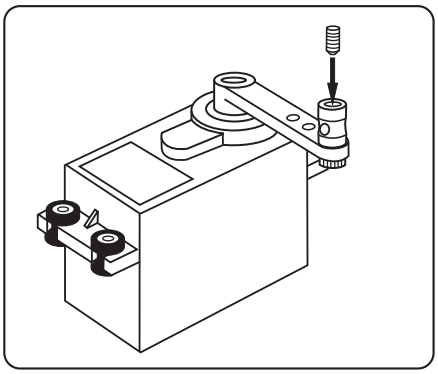
2mm dia.x950mm Rudder push-rod with clevis one end.

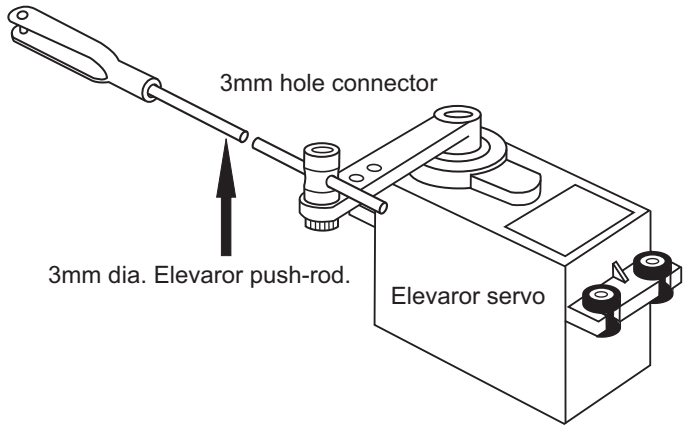


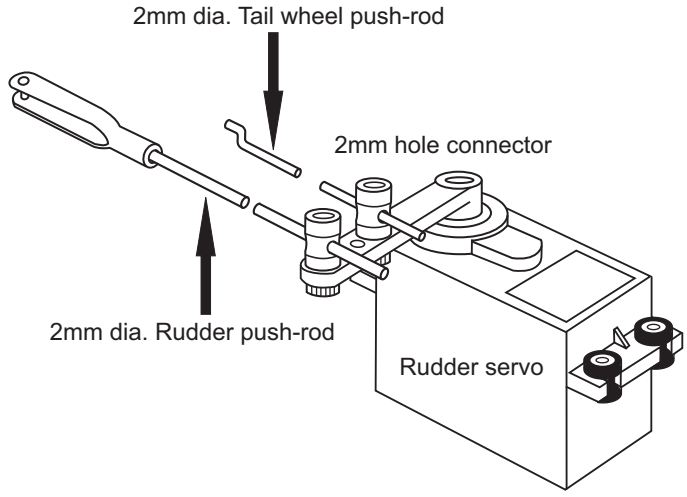
2mm dia.x900mm Tail wheel push-rod with Z bend one end.











3mm hole connector (for elevator)

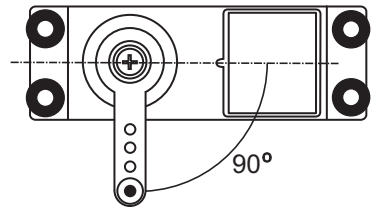
.....2

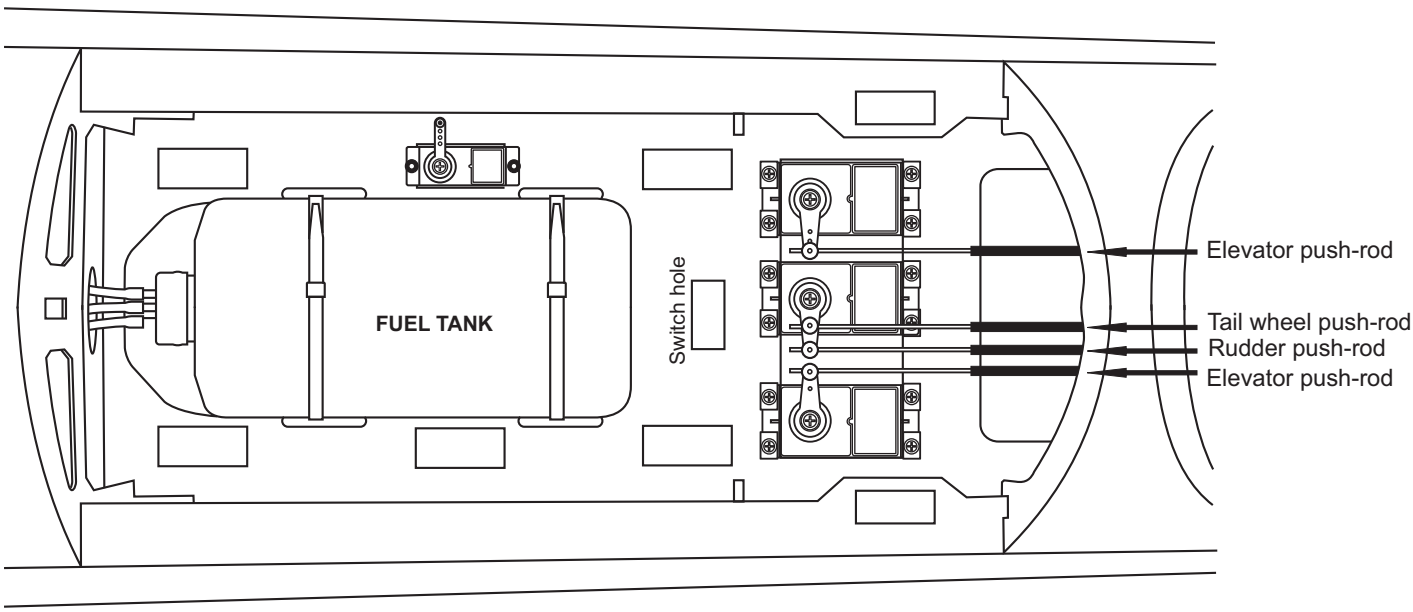
2mm hole connector (for rudder, Tail wheel and engine)

.....3

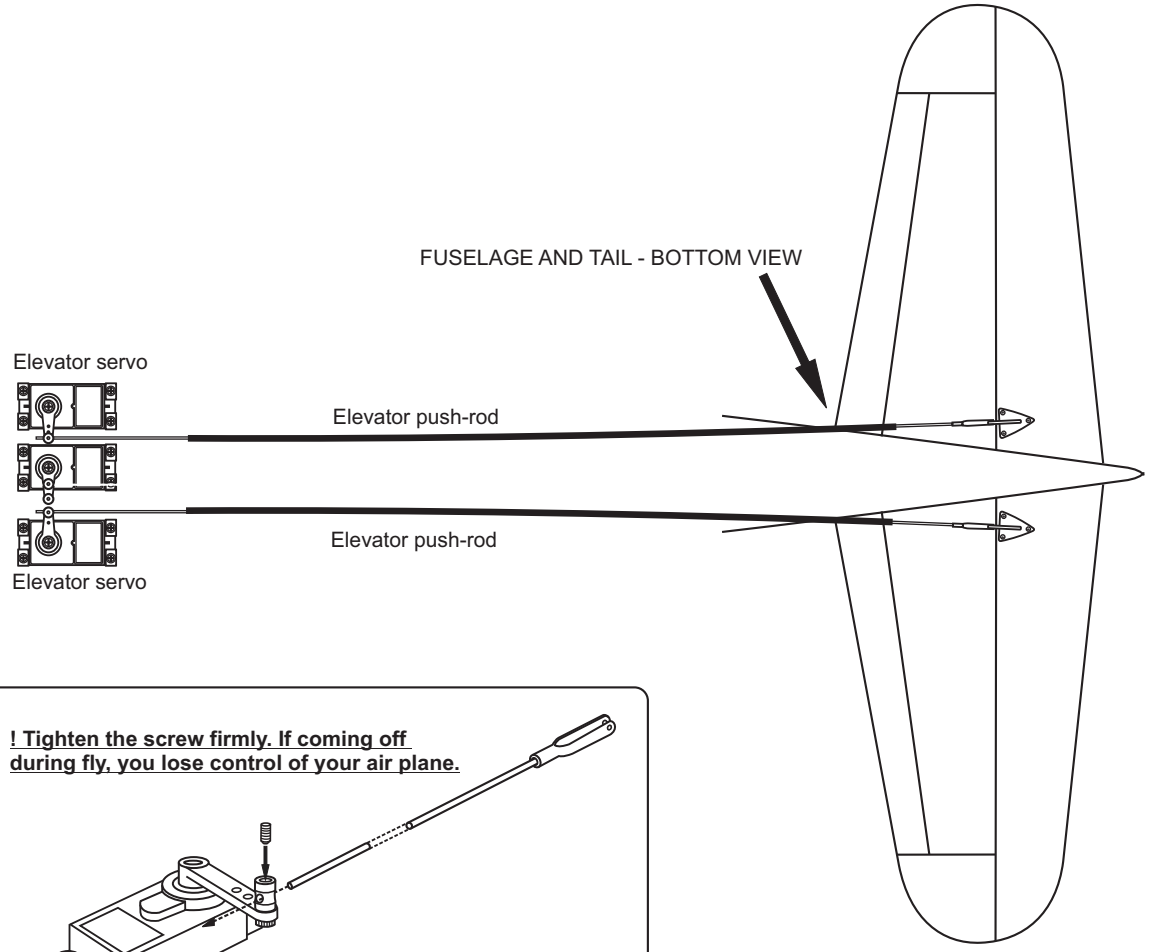
Switch on the radio (trim centered), mount the **rudder** and **elevator** servo horn in neutral position.

The servo horn should be perpendicular to the servo as shown on the drawing below.

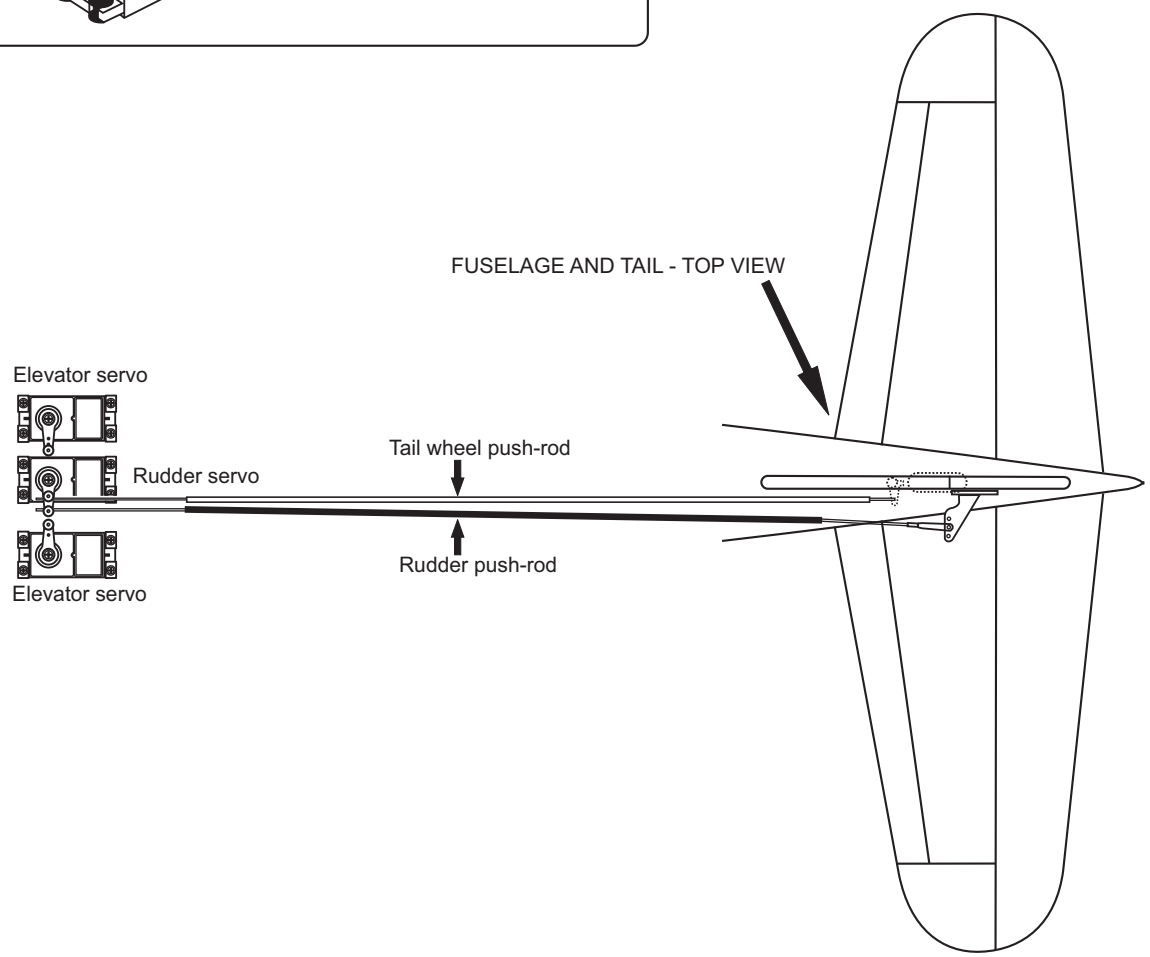


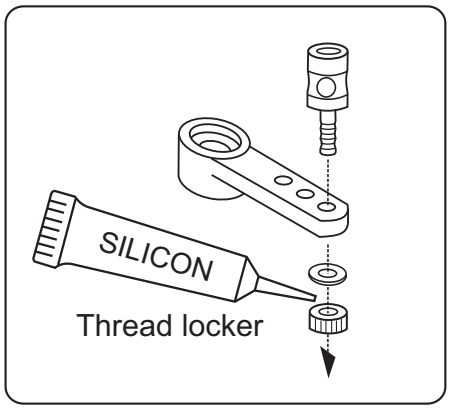


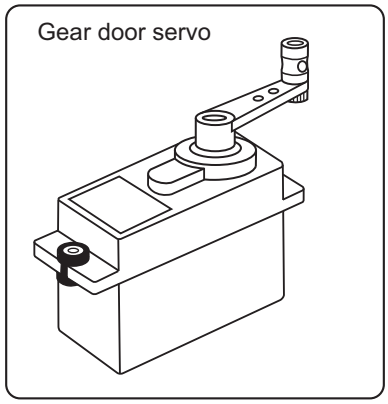
Fuselage - top view

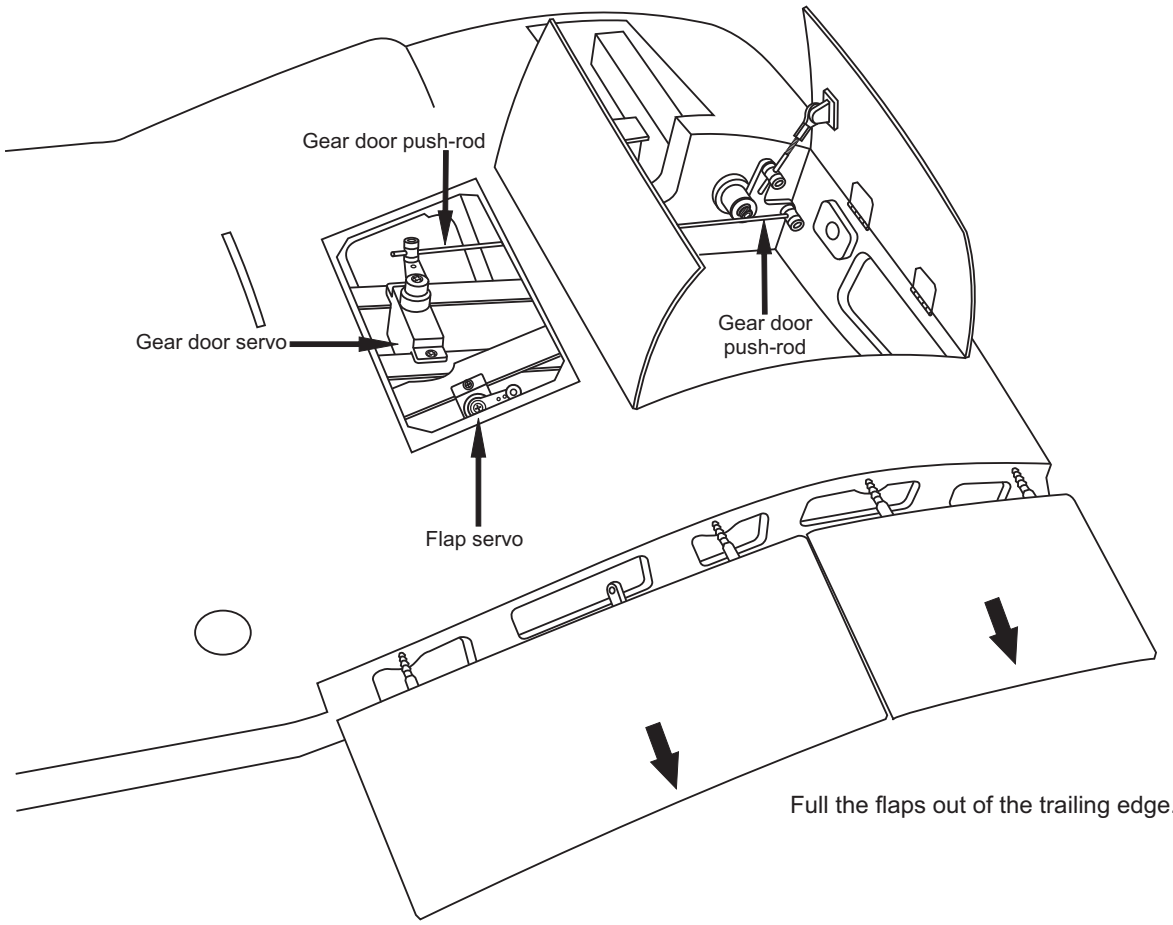


! Tighten the screw firmly. If coming off during fly, you lose control of your air plane.





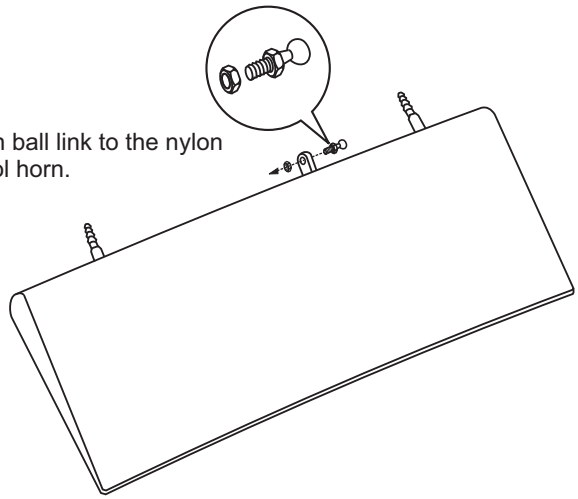




Full the flaps out of the trailing edge.

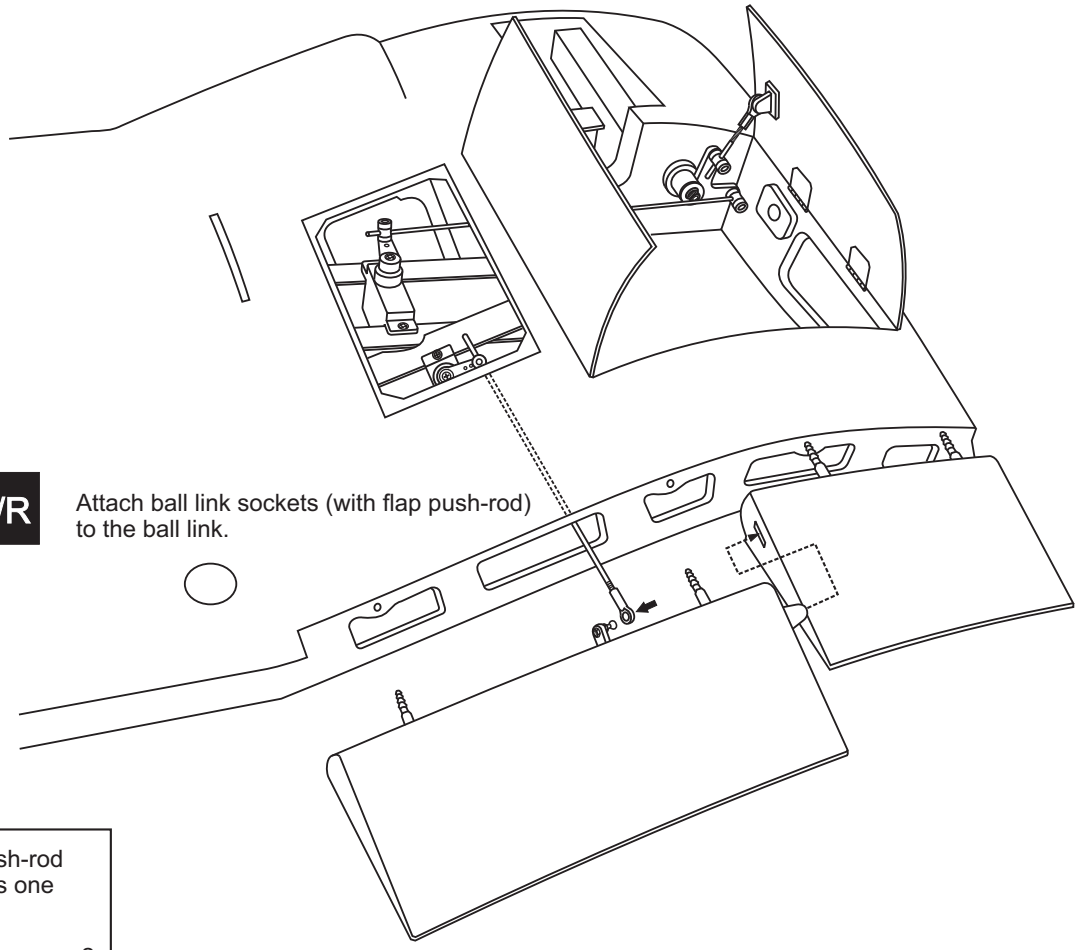
L/R

Attach ball link to the nylon control horn.



Ball-link (for inner flap)

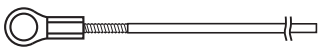
.....2



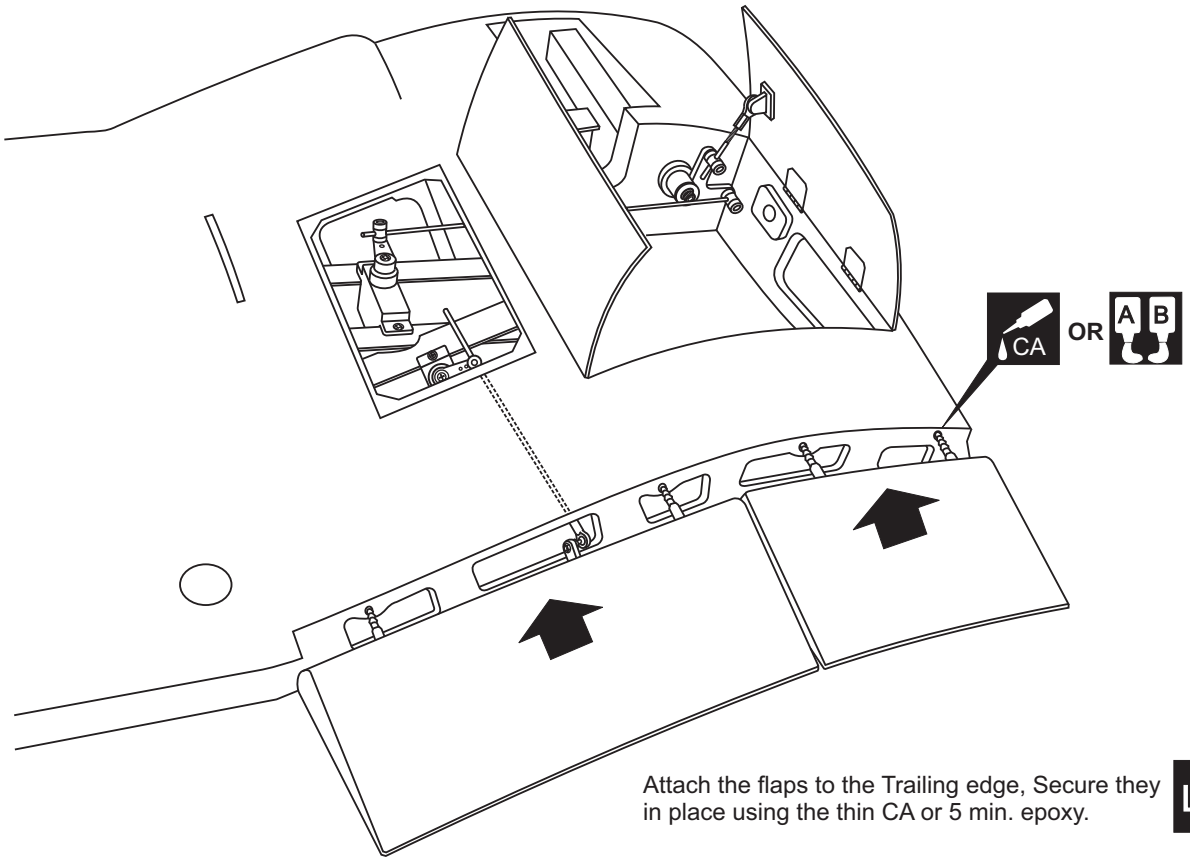
L/R

Attach ball link sockets (with flap push-rod) to the ball link.

2mm dia.x175mm flap push-rod with nylon ball link sockets one end.

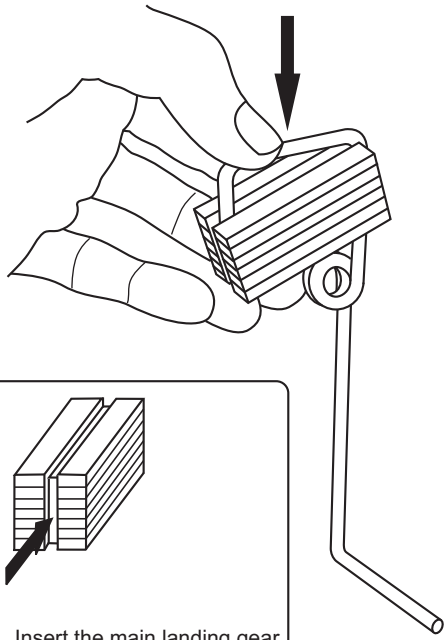


...2



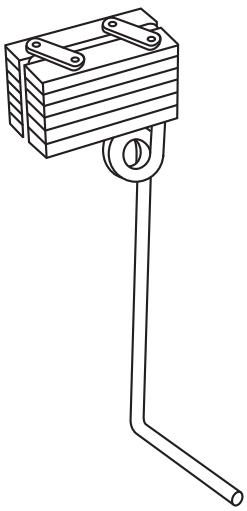
Attach the flaps to the Trailing edge, Secure they in place using the thin CA or 5 min. epoxy.

L/R



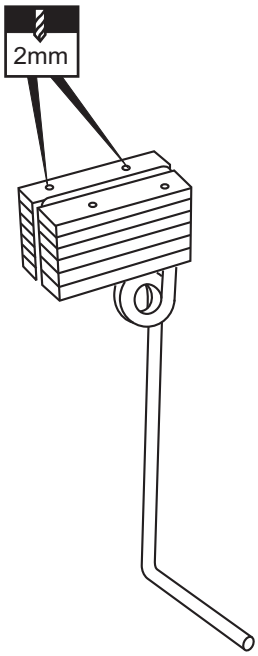
Insert the main landing gear into the slot on the gear mount, if necessary, use sander to widen the slot to make this easier.

1A



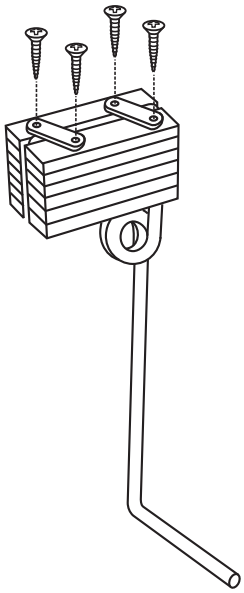
1B

Using the nylon gear strap as a template, mark the plywood gear mount where the four holes to be drill.



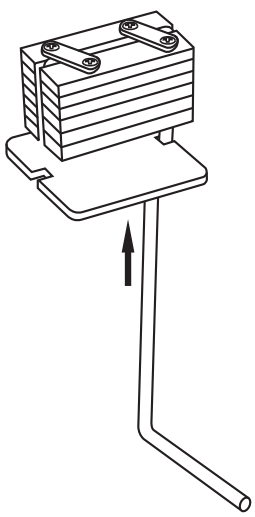
1C

Remove the nylon gear strap and drill a 2mm hole at each of the four marks marked.



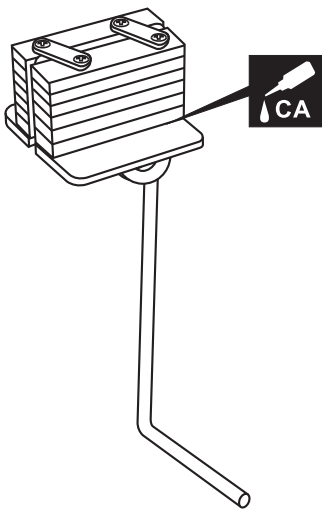
1D

Reposition the nylon gear strap and secure them in place using four 3x20mm screws.



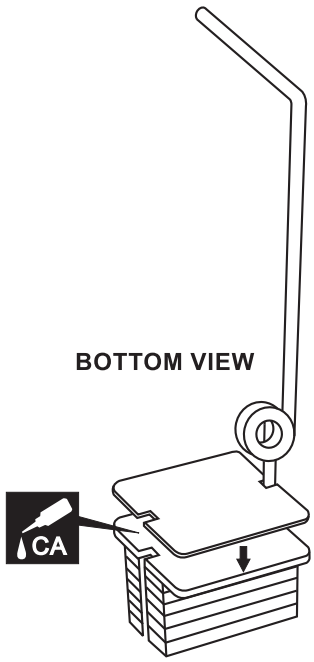
1E

Attach the ply gear mount plate to the plywood gear mount



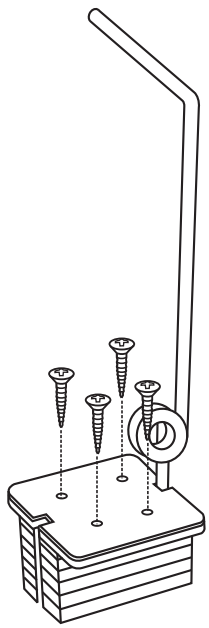
1F

Secure the ply gear mount plate in place using CA glue.



1G

Attach the square plastic onto the ply gear mount, secure it in place using CA glue.



1H

Drill a 2mm holes through the square plastic and ply gear mount plate.
Secure the ply gear mount using four 3x20mm screws.

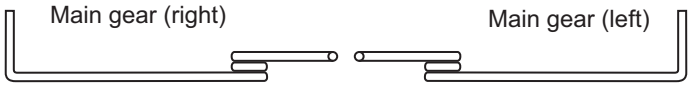
3x20mm screw 16

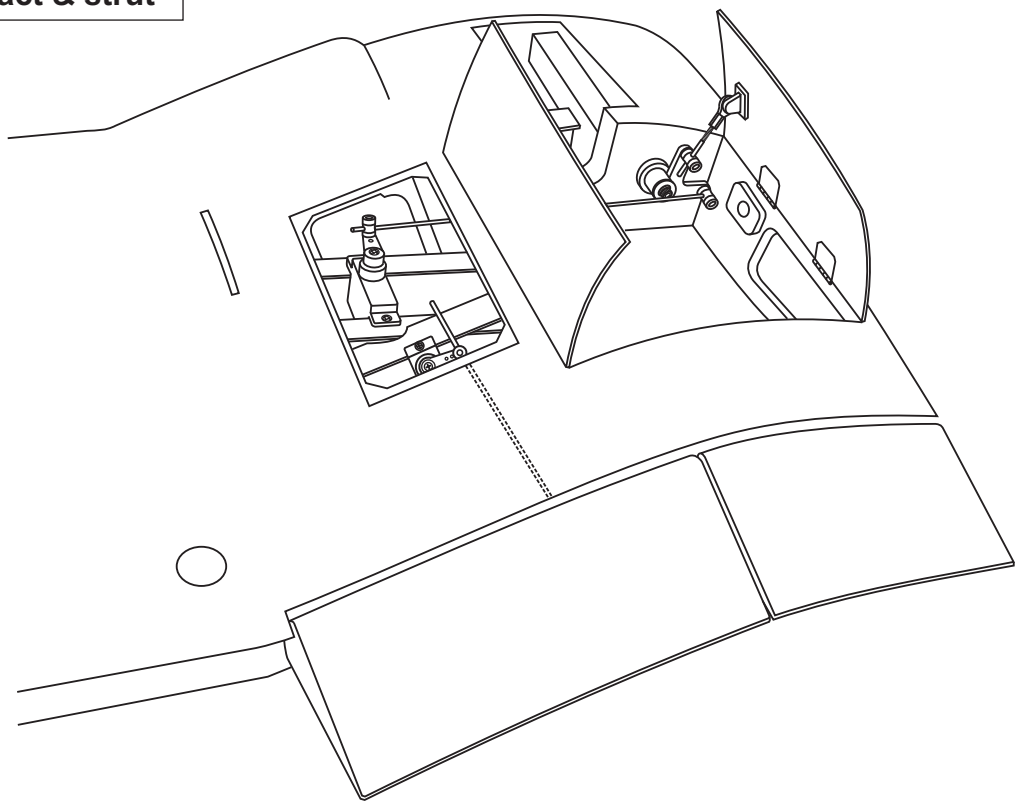
Nylon gear strap 4

Plywood Gear mount x 2

Square plastic x2

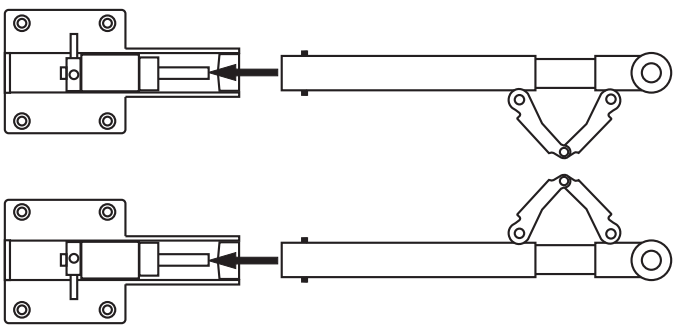
Ply gear mount plate x 2

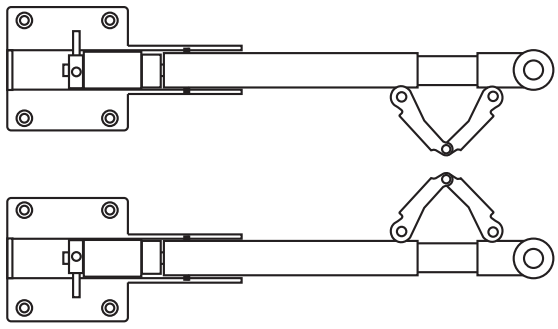


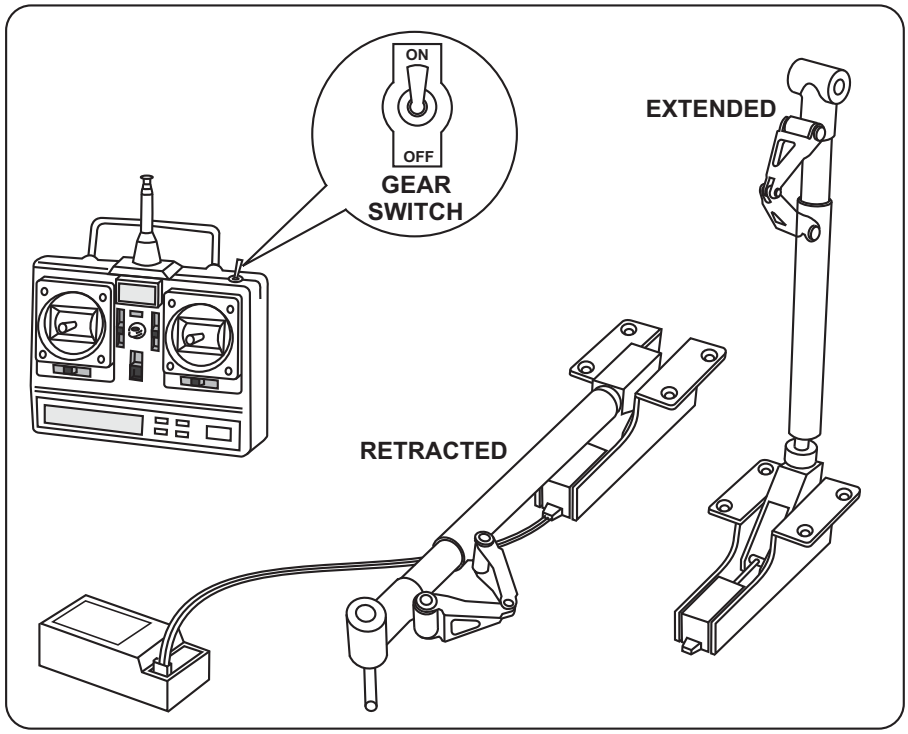


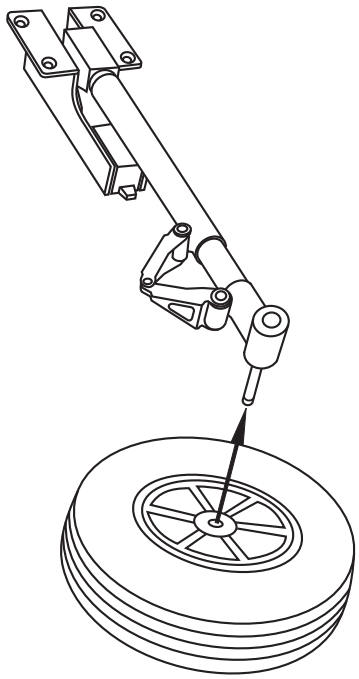
REQUIRED FOR OPERATION (Purchase separately)

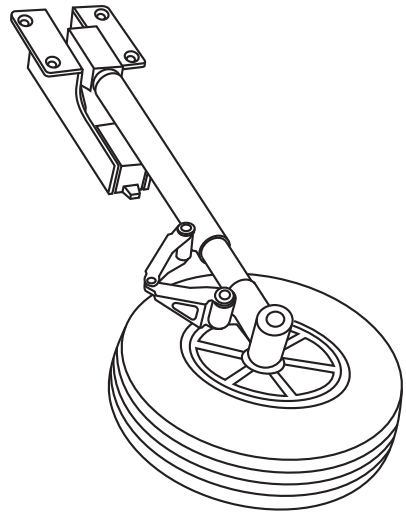
VQ-ARE34 Eretracts 90 degree - F4U Corsair 120 size EP-GP with struts







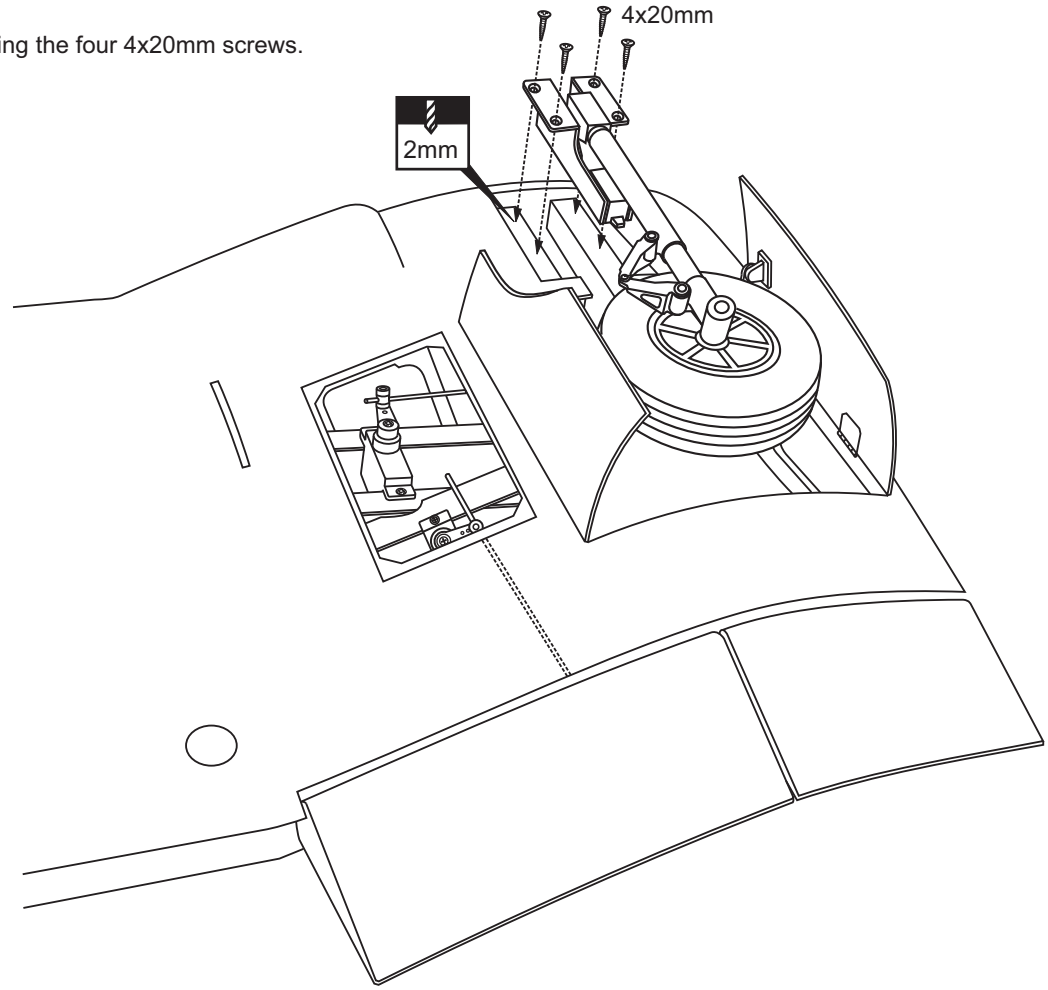




Install the Eretract on the mounts, adjust the Eretract so that the wheel does not touch the wing during operation.

Once the Eretract is working properly, mark the four holes you will drill.

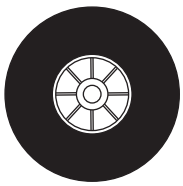
Secure the Eretract in place using the four 4x20mm screws.



4x20mm screw....4

4mm washer.. ...4

90mm wheel.. .2



23- Plastic mounting gear

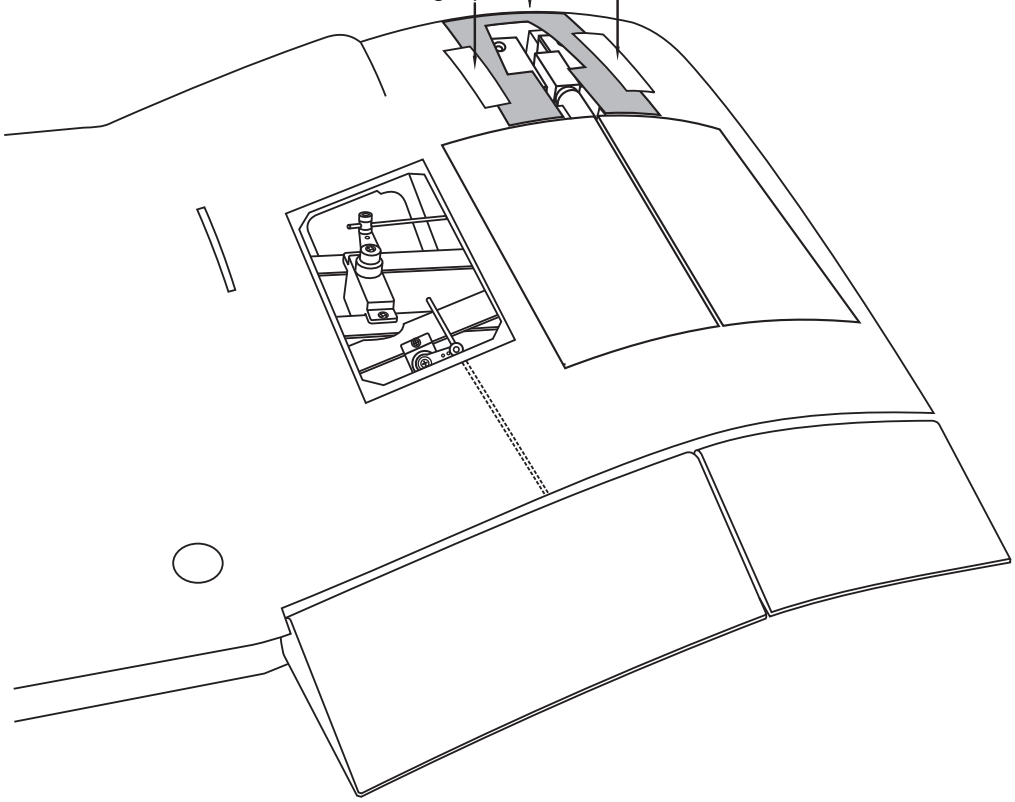
Plastic mounting gear

L/R

Place the mounting gear in place, sercure it in place with the marking tape, **do not glue or screw in this time.**

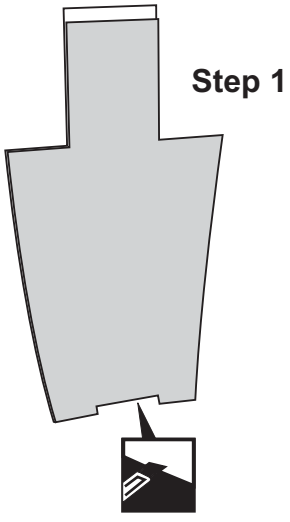
Masking tape

Masking tape

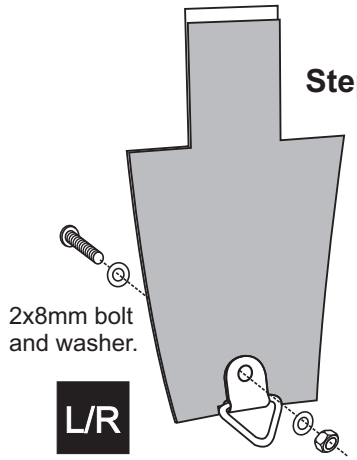


Door strut gear

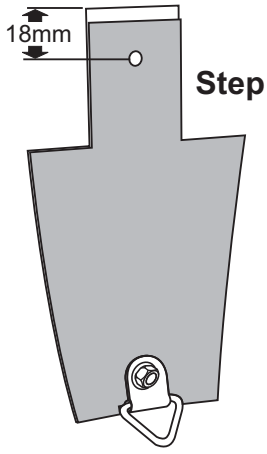
Step 1



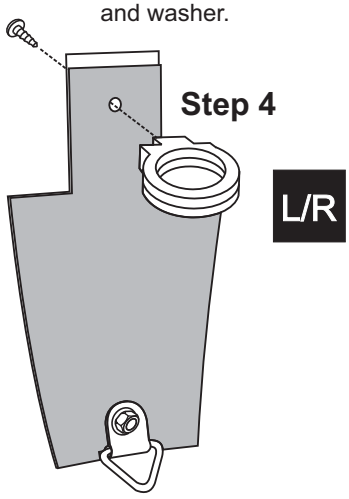
Step 2



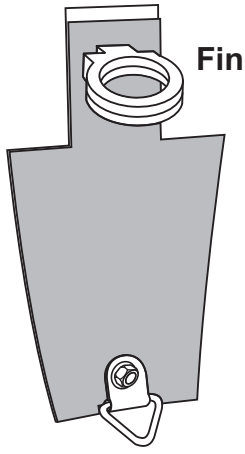
Step 3



Step 4



Finish




....2

2x6mm boulon


....2

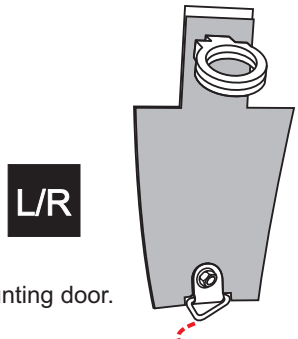
2mm washer


....2

Wooden ring

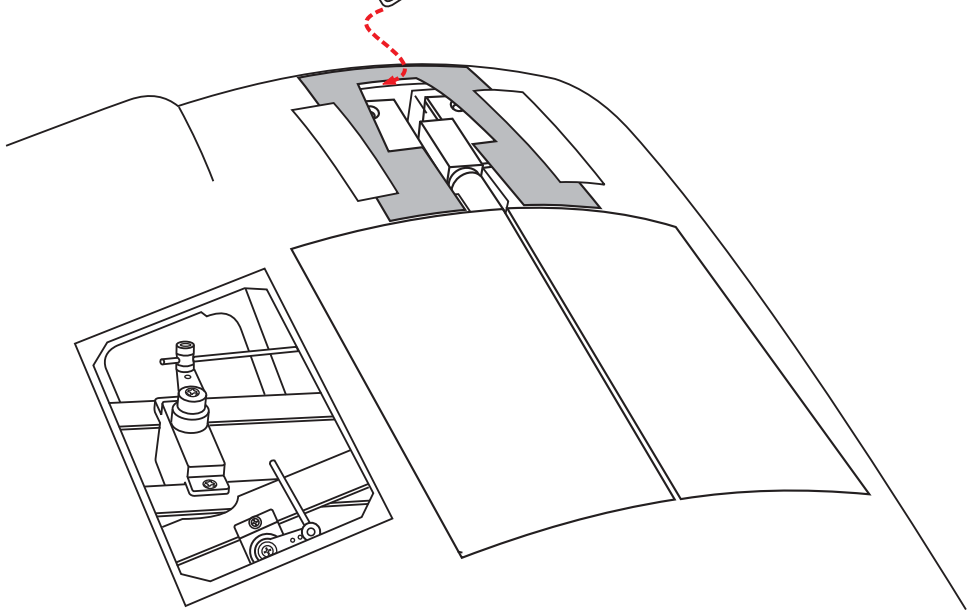

...4pcs

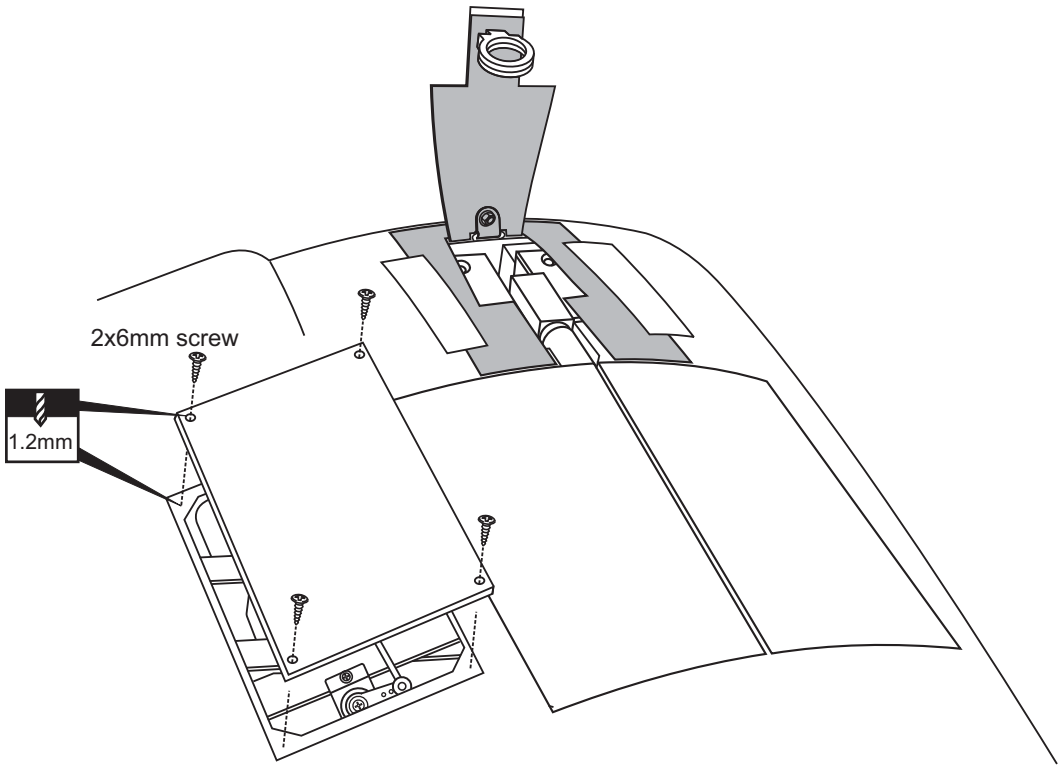
24- Plastic mounting gear



L/R

Insert the triangle hook under the mounting door.

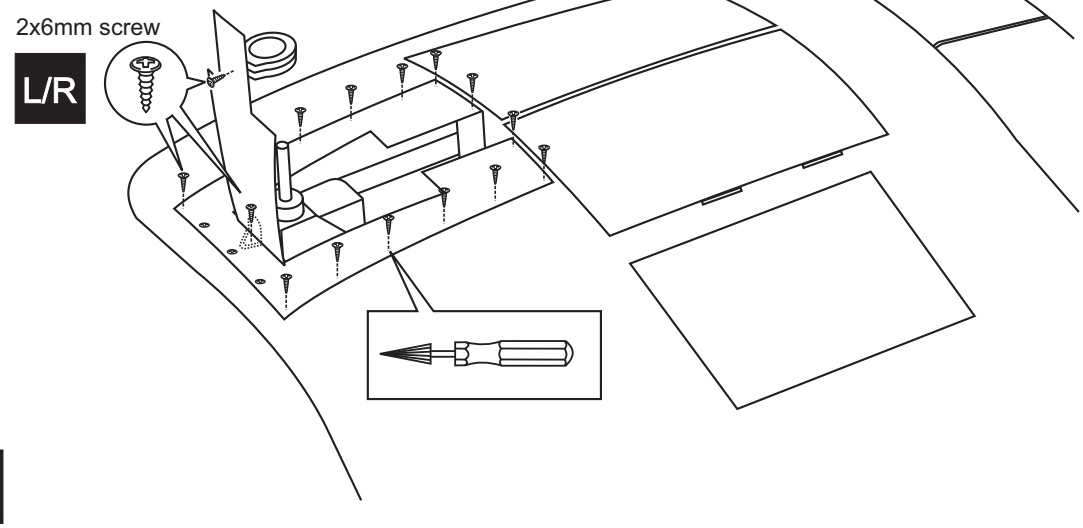




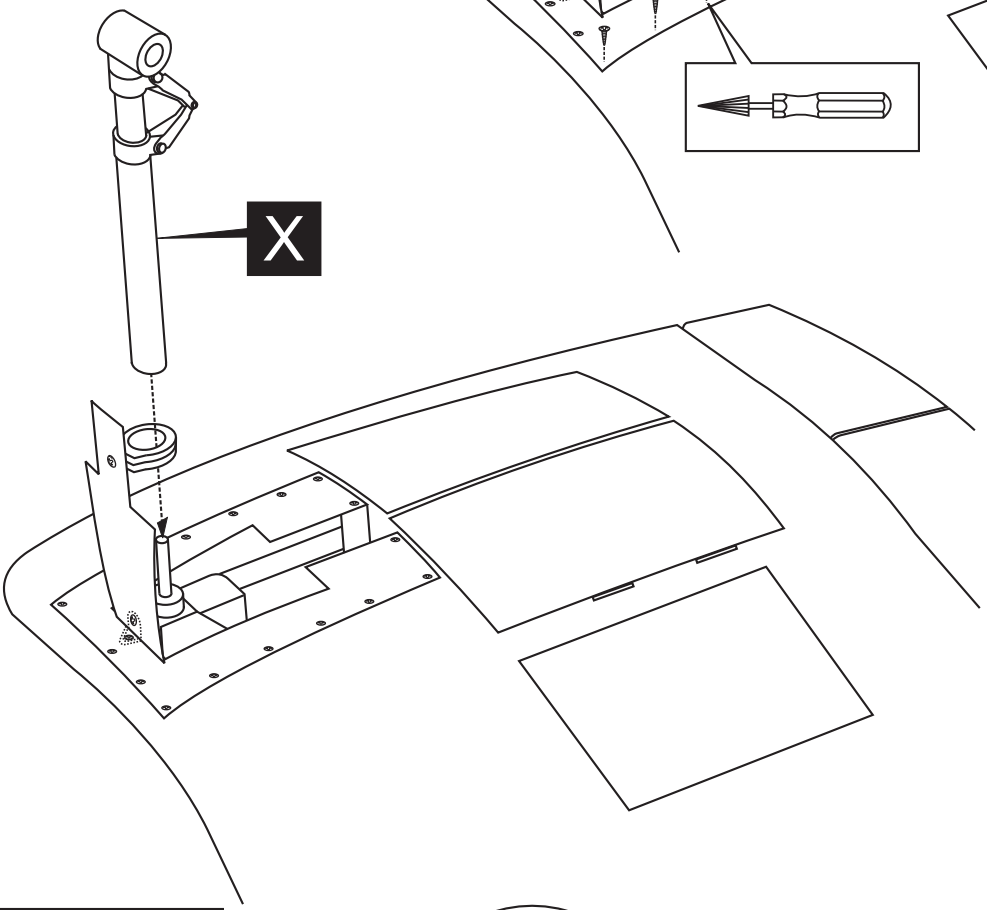
25- Plastic mounting gear

2x6mm screw

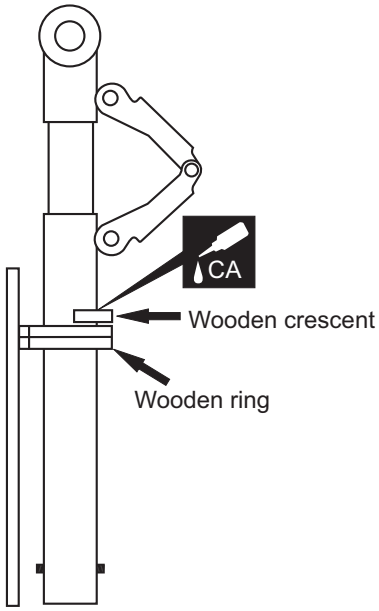
L/R



2x6mm screw 18

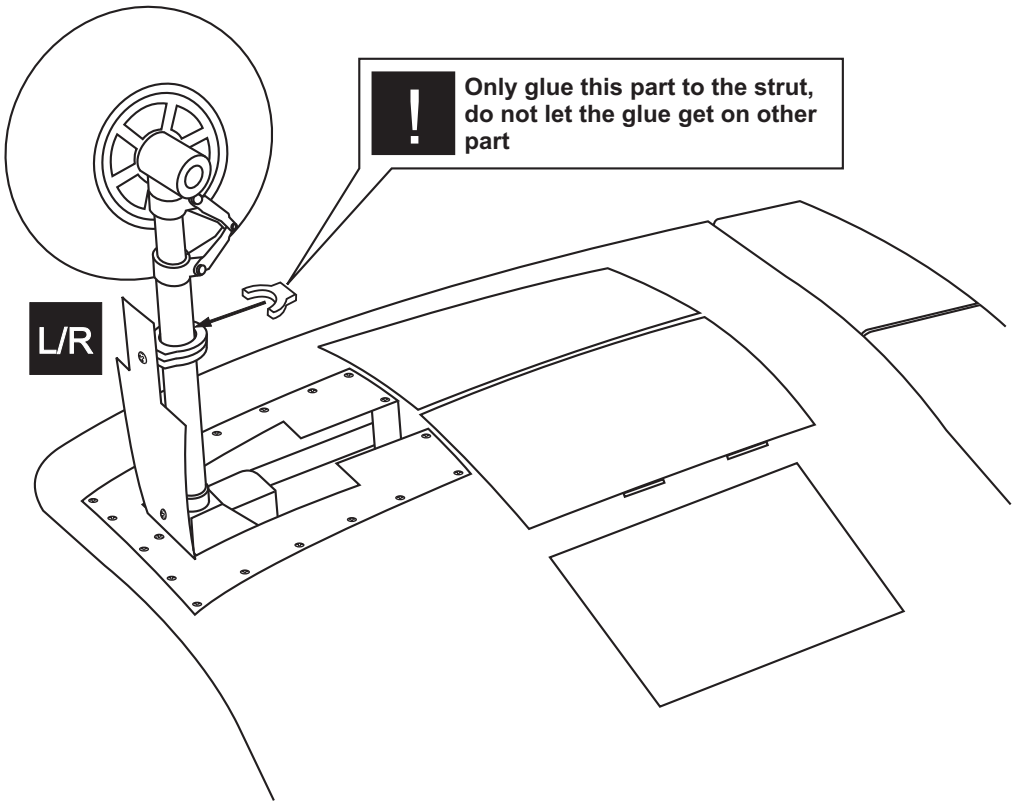


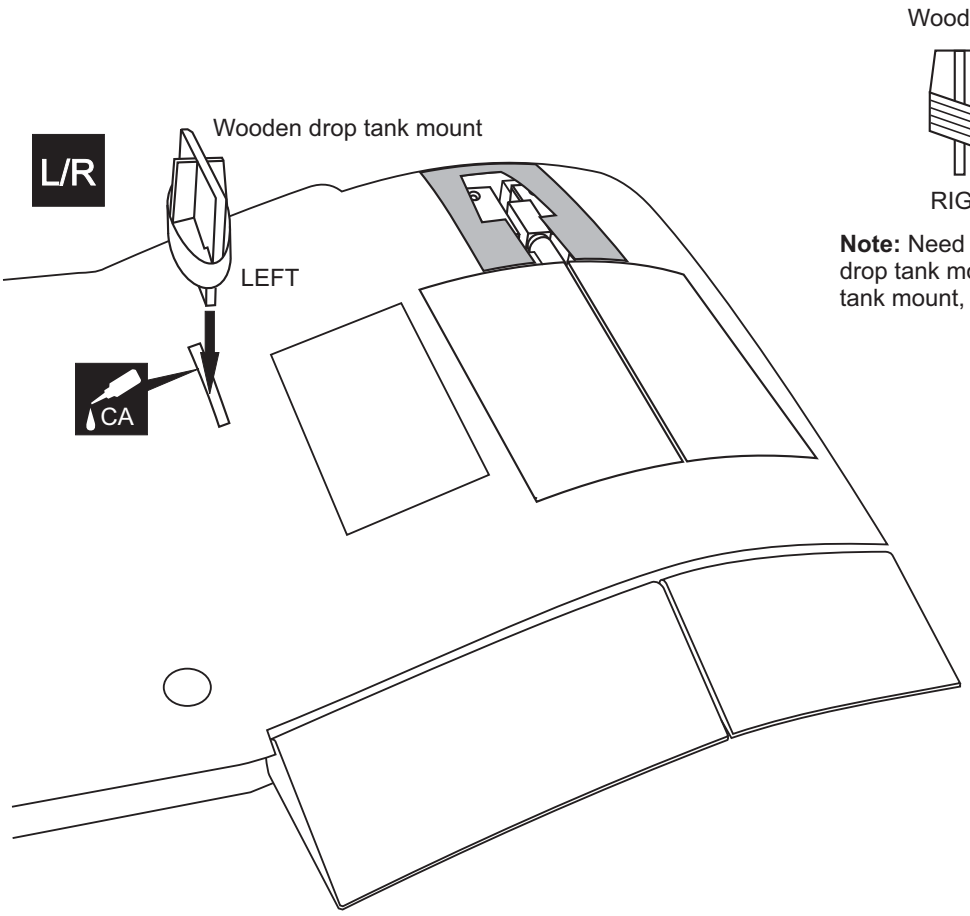
Wooden crescent 2

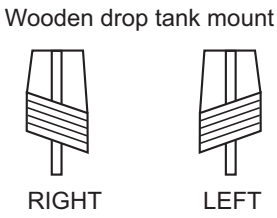


! **Only glue this part to the strut, do not let the glue get on other part**

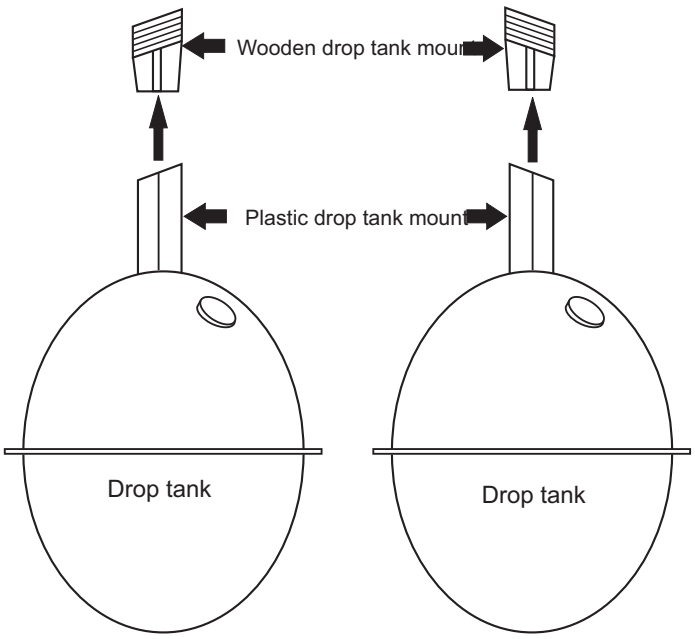
L/R

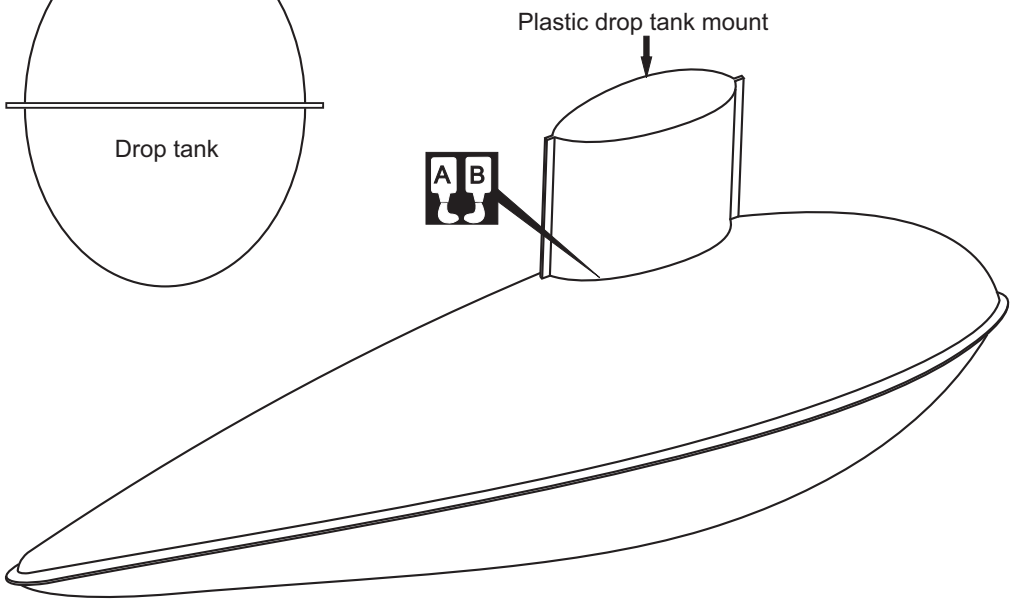


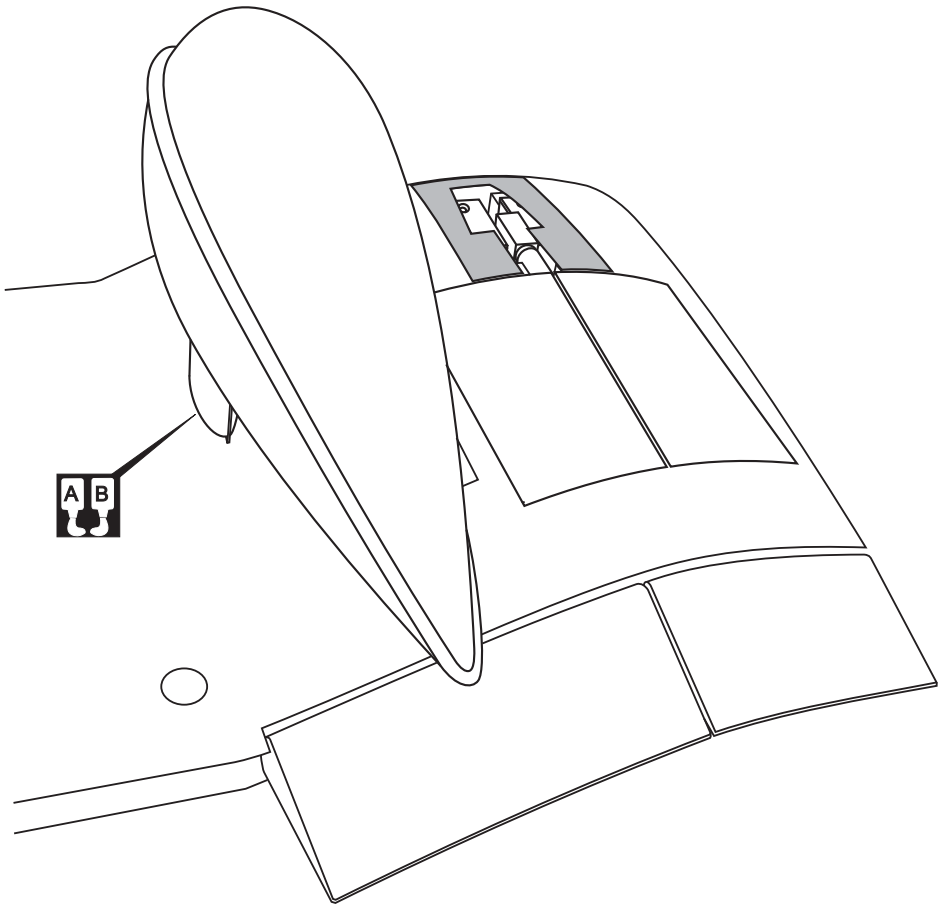


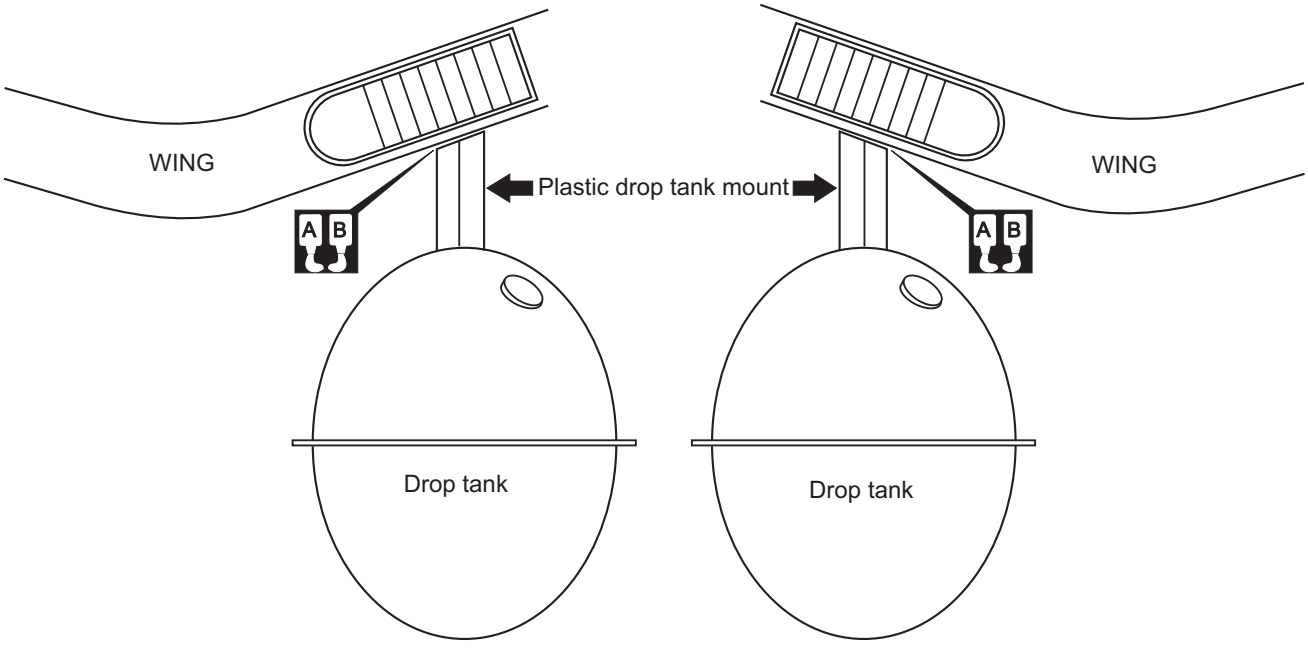


Note: Need to distinguish left wooden drop tank mount and right wooden drop tank mount, they are different.

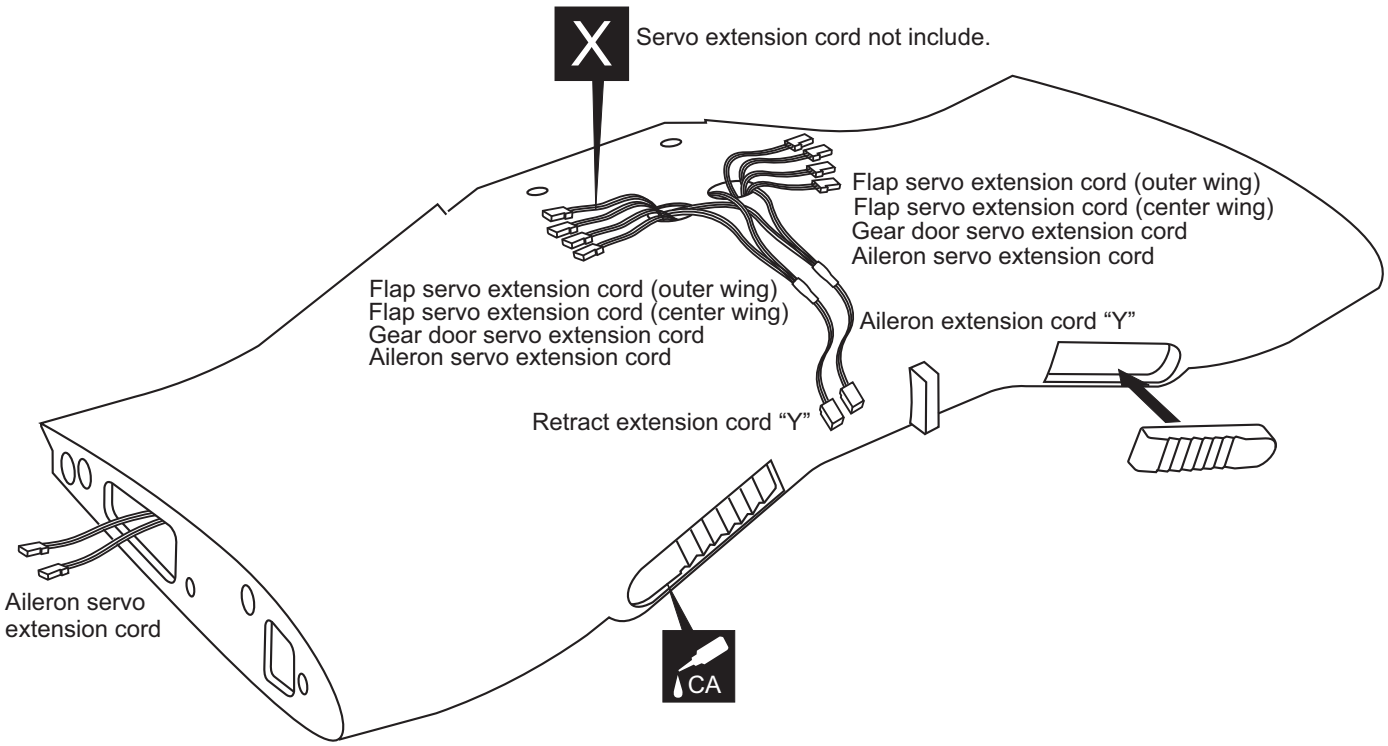





A
B

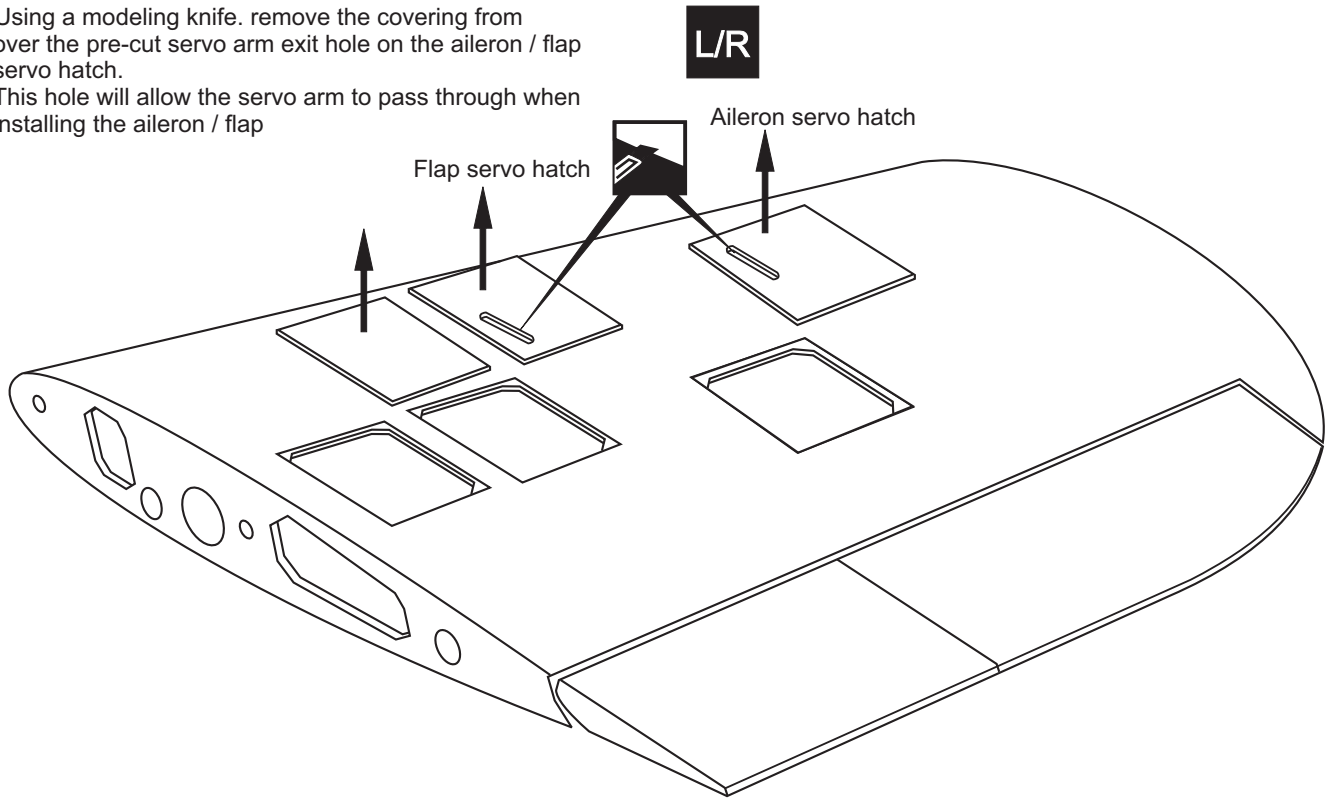

WING
A
B
Plastic drop tank mount
WING
A
B
Drop tank
Drop tank

28- Extension cord

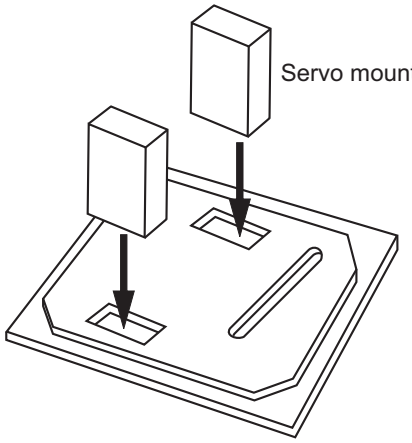


1-Remove all hatches from the wing.

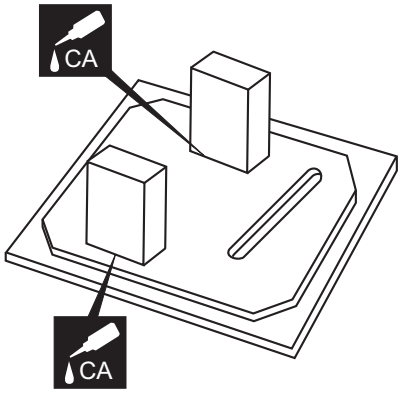
2-Using a modeling knife. remove the covering from over the pre-cut servo arm exit hole on the aileron / flap servo hatch.
This hole will allow the servo arm to pass through when installing the aileron / flap

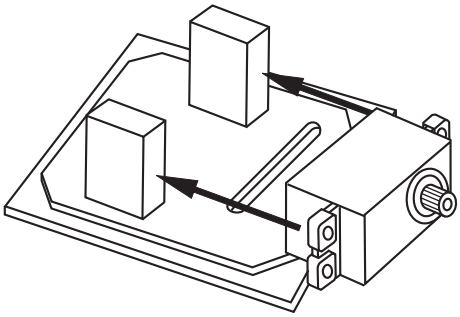


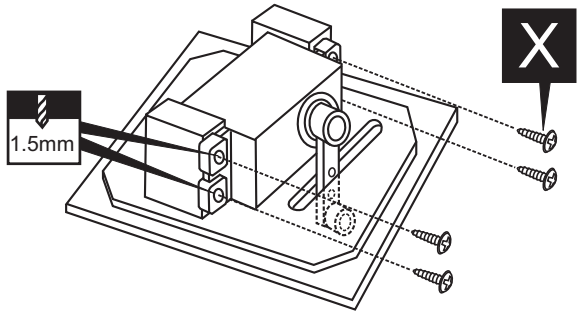
! Securely glue together. If coming off during fly, you lose control of your air plane.



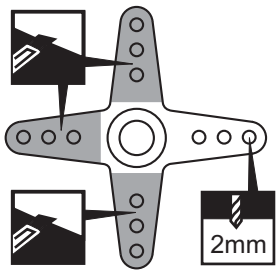
Aileron / Flap hatch
BOTTOM SIDE

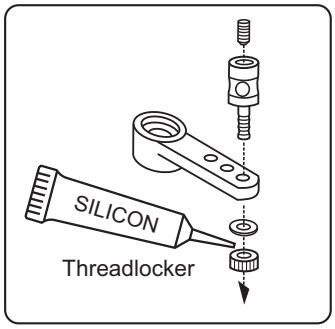


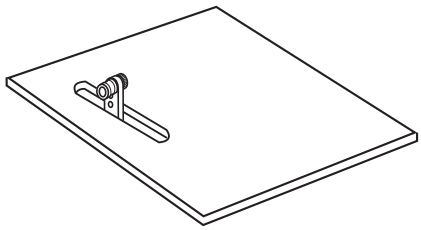


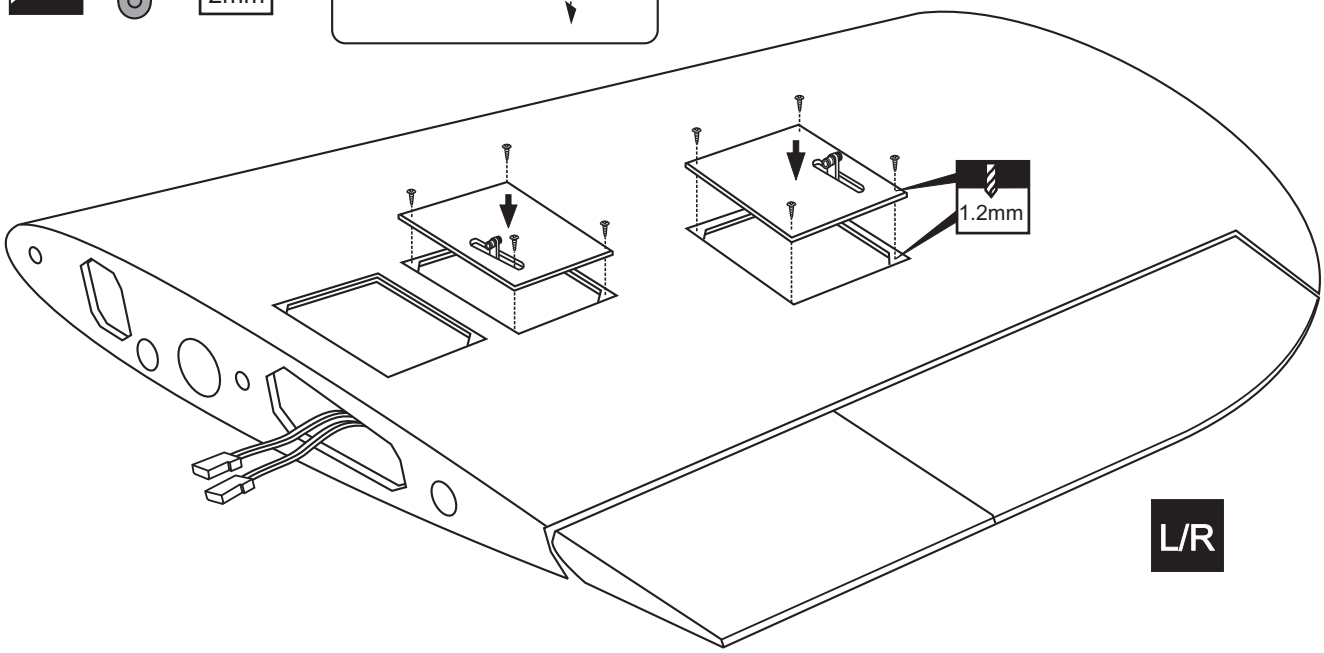


Installing the Flap / Aleron servo mounts on to the Flap / Aileron servo hatches. L/R

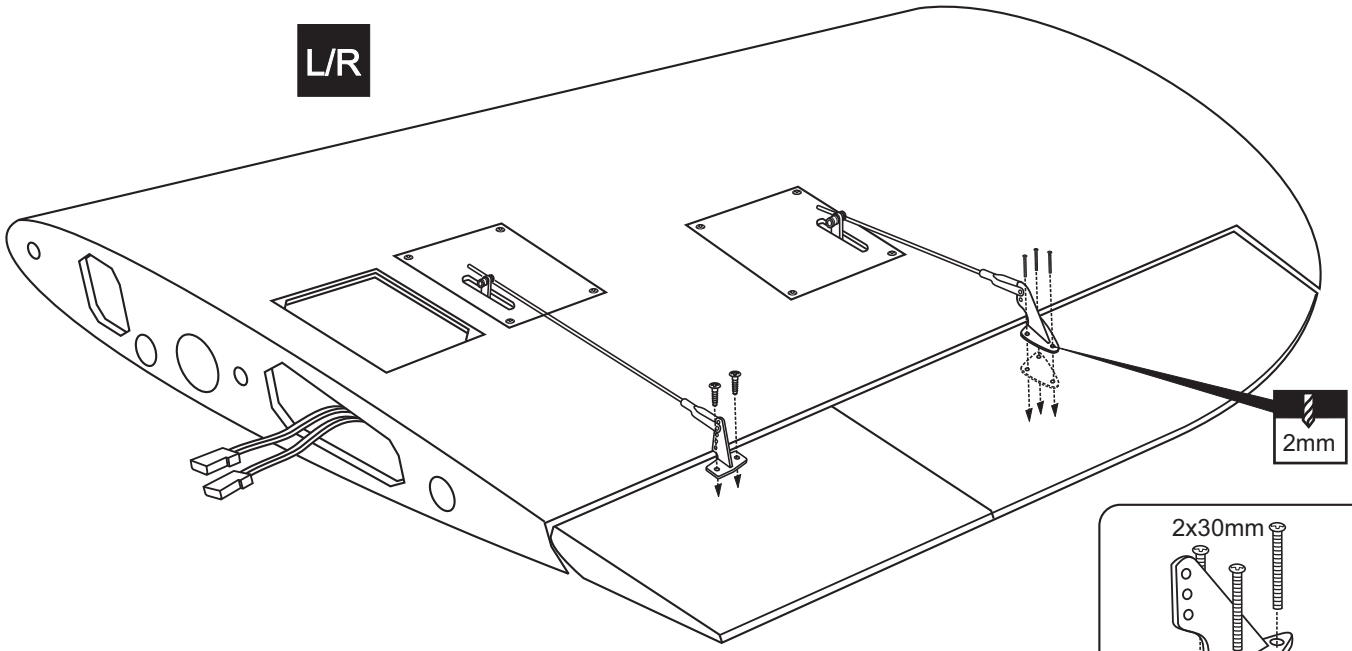


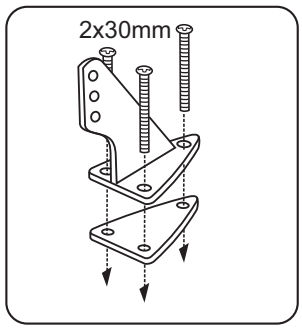


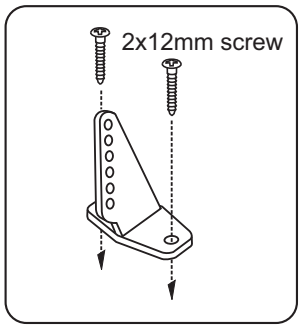




30- Aileron and flap control horn

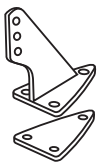






Note: Two screws to attach the control horn to flap should be **attach directly without pre-drilling holes**.

Nylon control horn



.....2 set

2x30mm boulon

.....6

Nylon control horn

.....2

2x12mm screw

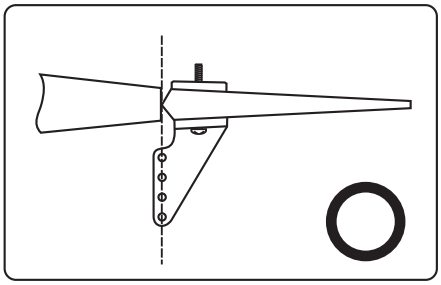
.....4

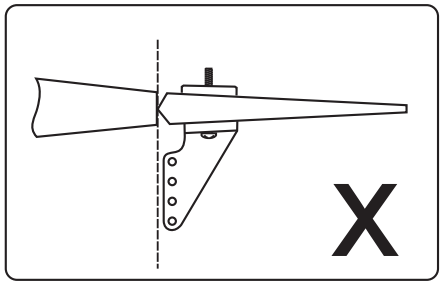
3x175mm aileron push-rod with clevis one end

...2

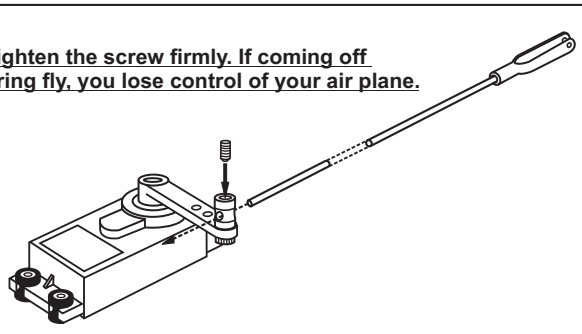
2x175mm flap push-rod with clevis one end

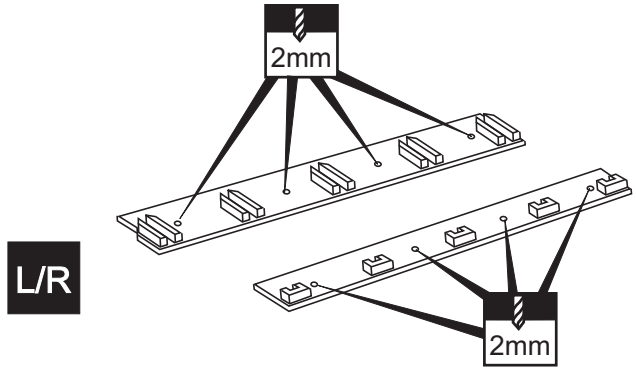
...2



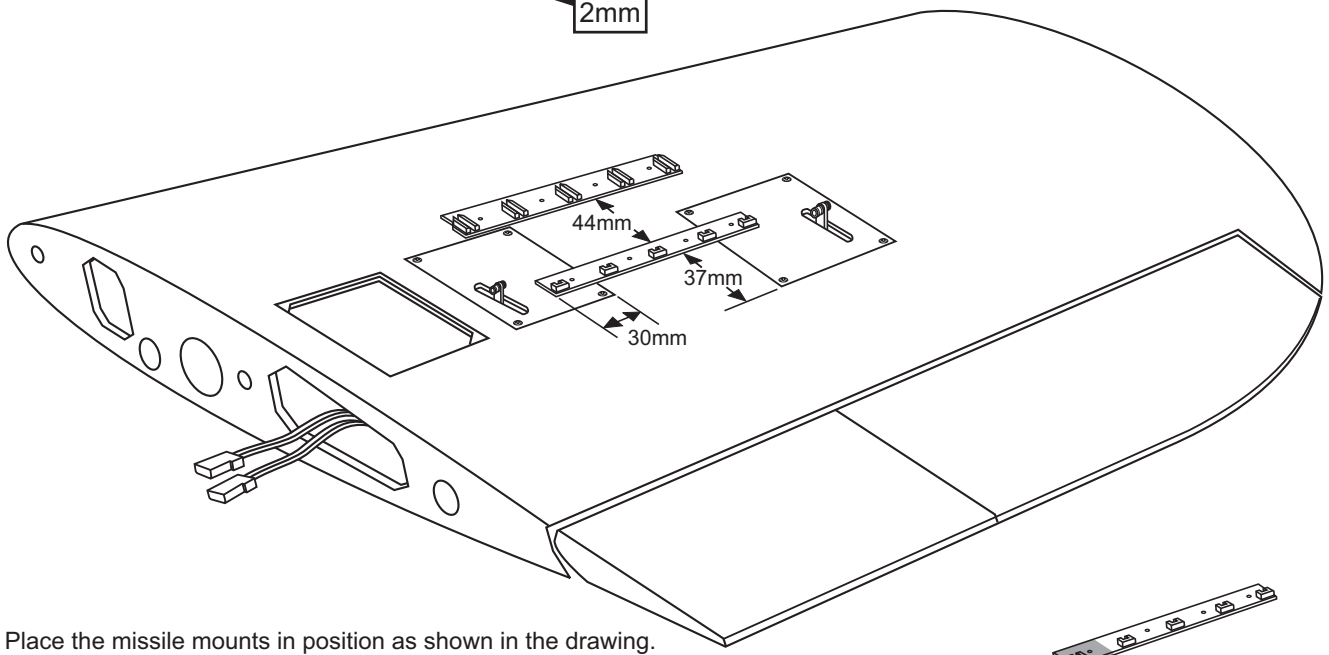


! Tighten the screw firmly. If coming off during fly, you lose control of your air plane.

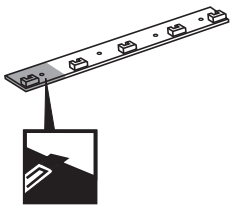




L/R



Place the missile mounts in position as shown in the drawing.

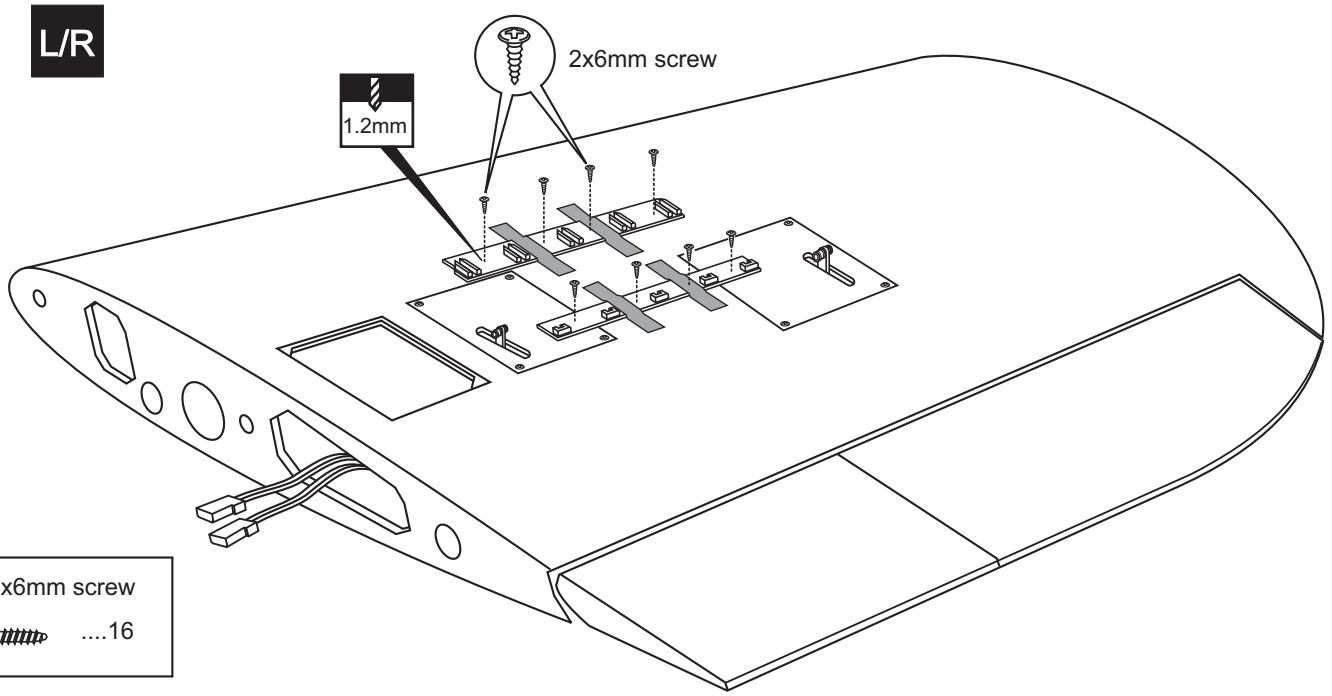


Cut out the dark area in one of two rear missile mount.

When the missile mounts are in place, secure them with marking tape.

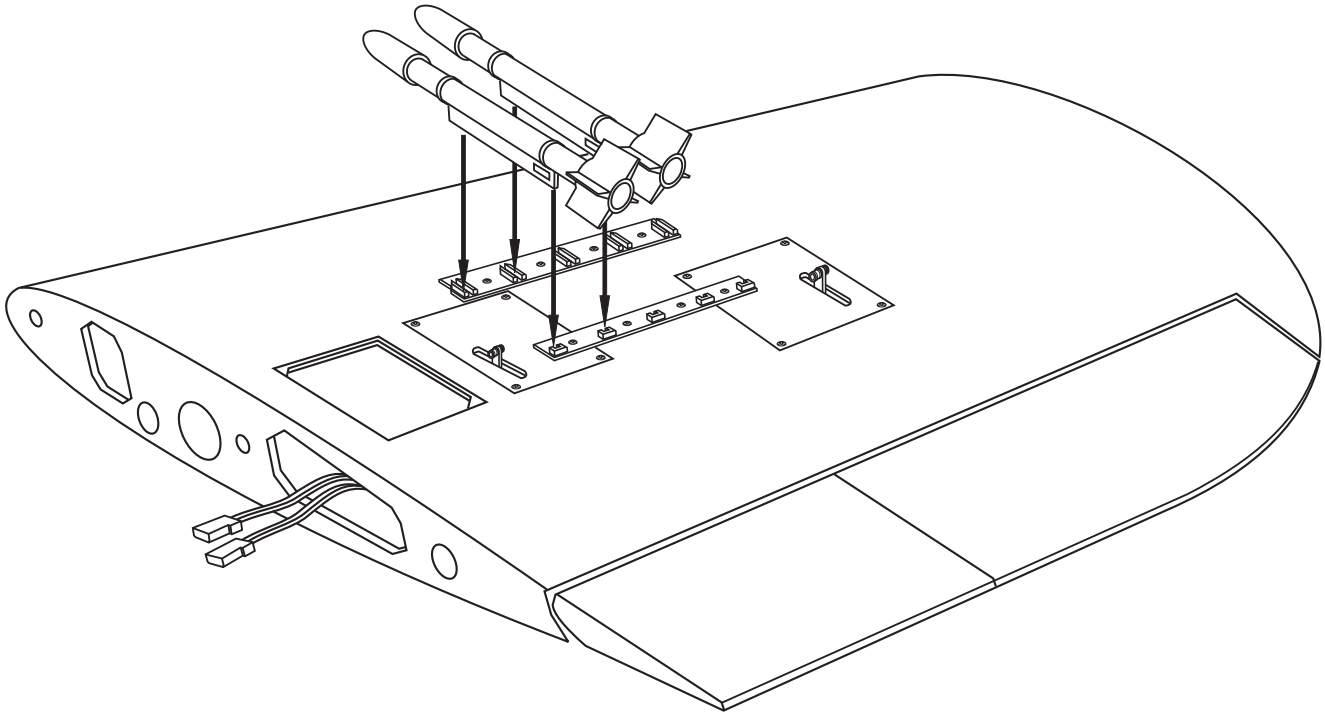
Use eight the 2x6mm screws to secure the missile mounts in place, then remove the marking tape.

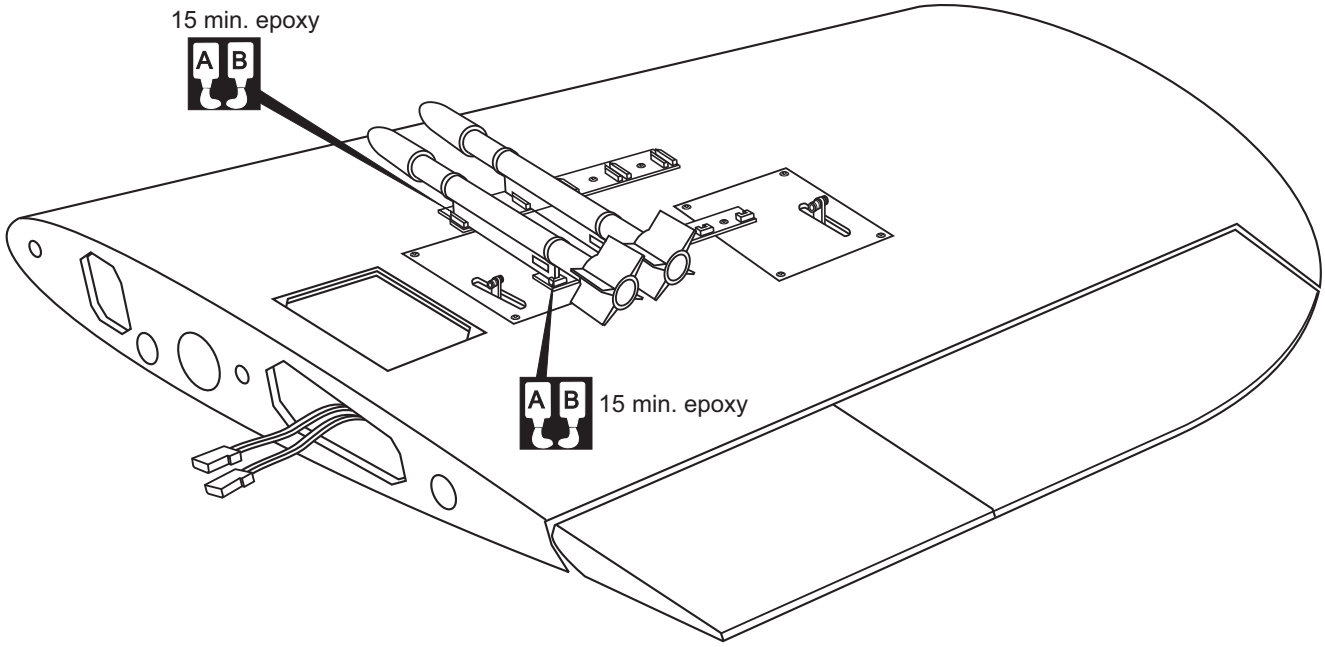
L/R



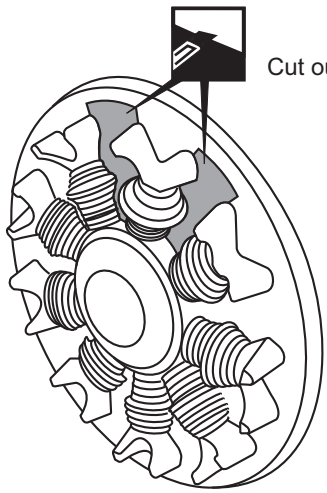
2x6mm screw

....16



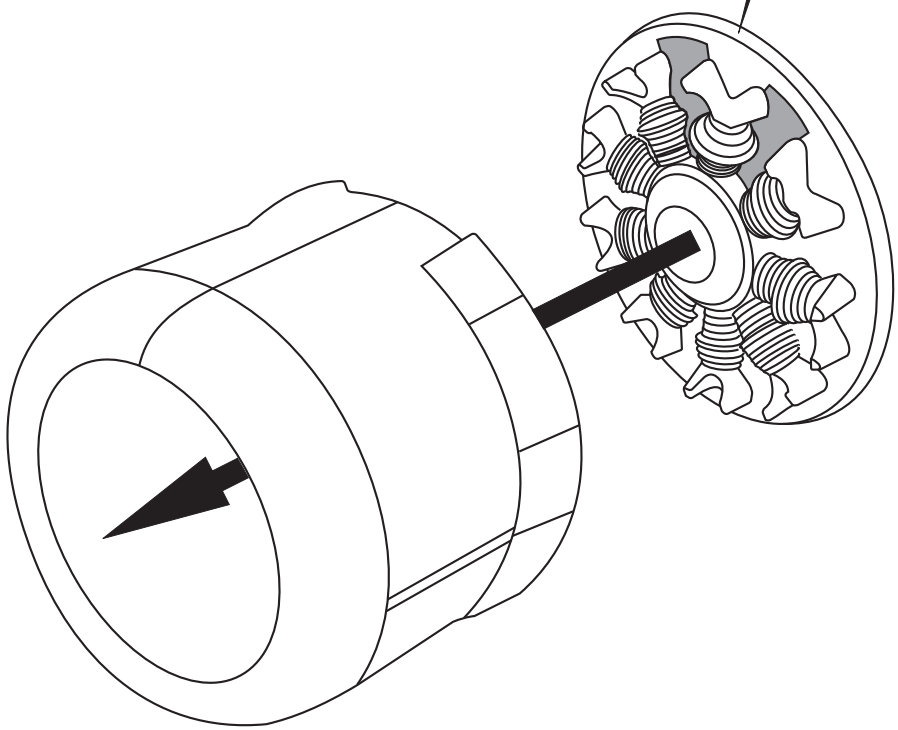

15 min. epoxy
A B
A B
15 min. epoxy

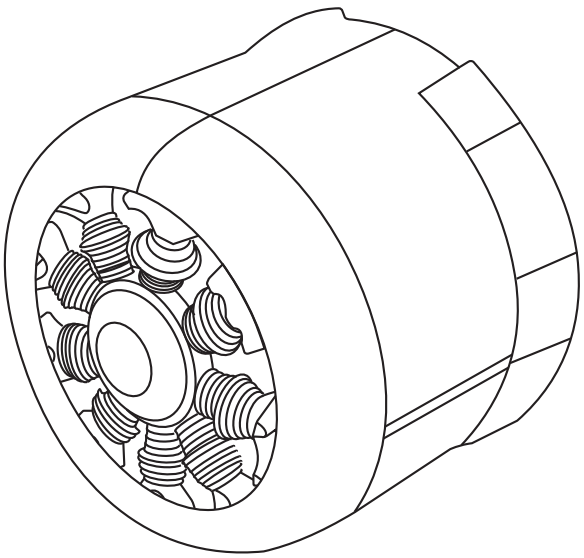
33- Dummy engine & cowl

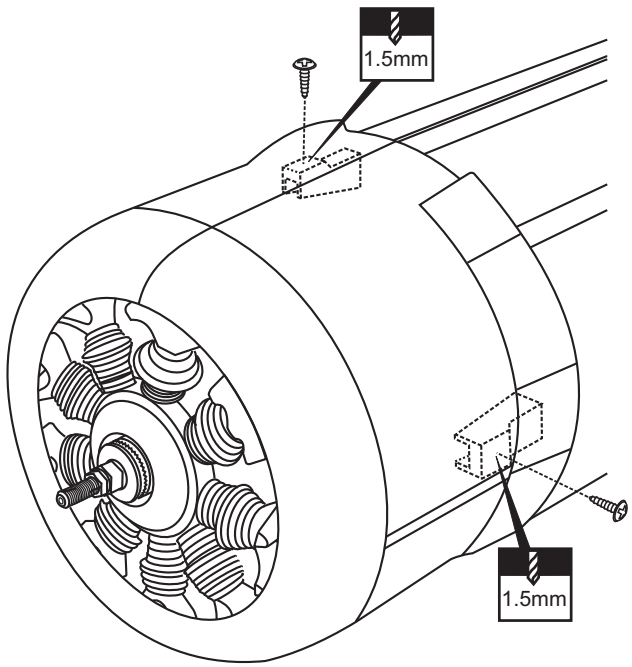


Cut out the dark areas to cool the engine.

15 min. epoxy







2.5x10mm screw

.....4

34- Joining the wing

Note: The wooden dowel must be perpendicular with the root rib.

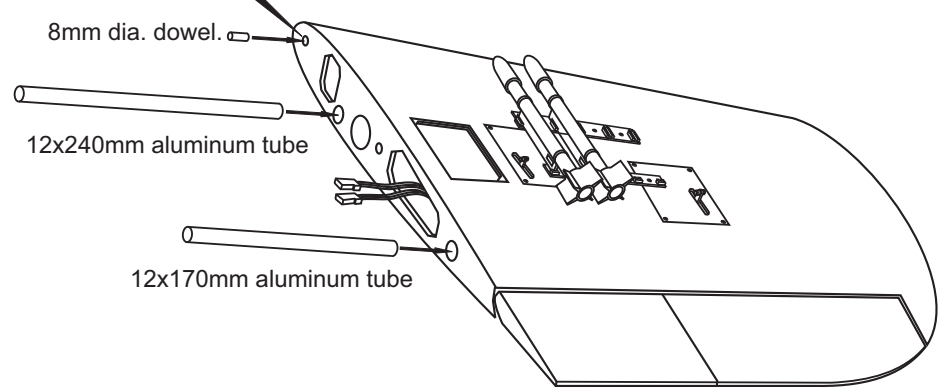
CA

L/R

8mm dia. dowel.

12x240mm aluminum tube

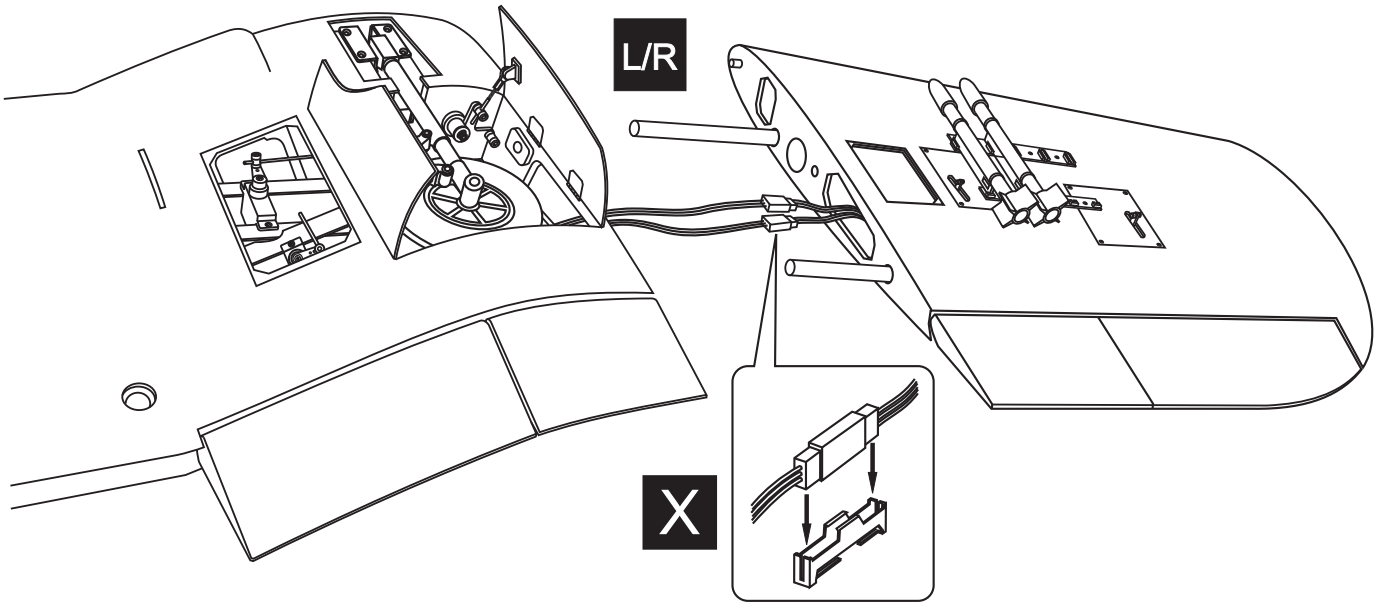
12x170mm aluminum tube



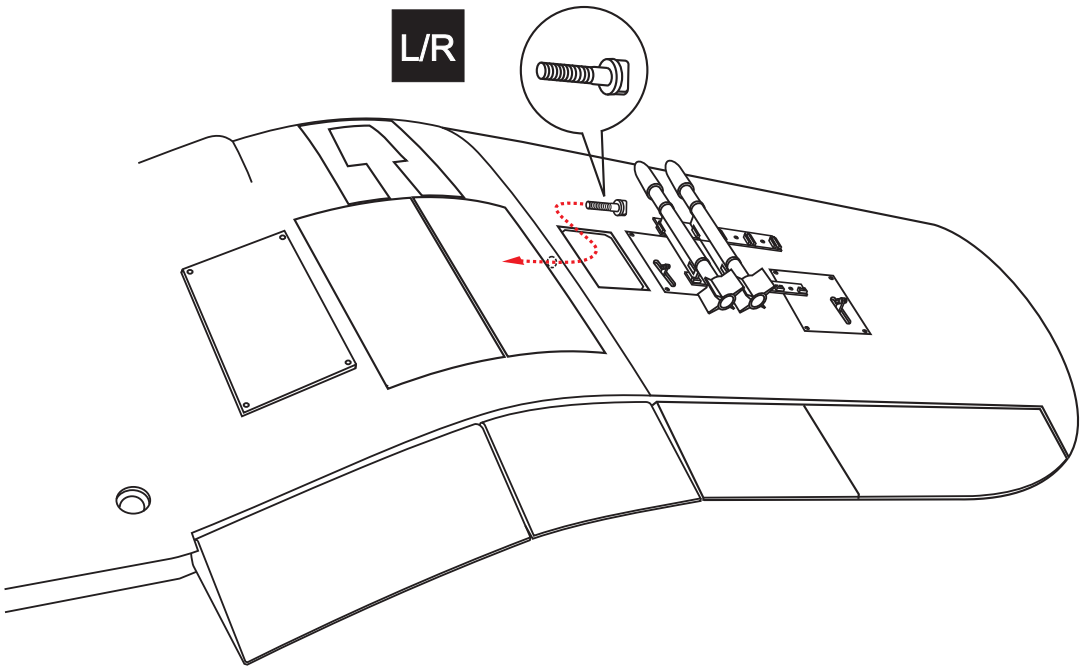
12x240mm aluminum tube 2

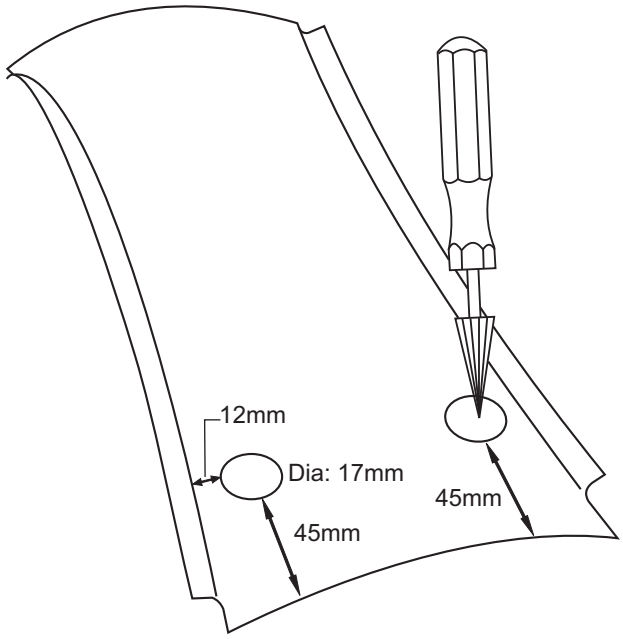
12x170mm aluminum tube 2

8mm dia. dowel 2



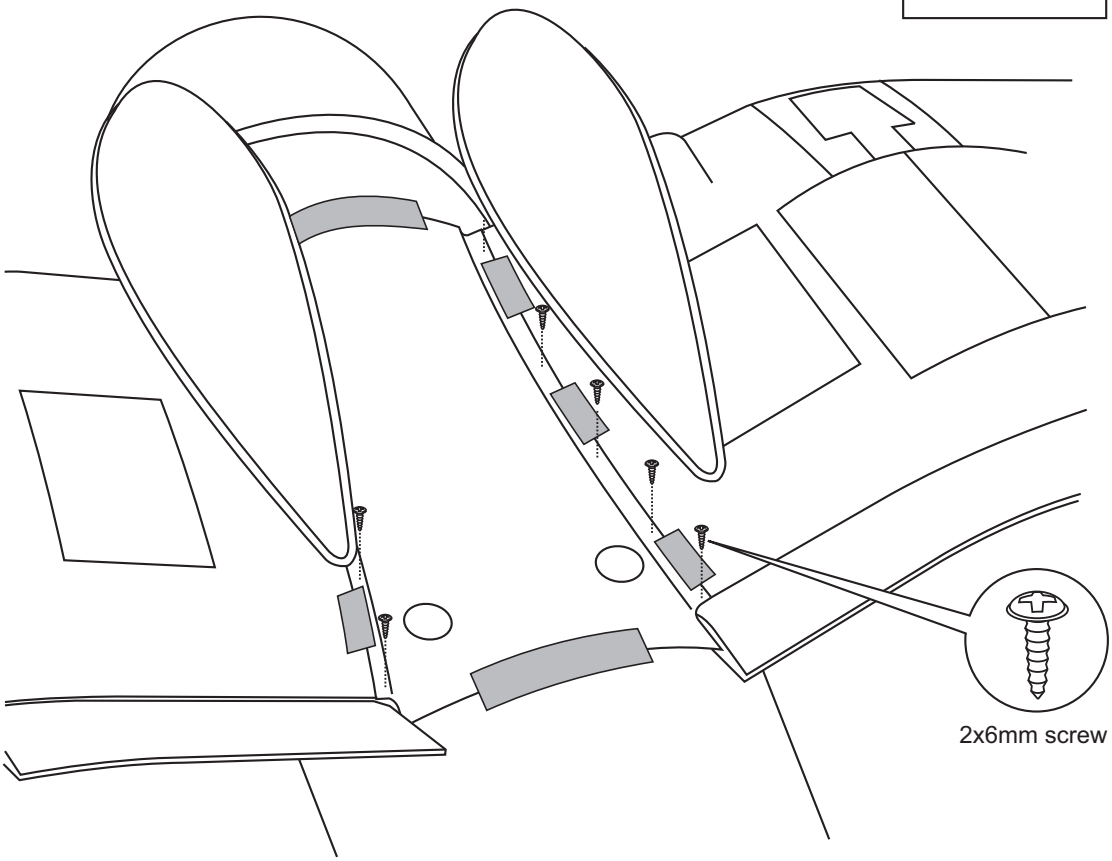
7x23 plastic bolt ...2





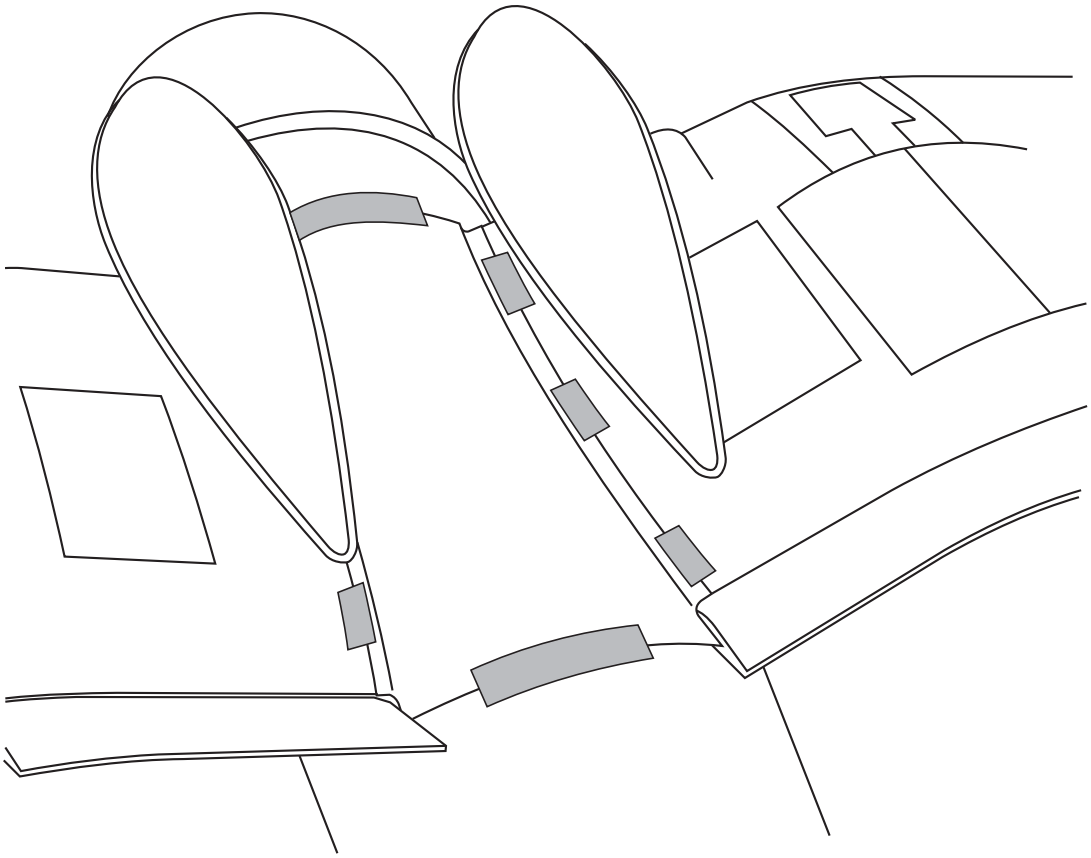
Attach the plastic bottom cover in place, secure it using marking tape.

2x6mm screw 24

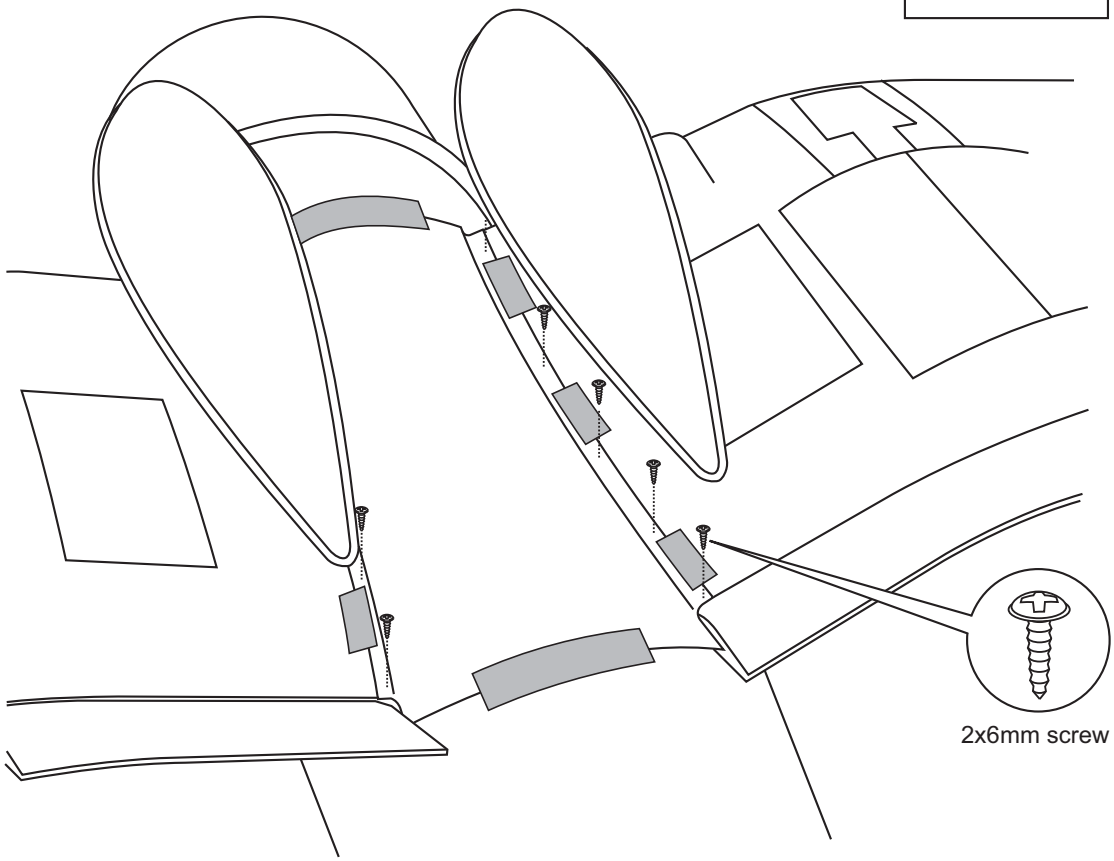


36- Plastic cover

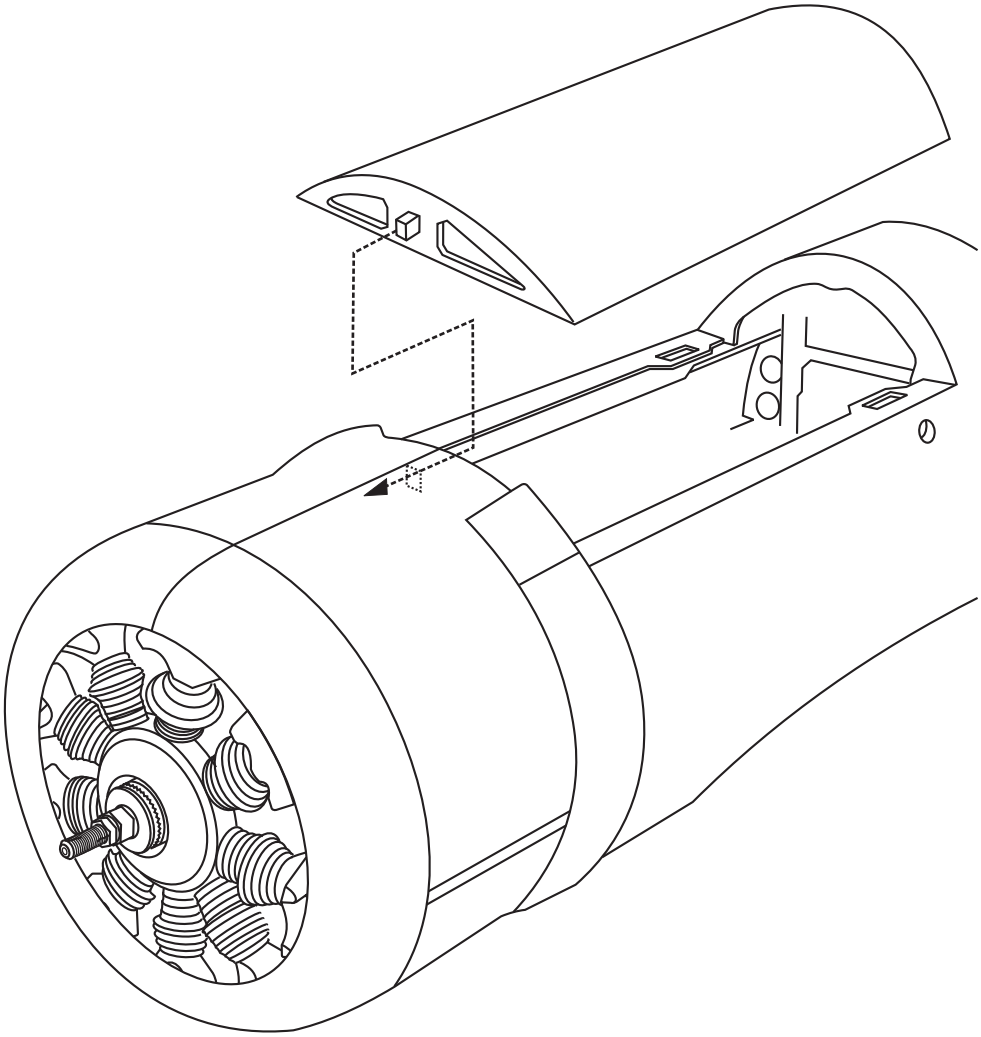
Attach the plastic bottom cover in place, secure it using marking tape.



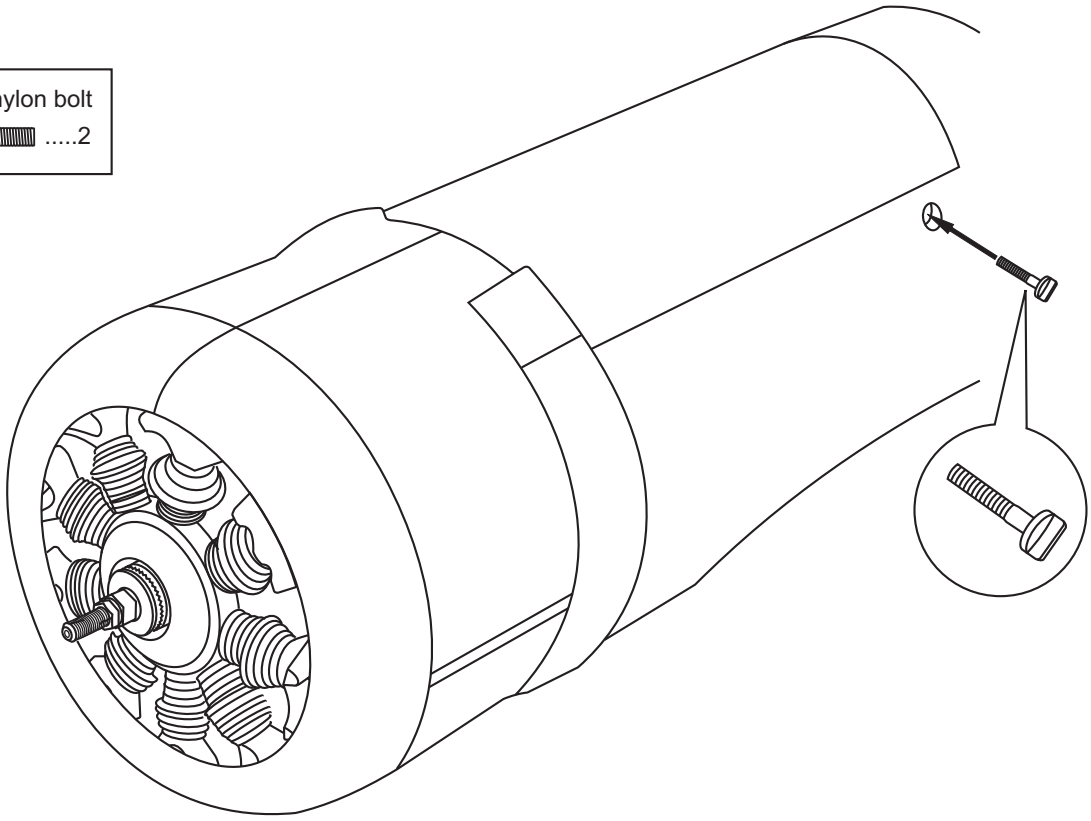
2x6mm screw 24

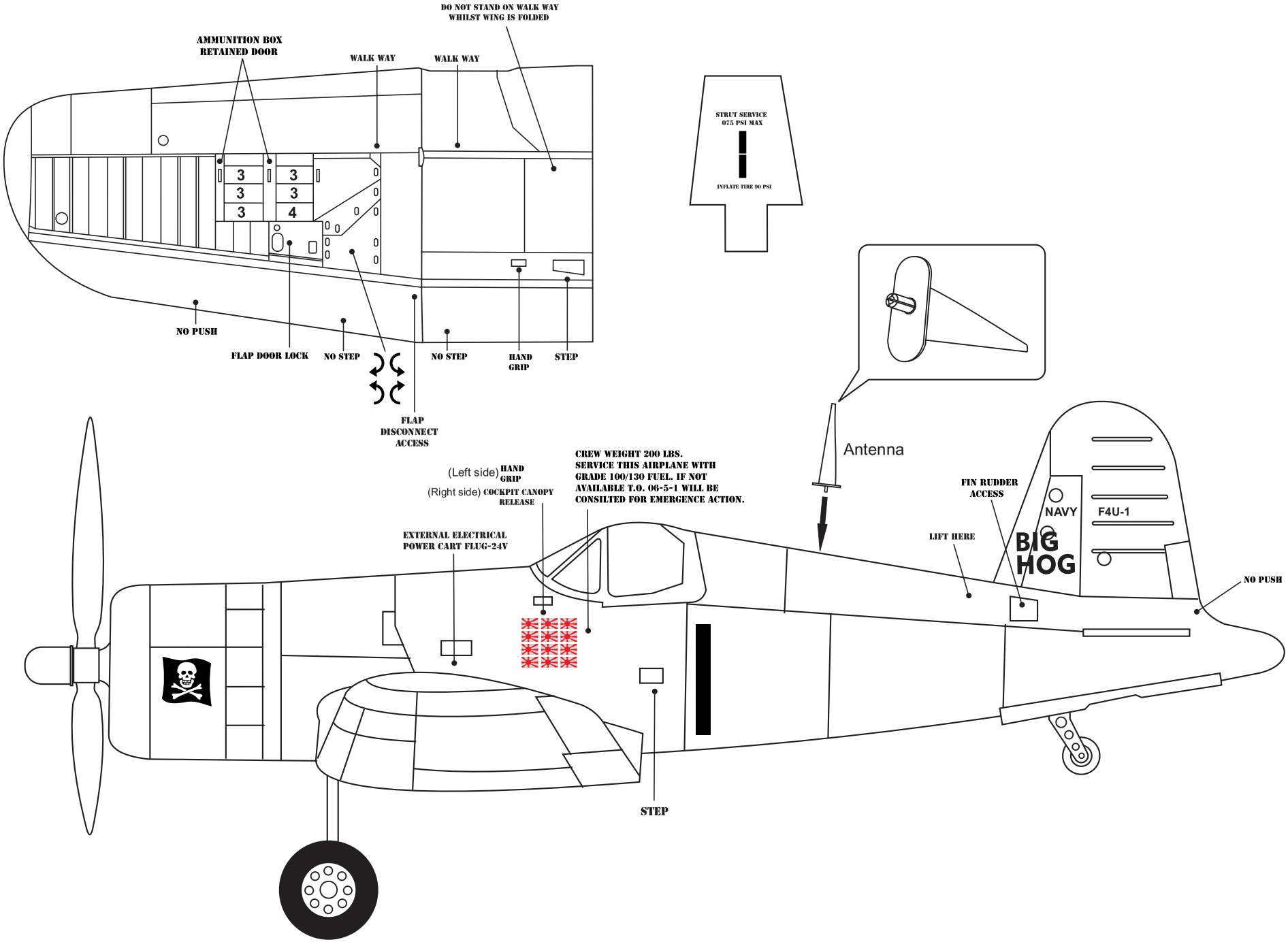


37- Fuselage hatch



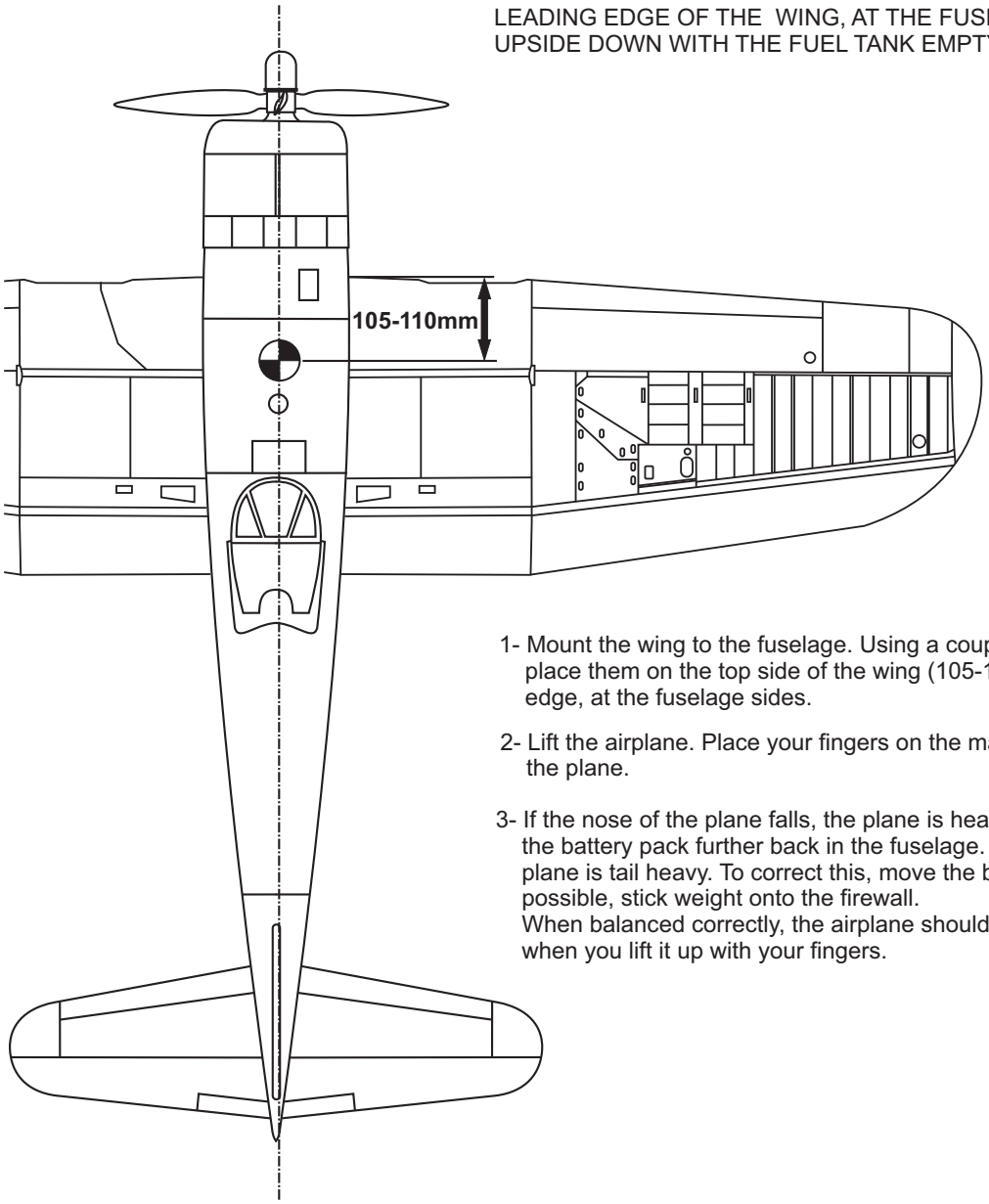
4x30mm nylon bolt 2





F4U CORSAIR 38- Decal

THE CENTER OF GRAVITY IS LOCATED **105-110** mm BACK FROM THE LEADING EDGE OF THE WING, AT THE FUSELAGE. BALANCE A PLANE UPSIDE DOWN WITH THE FUEL TANK EMPTY.



1- Mount the wing to the fuselage. Using a couple of pieces of masking tape, place them on the top side of the wing (105-110mm) 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.

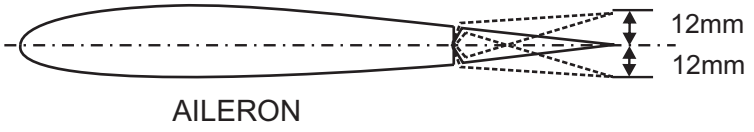
1- Turn the airplane upside down. Attach one loop of heavy string to the engine crankshaft and one to the tail wheel wire. With the wing level, carefully lift the airplane by the string. This may require two people to make easier.

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.

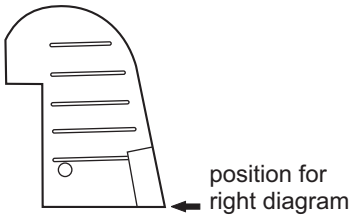
DO NOT try to fly an out-of-balance model !

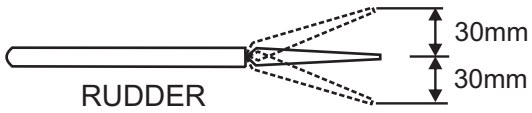
CONTROL SURFACE

LOW RATE

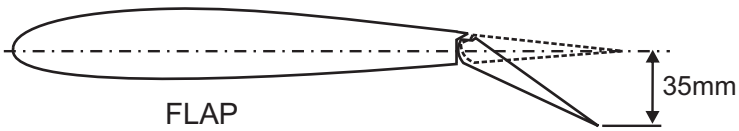


AILERON

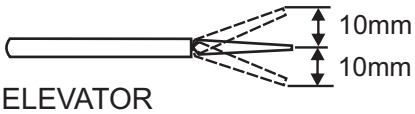




RUDDER



FLAP



ELEVATOR

IMPORTANT: Flying your model at these throws will provide you with the greatest chance for successful first flights. If, after you have become accustomed to the way the F4U Corsair flies, you would like to change the throws to suit your taste that is fine. However, too much control throw could make the model difficult to control, so remember, “more is not always better”.

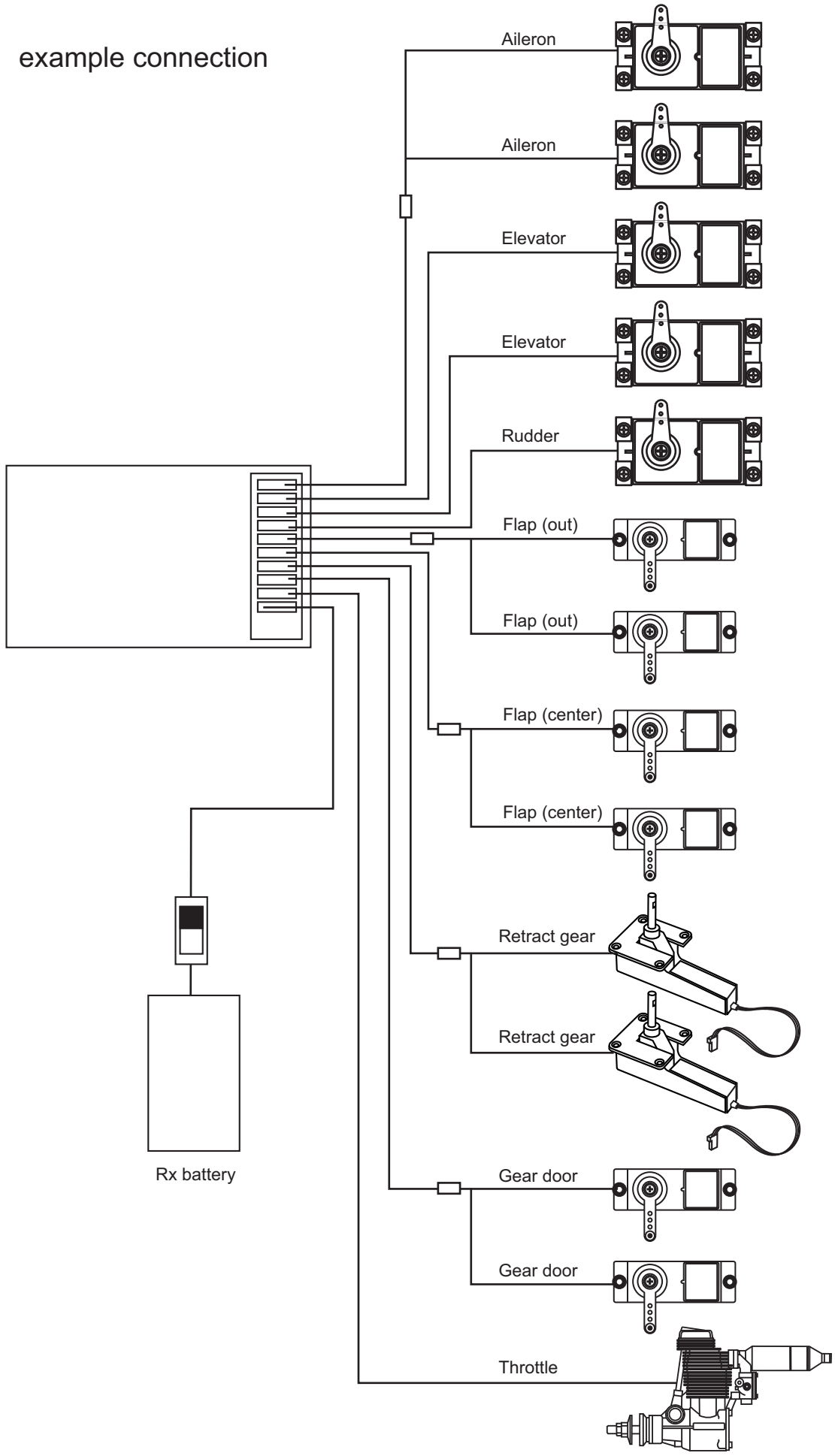
LOW RATE

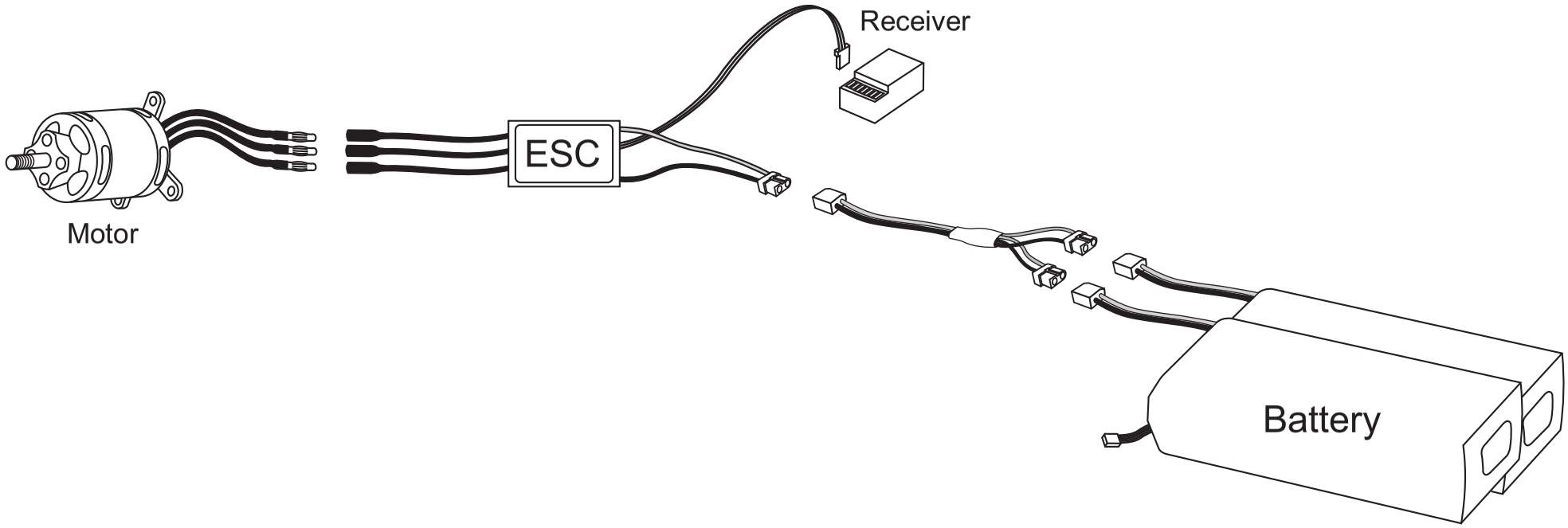
Aileron	: 12mm up / down
Elevator	: 10mm up / down
Rudder	: 30mm right / left
Flap	: 35mm down

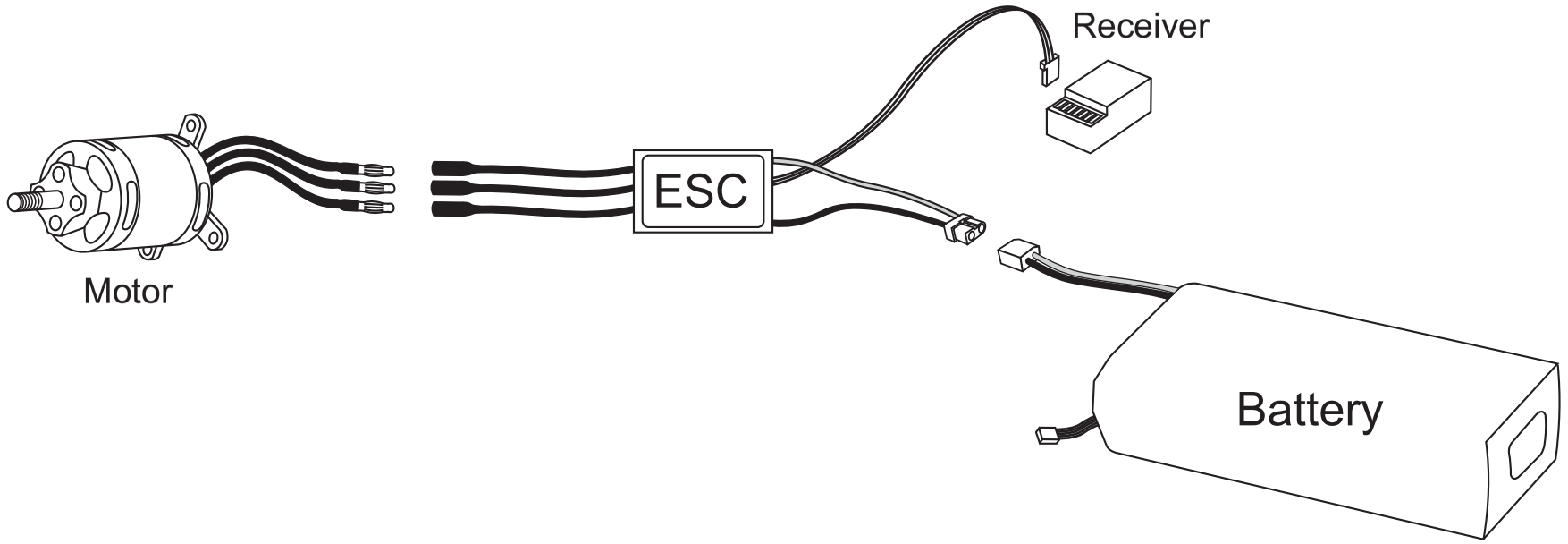
HIGH RATE

Aileron	: 15mm up / down
Elevator	: 15mm up / down
Rudder	: 40mm right / left
Flap	: 40mm down

example connection




Receiver
ESC
Motor
Battery


Receiver
ESC
Motor
Battery