Radio control model / Flugmodel

CESSNA 172

1730mm Wingspan

ALL BALSA, PLYWOOD CONSTRUCTION AND ALMOST READY TO FLY

Instruction manual / Montageanleitung

SPECIFICATIONS

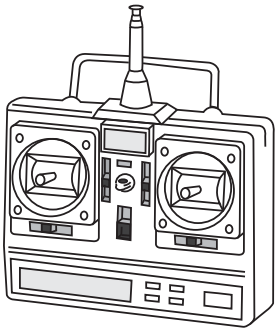
Wingspan:.....1730mm
Length (installed motor) 1190mm
Electric Motor:.....800Watt
Glow Engine:..... .55 2-T / .72 4-T
RTF Weight: 3100 - 3450g (will vary with equipment use).
Radio:.....6 Channel / 6-7 Servos
Function: Ailerons-Elevator-Rudder-Throttle Flaps.

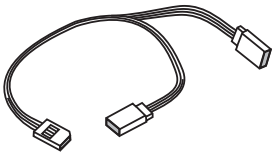
RADIO CONTROL MODEL ®

WARNING! This radio controlled model is NOT a toy. If modified or flown carelessly it could go out of controll and cause serious human injury or property damage. Before flying your airplane, ensure the air field is spacious enough. Always fly it outdoors in safe areas and seek professional advice if you are unexperienced.

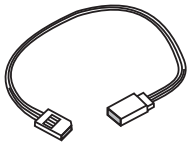
ACHTUNG! Dieses ferngesteuerte Modell ist KEIN Spielzeug! Es ist für fortgeschrittene Modellflugpiloten bestimmt, die ausreichende Erfahrung im Umgang mit derartigen Modellen besitzen. Bei unsachgemässer Verwendung kann hoher Personen- und/oder Sachschaden entstehen. Fragen Sie in einem Modellbauverein in Ihrer Nähe um professionelle Unterstätzung, wenn Sie Hilfe im Bau und Betrieb benötigen. Der Zusammenbau dieses Modells ist durch die vielen Abbildungen selbsterklärend und ist für fortgeschrittene, erfahrene Modellbauer bestimmt.

REQUIRED FOR OPERATION (Purchase separately)

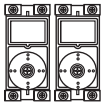




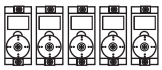
Aileron: “Y”x1pcs



Aileron: 50cmx2 pcs
Flap: 30cmx2 pcs
Rx battery pack: 20cmx1 pcs

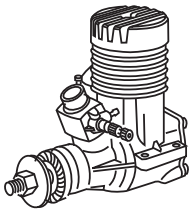


Standard

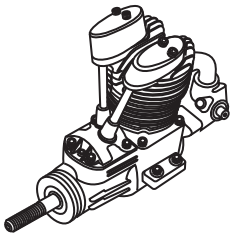


Mini (19g)

8 channels radio
Elevator : 1 standard servo
Rudder: 1 standard servo
Aileron: 2 mini servo
Flaps: 2 mini servo
Nose gear: 1 mini servo
Throttle: 1 mini servo (for glow engine only)

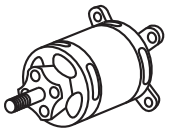


.55 - 2 cycle

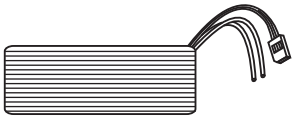


.62 ~.72 - 4 cycle

Silicone tube



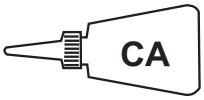
800W Brushless Motor



4S 5000mAh LiPo battery

GLUE (Purchase separately)

Silicon sealer



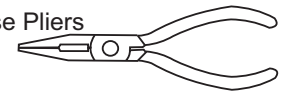
Cyanoacrylate Glue (thin type)

Epoxy Glue
(30 minute type)

TOLLS REQUIRED (Purchase separately)

Hobby knife

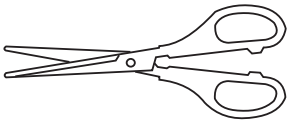
Needle nose Pliers



Sander

Phillip screw driver

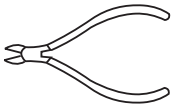
Scissors



Hex Wrench

Awl

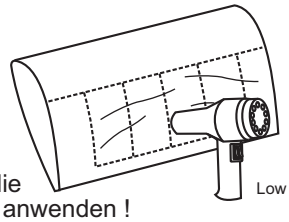
Wire Cutters



Masking tape - Straight Edged Ruler - Pen or pencil - 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 !



Low seting

Symbols used throughout this instruction manual, comprise:

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

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

Löcher bohren mit dem angegebenen Bohrer (hier 1,5 mm)

Hier besonders aufpassen

Schraffierte Stellen, Bespannfolie vorsichtig entfernen

Während des Zusammenbaus immer prüfen, ob sich die Teile auch reibungslos bewegen lassen

Epoxy-Klebstoff verwenden

Sekundenkleber auftragen

Linke und rechte Seite wird gleichermaßen zusammengebaut

Nicht enthalten. Teile müssen separat gekauft werden.

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”	

SAFETY NOTES BEFORE ASSEMBLING

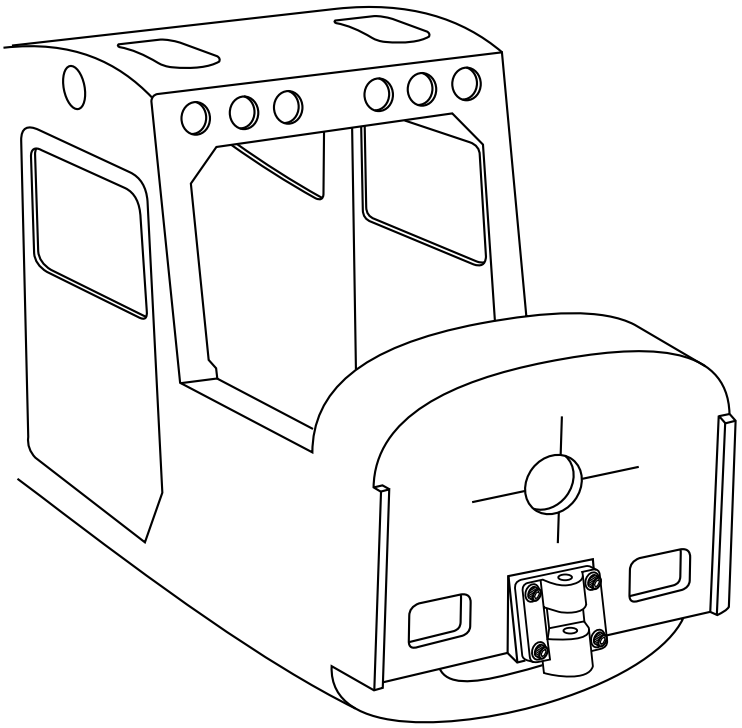
This model is highly pre-fabricated and can be built in a very short time. However, the work which you have to carry out is important and must be done carefully.
The model will only be strong and fly well if you complete your tasks competently - so please work slowly, accurately and check every joints,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

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

CESSNA 172 1- Nose gear

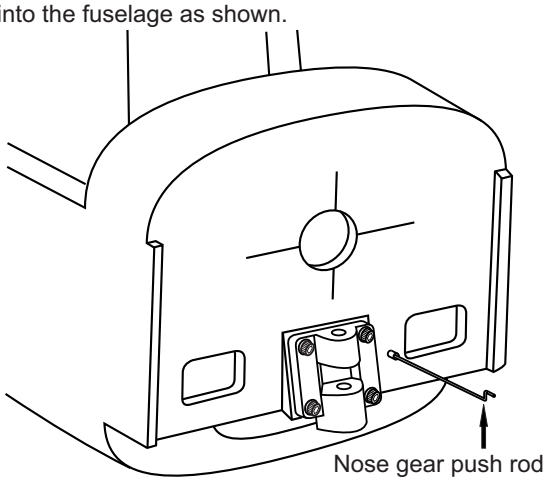
The canopy hatch should be removed to make installation of other parts easier.



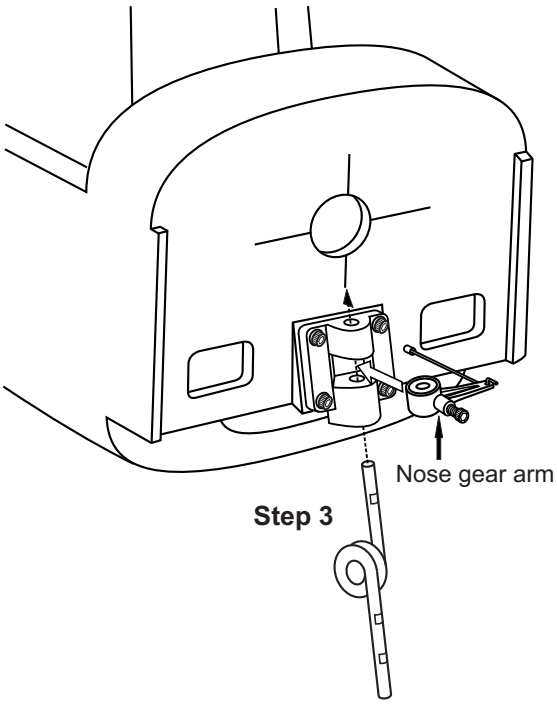
Step 1

3x25mm hex bolt	4
3mm washer	4

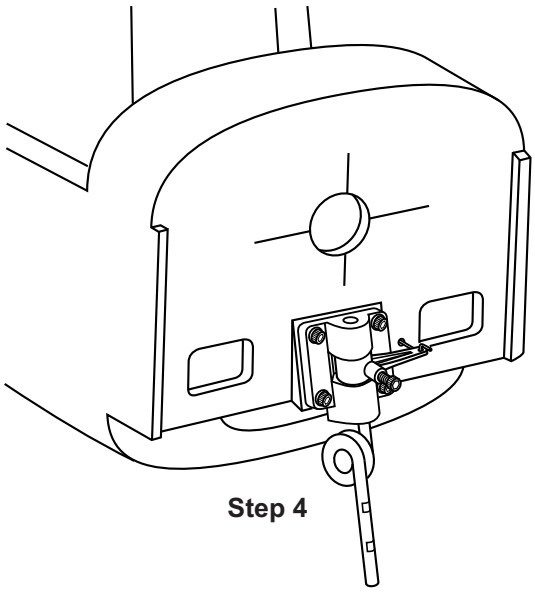
Insert the 3mm white nylon tube and 1.2x550mm nose gear pushrod into the fuselage as shown.



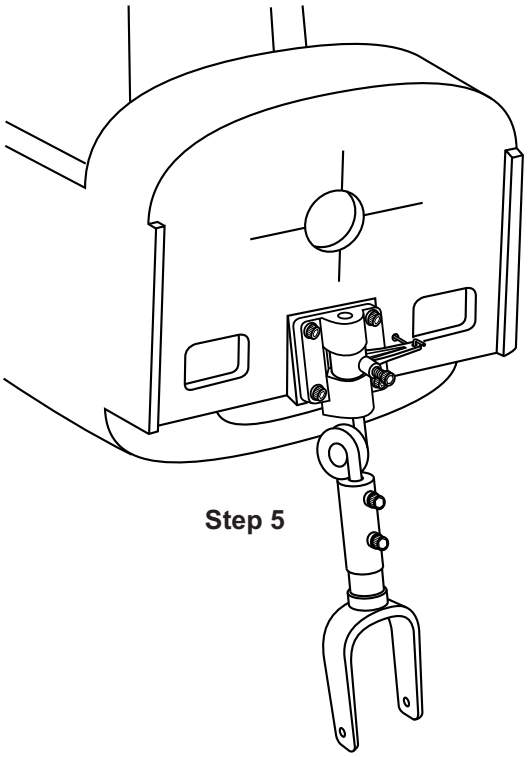
Step 2



Step 3



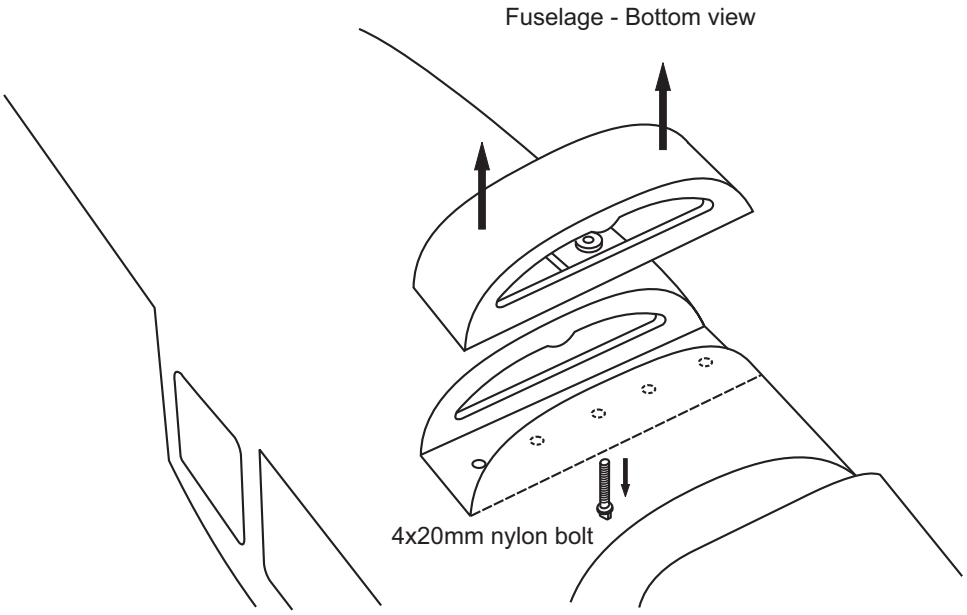
Step 4



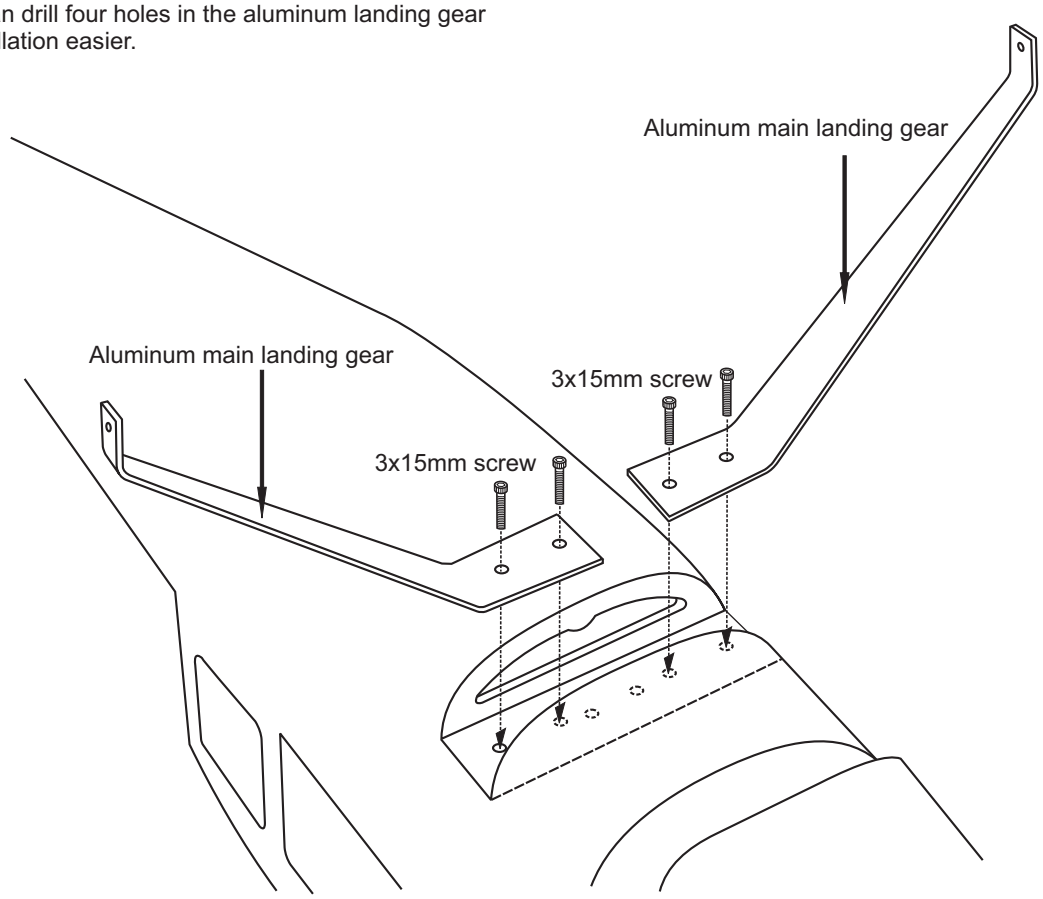
Step 5

CESSNA 172 2- Main landing gear

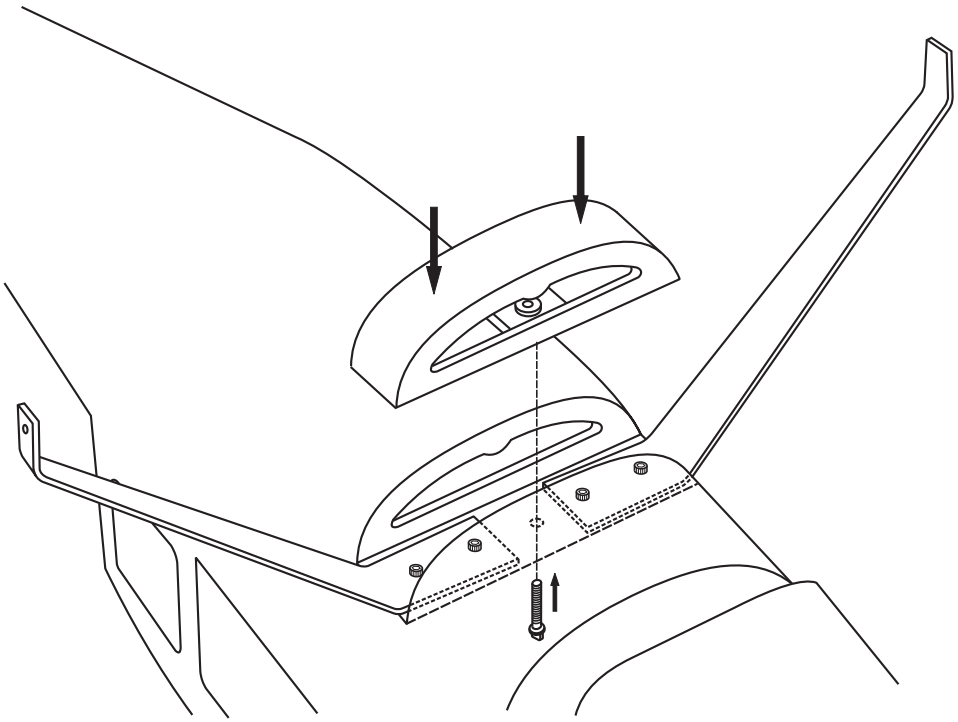
4x20mm nylon bolt 1

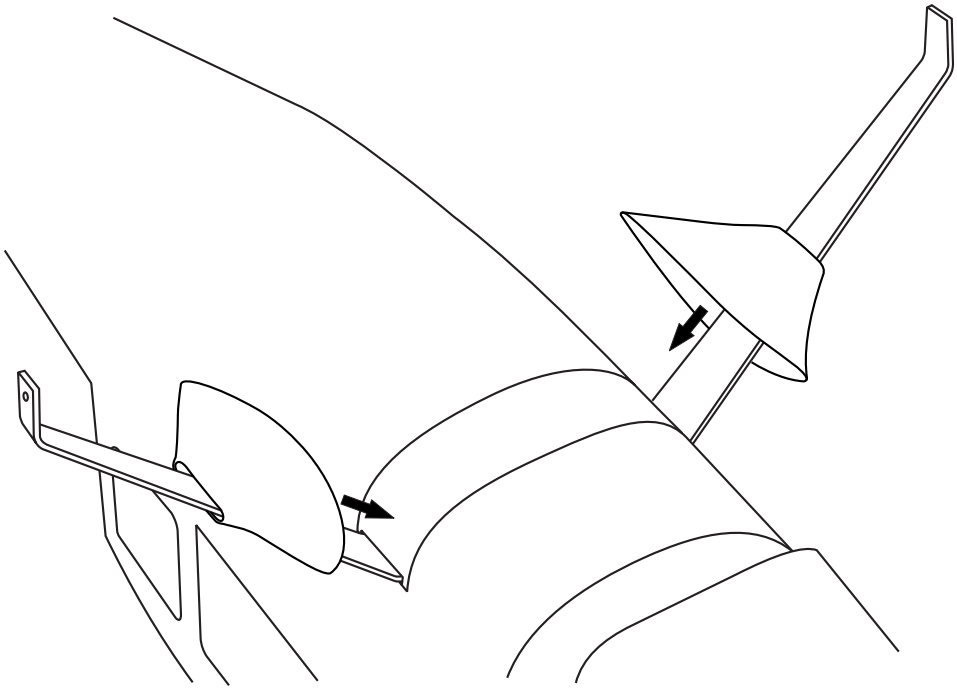


NOTE: If necessary, you can drill four holes in the aluminum landing gear wider to make installation easier.

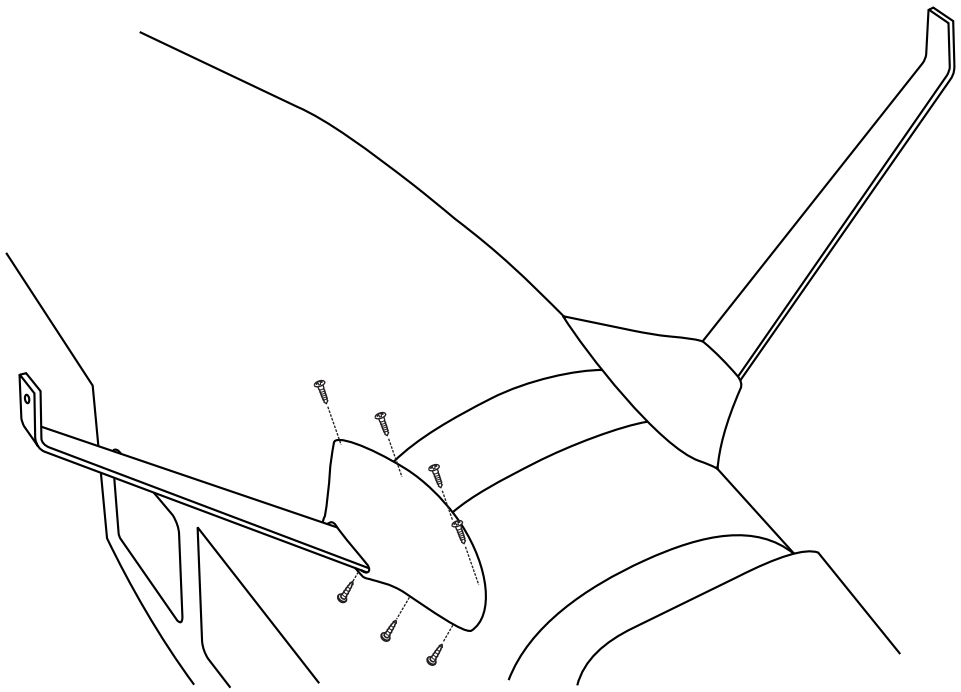


3x15mm hex bolt 4

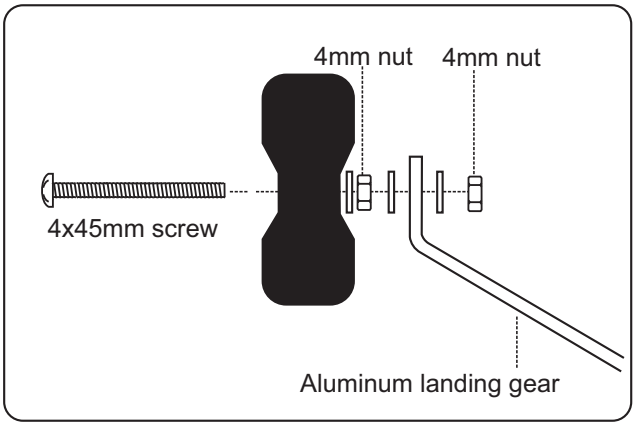


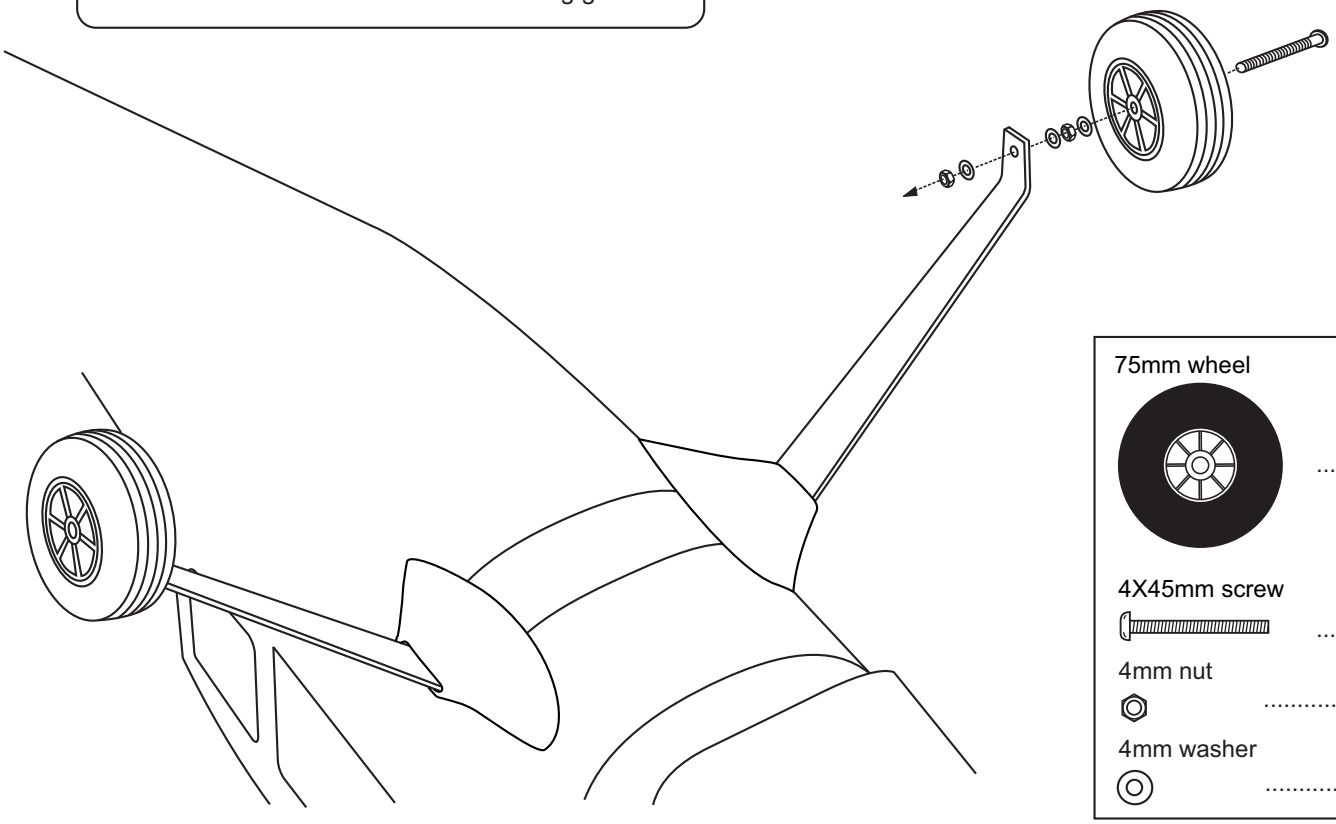


CESSNA 172 4- Main landing gear



2x8mm screw 16





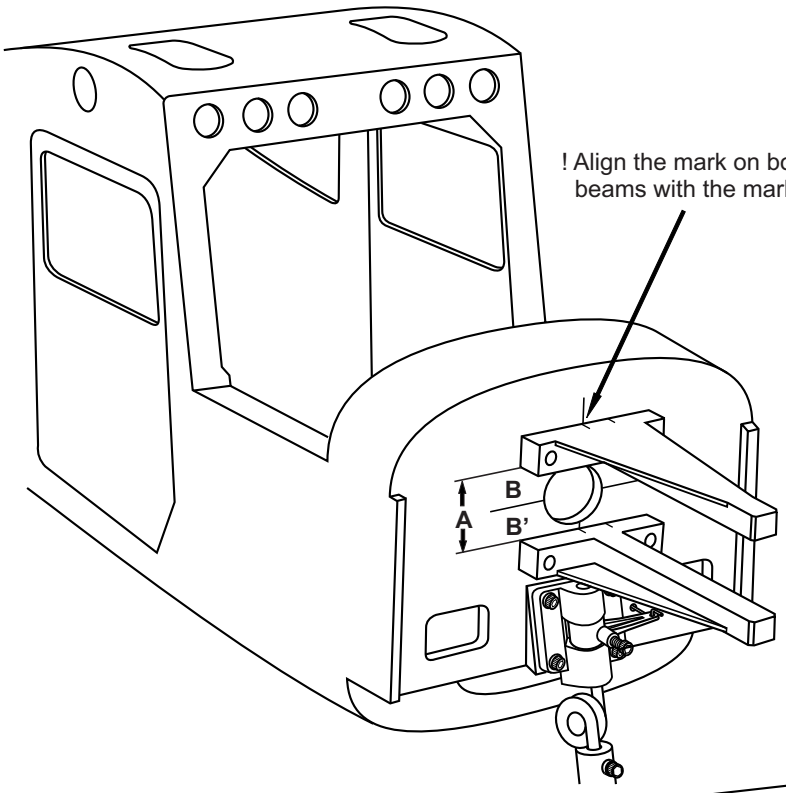
75mm wheel ...2

4X45mm screw ...2

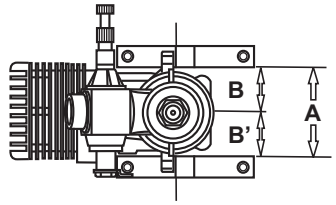
4mm nut 4

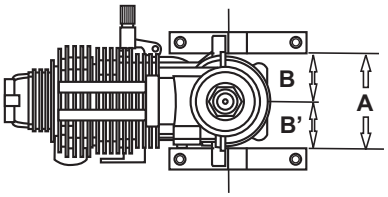
4mm washer 6

CESSNA 172 5- GLOW ENGINE INSTALLATION



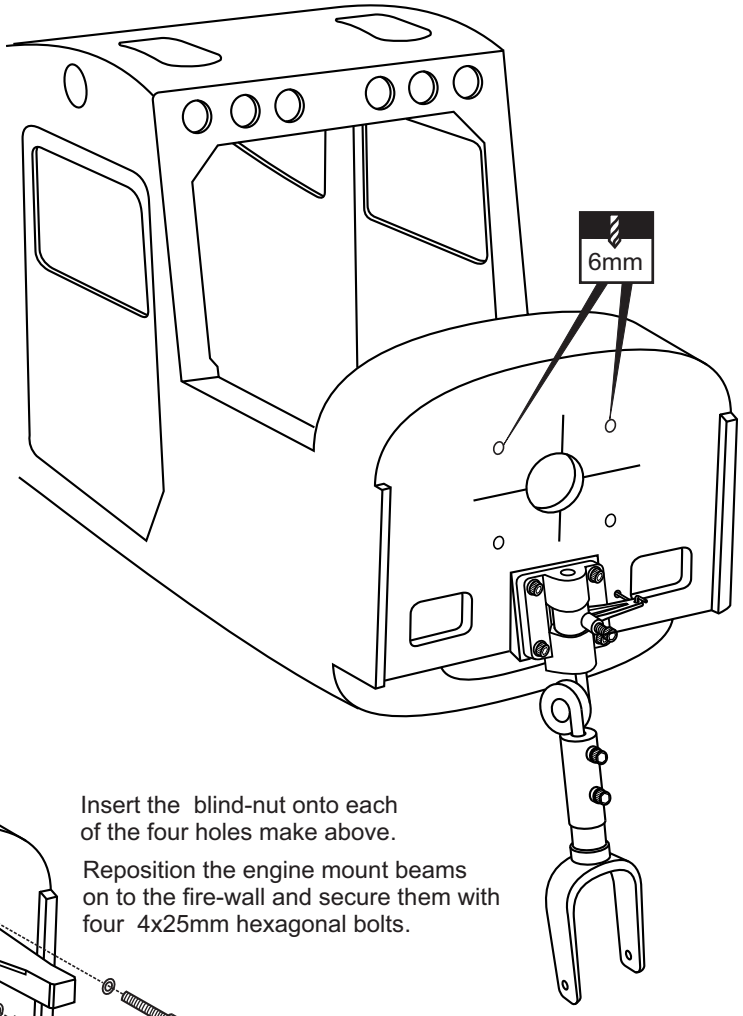
! Align the mark on both engine mount beams with the mark on the Fire-wall.



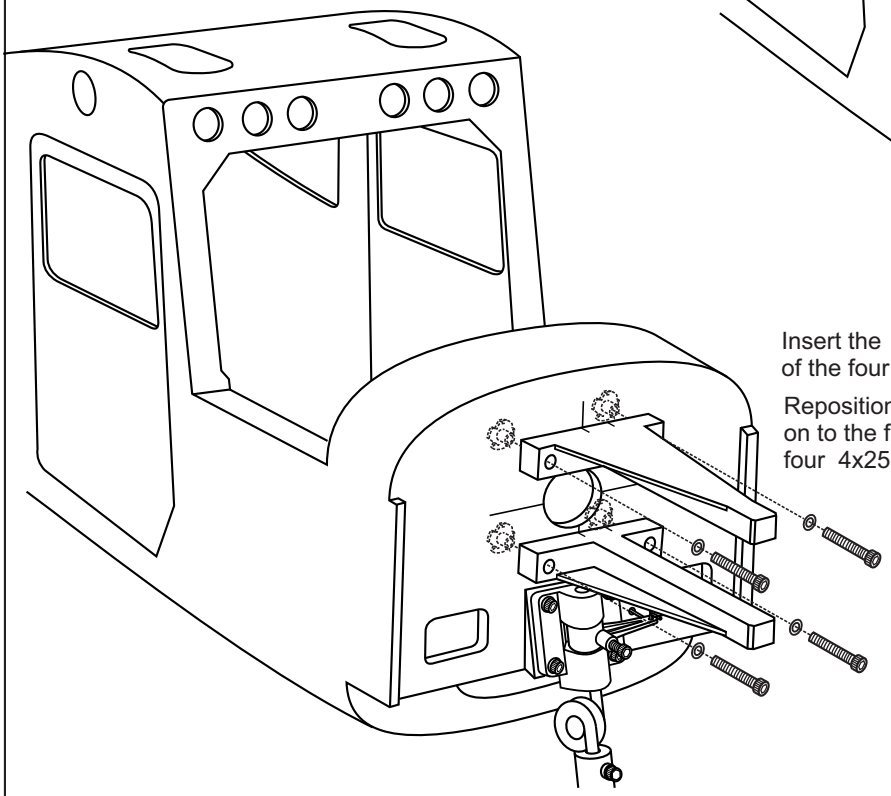


Attach the engine mount beams onto the fire-wall so the distance between of two engine mount beams is “A”,and B=B’ as show.
Secure the engine mount beams onto the fire-wall with litter CA glue

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



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

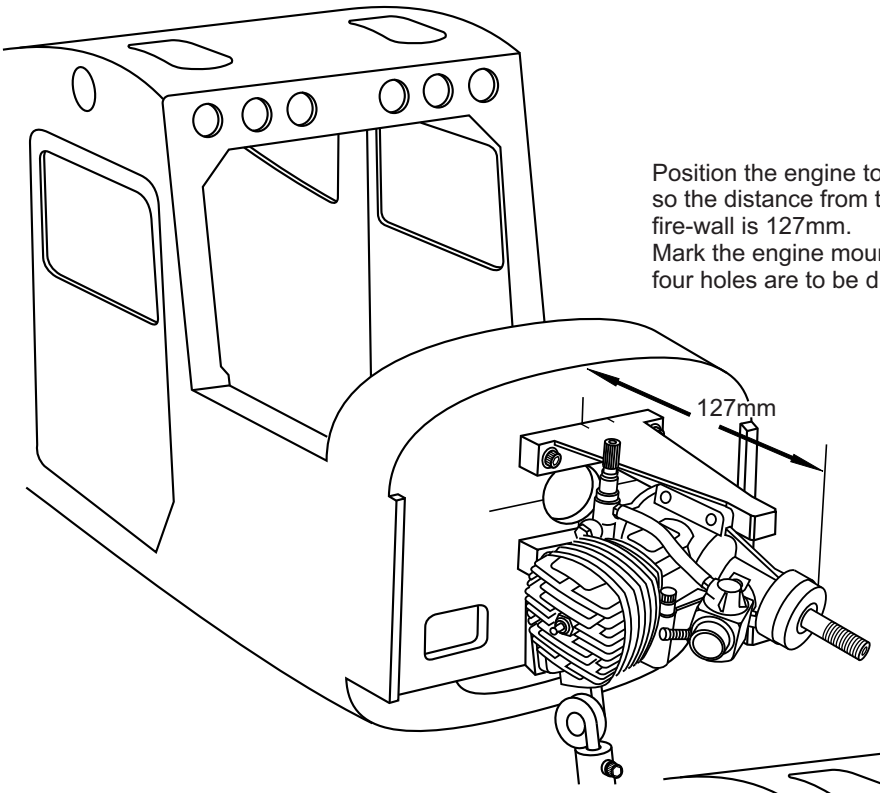


Insert the blind-nut onto each of the four holes make above.

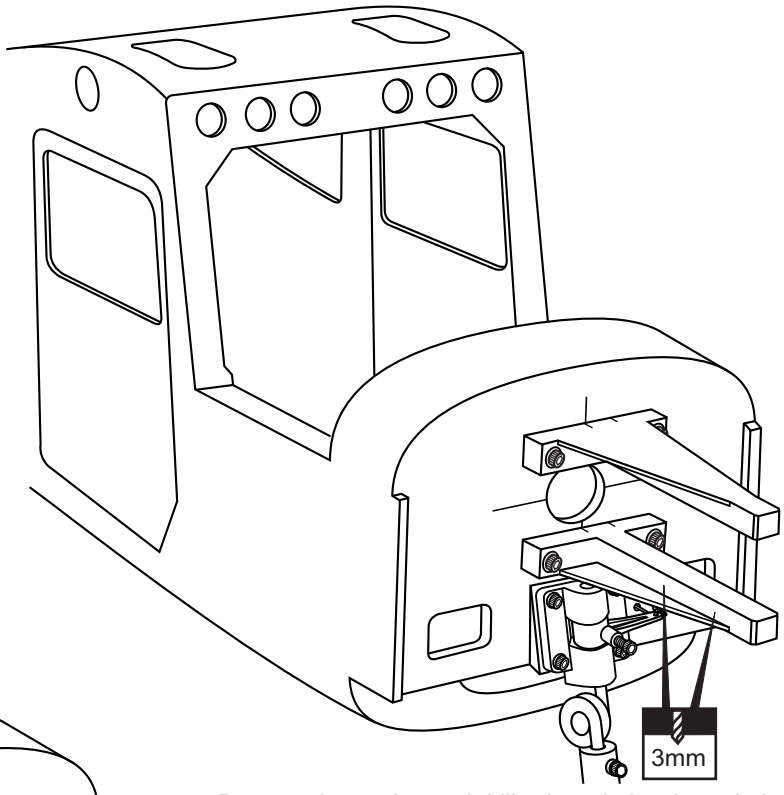
Reposition the engine mount beams on to the fire-wall and secure them with four 4x25mm hexagonal bolts.

4x25mm hexagonal bolt - washer	4
Blind-nut	4

CESSNA 172 6- GLOW ENGINE INSTALLATION

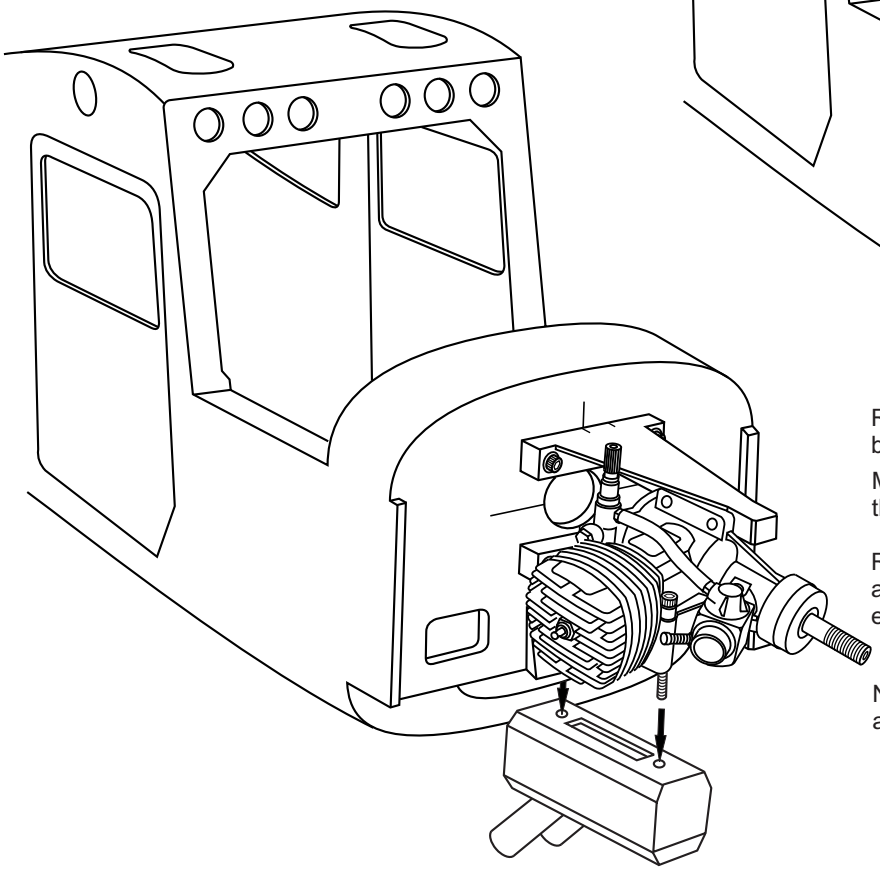


Position the engine to the engine mounts so the distance from the prop hub to the fire-wall is 127mm.
Mark the engine mount beams where the four holes are to be drilled.



Remove the engine and drill a 3mm 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.

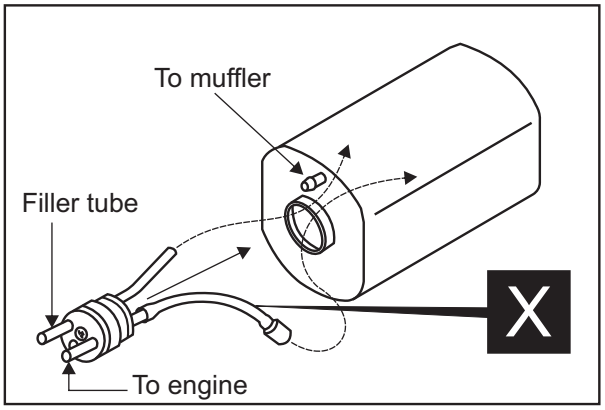


Reposition the engine on the engine mount beams, aligning it with the holes. Secure the engine to the engine mount using four 3x25mm hexagonal bolts.

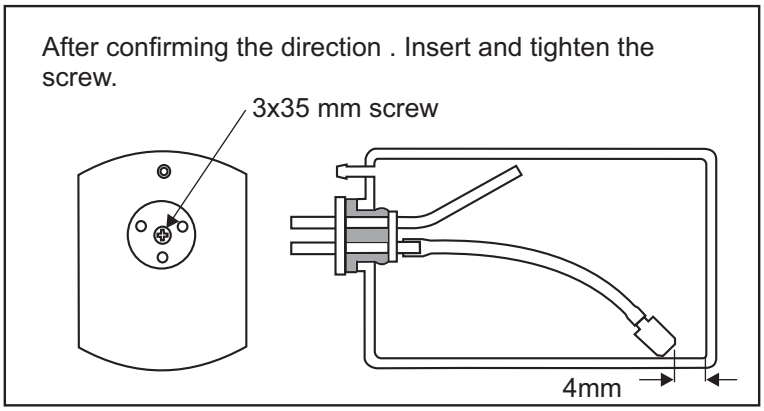
Note: Apply Silicon sealer to each of the 3x25mm bolt and nut.

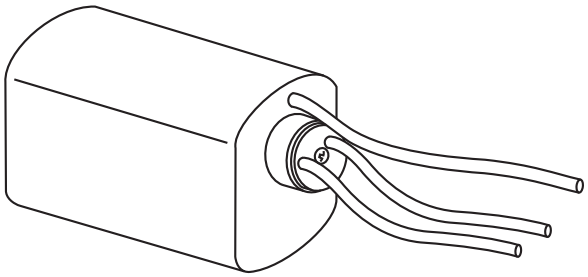
3x25mm hexagonal bolt	
	4
Washer	
	4

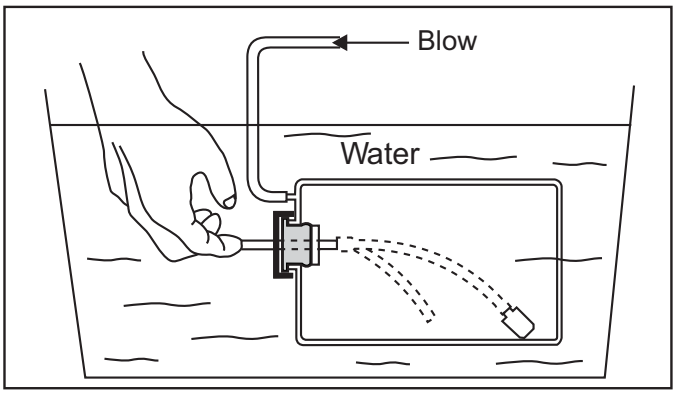
CESSNA 172 7- FUEL TANK



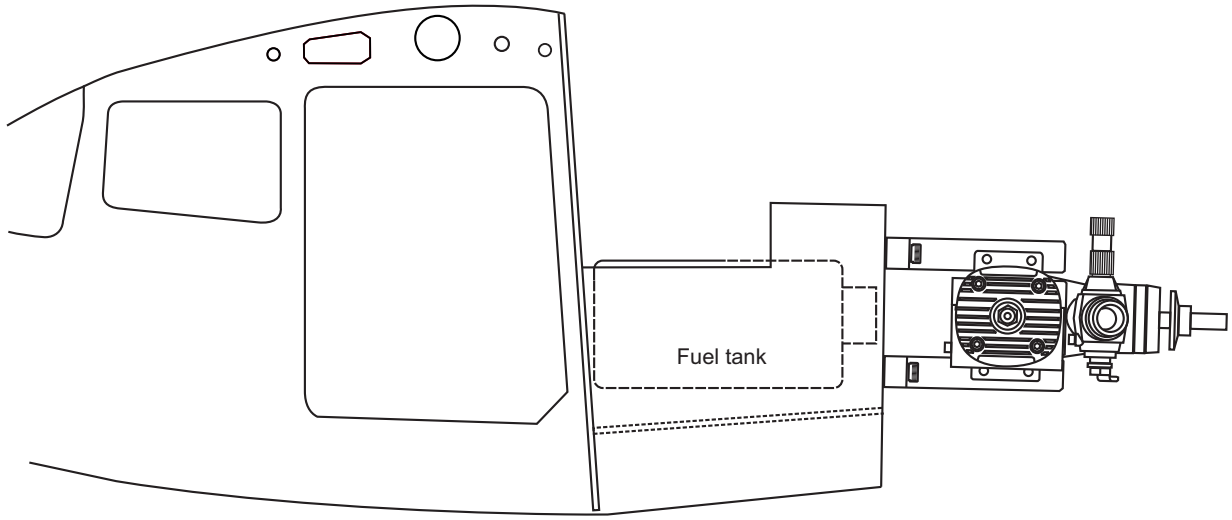
After confirming the direction . Insert and tighten the screw.



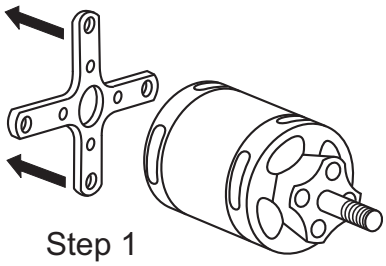




Checking for leaks - block the vents and blow into the feed - if in doubt submersing the tank in a blow of water will show up any problems.

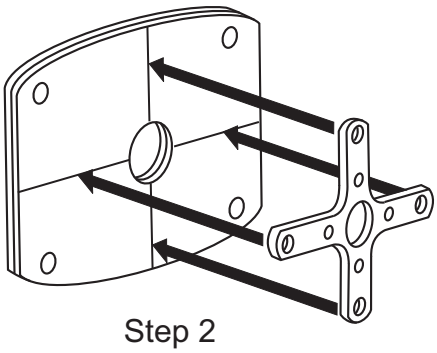


CESSNA 172 8- Electric motor mount



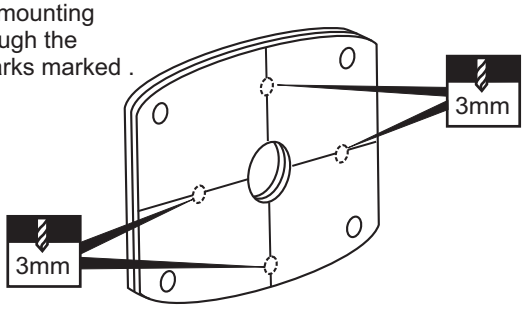
Step 1

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

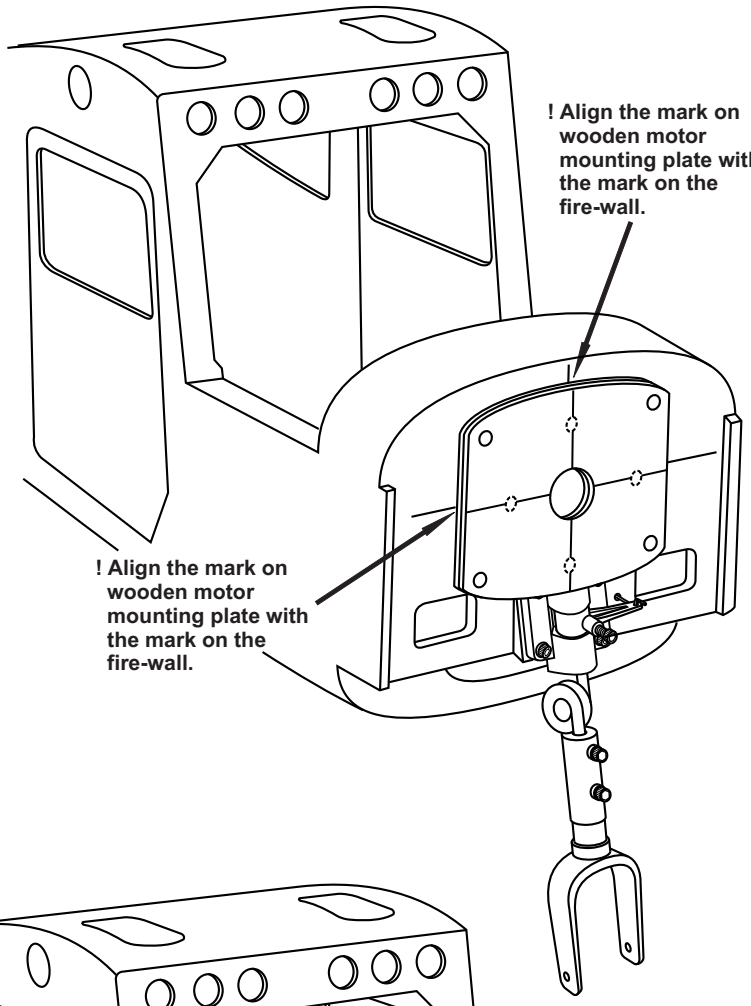


Step 2

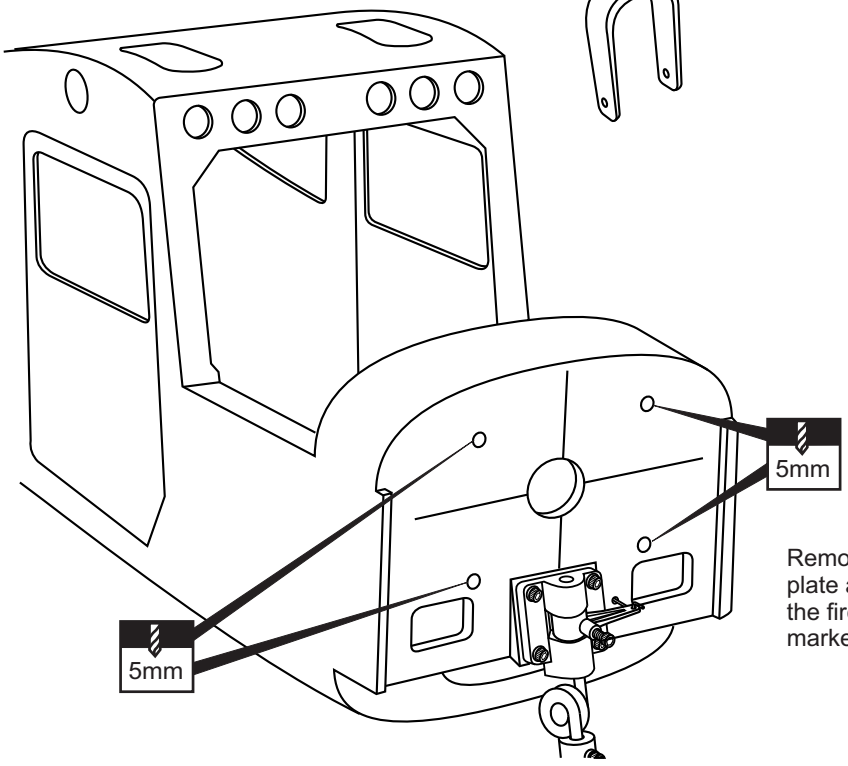
Remove the aluminum motor mounting plate and drill a 3mm hole through the plywood at each of the four marks marked .



Step 3



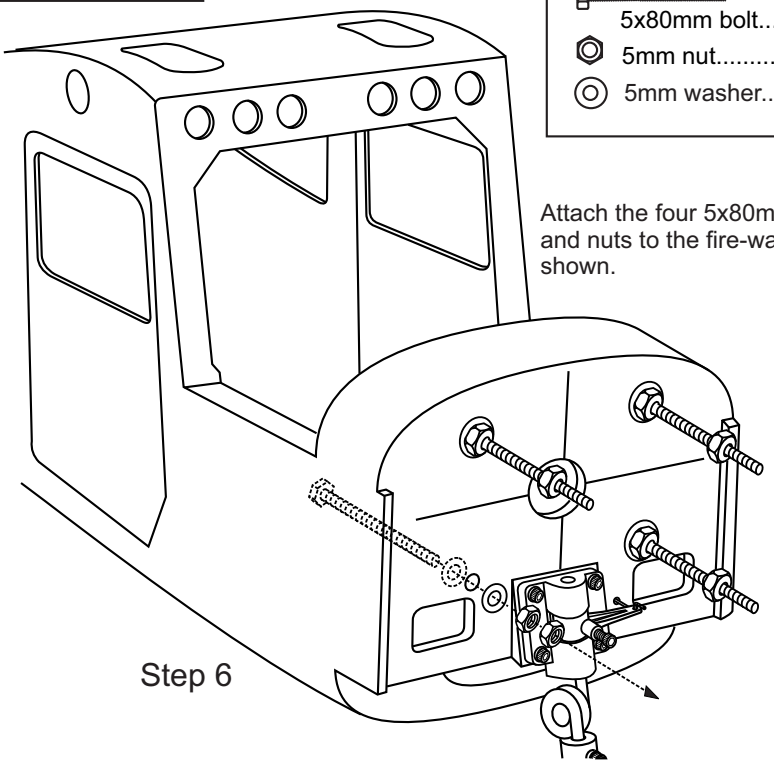
Using a wooden motor mounting plate as a template, mark the fire-wall where the four holes are to be drilled.



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

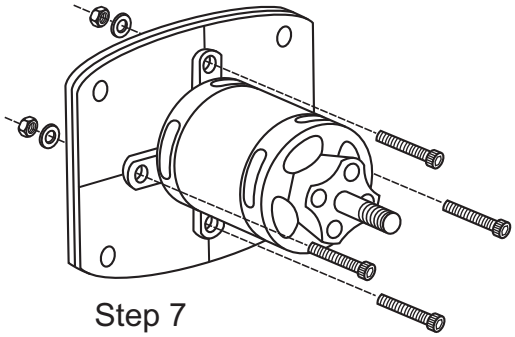
CESSNA 172 9- Electric motor mount

5x80mm bolt.....4
5mm nut.....12
5mm washer...16



Attach the four 5x80mm bolts and nuts to the fire-wall as shown.

Step 6

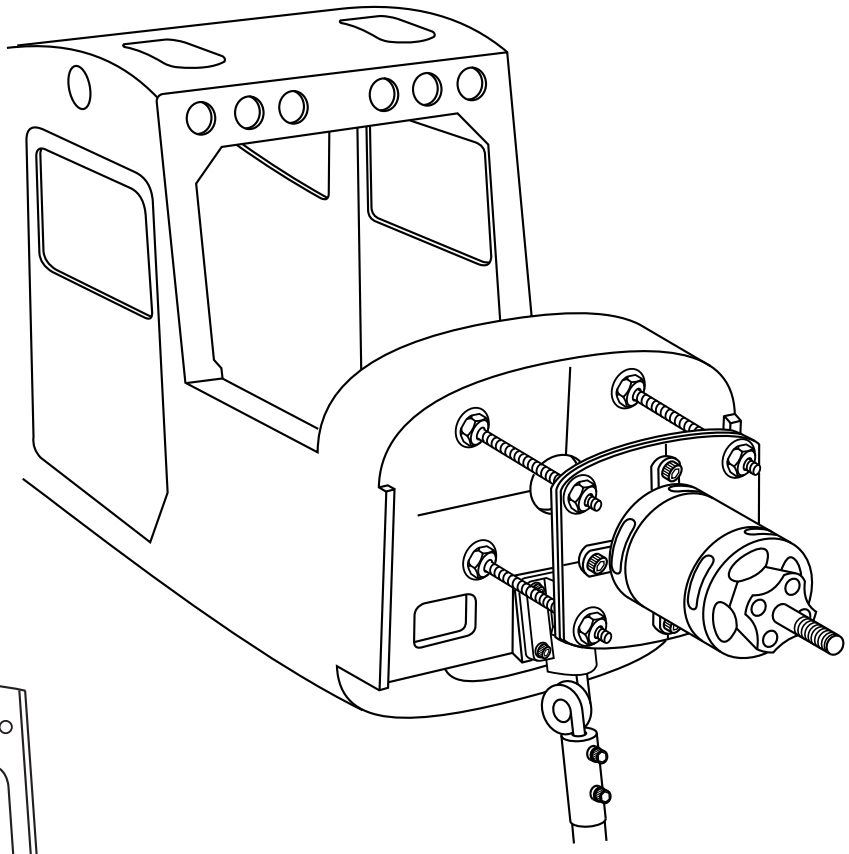


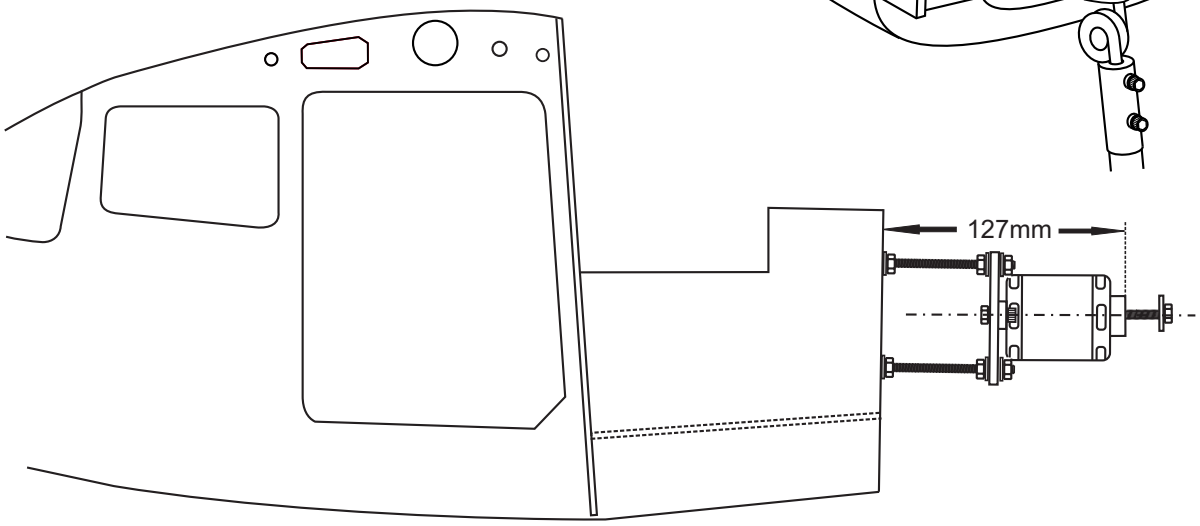
Step 7

3mm bolt / nut...4

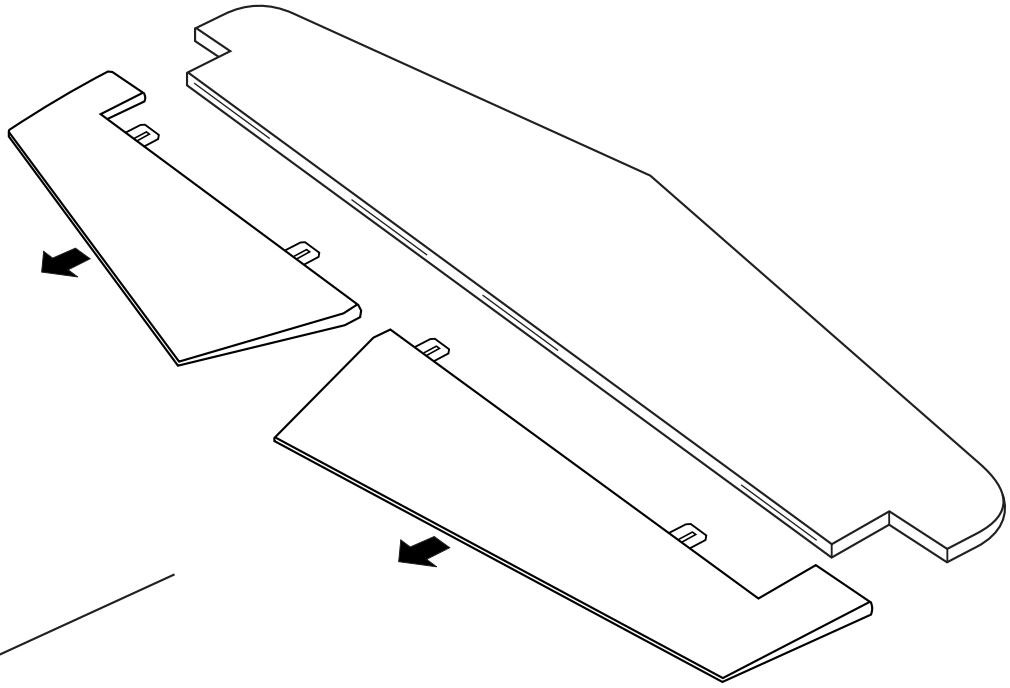
Secure the Motor to the wooden motor mounting plate using the four 3mm bolts.

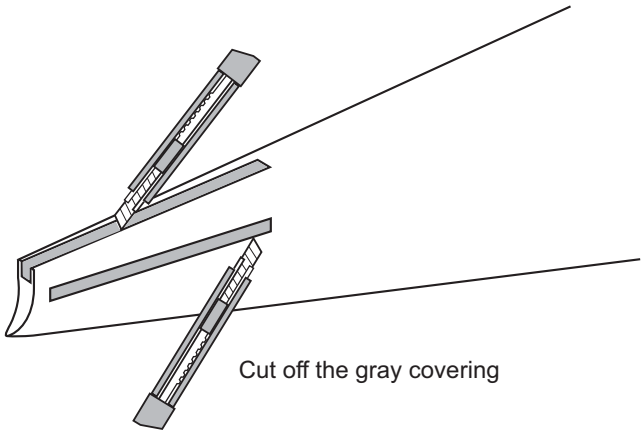
Adjust the wooden motor mount so the distance from the prop hub to the fire-wall is 131mm.





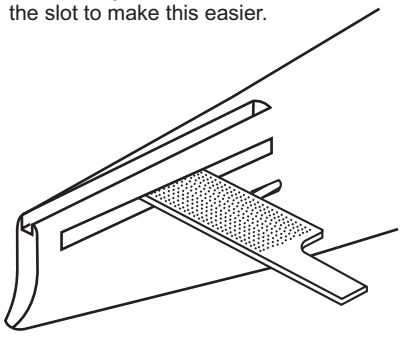
CESSNA 172 10- Horizontal stabilizer

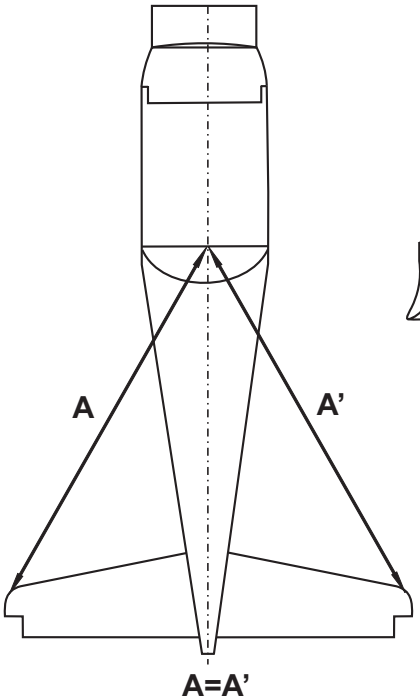


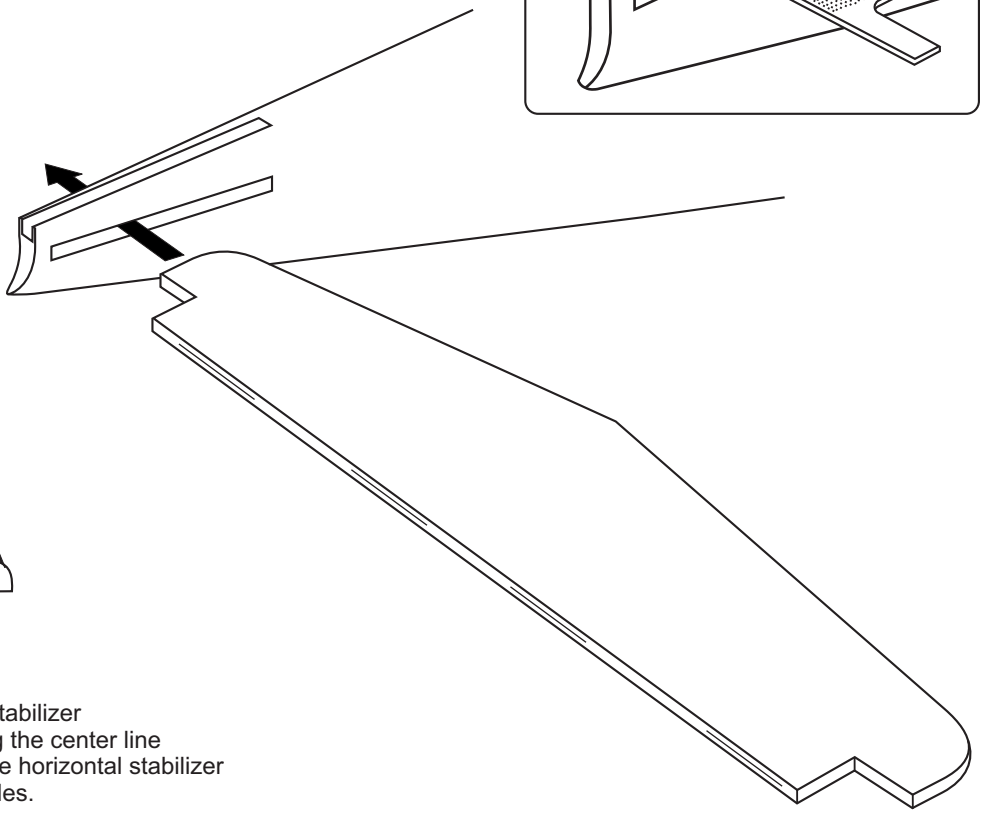


Cut off the gray covering

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

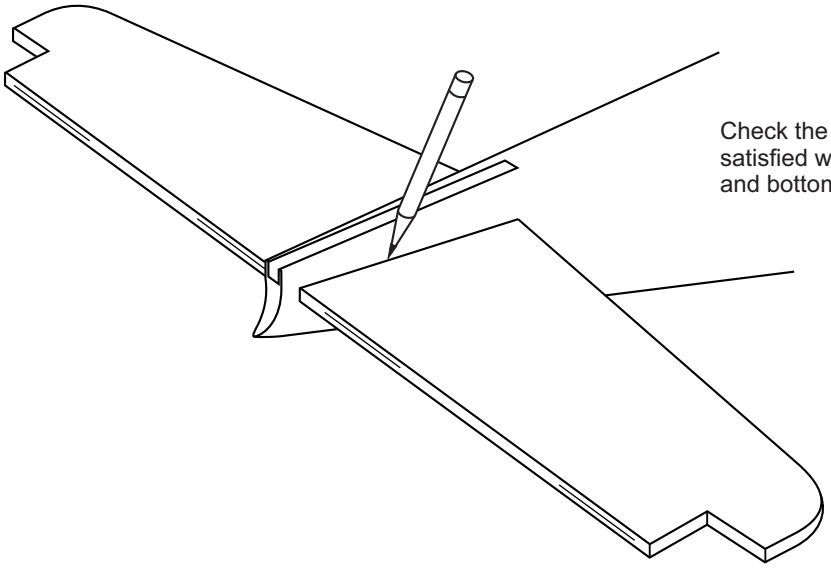




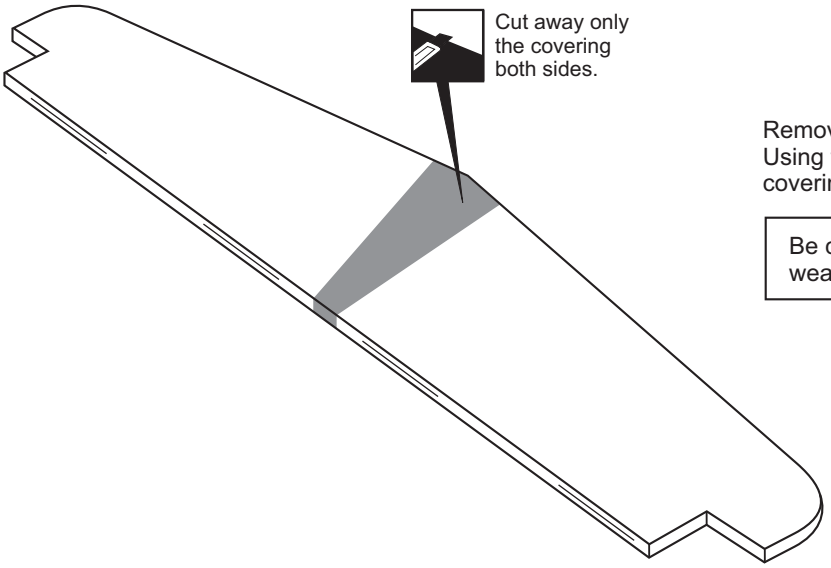


Check the alignment of the horizontal stabilizer
by measuring from the fixed point along the center line
of the fuselage to the trailing edge of the horizontal stabilizer
The distance must be equal on both sides.

CESSNA 172 11- Horizontal stabilizer

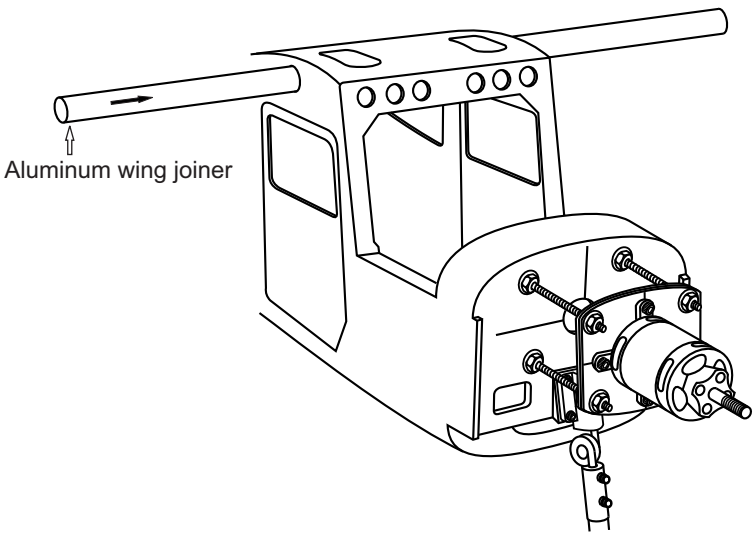


Check the alignment of the horizontal stabilizer. When you are satisfied with the alignment, use a pencil to trace around the top and bottom of the stabilizer where it meets the fuselage.



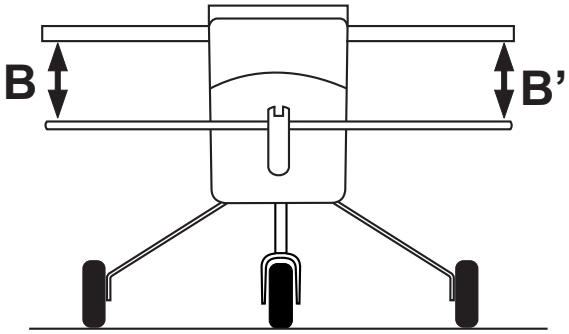
Remove the horizontal stabilizer from the fuselage. Using the sharp hobby knife, carefully cut away the covering **inside the lines** which were marked above.

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



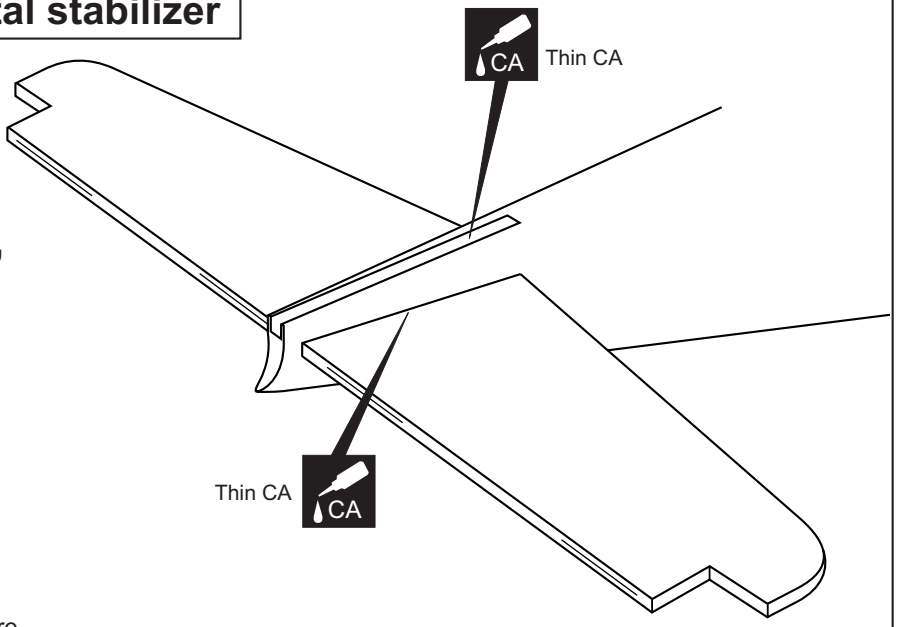
CESSNA 172 12- Horizontal stabilizer

Again, slide the horizontal stabilizer into the slot on the fuselage. Check the alignment of the horizontal stabilizer (B=B').



B=B'

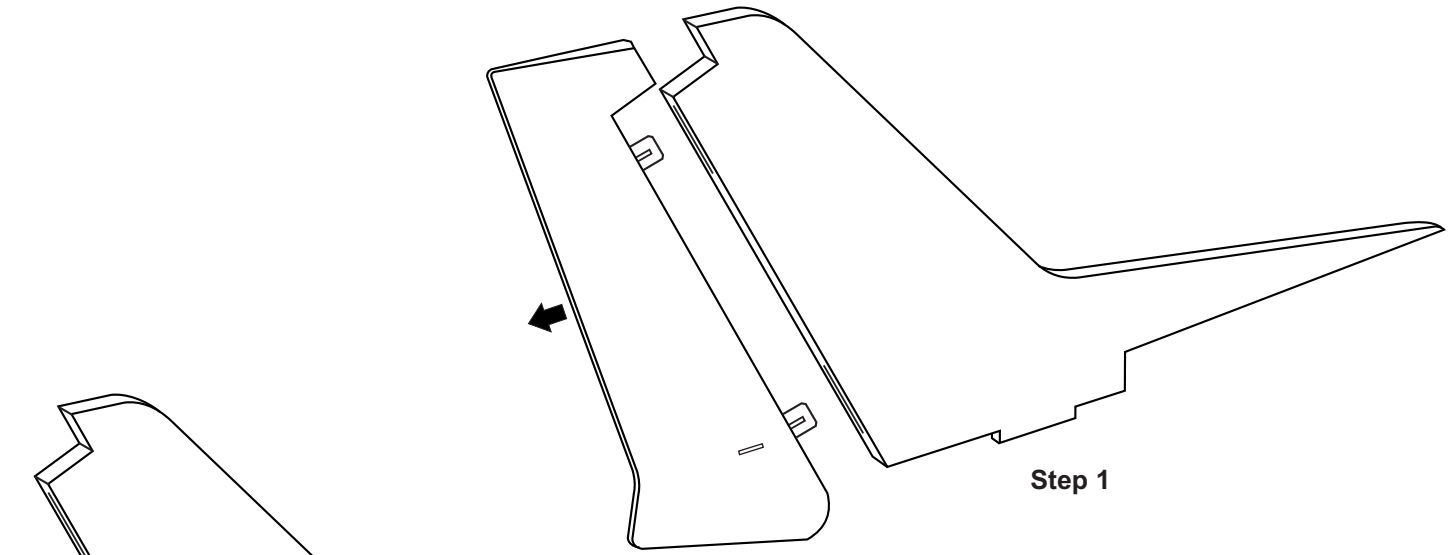
The distance must be equal on both sides (B=B'). If not, adjust the stabilizer until the measurement are the same.



When you are satisfied with the alignment, **glue the both sides** of the horizontal stabilizer where it meets the fuselage.

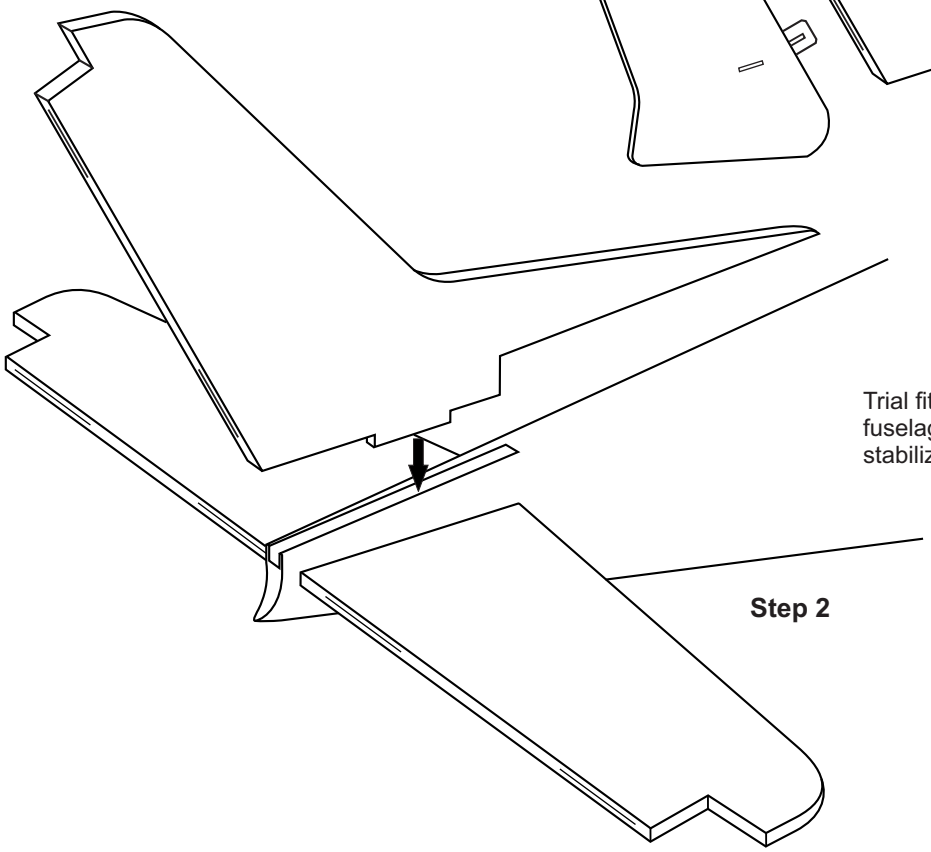
! Securely glue together. If coming off during fly, you lose control of your air plane.

CESSNA 172 13- Vertical stabilizer



Step 1

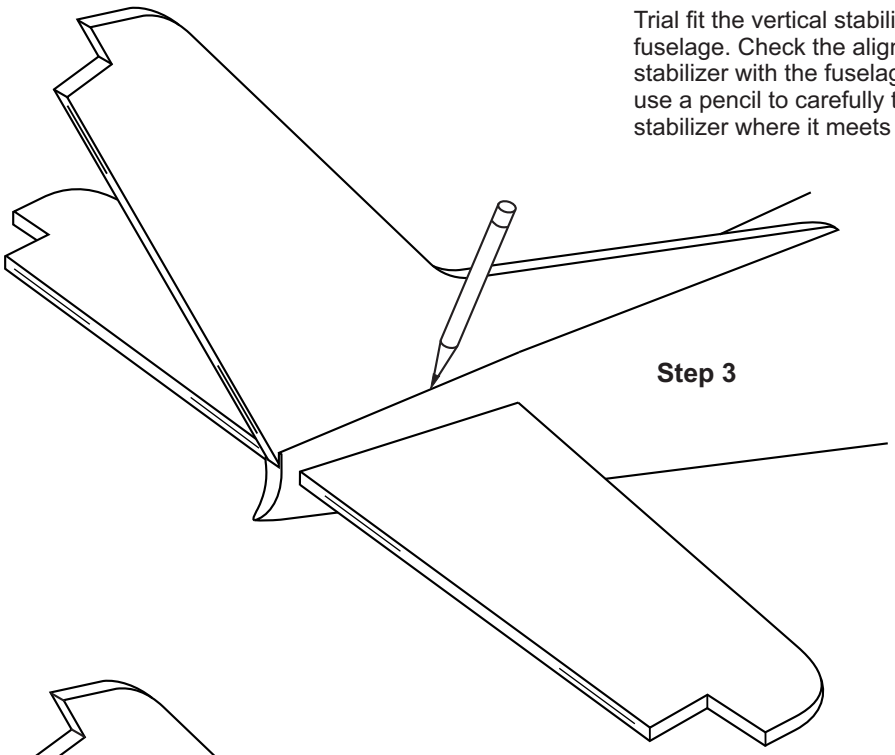
Trial fit the vertical stabilizer in place on the fuselage. Check the alignment of the vertical stabilizer with the fuselage.



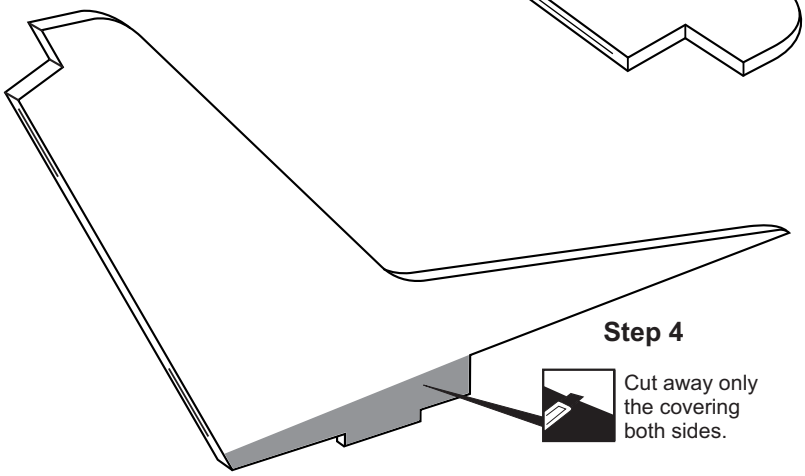
Step 2

CESSNA 172 14- Vertical stabilizer

Trial fit the vertical stabilizer in place on the fuselage. Check the alignment of the vertical stabilizer with the fuselage. When you are satisfied with the alignment, use a pencil to carefully trace around the left and right of the vertical stabilizer where it meets the fuselage.



Step 3

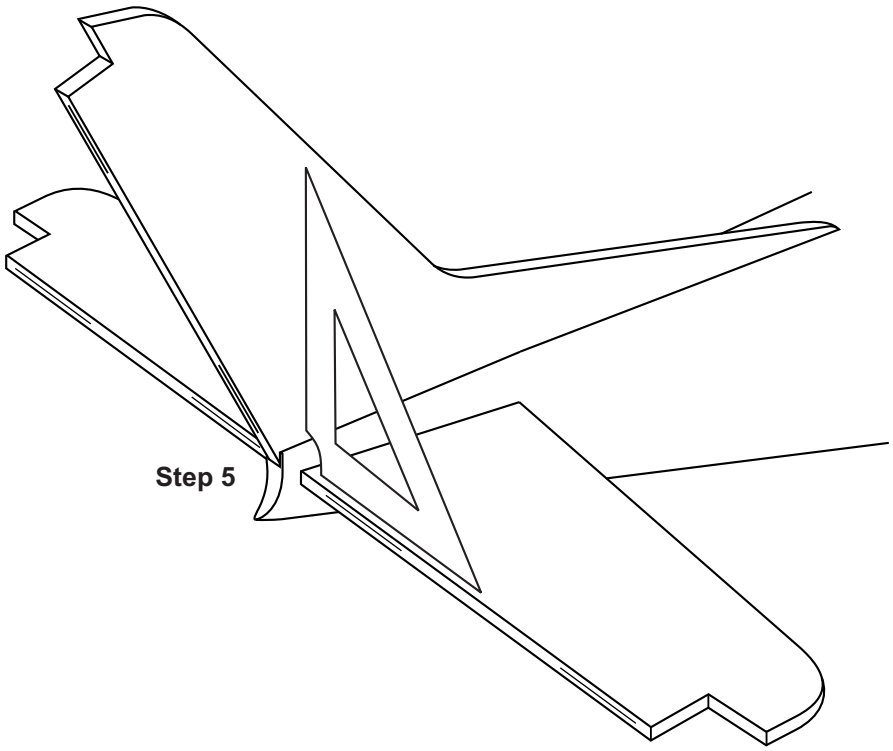


Step 4

Cut away only the covering both sides.

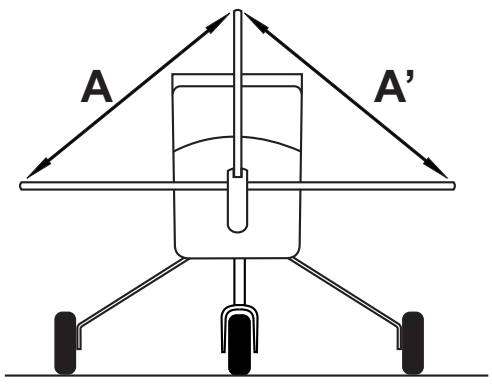
Remove the vertical stabilizer from the fuselage. Using the sharp hobby knife, carefully cut away the covering **inside the lines** which were marked above.

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



Step 5

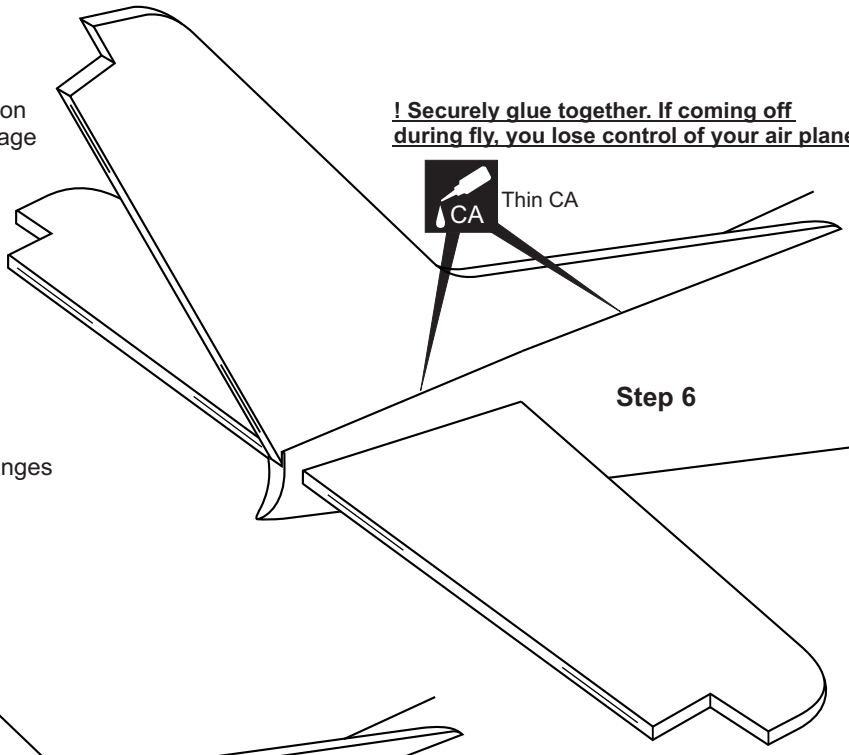
Again, slide the vertical stabilizer into the slot on the fuselage. Check the alignment of the vertical stabilizer (A=A').
You can also use a 90 degree square ruler as shown in the picture.



A=A'

CESSNA 172 15- Vertical stabilizer

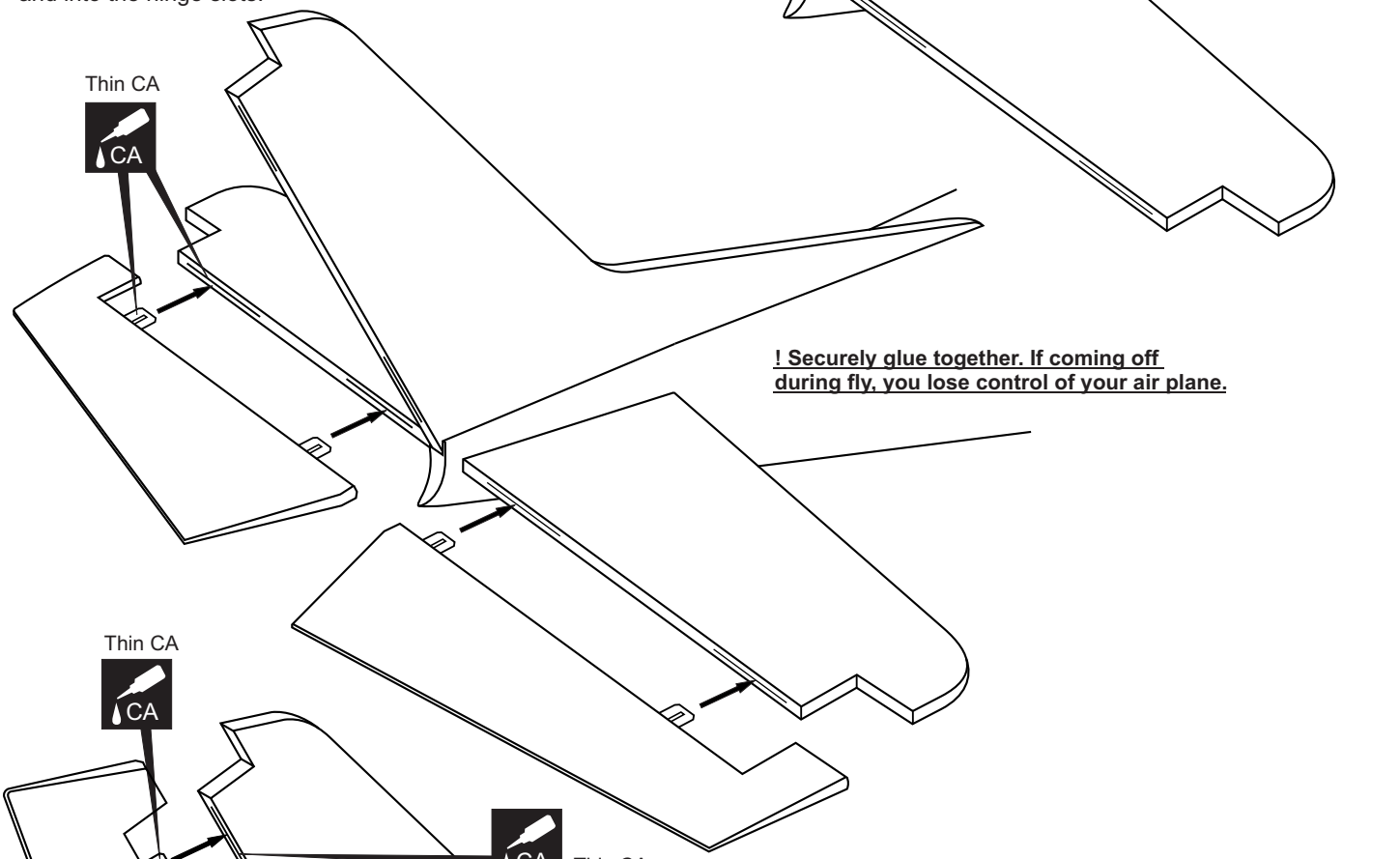
Use a small glue faucet, Apply the thin CA glue on the vertical stabilizer where it contacts the fuselage **(both the left and right sides)**.



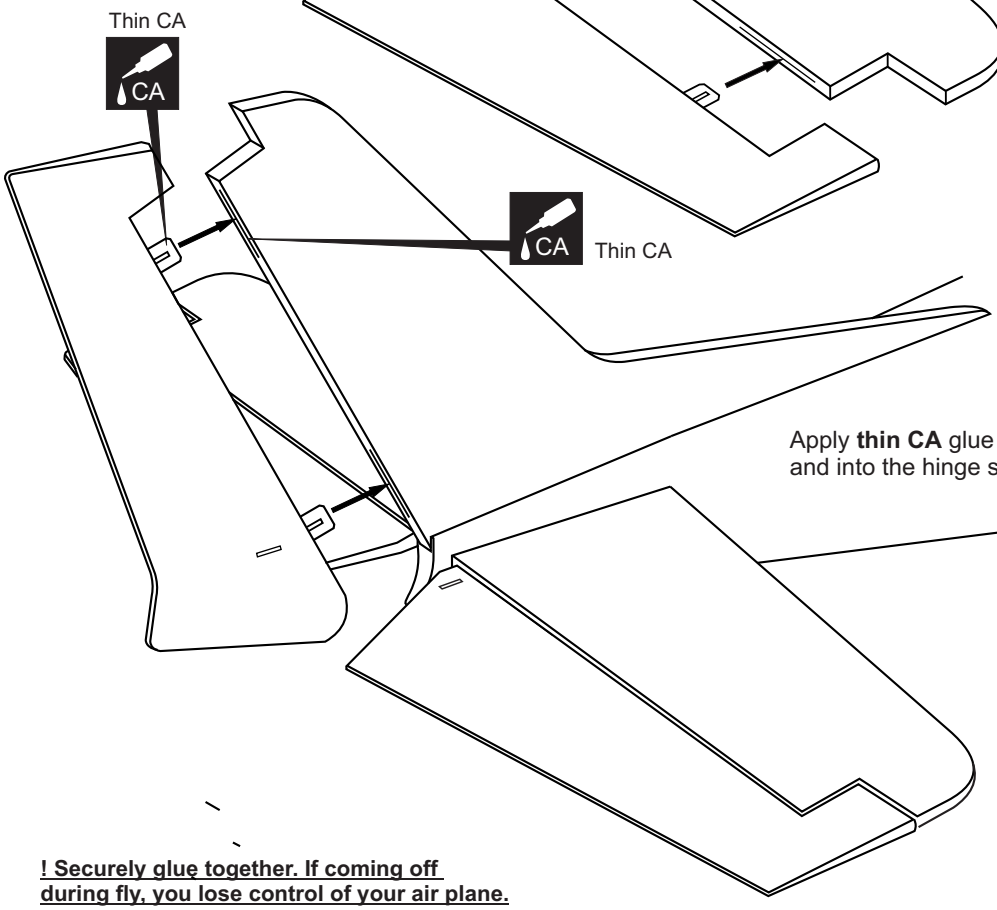
! Securely glue together. If coming off during fly, you lose control of your air plane.

Step 6

Apply **thin CA** glue on the top and bottom of the hinges and into the hinge slots.



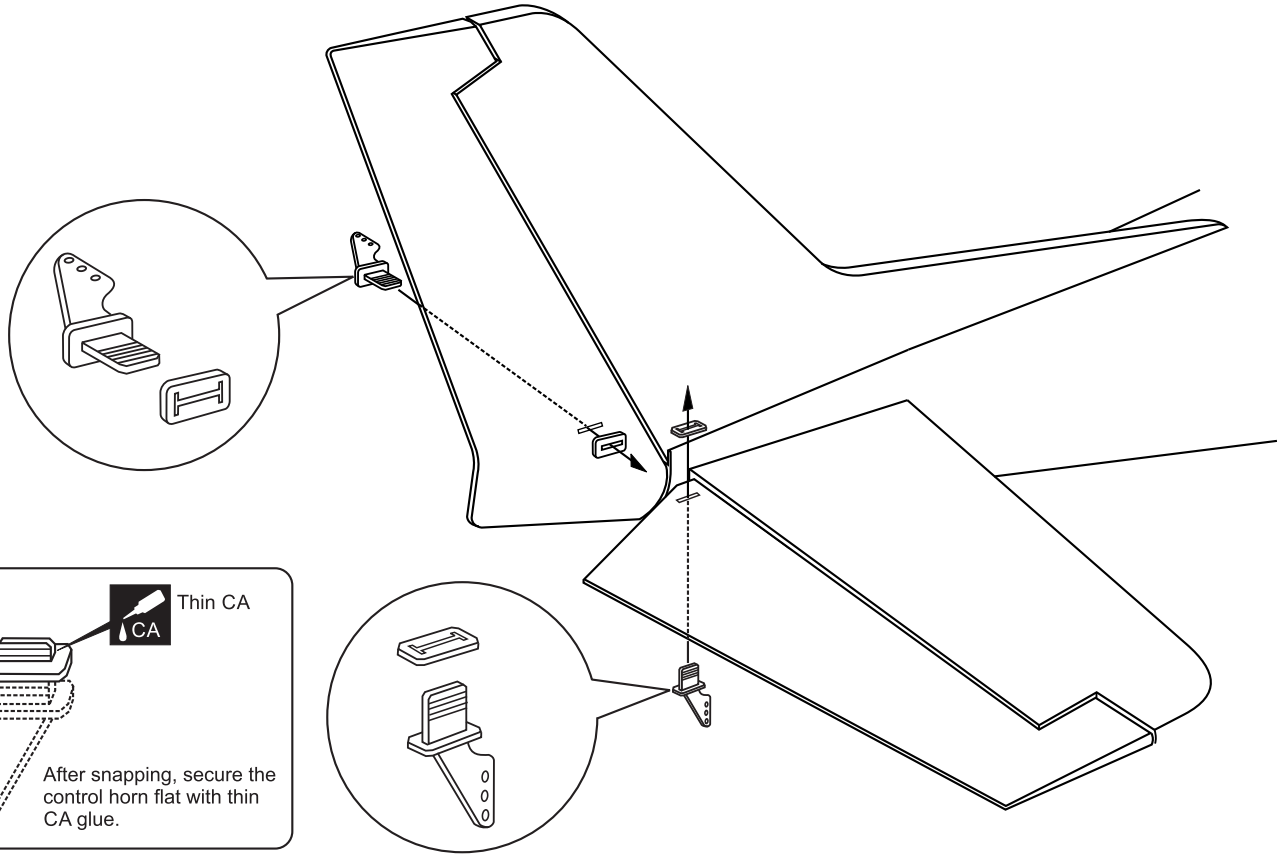
! Securely glue together. If coming off during fly, you lose control of your air plane.



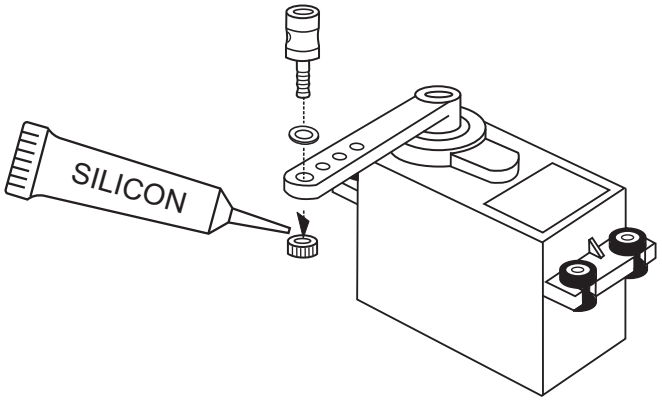
Apply **thin CA** glue on the left and right of the hinges and into the hinge slots.

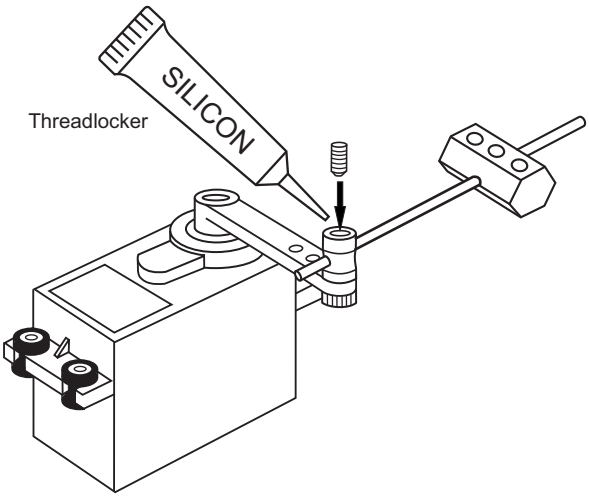
! Securely glue together. If coming off during fly, you lose control of your air plane.

CESSNA 172 16- Control horn



CESSNA 172 17- Connector





Connector 4

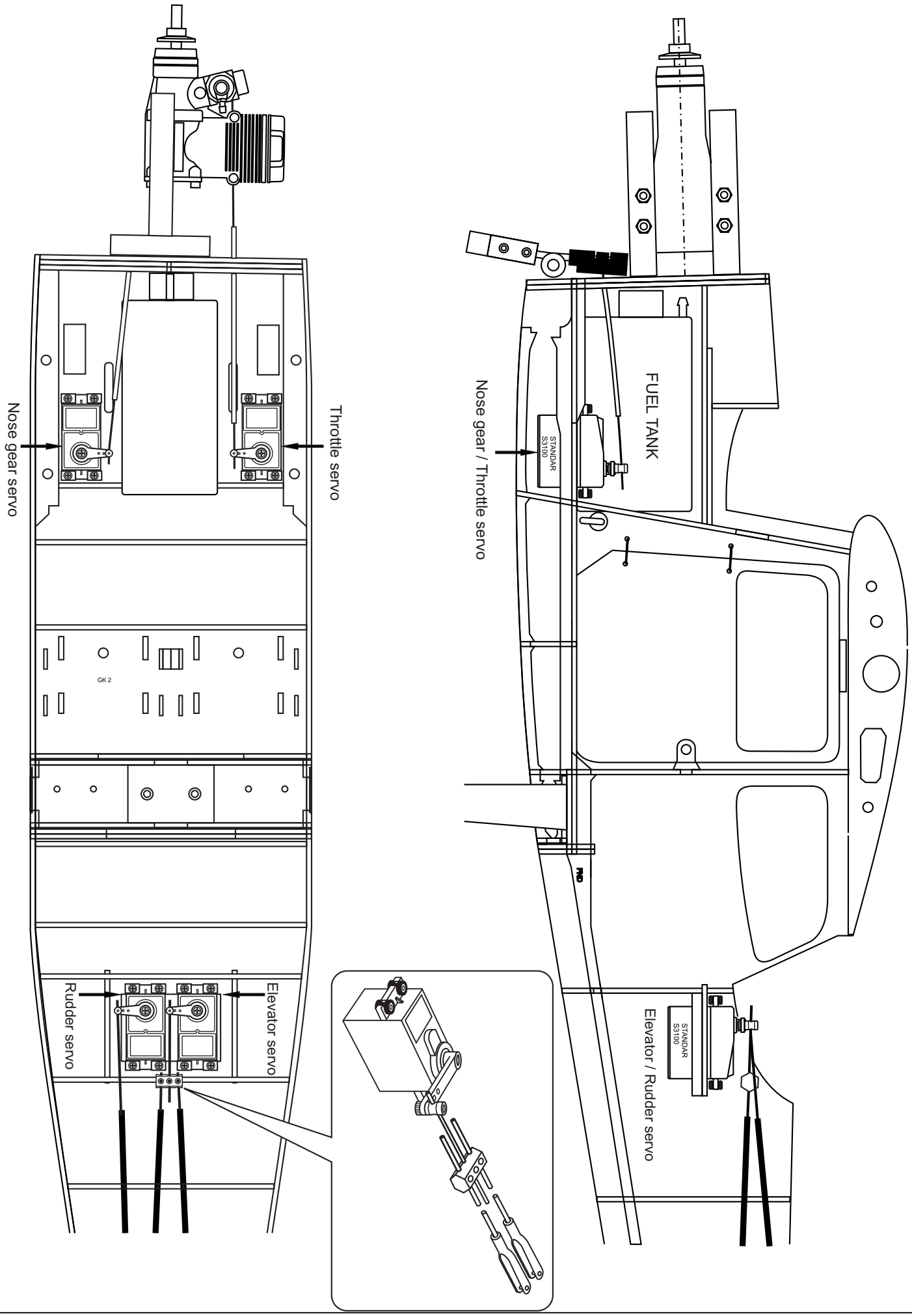
Connector 1

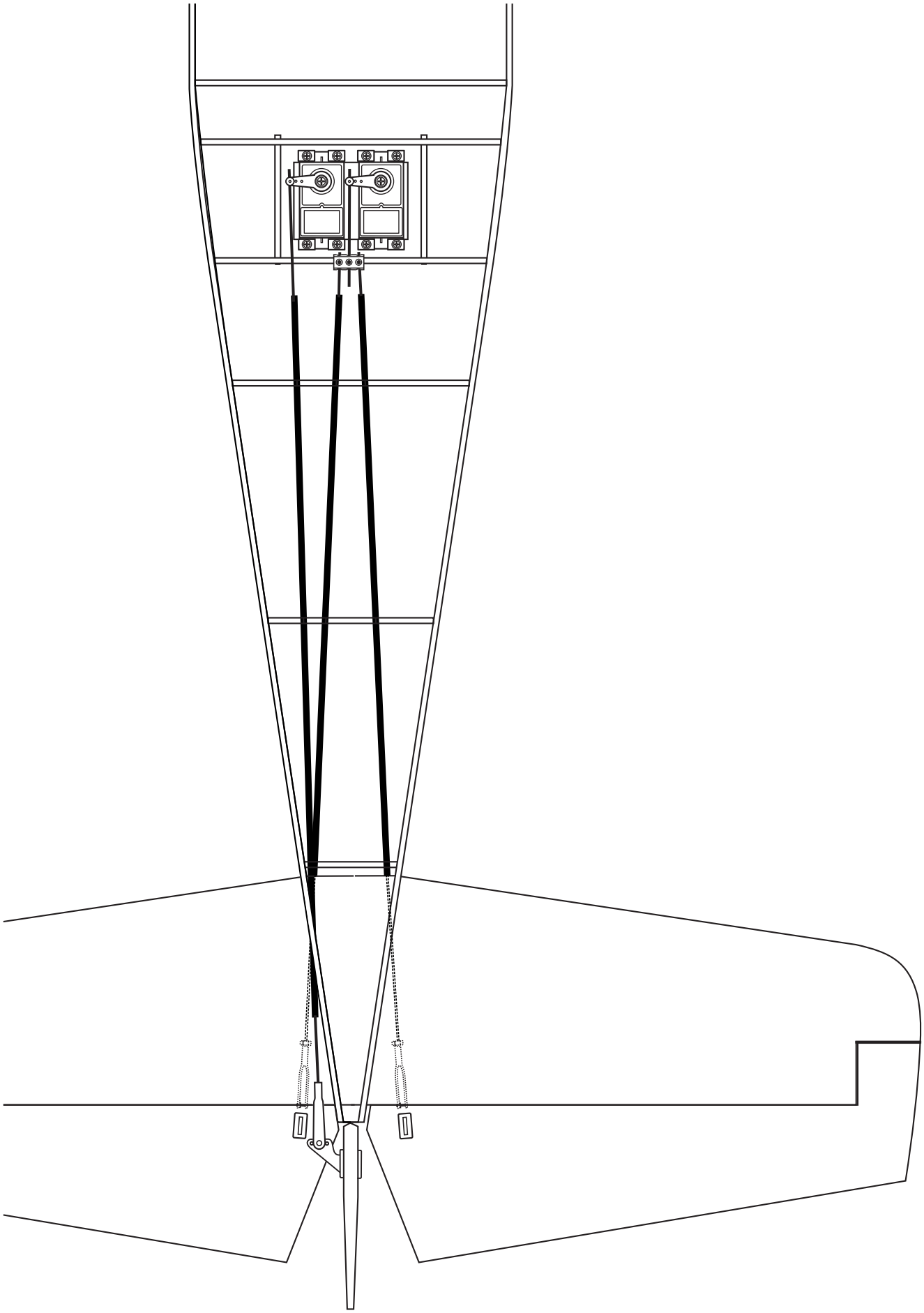
2x950mm rod/clevis ...3

1.2x550mm throttle rod 2

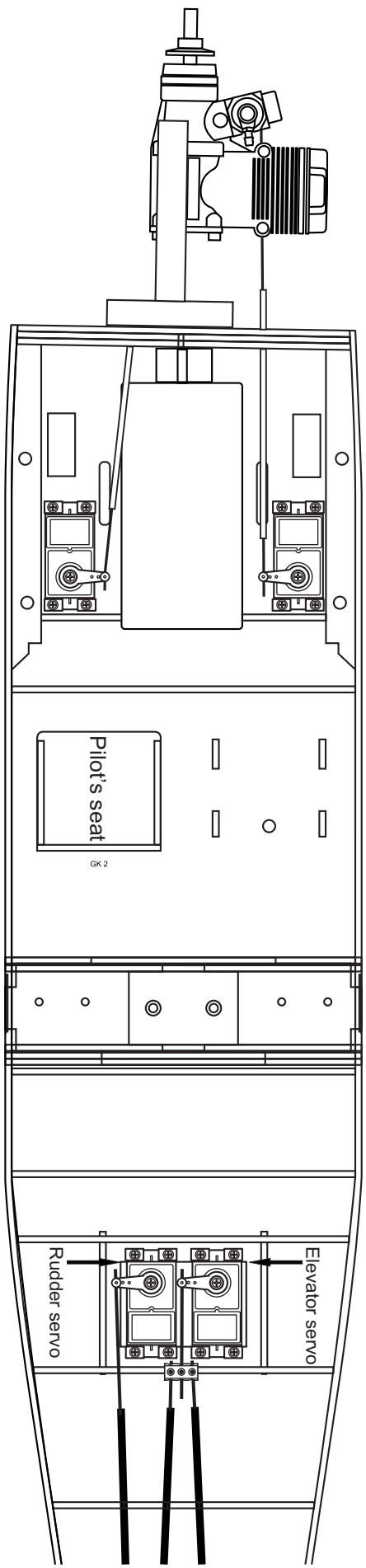
2x100mm rod 1

CESSNA 172 17- Linkages



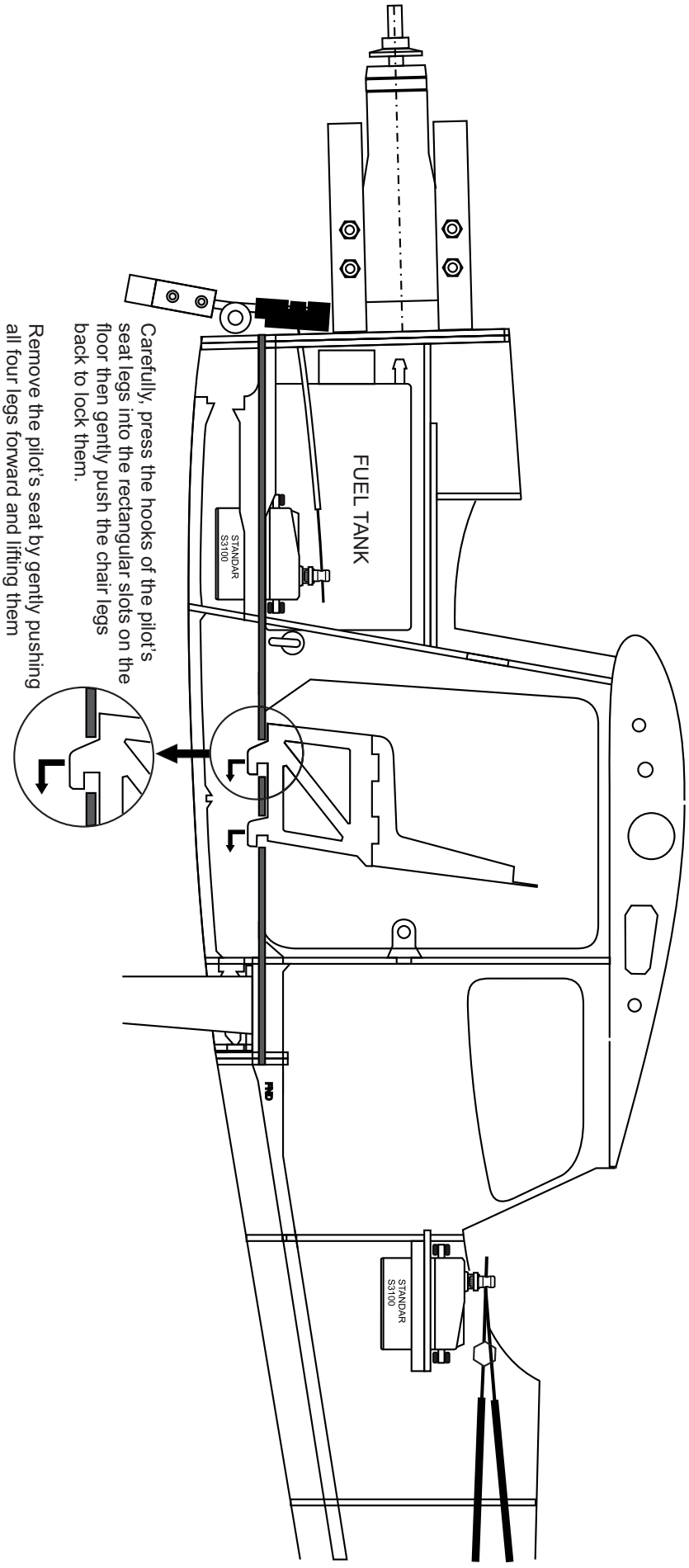


CESSNA 172 19- Pilot's seat



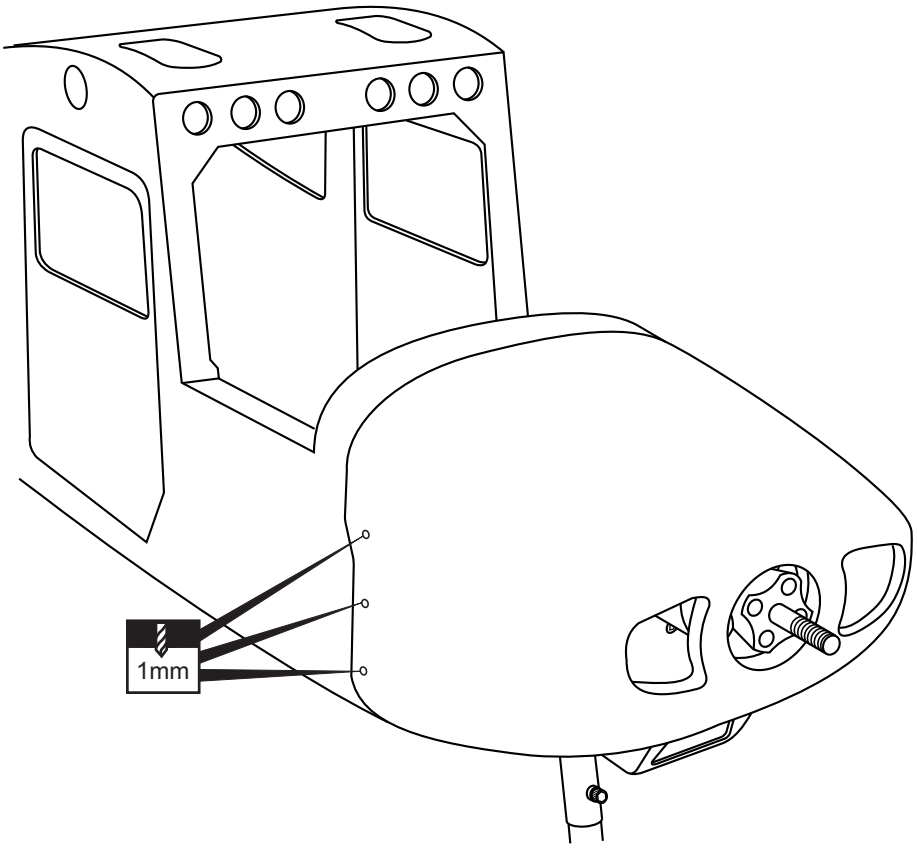
Remove the pilot's seat by gently pushing all four legs forward and lifting them up.

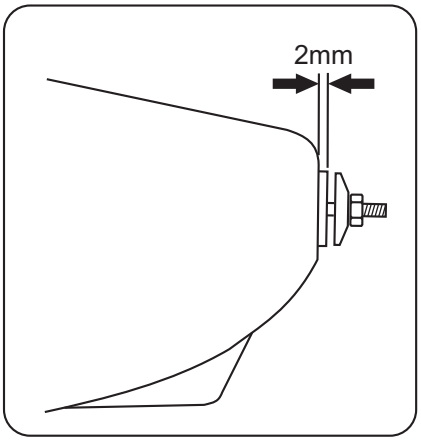
Carefully, press the hooks of the pilot's seat legs into the rectangular slots on the floor then gently push the chair legs back to lock them.

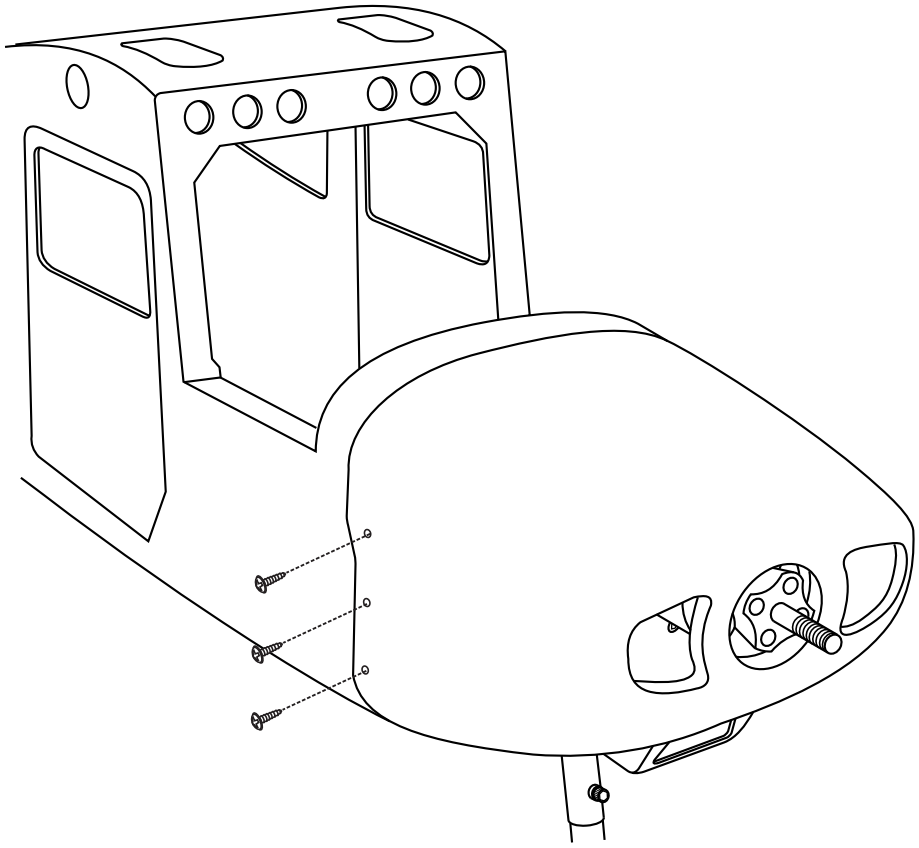


CESSNA 172 20- Cowl

Insert the cowl onto the fuselage so that the distance from the prop hub of engine to the front of the cowl is 2mm as shown.





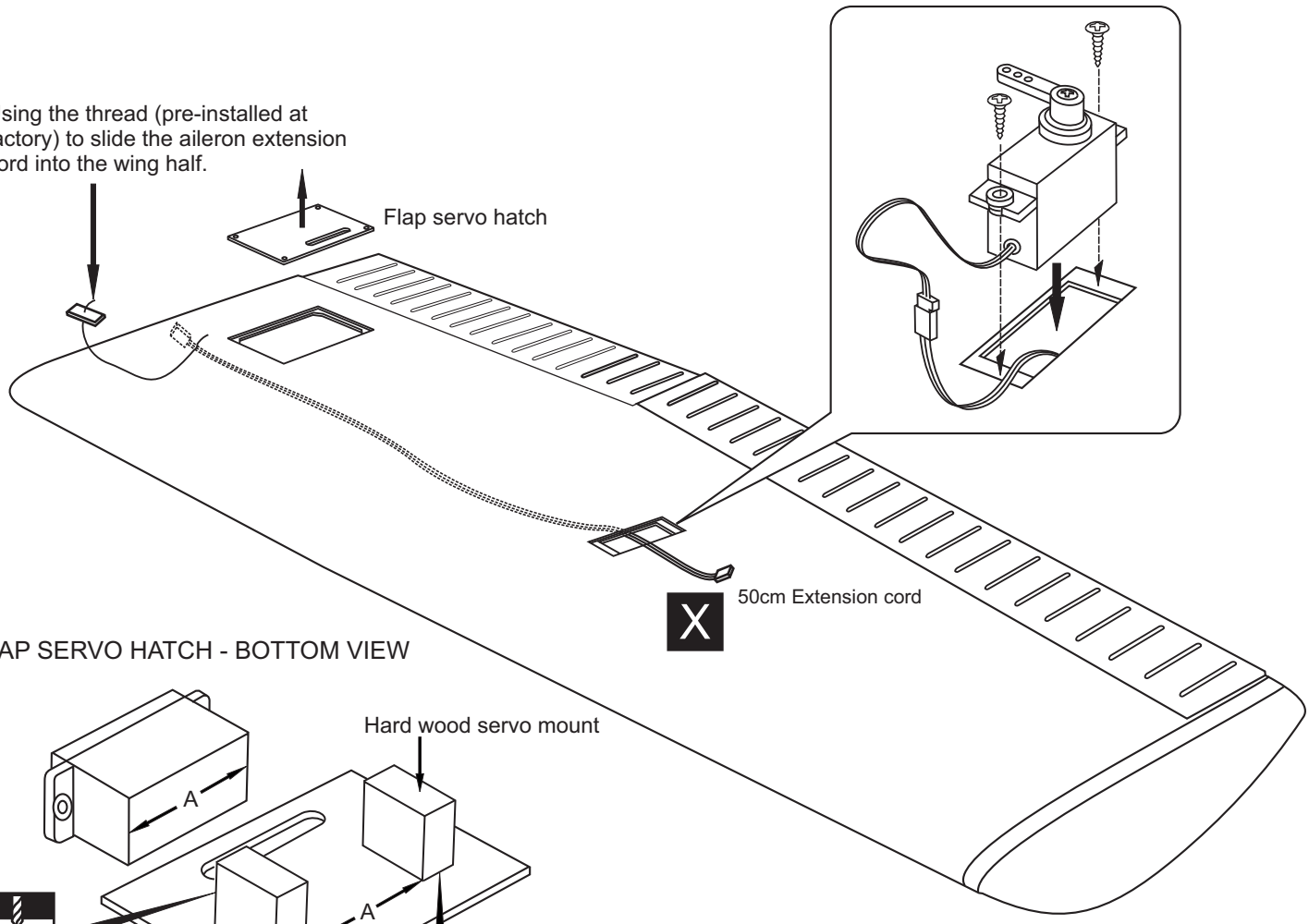


2.5x10mm screw

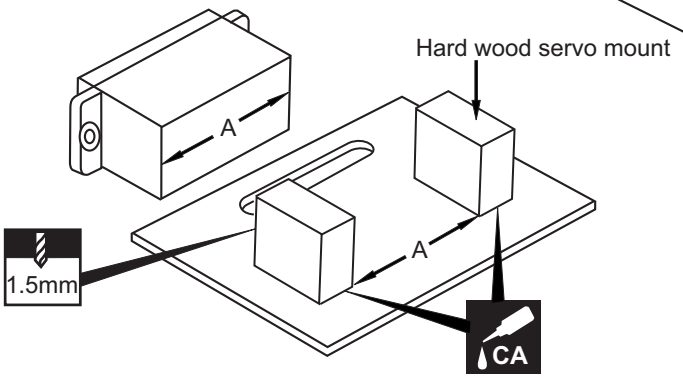
.....6

CESSNA 172 21- Aileron and Flap servo

Using the thread (pre-installed at factory) to slide the aileron extension cord into the wing half.

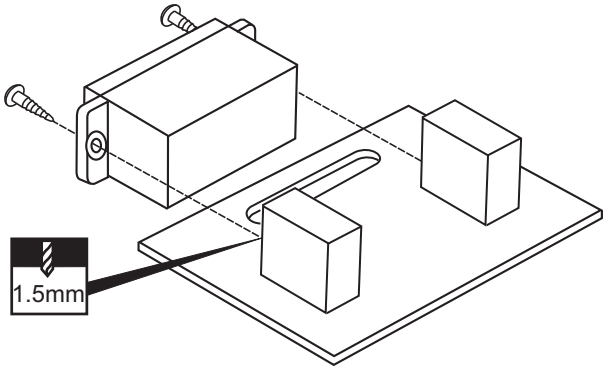


FLAP SERVO HATCH - BOTTOM VIEW

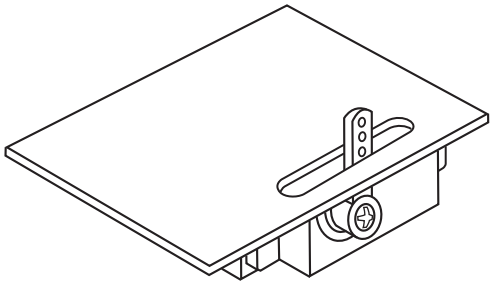


Thin CA

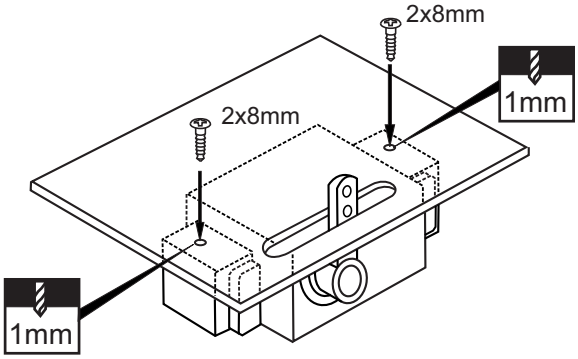
! Securely glue together. If coming off during fly, you lose control of your air plane.

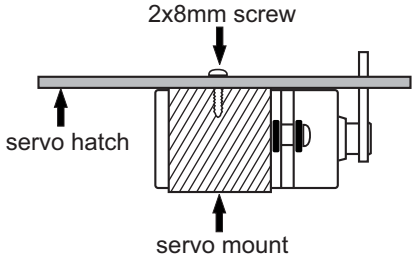


FLAP SERVO HATCH - TOP VIEW



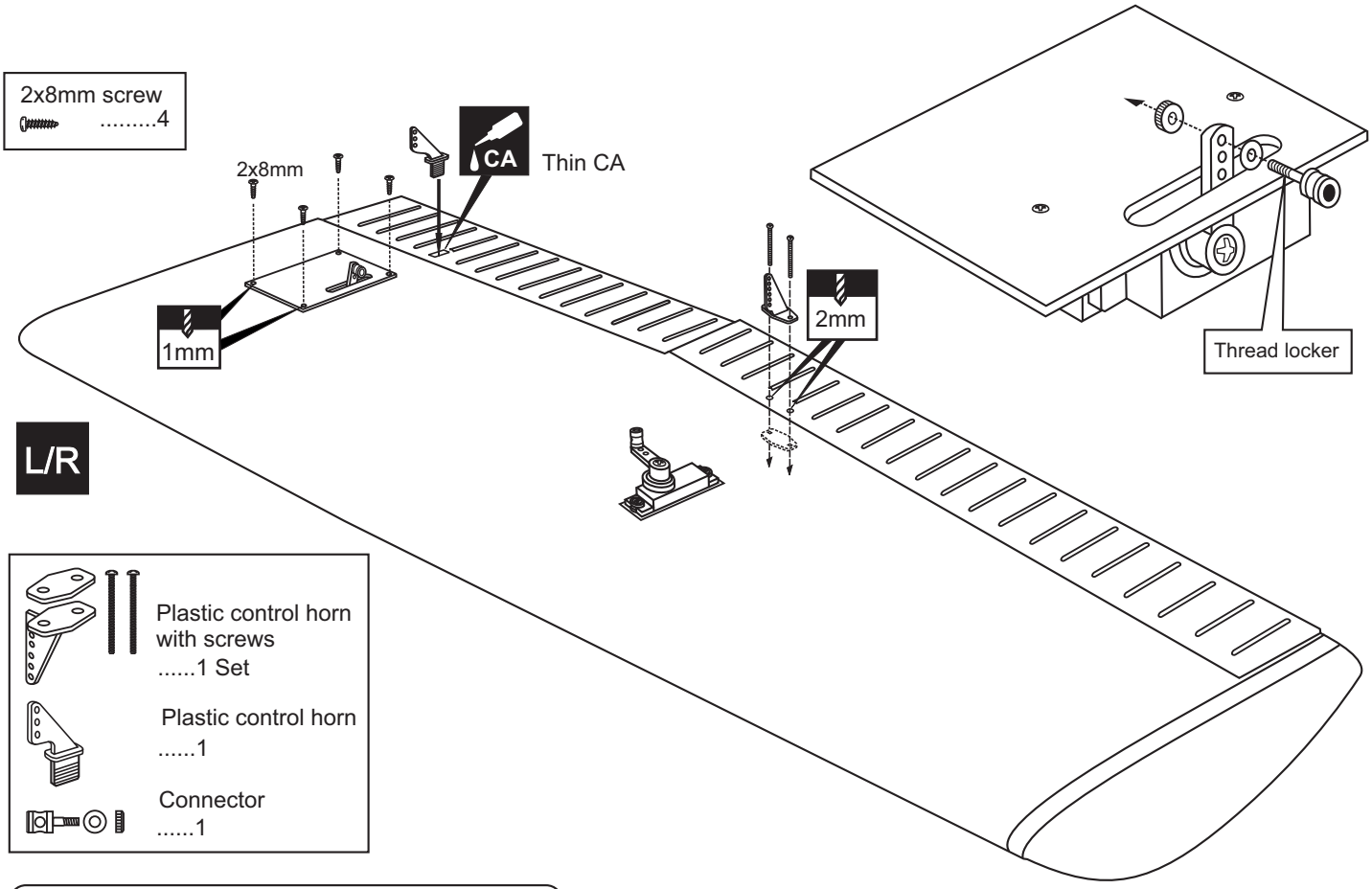
IMPORTANT:
To be safe, you must attach the four screws as shown in this picture.

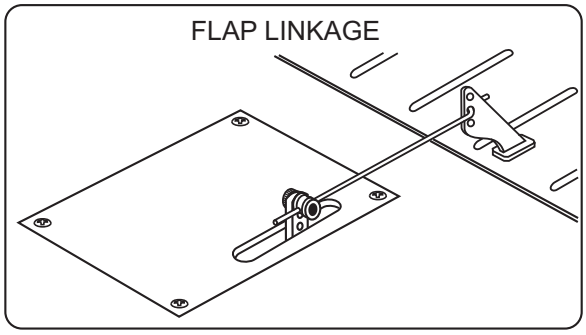


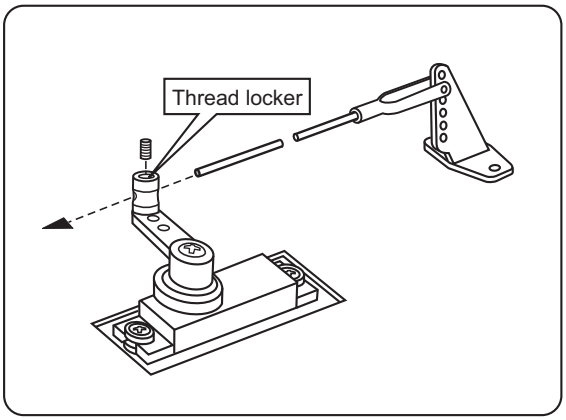


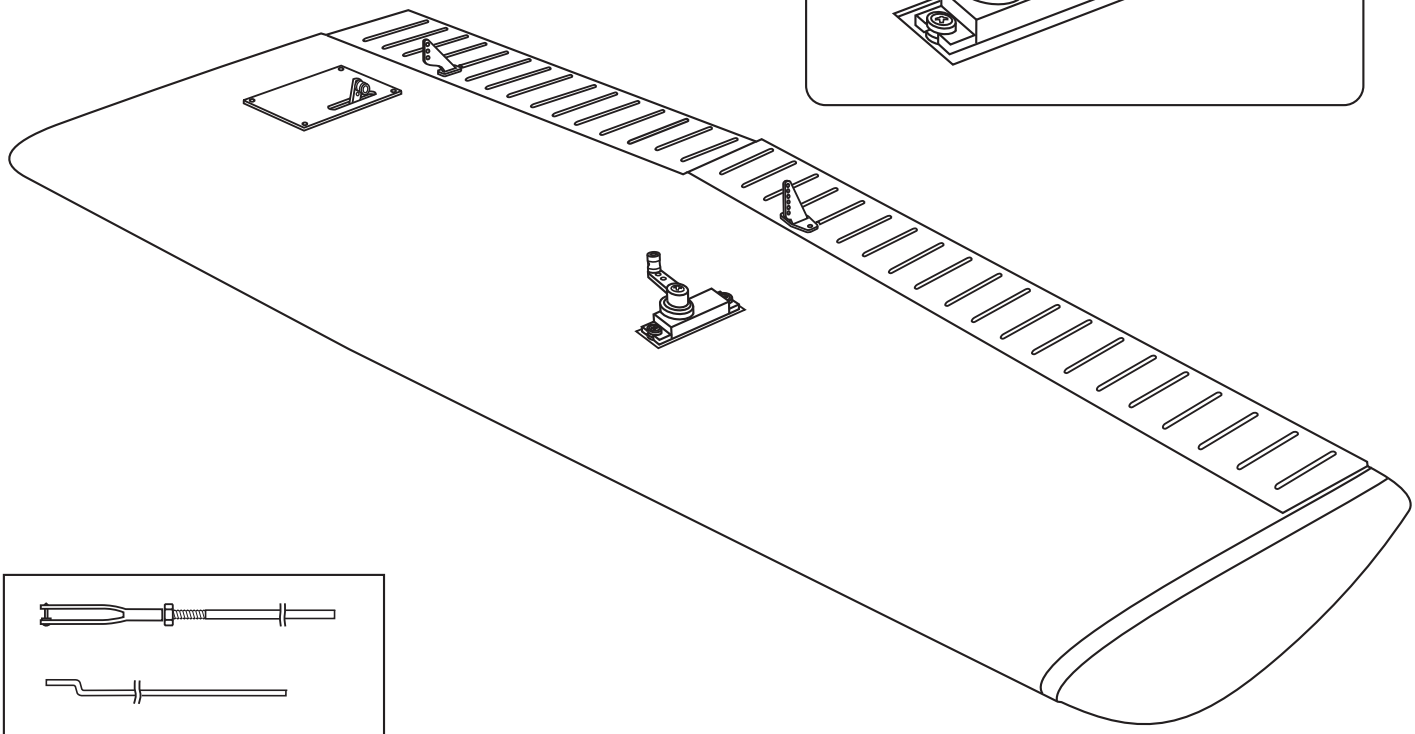
CESSNA 172 22- Control horn and linkages

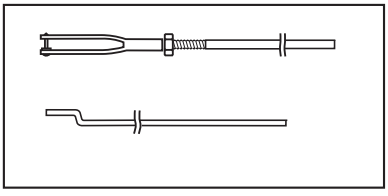
2x8mm screw 4



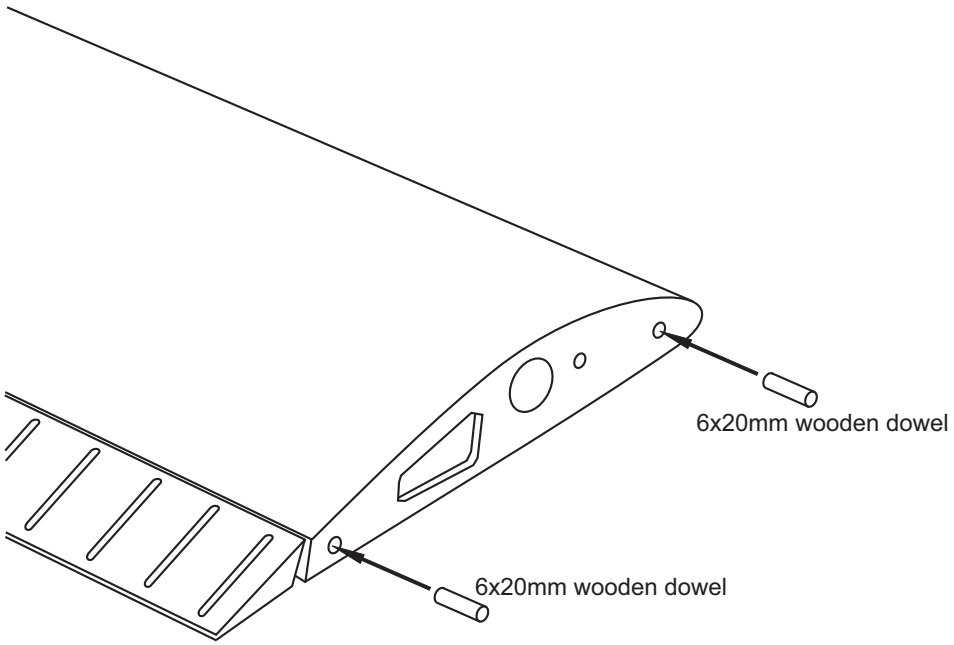


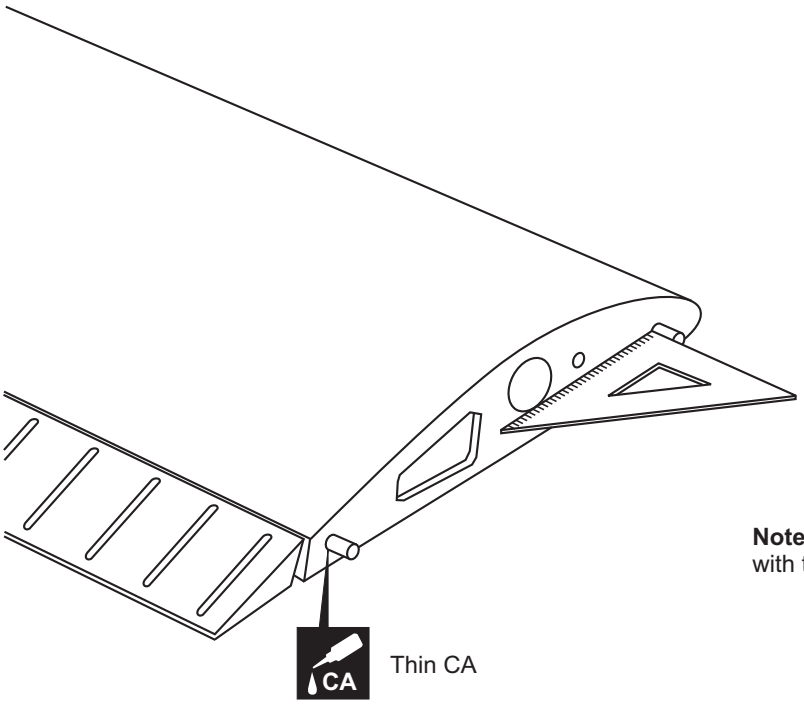






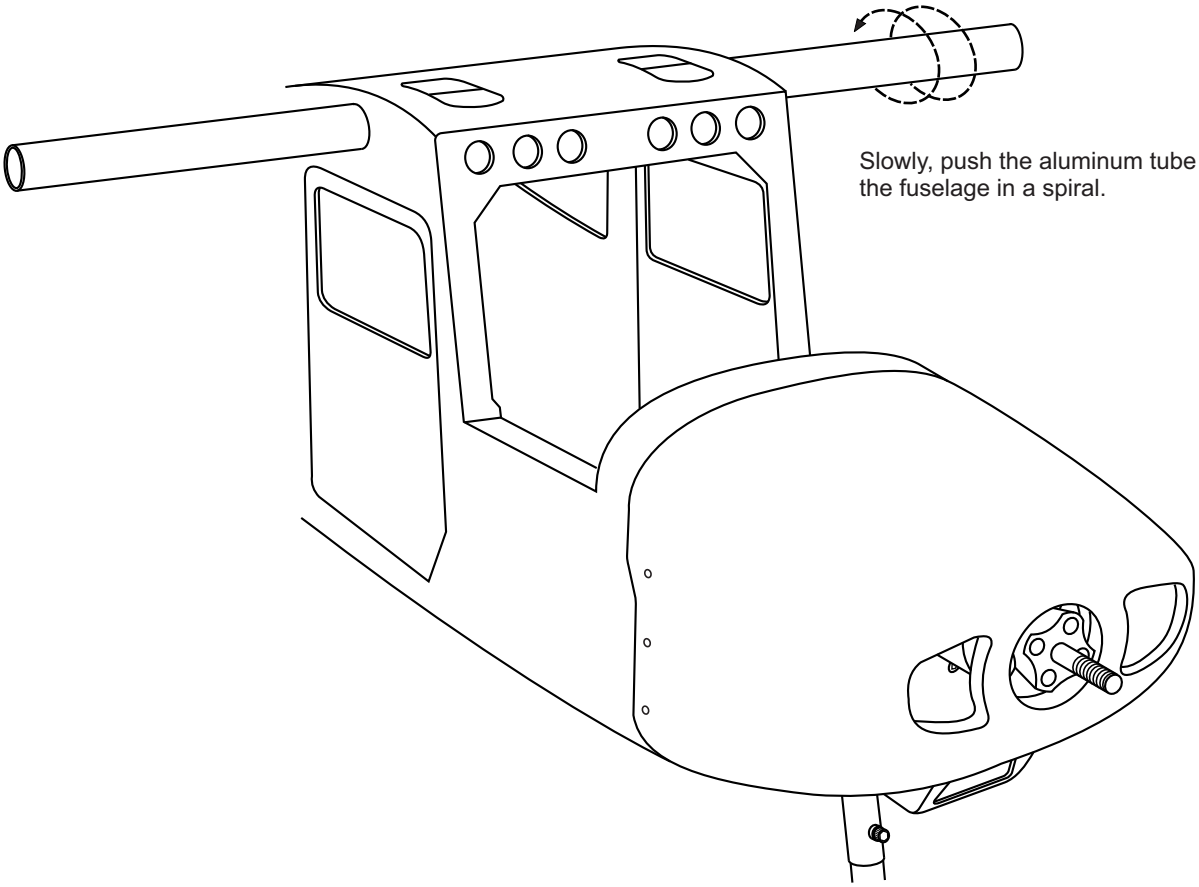
CESSNA 172 23- Dowel





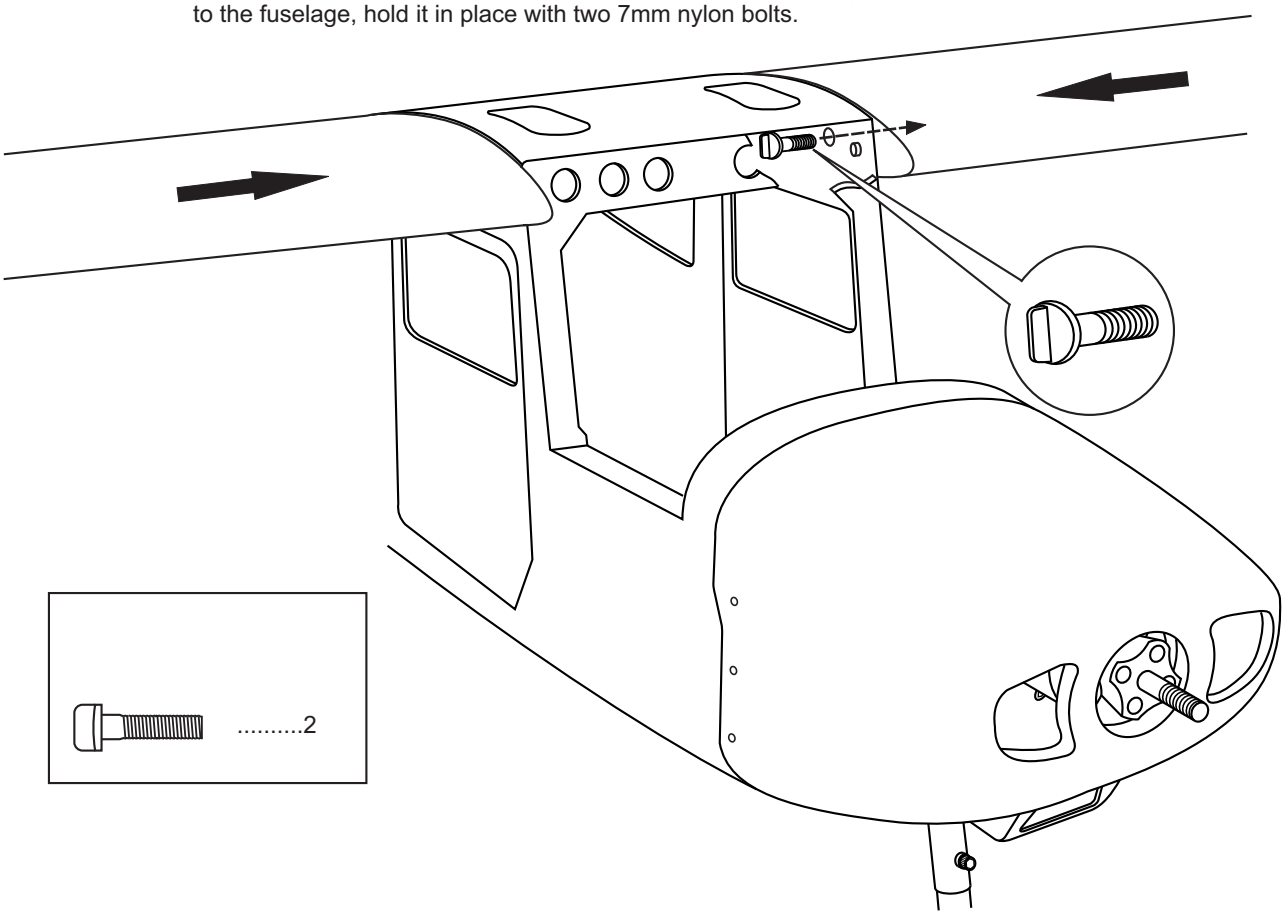
Note: The wooden dowels must be perpendicular with the root rib.

CESSNA 172 24- Joining the wing



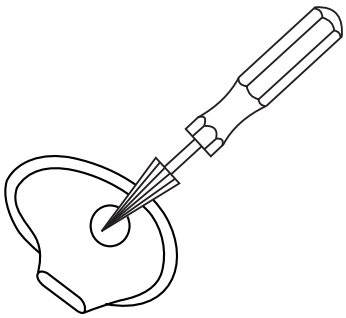
Slowly, push the aluminum tube through the fuselage in a spiral.

Carefully, push each wing close to the fuselage. Once the wings is close to the fuselage, hold it in place with two 7mm nylon bolts.

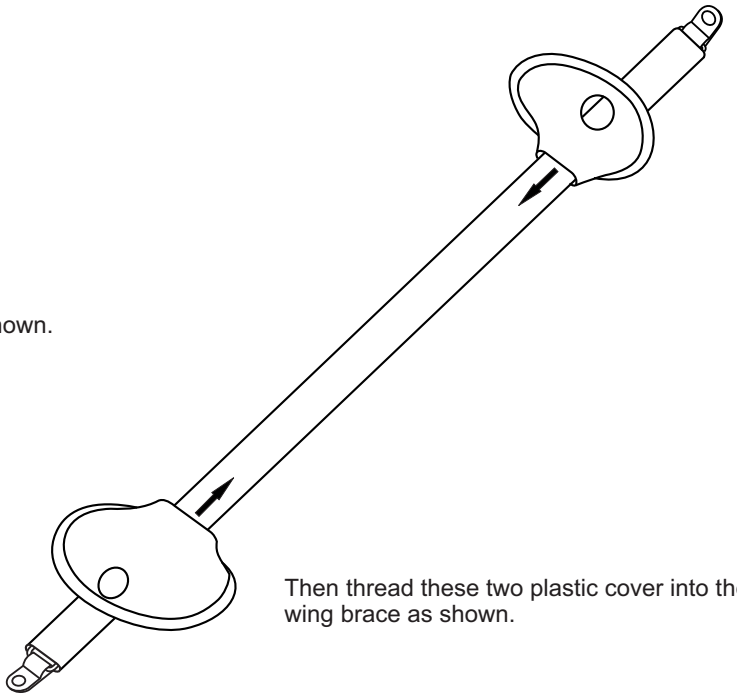


.....2

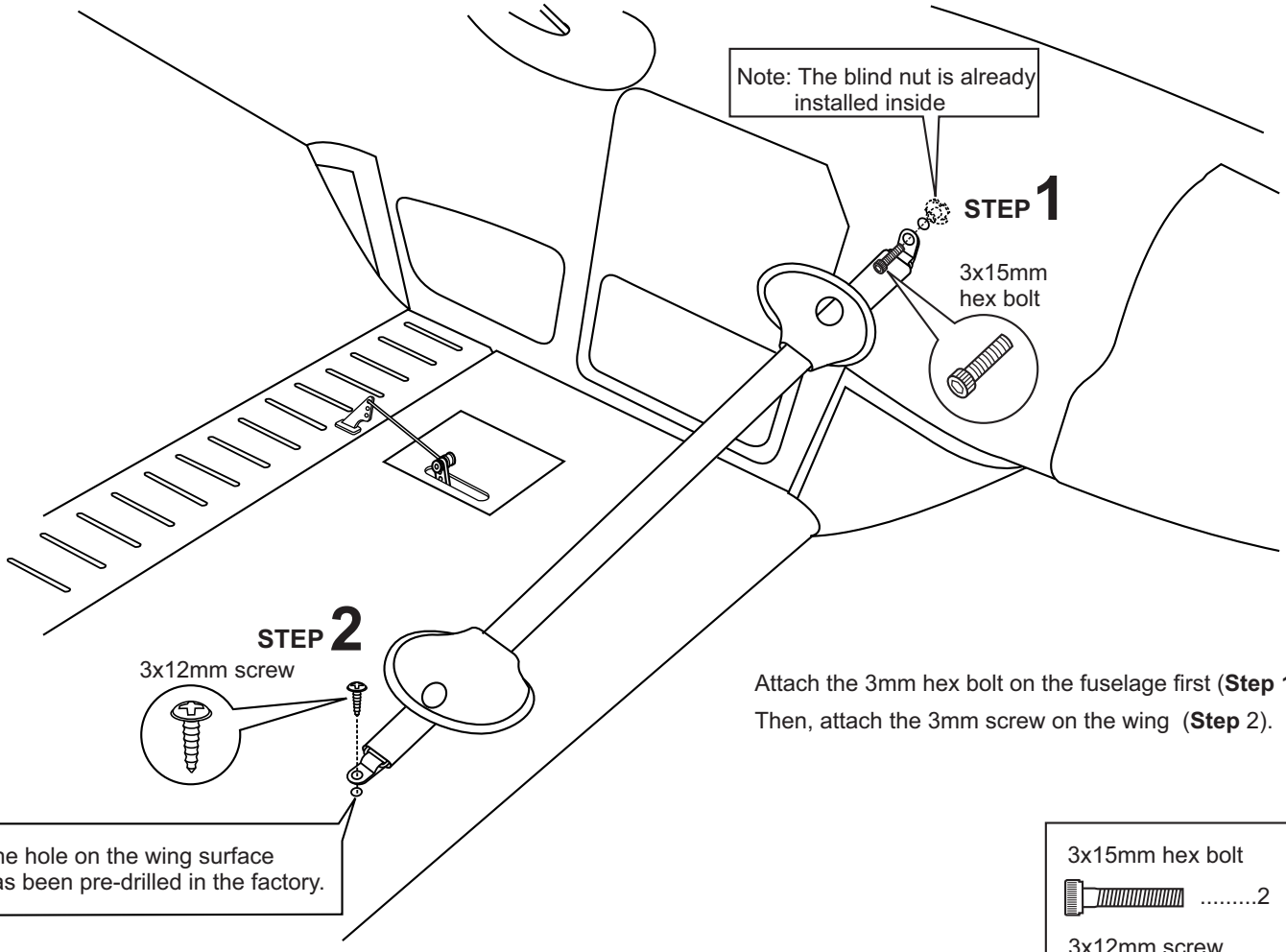
CESSNA 172 25- Wing brace



Make a 10mm round hole on the plastic cover as shown.



Then thread these two plastic cover into the wing brace as shown.

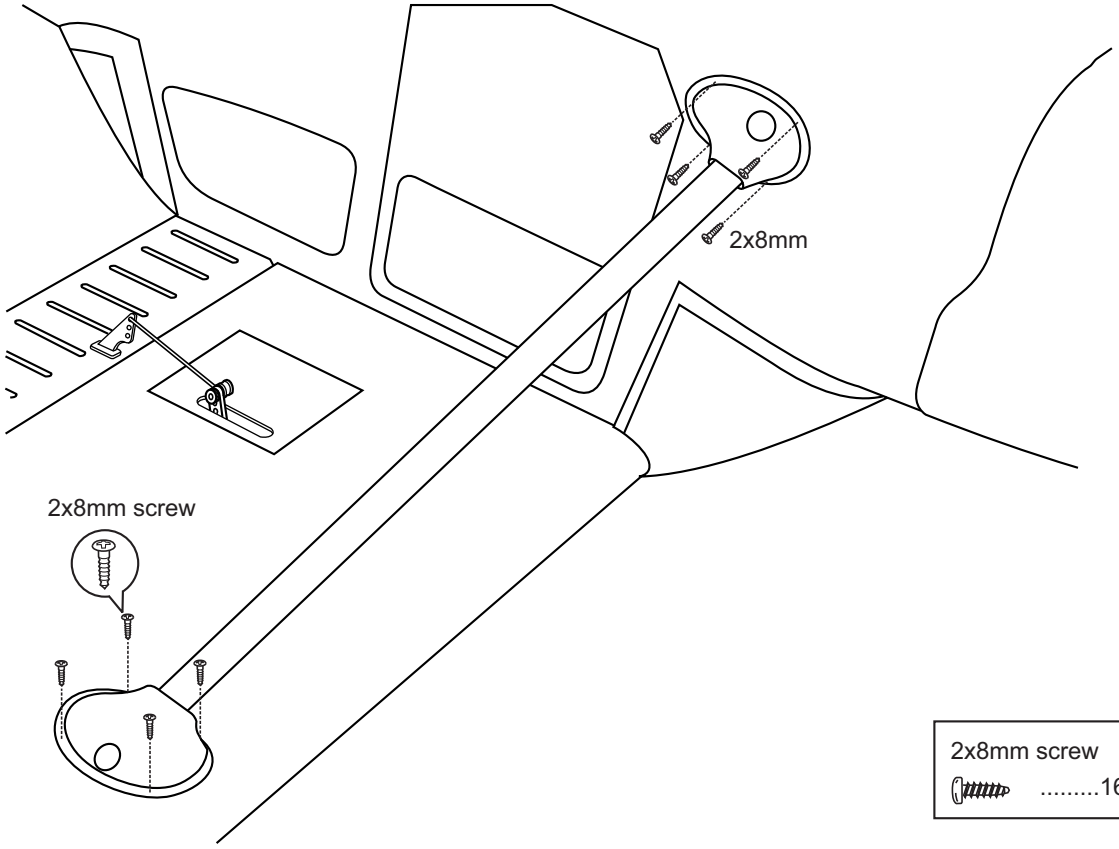


Attach the 3mm hex bolt on the fuselage first (**Step 1**).
Then, attach the 3mm screw on the wing (**Step** 2).

3x15mm hex bolt 2

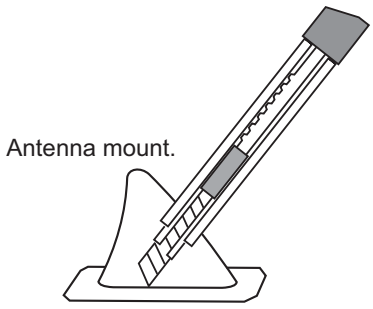
3x12mm screw 2

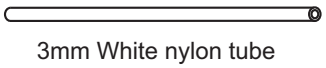
CESSNA 172 26- Wing brace

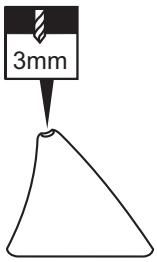


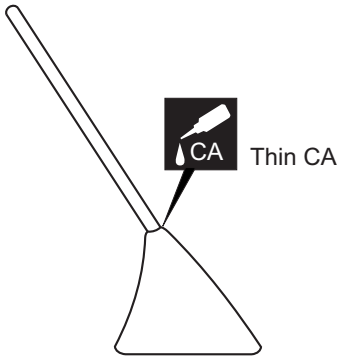
2x8mm screw 16

CESSNA 172 27- Antenna

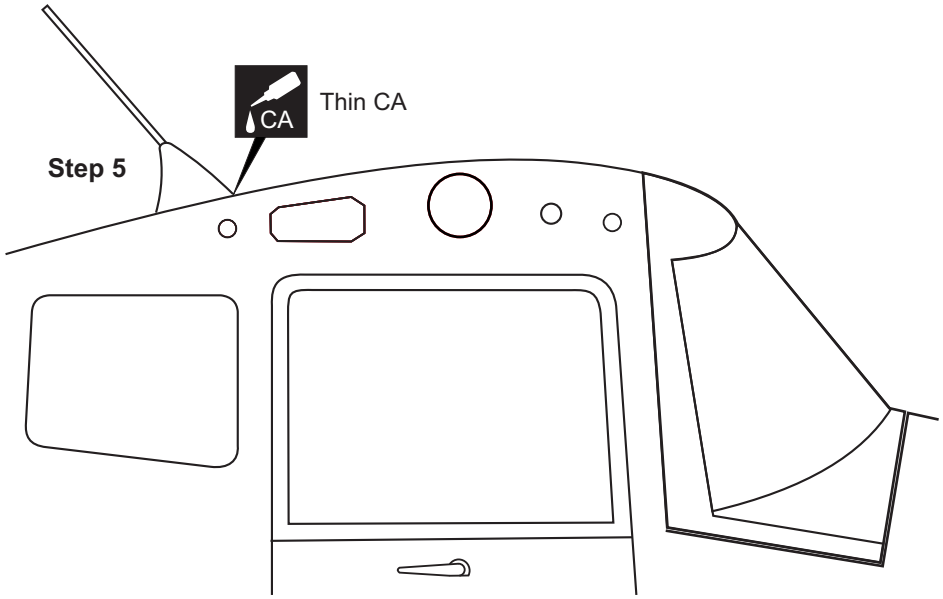






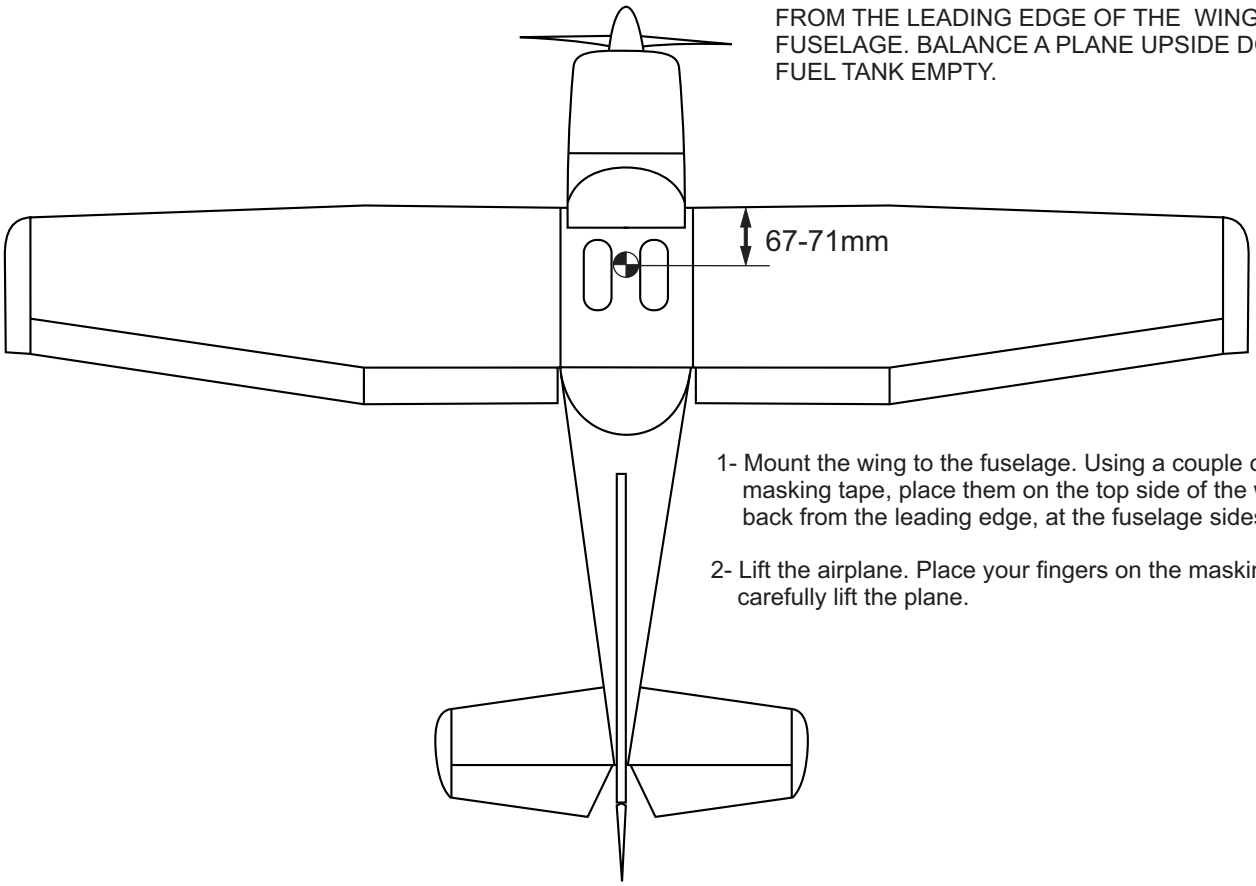


Step 1



CESSNA 172 29- Balance

THE CENTER OF GRAVITY IS LOCATED 67 - 71mm 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 (67-71mm) 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.

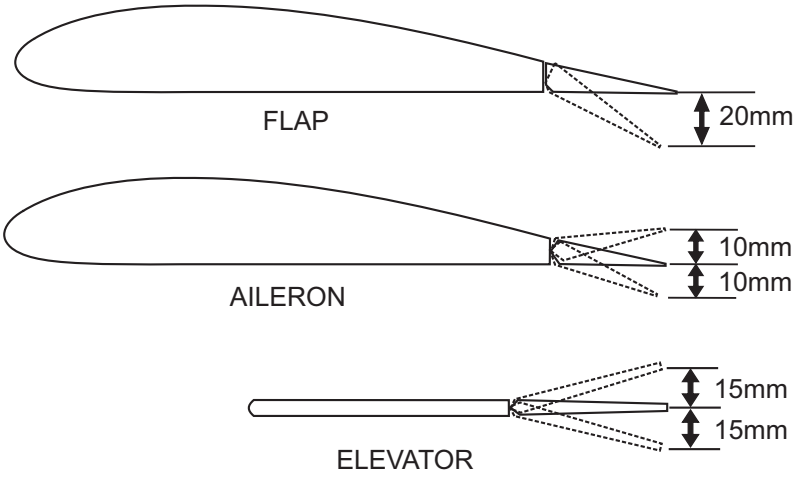
LATERAL BALANCE:

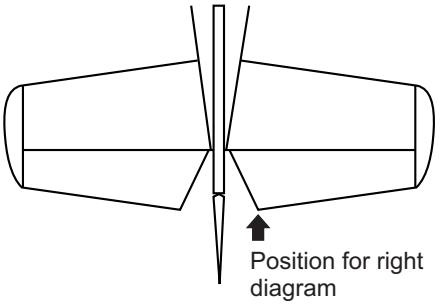
After you have balanced a plane on the CG, you should laterally balance it. Doing this will help the airplane track straighter.

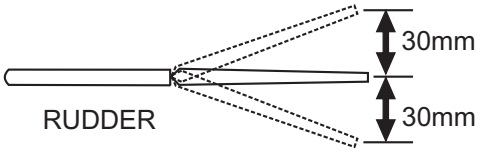
1- Turn the airplane upside down. Attach one loop of heavy string to the engine crankshaft and one to the tail wheel wire. With the wing level, carefully lift the airplane by the string. This may require two people to make easier.

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.

CESSNA 172 30- Control surface

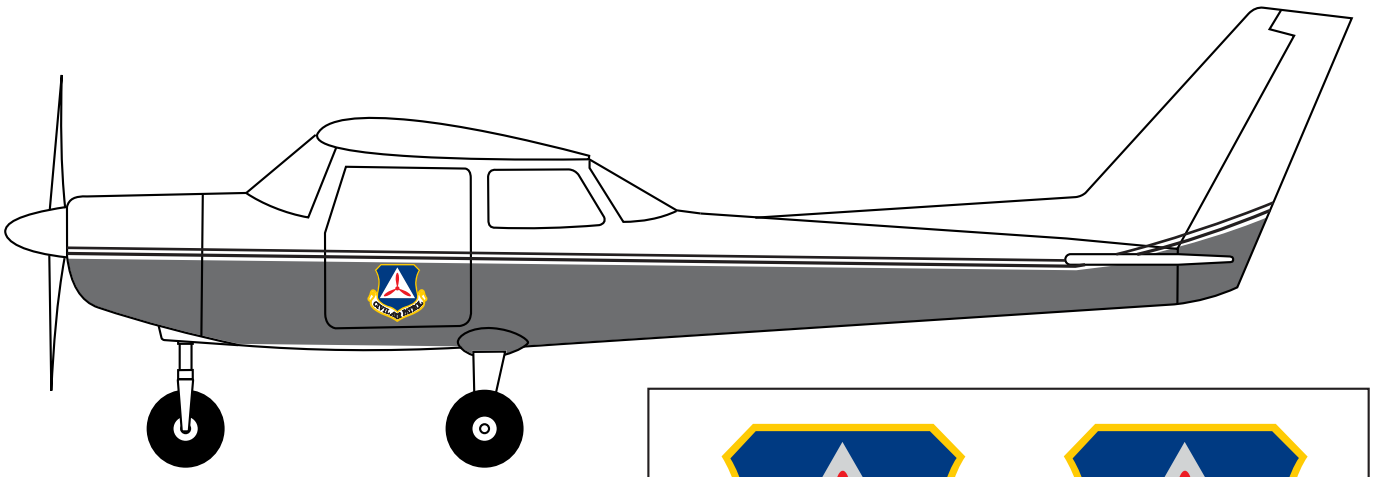






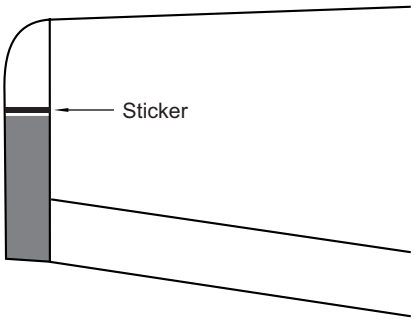
IMPORTANT: Flying your model at these throws will provide you with the greatest chance for successful first flights.
If,after you have become accustomed to the way the Spitfire flies, you would like to change the throws to suit your taste that is fine. However, too much control throw could make the model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

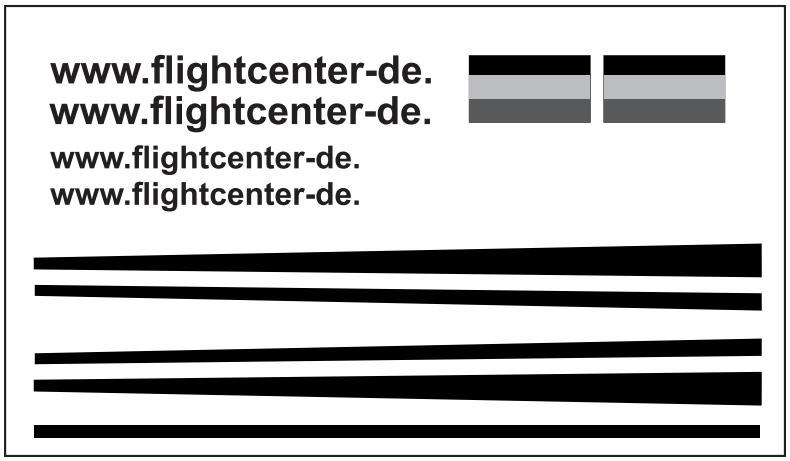
CESSNA 172 | 31- Decor

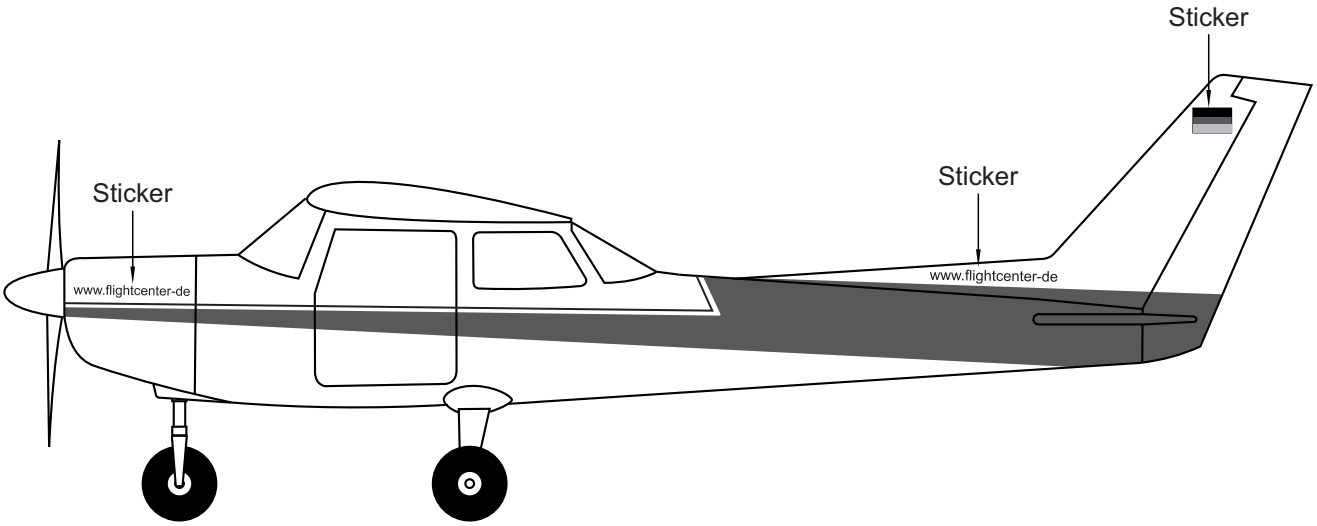


CIVIL AIR PATROL VERSION

FLIGHT CENTER-DE. VERSION







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