

Radio control model

KING QUEST 100



ALL Balsa, PLYWOOD CONSTRUCTION AND ALMOST READY TO FLY

Instruction manual

SPECIFICATIONS

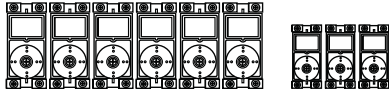
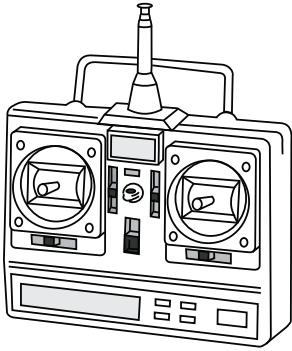
Wingspan:.....2210mm
Length:.....1580mm
Electric Motor:.....2300-2500w
Glow Engine:.....90-120 2-T / 120 4-T
RTF Weight: 5.8-6.1kg (Will vary with
Equipment Used).
Radio:.....Minimum 7 Channels / 9 Servos
Function: Ailerons-Elevator-Rudder-Throttle
Flaps.

WARNING! This radio controlled model is NOT a toy. If modified or flown carelessly it could go out of control 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 inexperienced.

NEXA

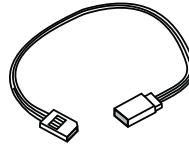
REQUIRED FOR OPERATION (Purchase separately)

www.motionrc.com

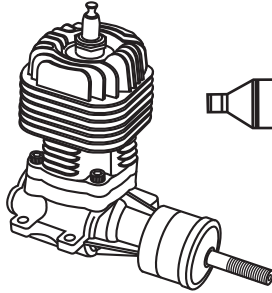


Minimum 7 channels radio for airplane with 9 servos

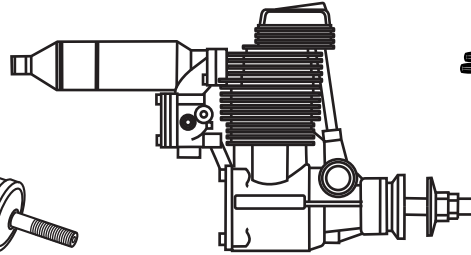
6 standard servo for Aileron, Flap, Nose gear and Throttle
3 mini servo (3x19gr) for Rudder and Elevator (2pcs).



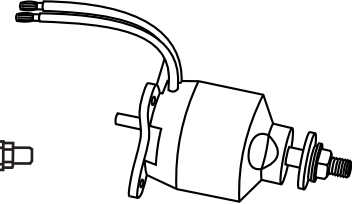
Servo extension cord
700mm for Aileron servos (2pcs)
400mm for Flap servos (2pcs)
600mm for Elevator and Rudder servos (3pcs)



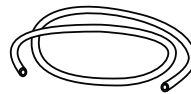
20cc Gas Engine



120-4T Glow Engine

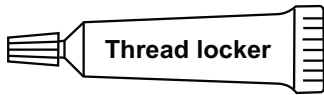


2300-2500 Watt

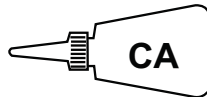


Silicone tube (in case of Gas or Glow engine using)

GLUE (Purchase separately)



Thread locker



CA

Cyanoacrylate Glue



EPOXY A

Epoxy Glue (5 minute type)



EPOXY B

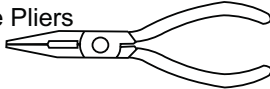
Epoxy Glue (30 minute type)

TOLLS REQUIRED (Purchase separately)

Hobby knife 


Phillip screw driver 

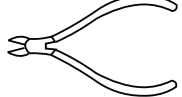
Hex Wrench 

Needle nose Pliers 

Scissors 

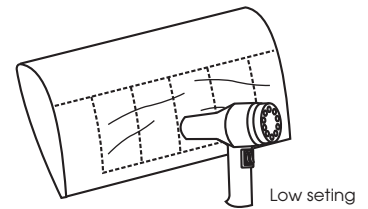
Awl 

Sander 

Wire Cutters 


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


If exposed to direct sunlight and/or heat, wrinkles 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.





Low setting


Symbols used throughout this instruction manual, comprise:


 Drill holes using the stated size of drill (in this case 1.5 mm \dot{y})


 Take particular care here


 Hatched-in areas: remove covering film carefully

 Check during assembly that these parts move freely, without binding

 Use epoxy glue

 Apply cyano glue

 Assemble left and right sides the same way.

 Not included. These parts must be purchased separately

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

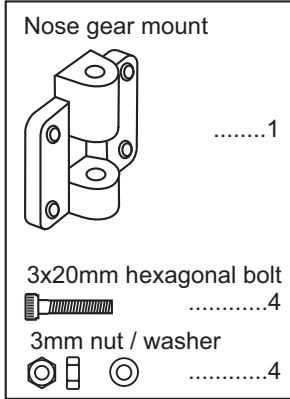
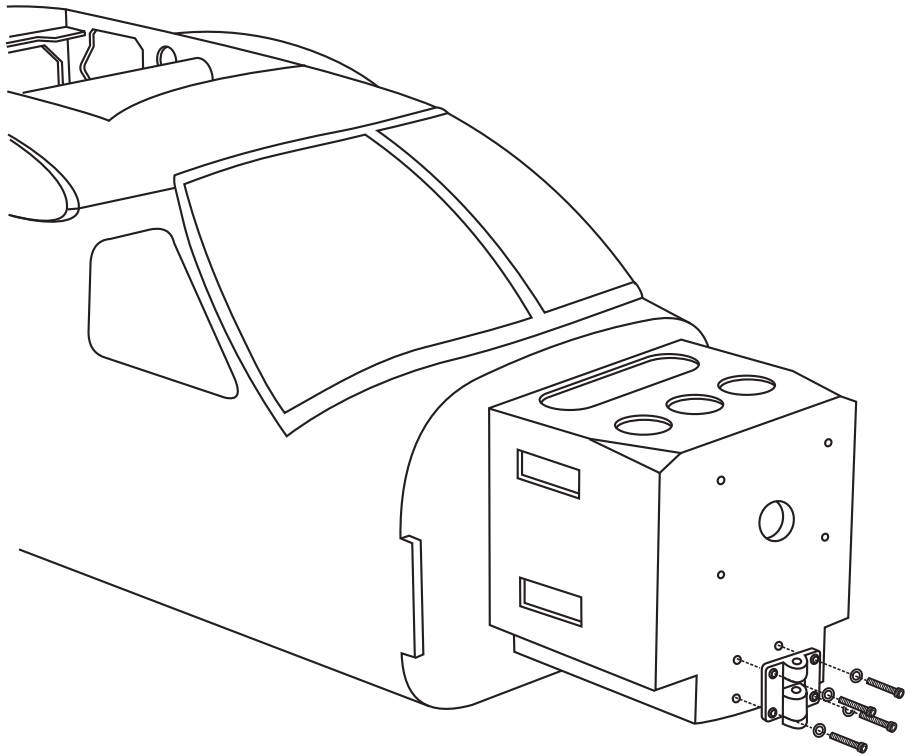
CONVERSION TABLE

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

KING QUEST 100 1-Nose gear mount

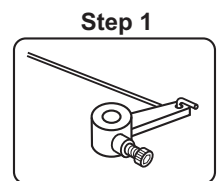
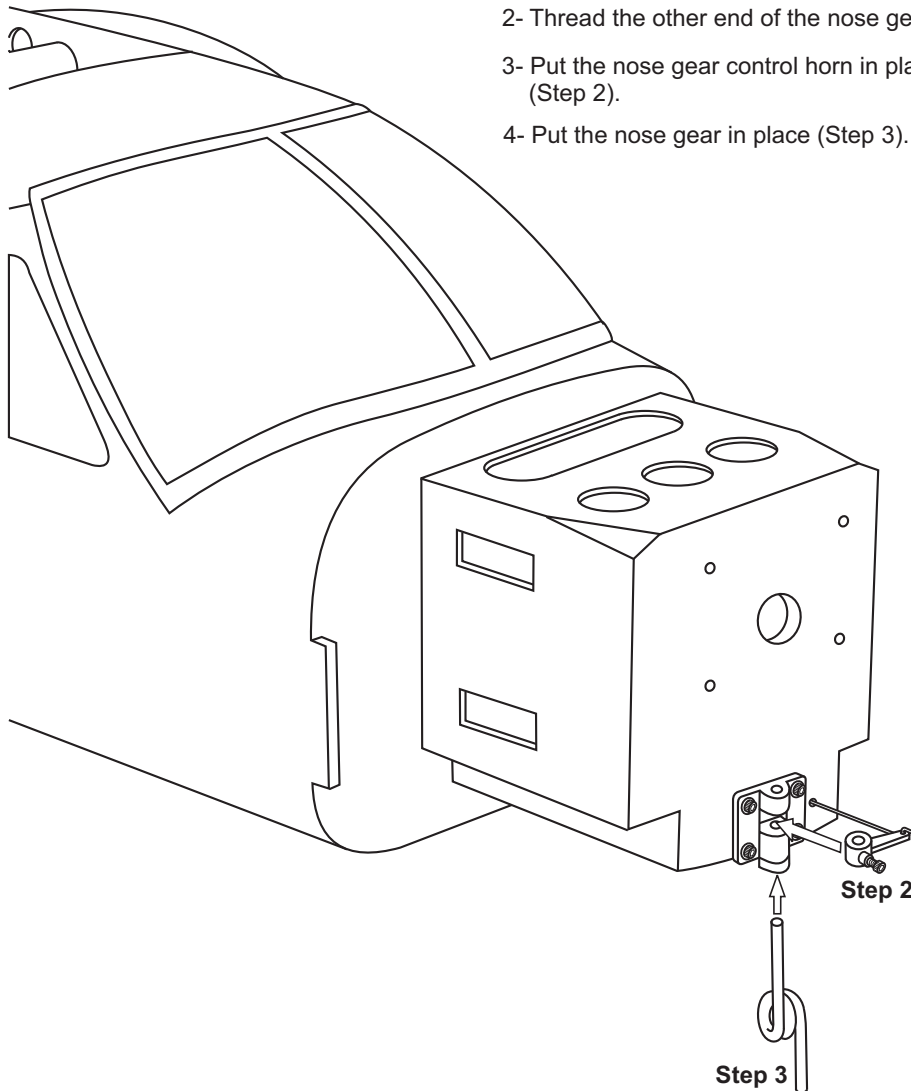
1- Slide one end of the 2x500mm white plastic tube into the pre-drilled hole on the right side of the nose gear mount, the end of the plastic tube fits across the front of the fire-wall. The other end of the plastic tube leads to where the nose gear servo arm will be.

2- Hold the end of the plastic tube firmly to fire-wall with thin CA glue.



2-Installing the nose gear & nose gear arm

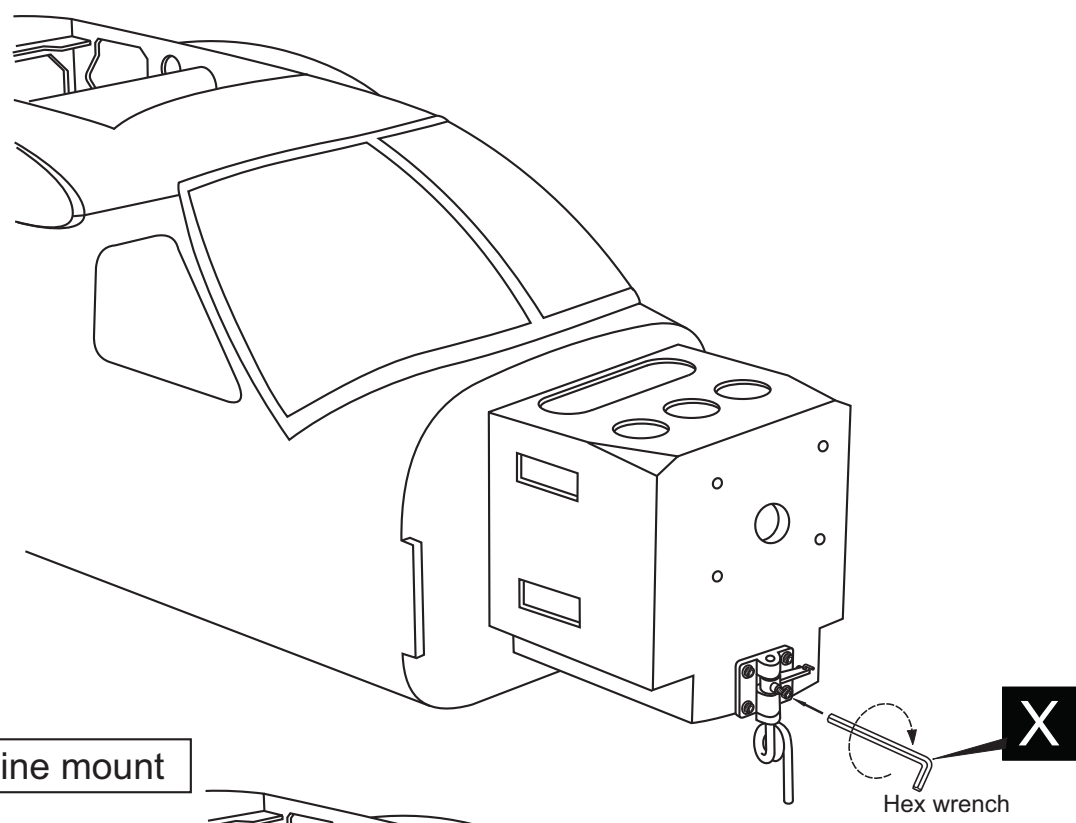
- 1- Thread one end with the Z bend of the nose gear push rod into the hole on the nose gear control horn (Step 1).
- 2- Thread the other end of the nose gear push rod into the white plastic.
- 3- Put the nose gear control horn in place with the screw hole facing forward (Step 2).
- 4- Put the nose gear in place (Step 3).



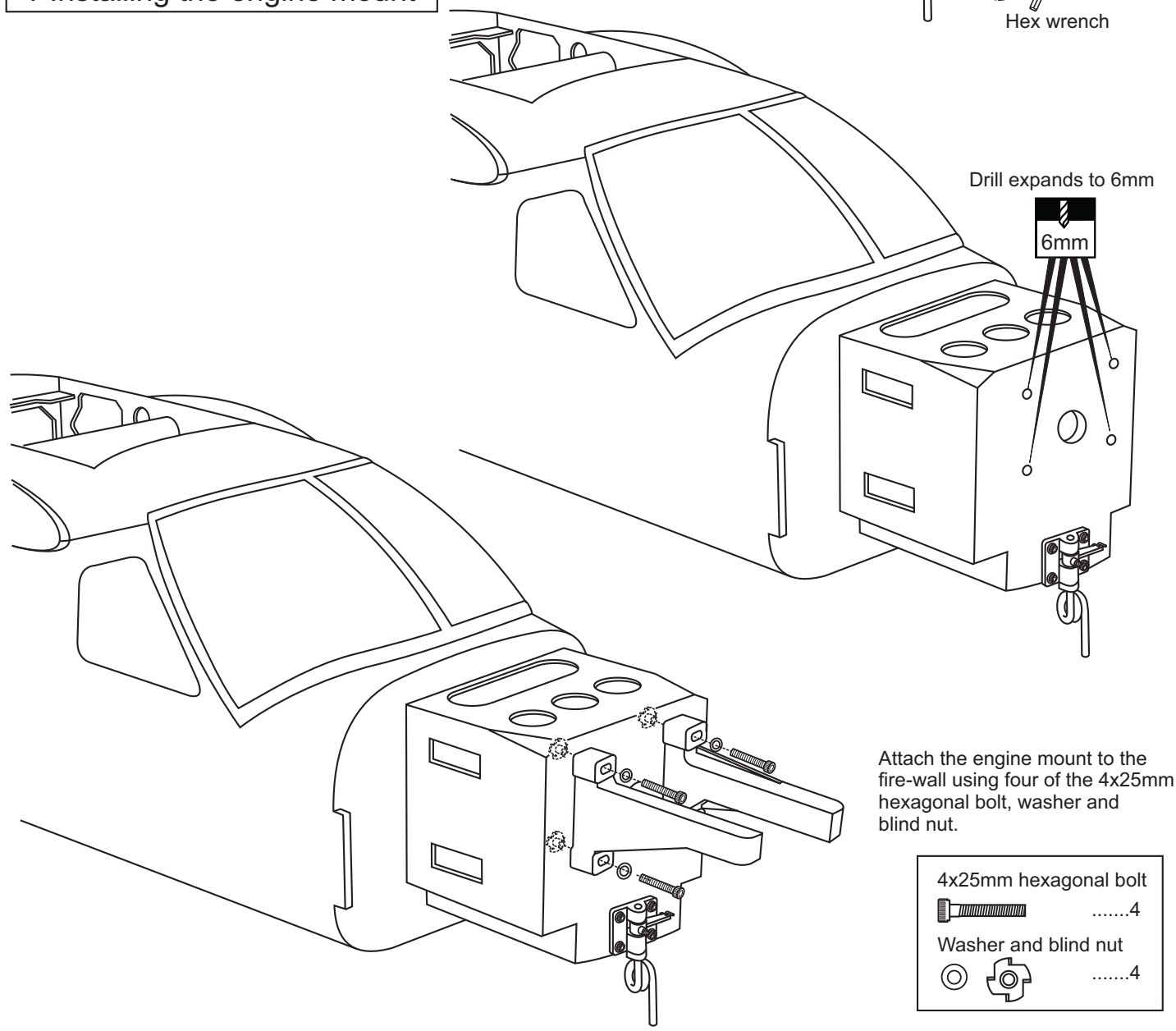
Step 2

Step 3

QUEST KODIAK 3-Installing the nose gear & nose gear arm

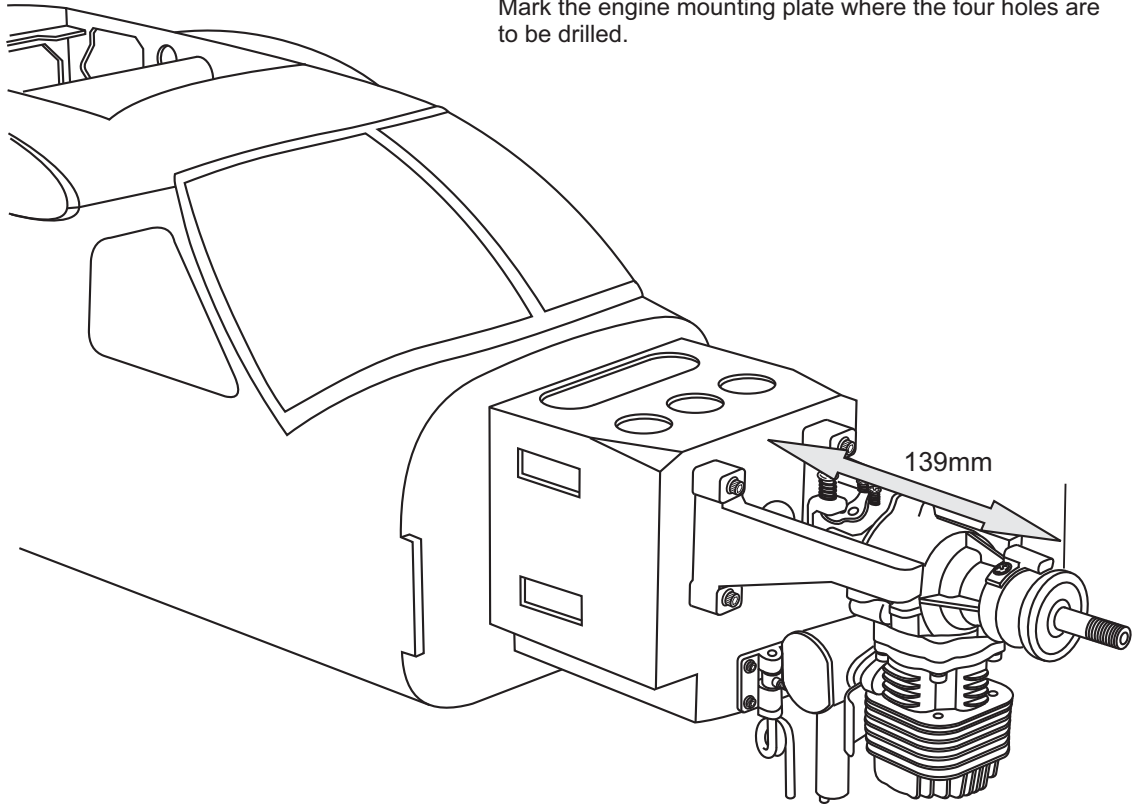


4-Installing the engine mount



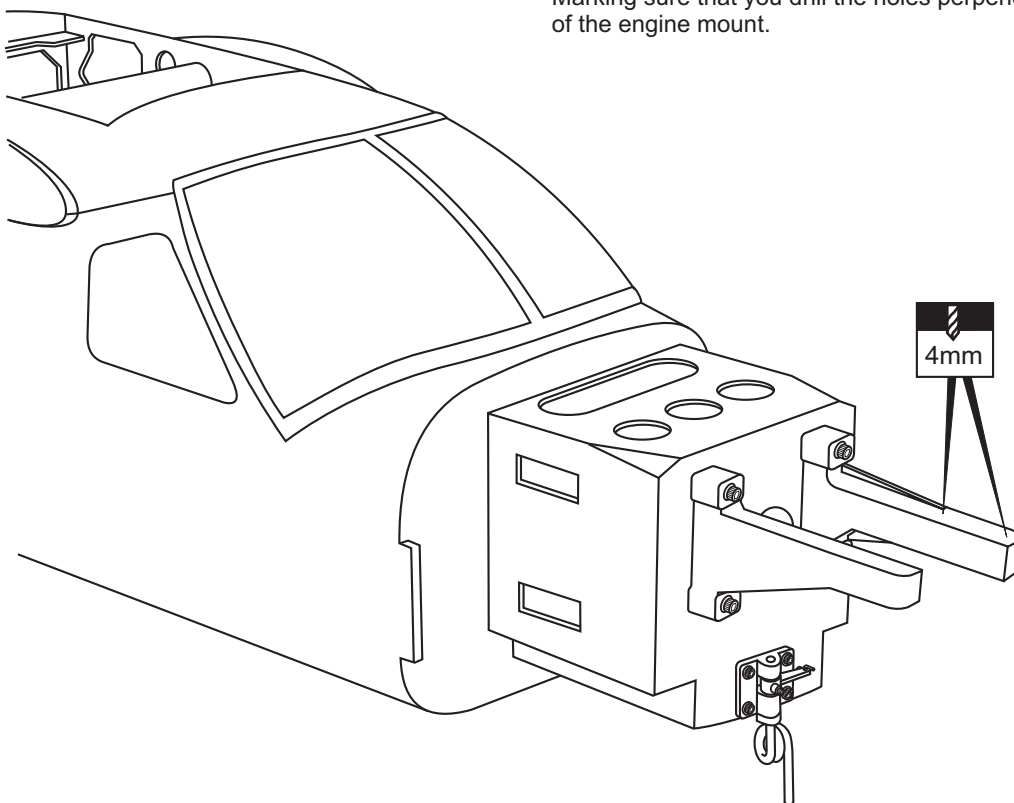
QUEST KODIAK 5-Installing the engine

Position the engine to the engine mounts so the distance from the prop hub to the fire-wall is 139mm.
Mark the engine mounting plate where the four holes are to be drilled.



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

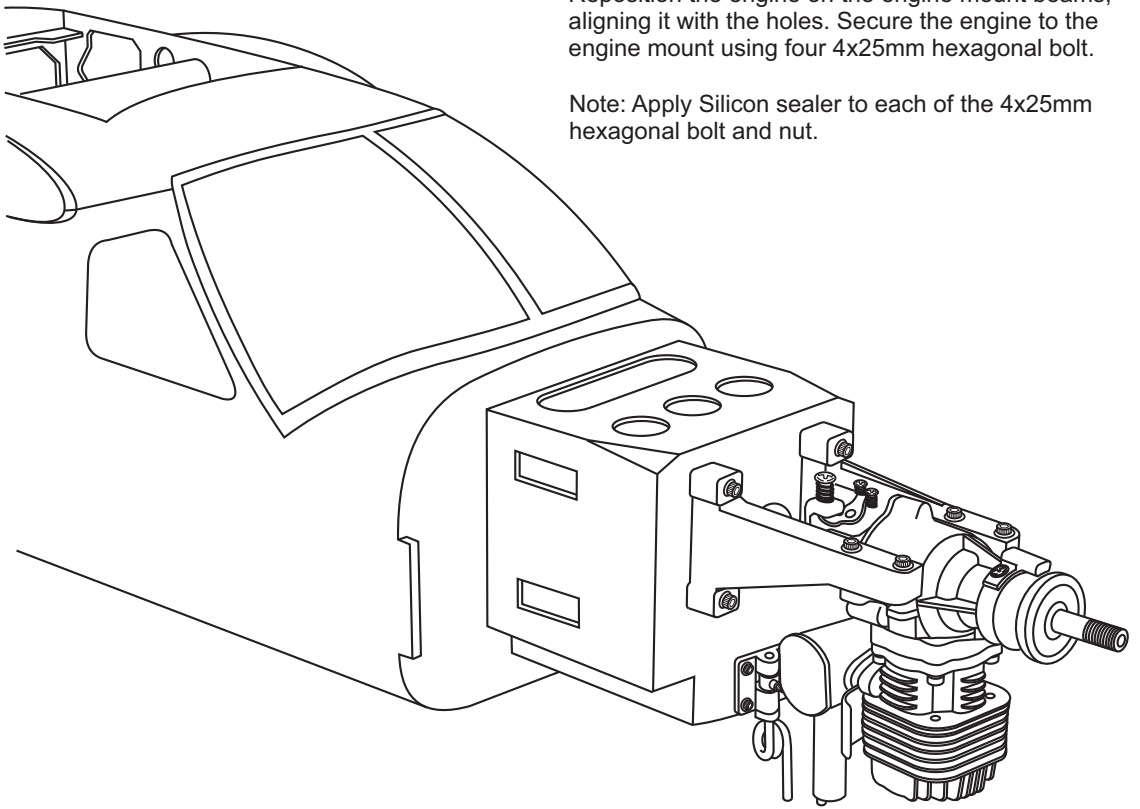
Marking sure that you drill the holes perpendicular to the beam of the engine mount.



QUEST KODIAK 6-Installing the engine

Reposition the engine on the engine mount beams, aligning it with the holes. Secure the engine to the engine mount using four 4x25mm hexagonal bolt.

Note: Apply Silicon sealer to each of the 4x25mm hexagonal bolt and nut.



4x25mm screw

4

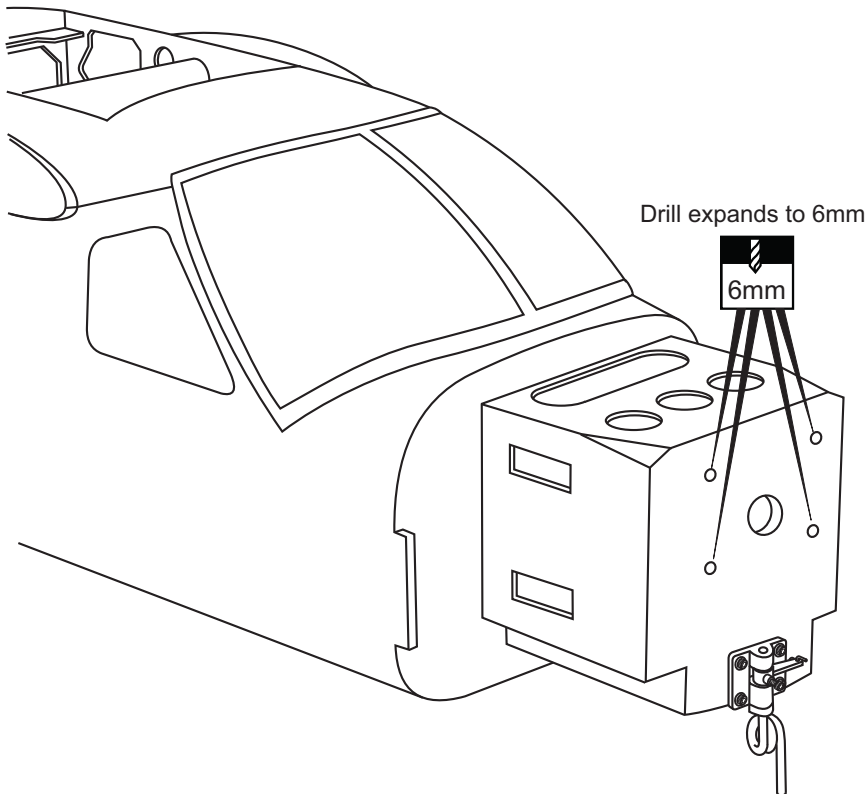
4mm Washer

4

4mm Nut

4

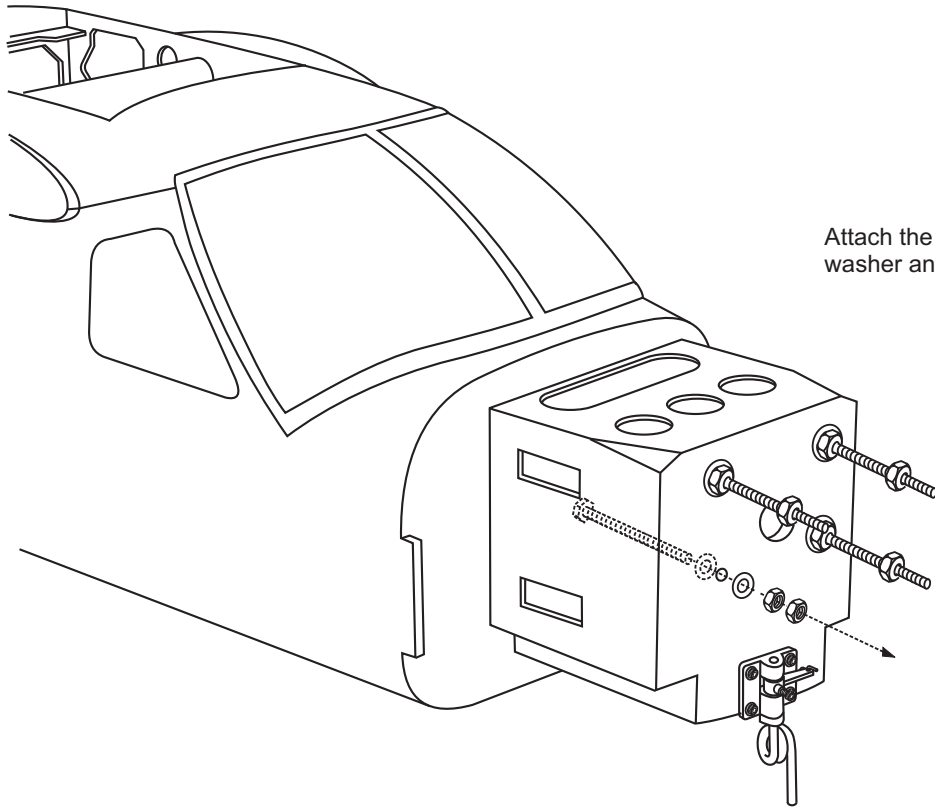
7-Installing the electric motor mounting



Drill expands to 6mm

 6mm

QUEST KODIAK 8-Installing the electric motor mounting

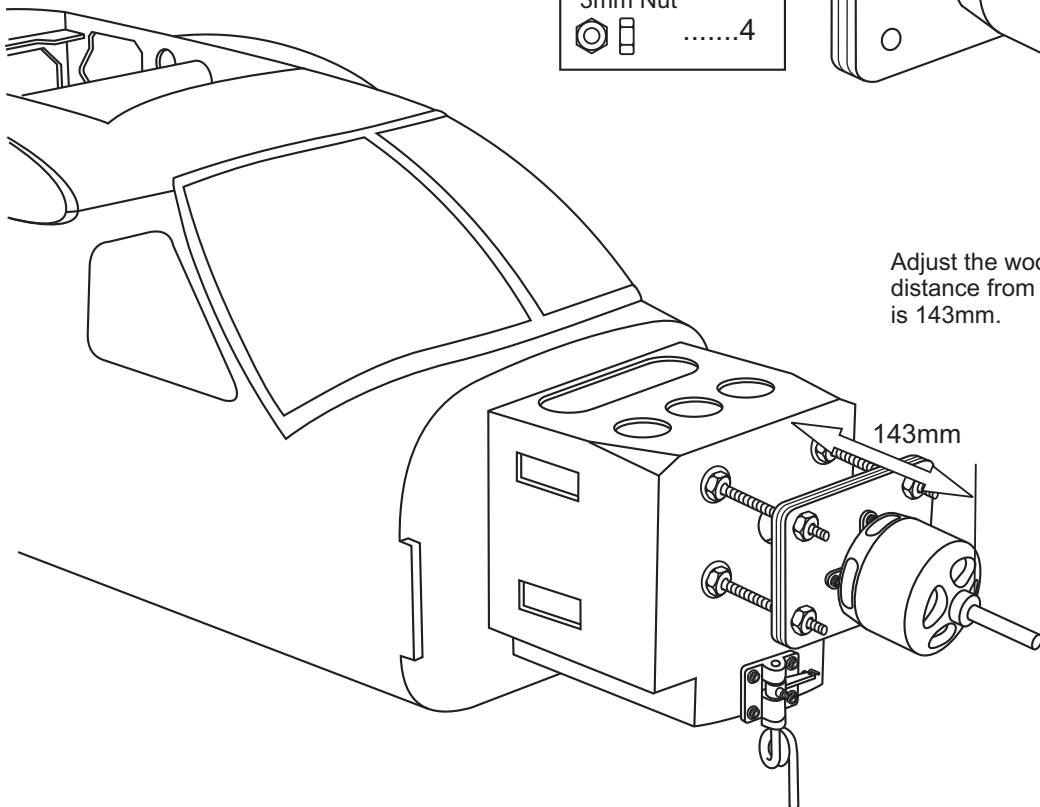
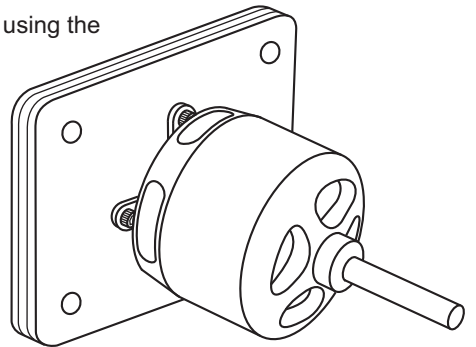


- 6x100mm bolt.....4
- 6mm nut.....12
- 6mm washer...16

Attach the four of the 6x100mm bolts washer and nuts to the fire-wall as shown.

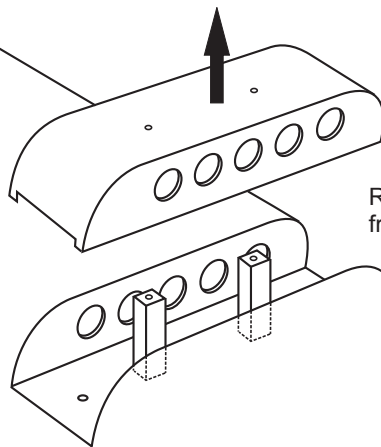
Secure the Motor to the wooden motor mounting plate using the four of the 3x20mm hexagonal bolts, washer and nut.

- 3x20mm screw4
- 3mm Washer4
- 3mm Nut4



Adjust the wooden motor mount so the distance from the prop hub to the fire-wall is 143mm.

QUEST KODIAK 9-Installing the main landing gear



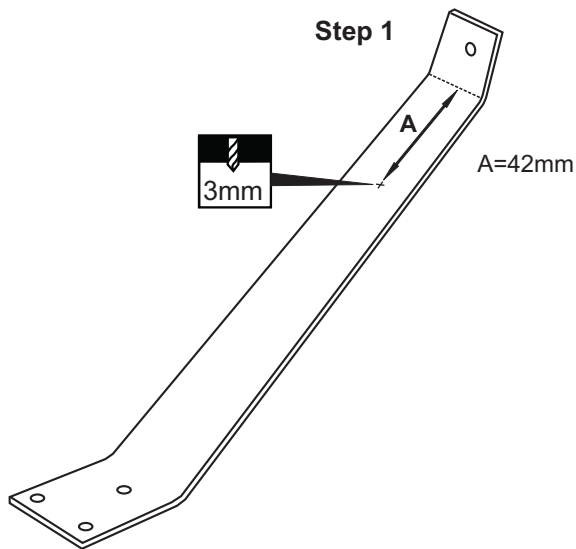
Remove the adhesive tape and remove the cover from the fuselage.

4x15mm hexagonal bolt

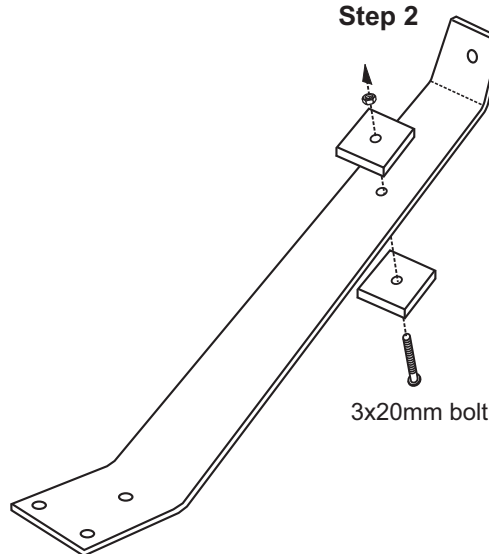


.....6

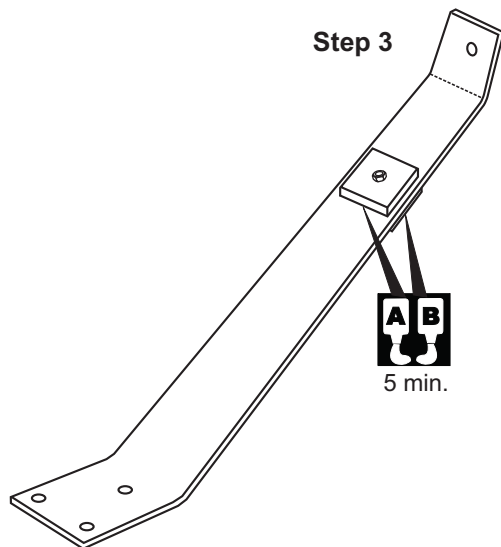
Step 1



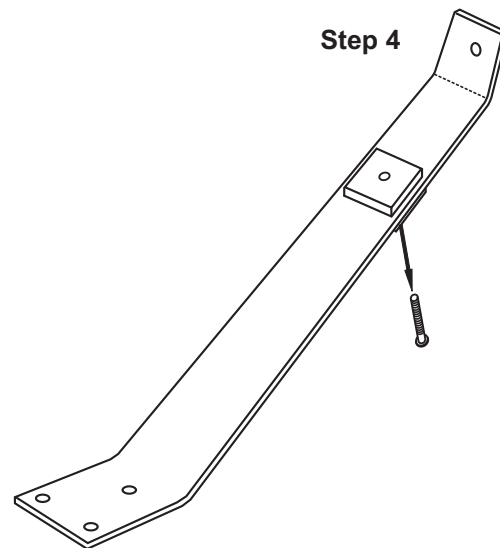
Step 2



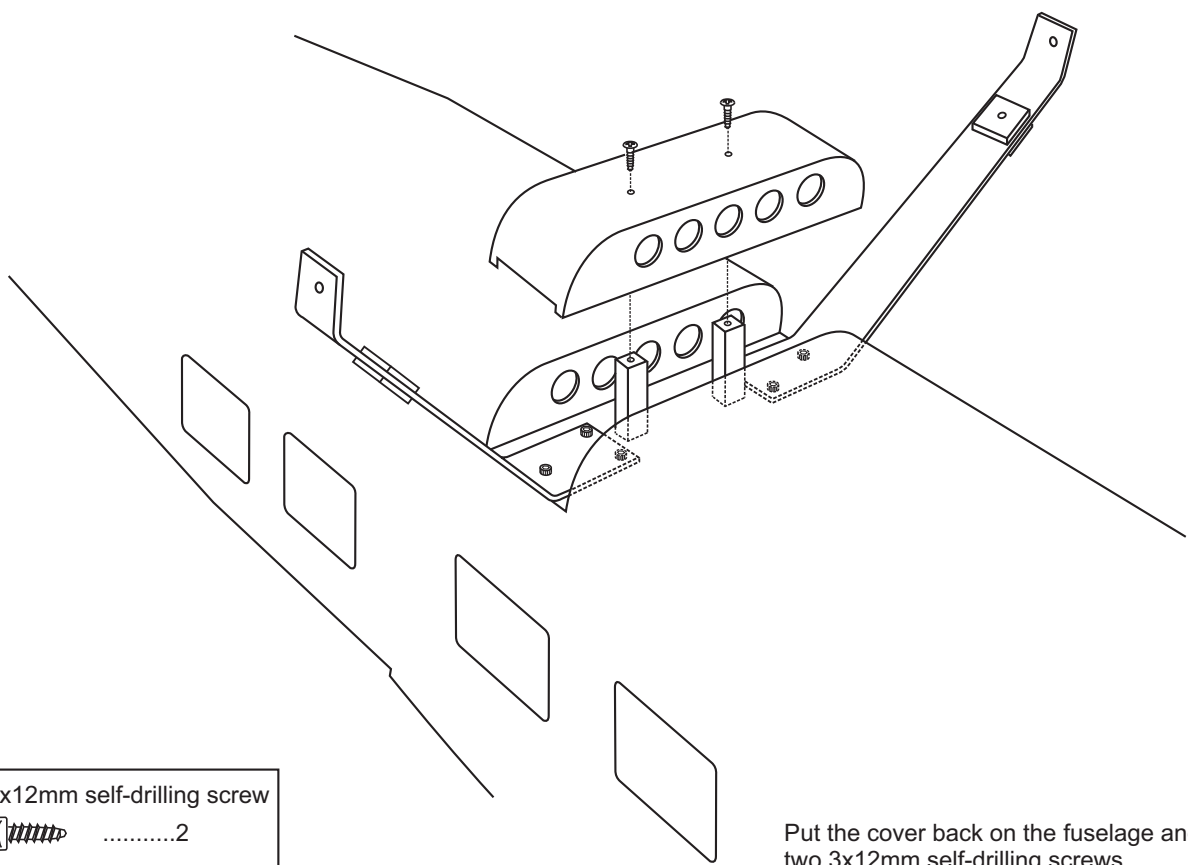
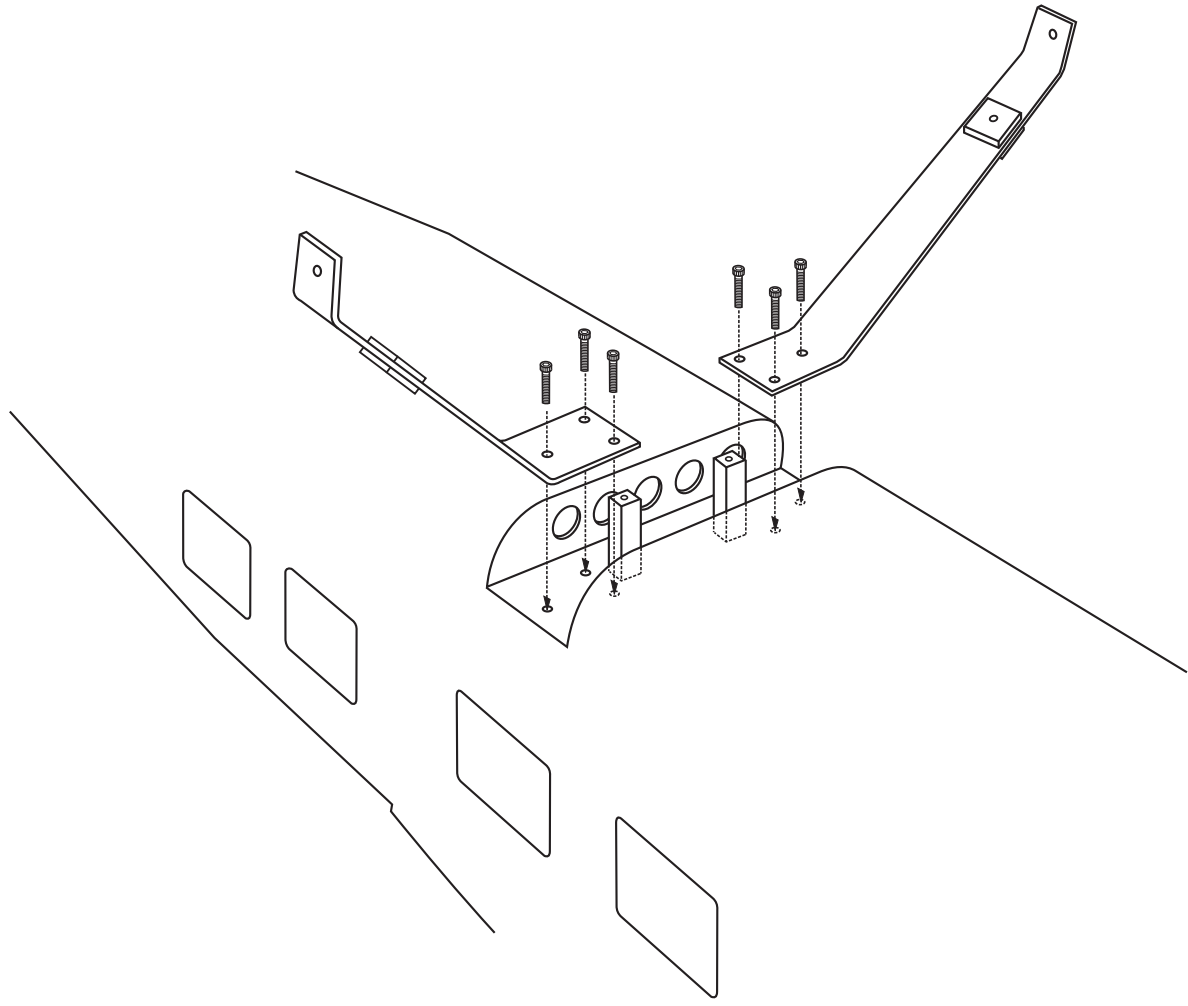
Step 3




Step 4



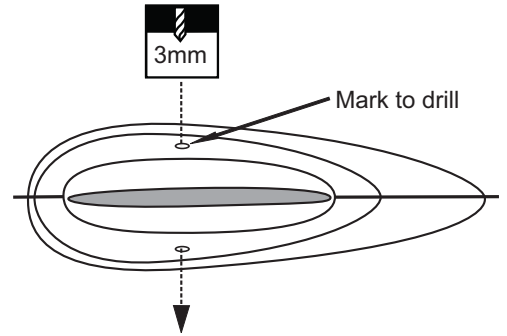
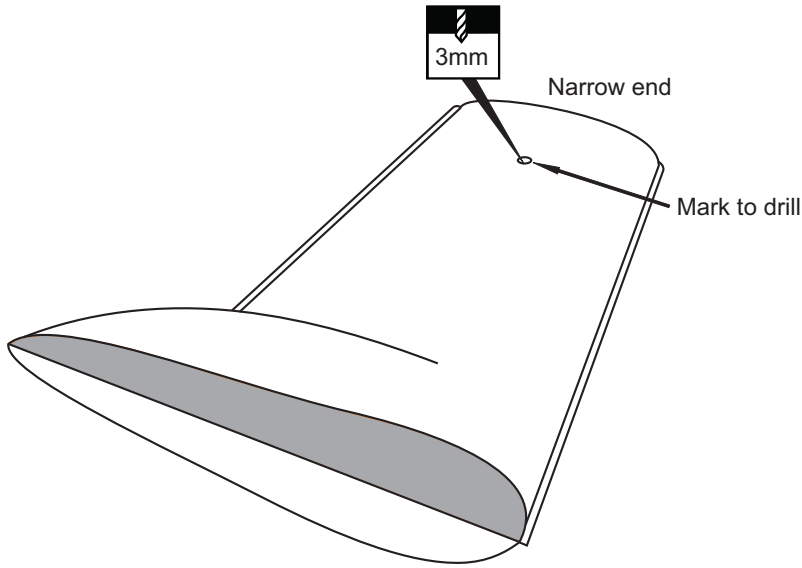
QUEST KODIAK 10-Installing the main landing gear



3x12mm self-drilling screw
2

Put the cover back on the fuselage and secure it with two 3x12mm self-drilling screws.

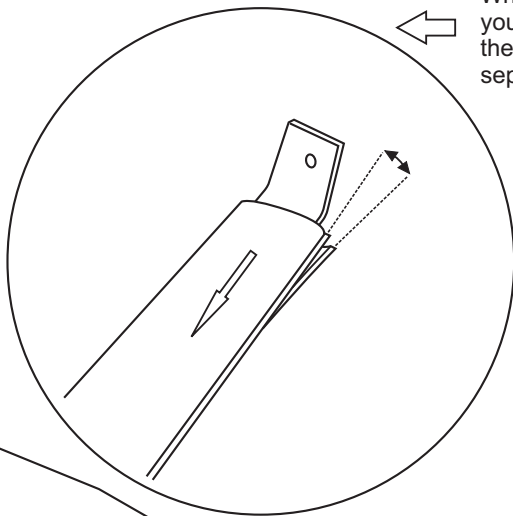
QUEST KODIAK 11-Installing the main landing gear



Plastic landing gear cover, view from the narrow end.

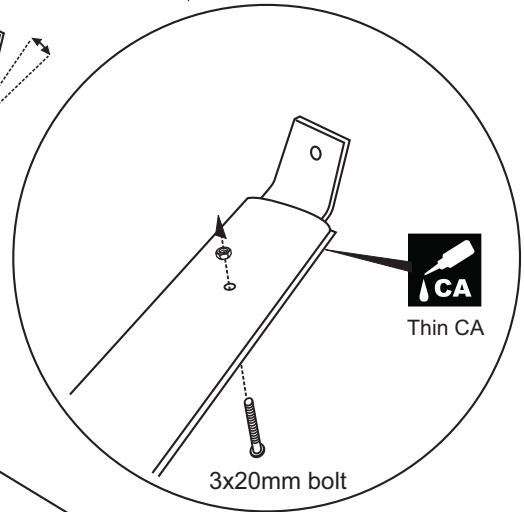
Step 1

When putting the plastic gear cover on the aluminum landing gear, you have to separate the two pieces of plastic gear cover a little on the narrow end (Step 1), once it is in place, you will glue the separated part with thin CA glue (Step 2).



Adjust the plastic cover until the holes on the plastic cover coincide with the holes on the aluminum landing gear, use 3x20mm bolt to fix the plastic cover as shown.


Step 2




3x20mm bolt

QUEST KODIAK 12-Installing the main landing gear

2x8mm self-drilling screw

12

2x8mm self-drilling screw

12

75mm wheel



...2

4x45mm screw



...2

4mm nut



.....4

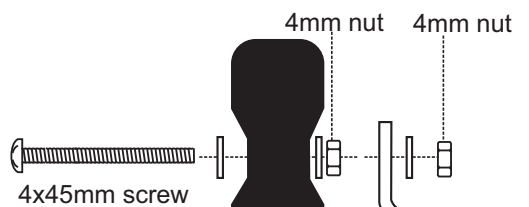
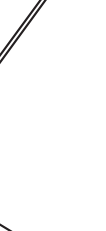
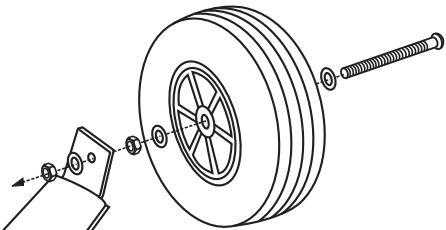
4mm washer



.....6

1mm

1mm



Aluminum landing gear

QUEST KODIAK 13-Installing the horizontal stabilizer

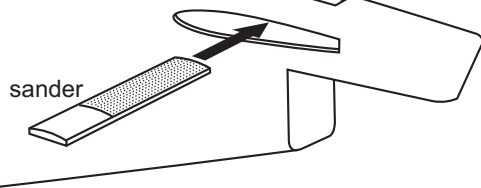
Step 1 Pull the left and right elevator out of the horizontal stabilizer (not glue yet).

Step 2



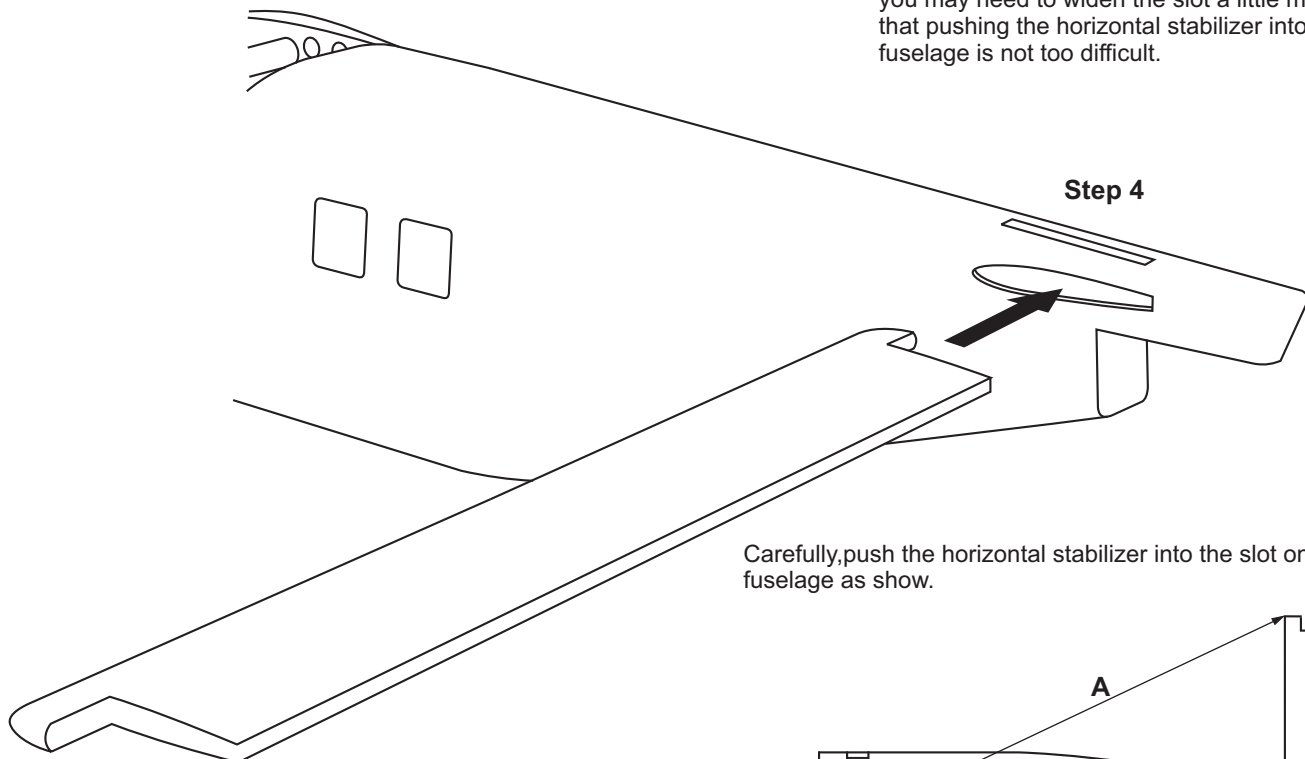
Using a sharp hobby knife, carefully cut away the covering around of all slots for the horizontal stabilizer and vertical fin installation.

Step 3



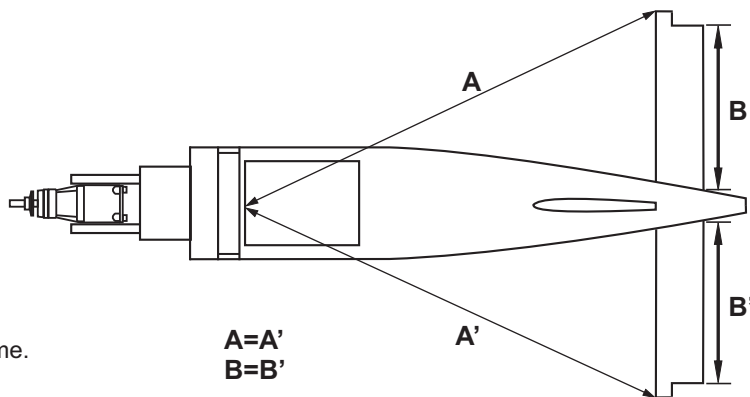
NOTE:
you may need to widen the slot a little more so that pushing the horizontal stabilizer into the fuselage is not too difficult.

Step 4

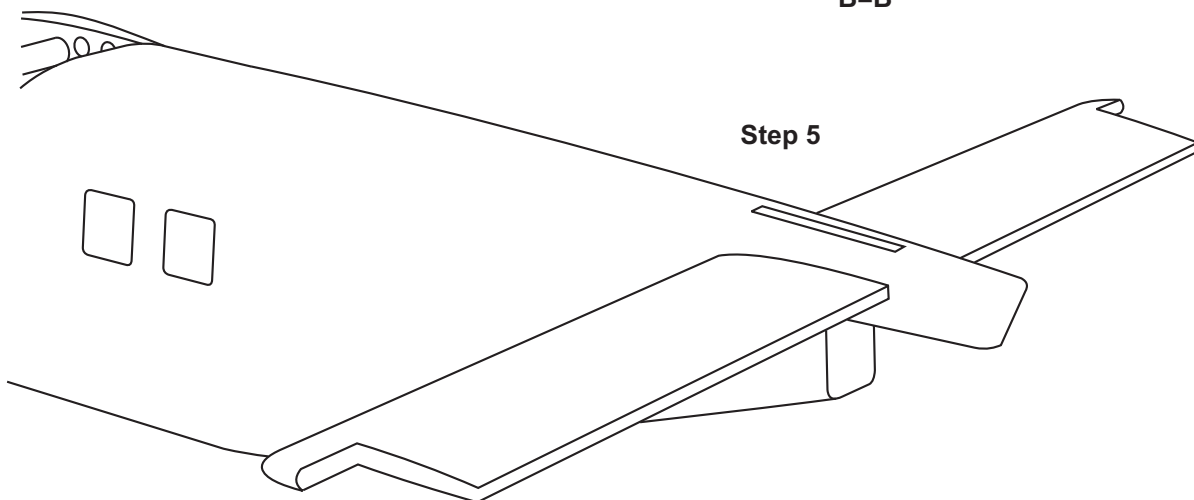


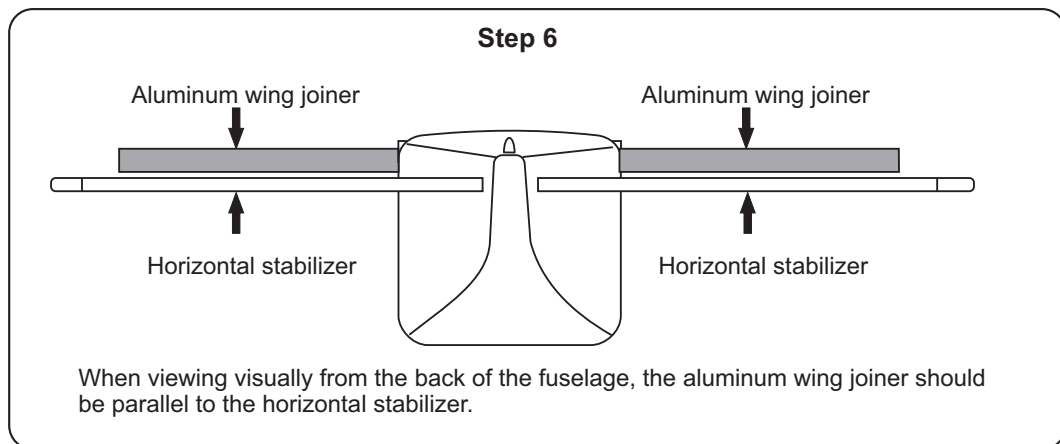
Carefully, push the horizontal stabilizer into the slot on the fuselage as show.

Check the alignment of the horizontal stabilizer by measuring from a fixed point along the center line of the fuselage to the leading edge on each side of the horizontal stabilizer. The distance must be equal on both sides. If not, adjust the stabilizer until the measurements are the same.

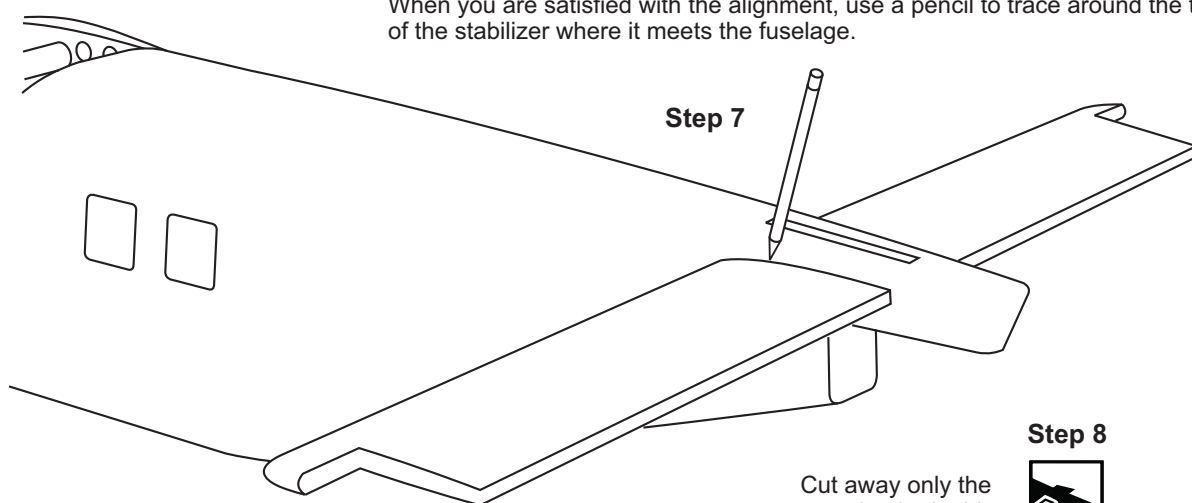


Step 5

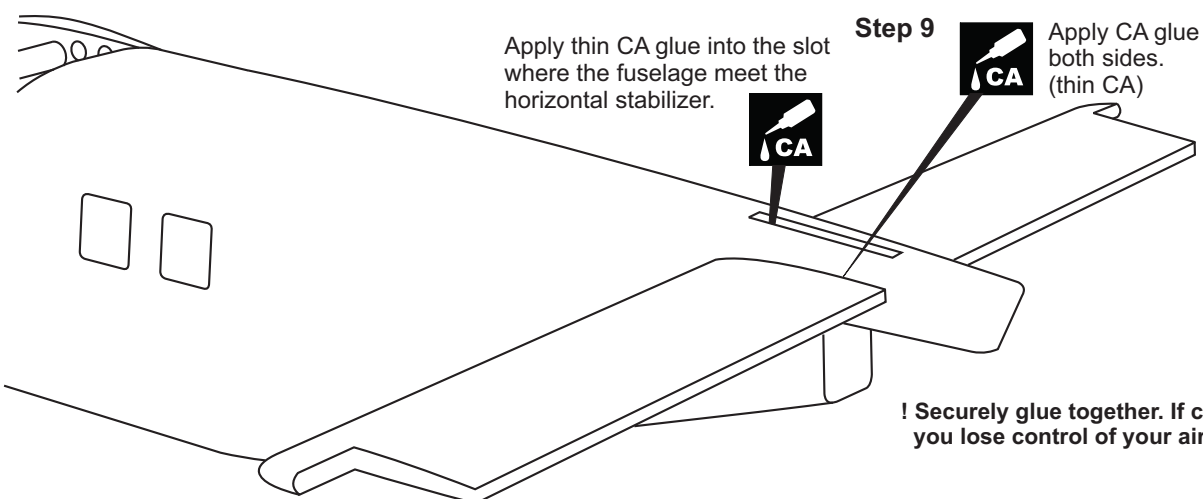
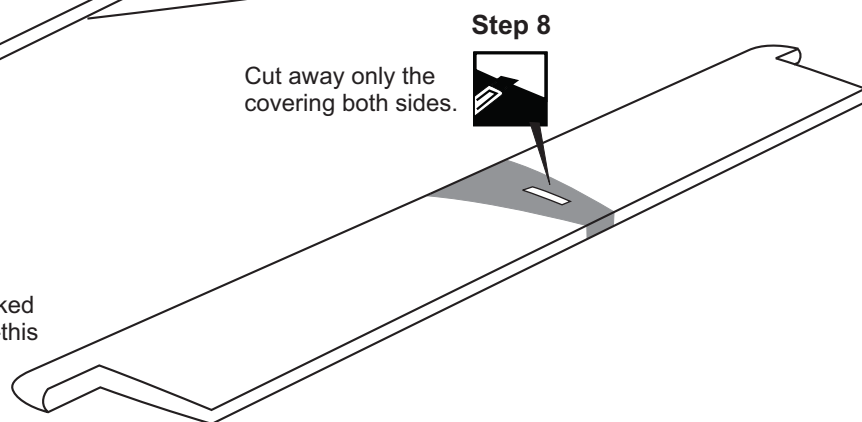




When you are satisfied with the alignment, use a pencil to trace around the top and bottom of the stabilizer where it meets the fuselage.

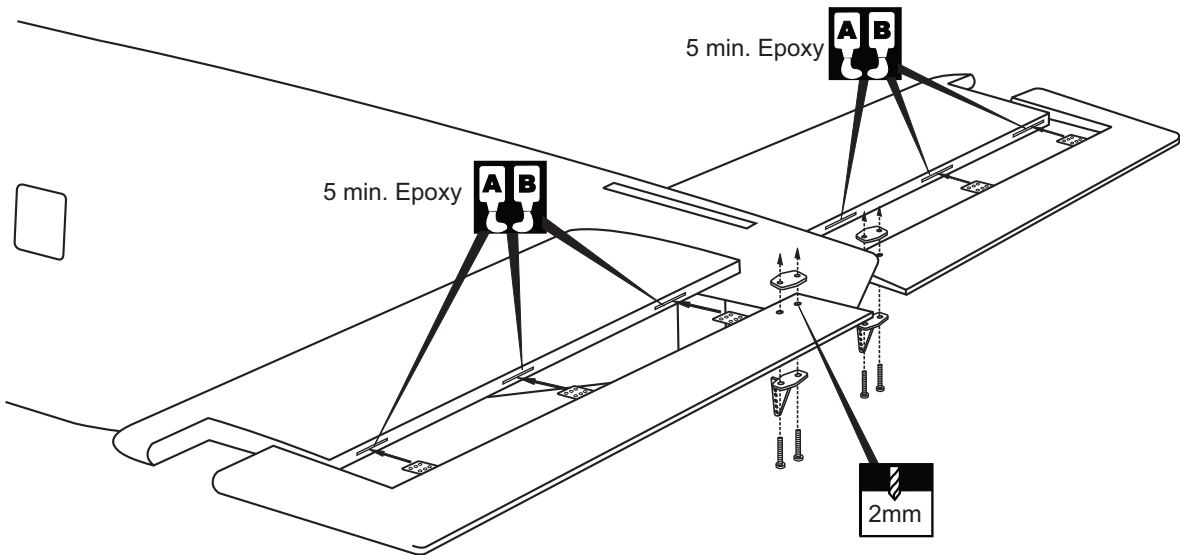


Remove the horizontal stabilizer from the fuselage. Using a straight edge and a sharp hobby knife, carefully cut away the covering **inside the lines** which were marked above. Be cautious **not to cut into the wood**-this will weaken the structure.



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

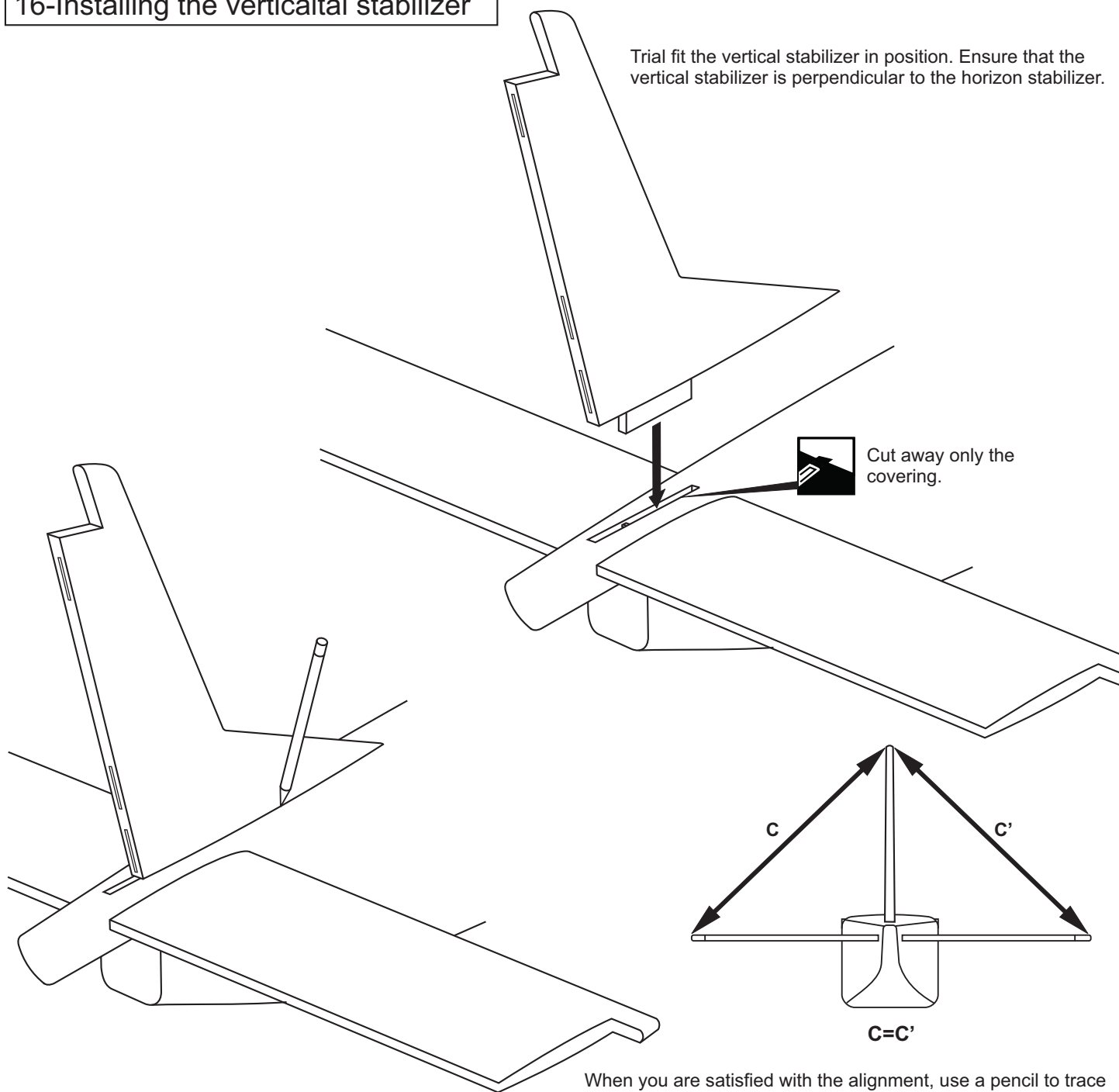
Install the horizontal stabilizer onto the fuselage and adjust the alignment as described in step 5 and 6. Note: it is important to ensure that the horizontal stabilizer is also level in regards to the fuselage. Apply the thin CA along the area where the covering was removed in the previous step and to the fuselage where the horizontal stabilizer mounts .



- Control horn
-2 set
- 2x20mm bolt
-4

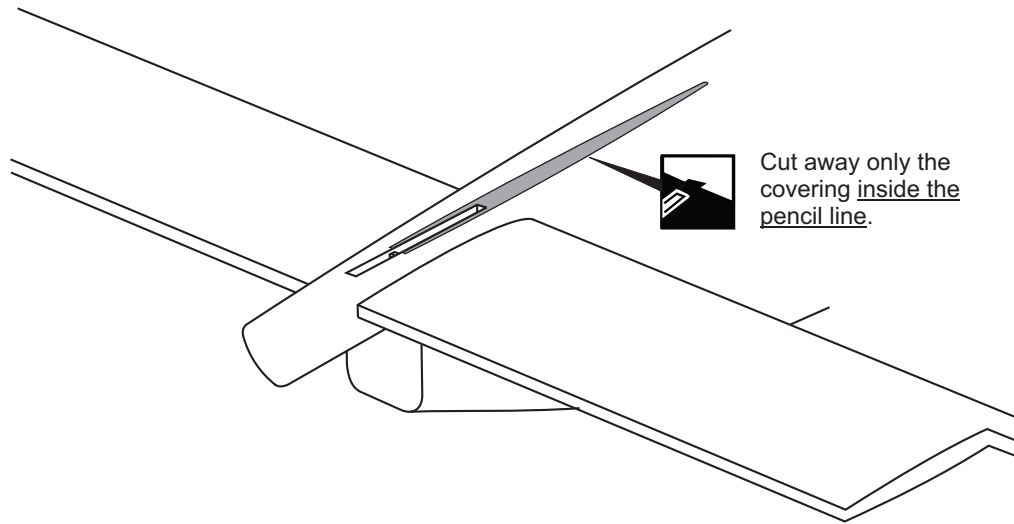
16-Installing the vertical stabilizer

Trial fit the vertical stabilizer in position. Ensure that the vertical stabilizer is perpendicular to the horizontal stabilizer.



When you are satisfied with the alignment, use a pencil to trace around the stabilizer where it meets the fuselage.

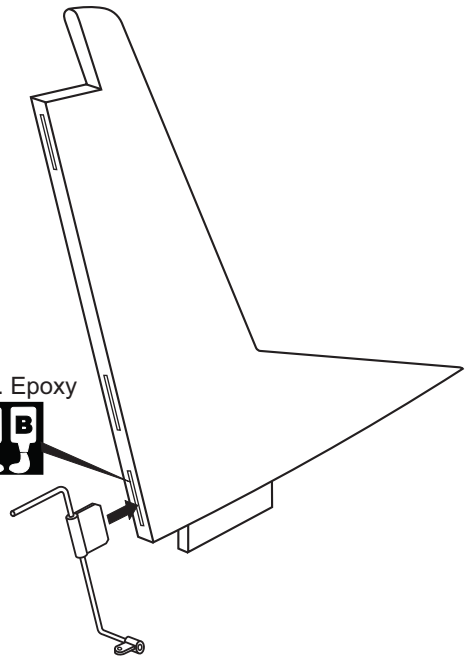
QUEST KODIAK 17-Installing the vertical stabilizer



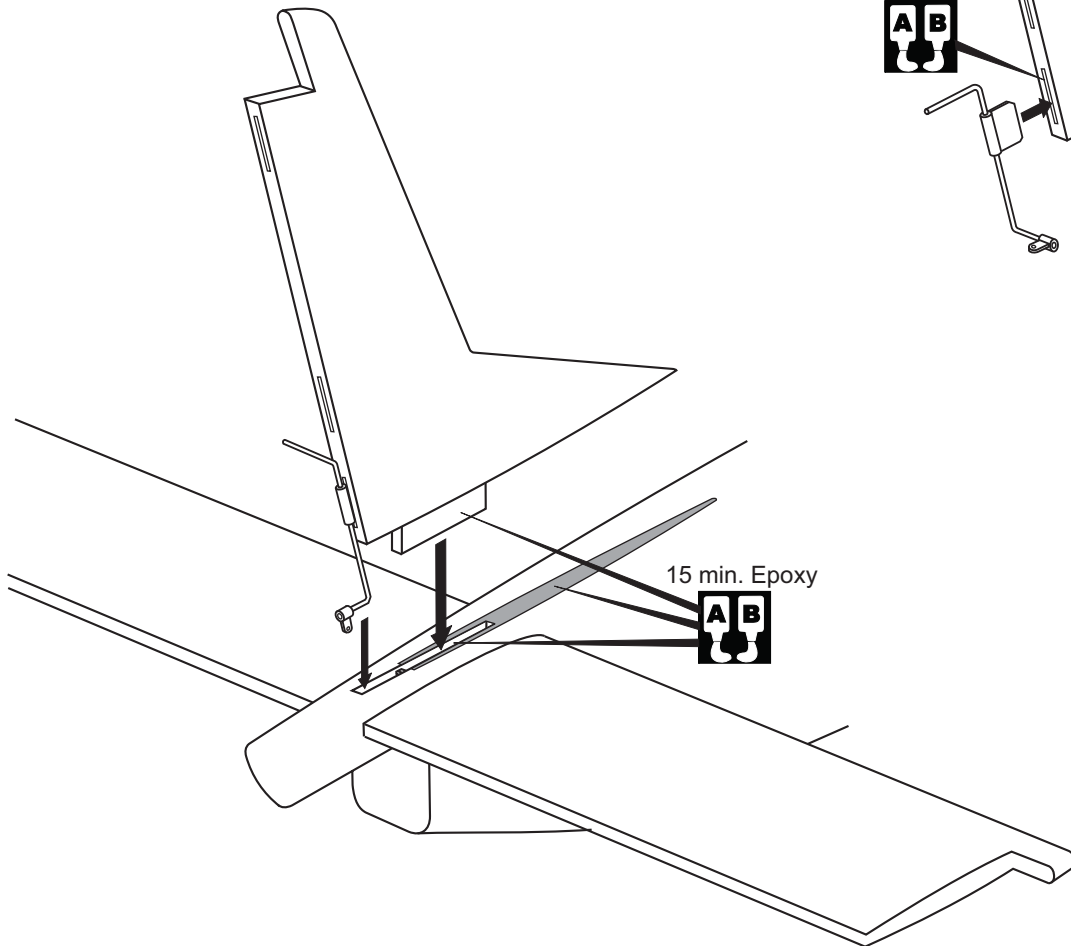
Cut away only the covering inside the pencil line.

Glue the torque rod bearing into the slot in the vertical stabilizer, using a thin layer of 5 minute epoxy.

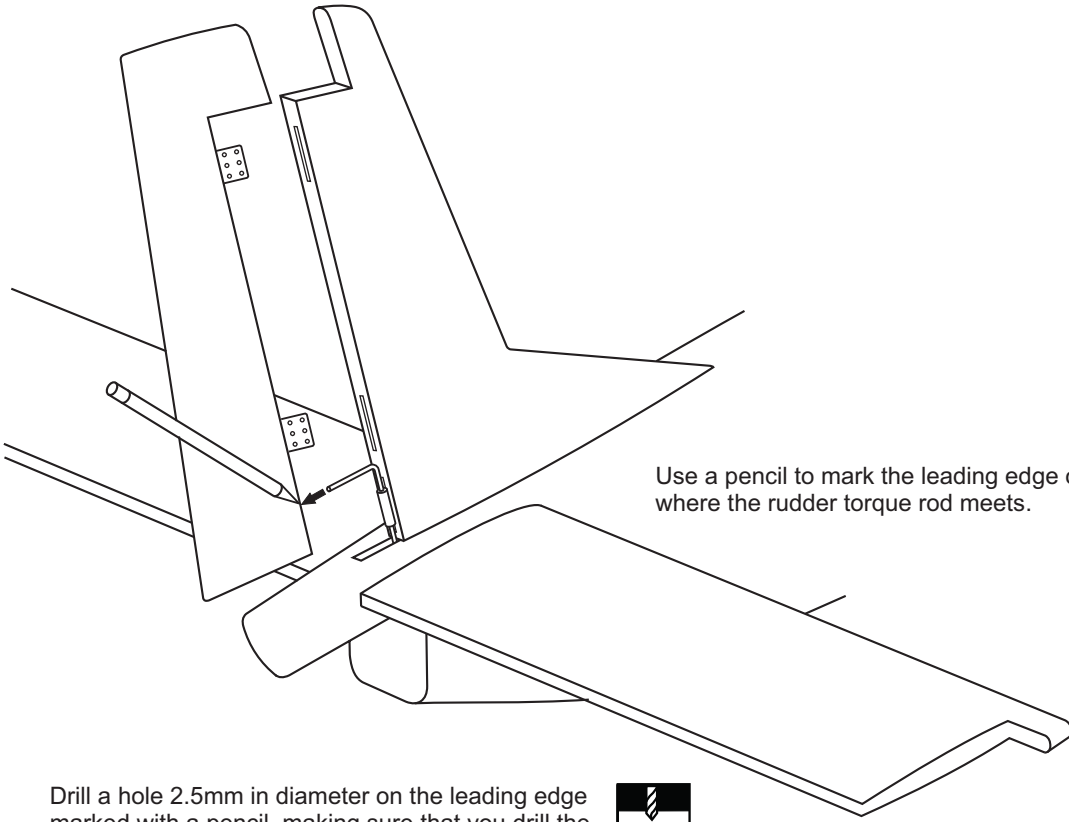
5 min. Epoxy



15 min. Epoxy

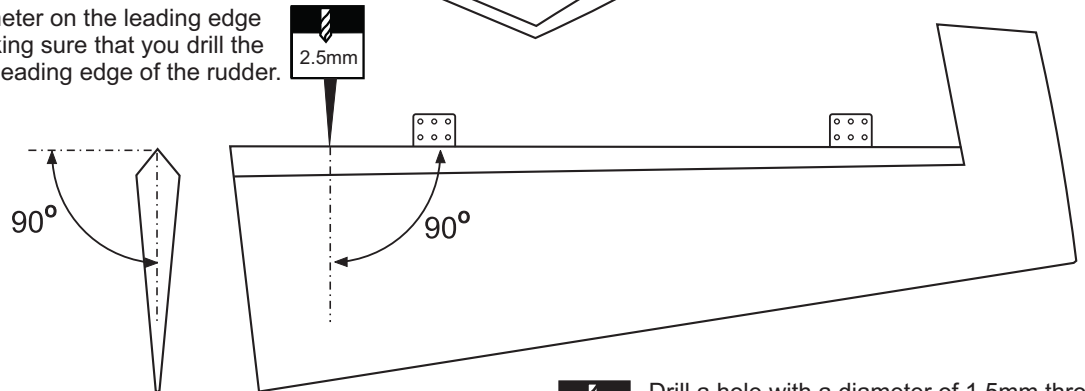


QUEST KODIAK 18-Installing the vertical stabilizer

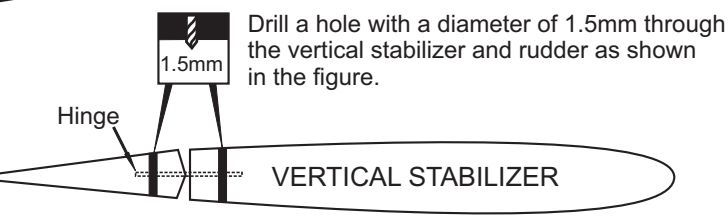
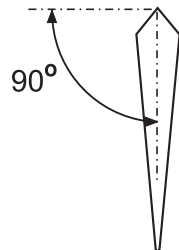


Use a pencil to mark the leading edge of the rudder where the rudder torque rod meets.

Drill a hole 2.5mm in diameter on the leading edge marked with a pencil, making sure that you drill the hole perpendicular to the leading edge of the rudder.



2.5mm

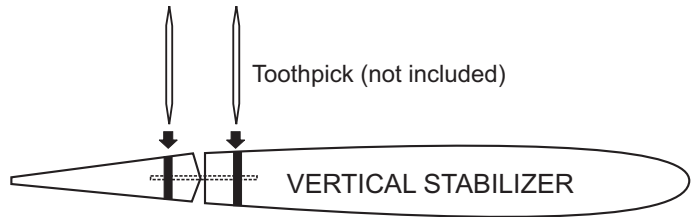


Drill a hole with a diameter of 1.5mm through the vertical stabilizer and rudder as shown in the figure.

1.5mm

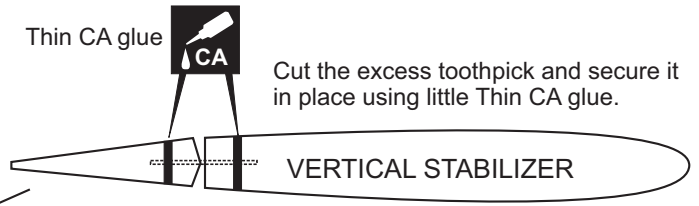
Hinge

VERTICAL STABILIZER



Toothpick (not included)

VERTICAL STABILIZER

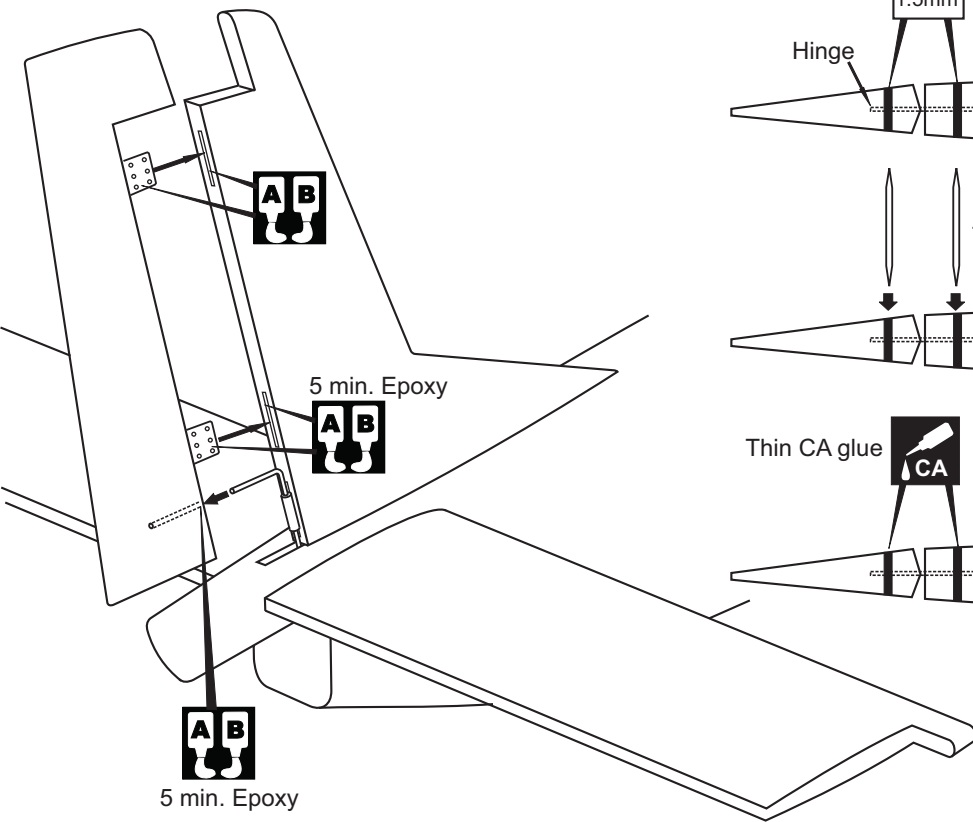


Thin CA glue



Cut the excess toothpick and secure it in place using little Thin CA glue.

VERTICAL STABILIZER



5 min. Epoxy

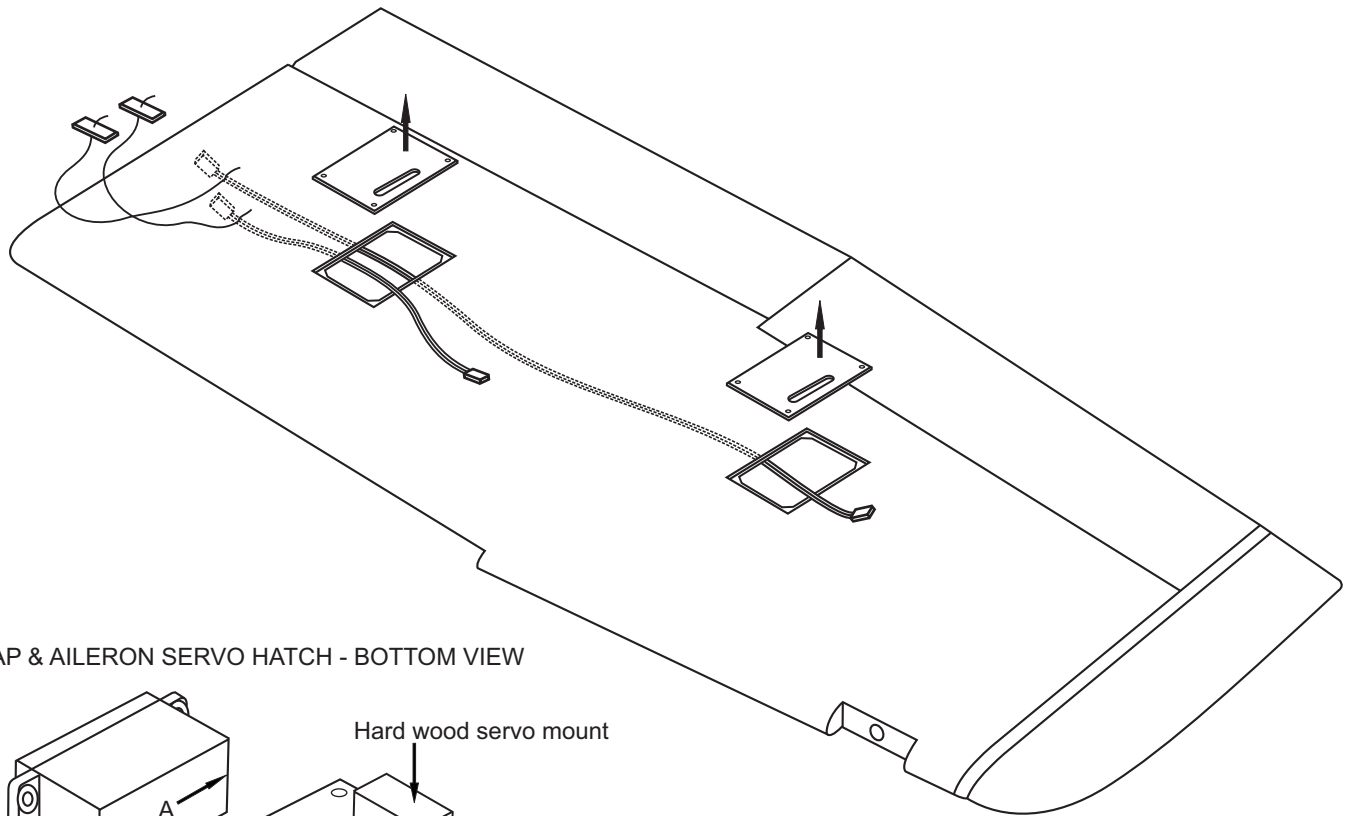


5 min. Epoxy

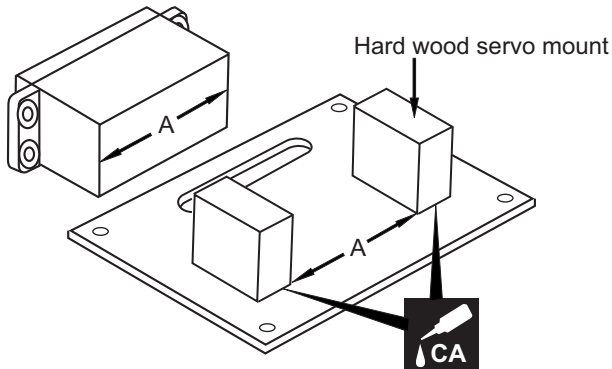
VERY IMPORTANT

If you not make this step, the rudder or elevator may be coming off when your airplane flying with high speed. You will lose control of your airplane.

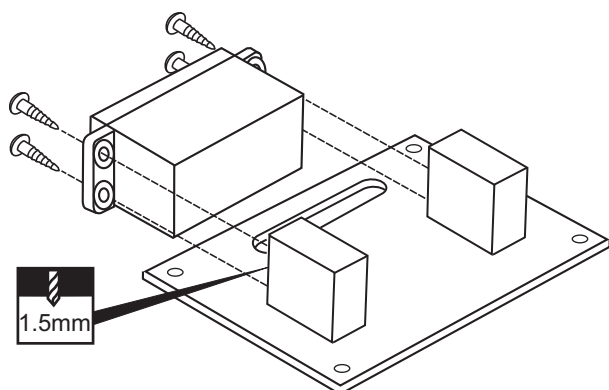
QUEST KODIAK 19- Flap & Aileron servo



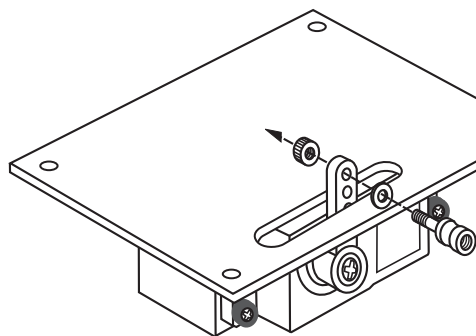
FLAP & AILERON SERVO HATCH - BOTTOM VIEW



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

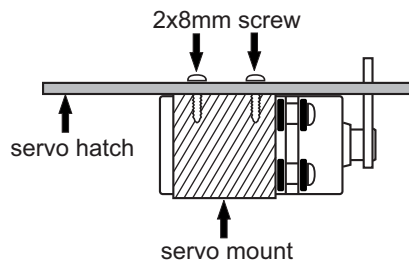
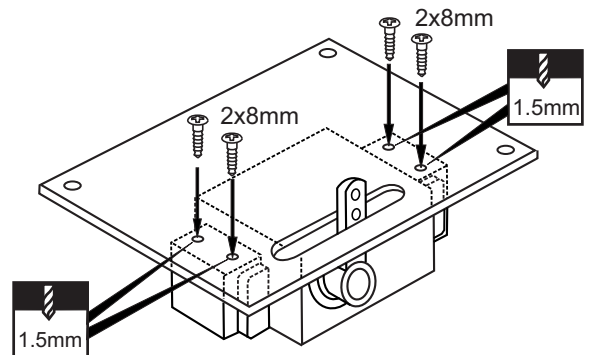


AILERON&FLAP SERVO HATCH - TOP VIEW



Note:
2mm connector for flap servo
3mm connector for aileron servo

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



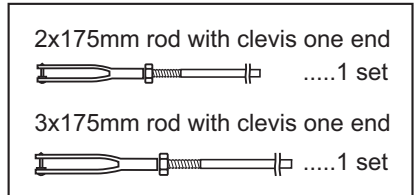
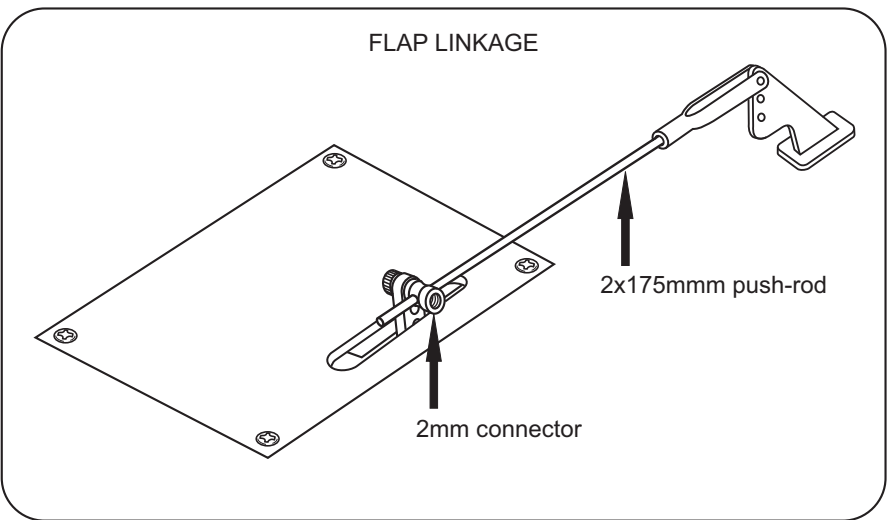
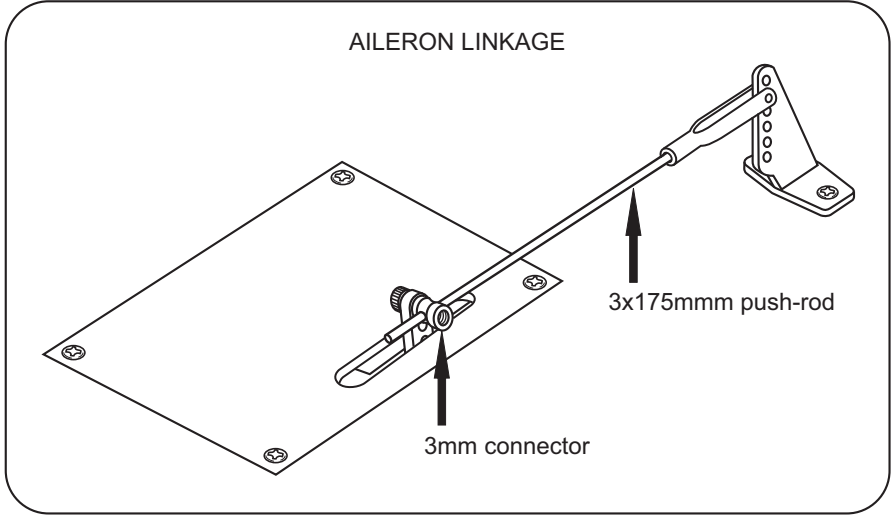
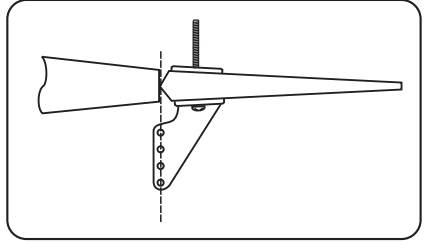
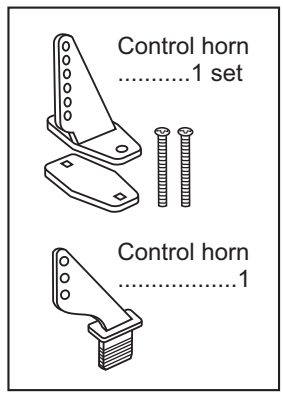
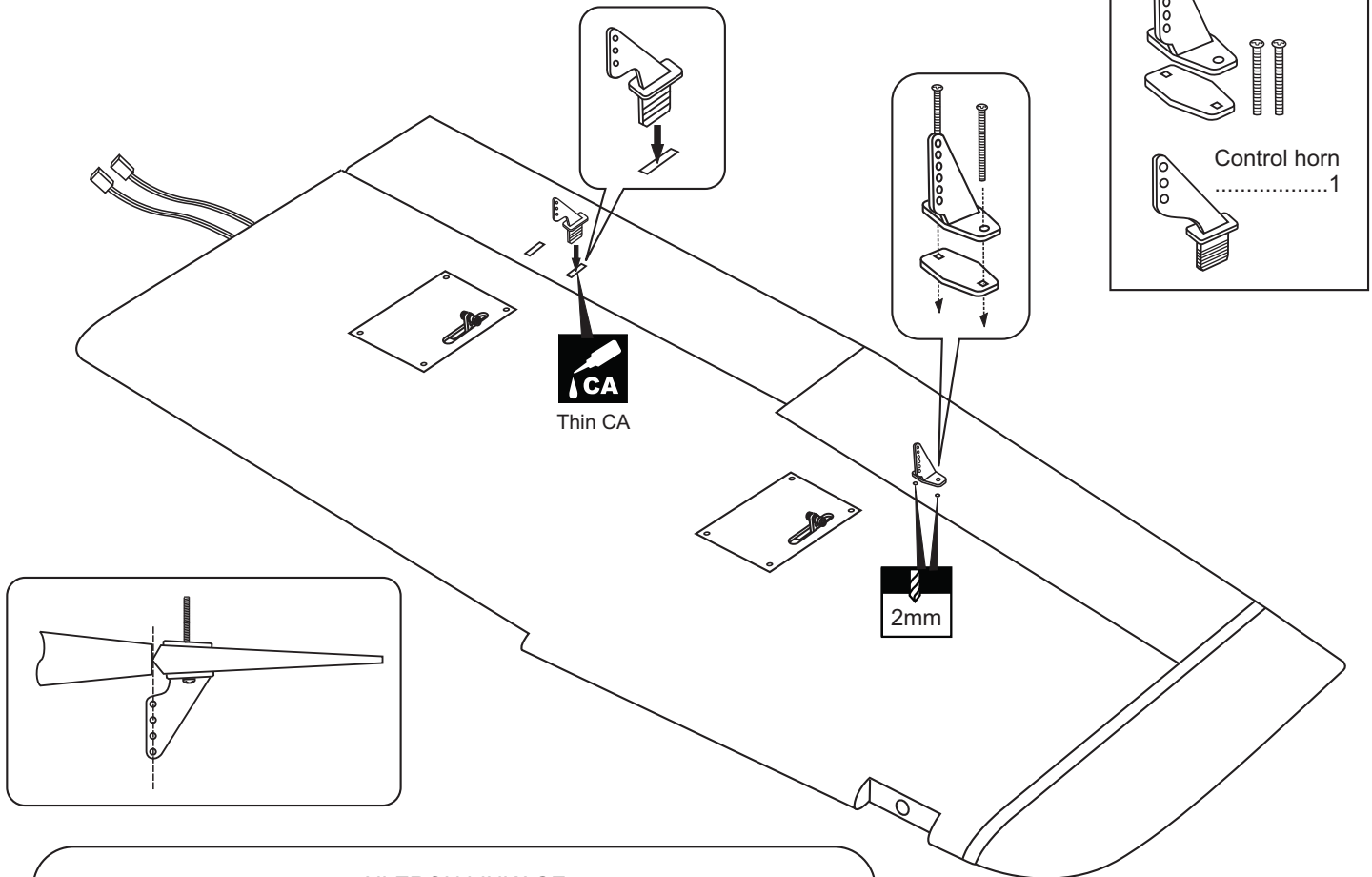
2mm connector



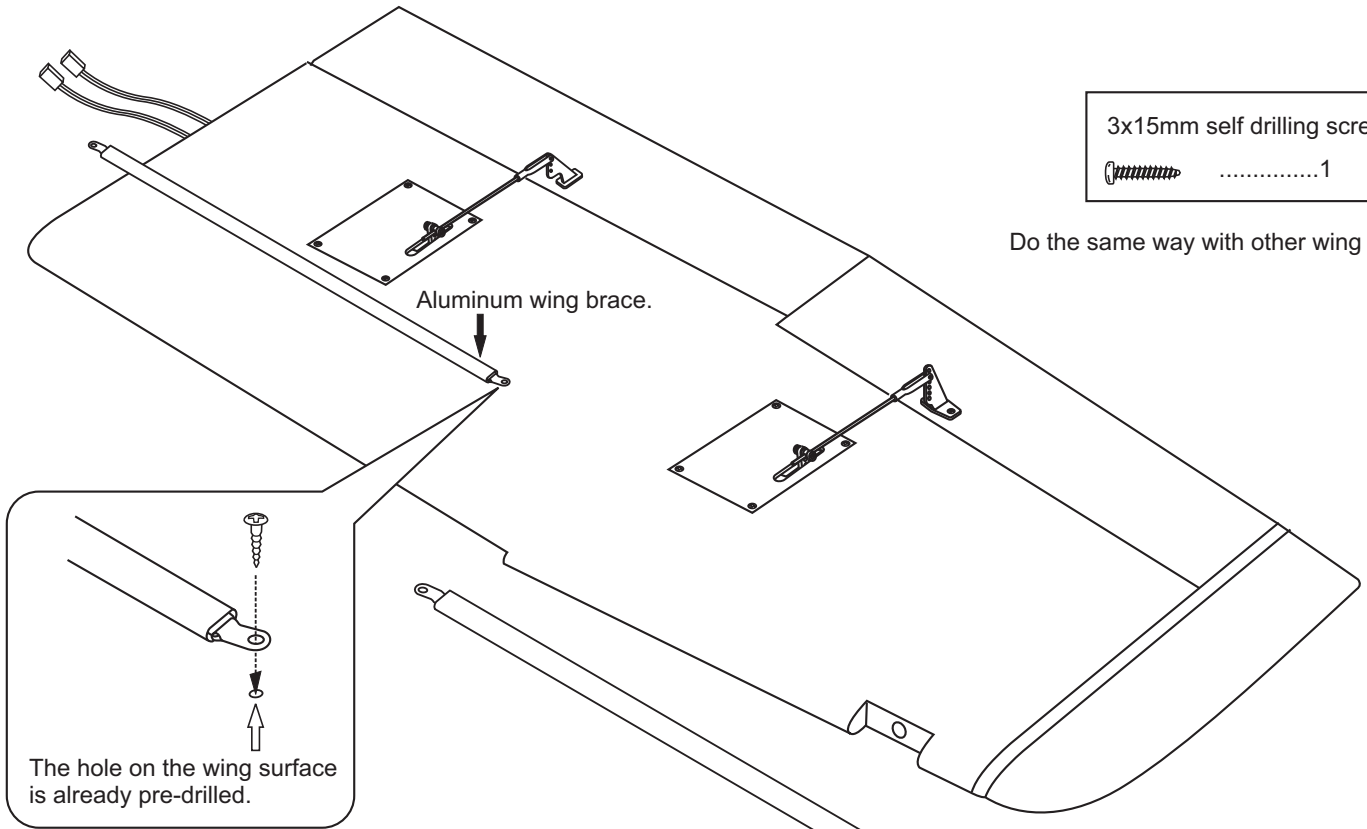
3mm connector



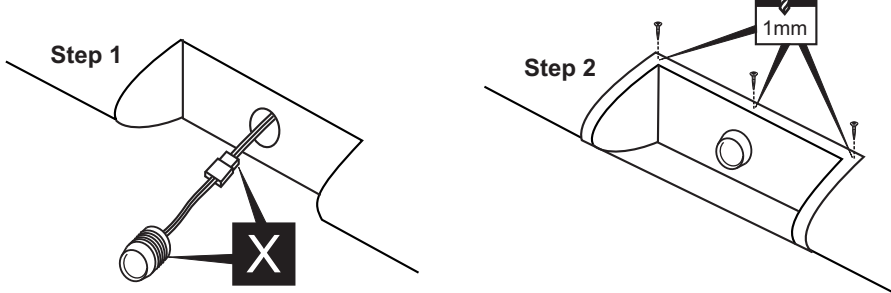
QUEST KODIAK 20- Flap & Aileron linkages



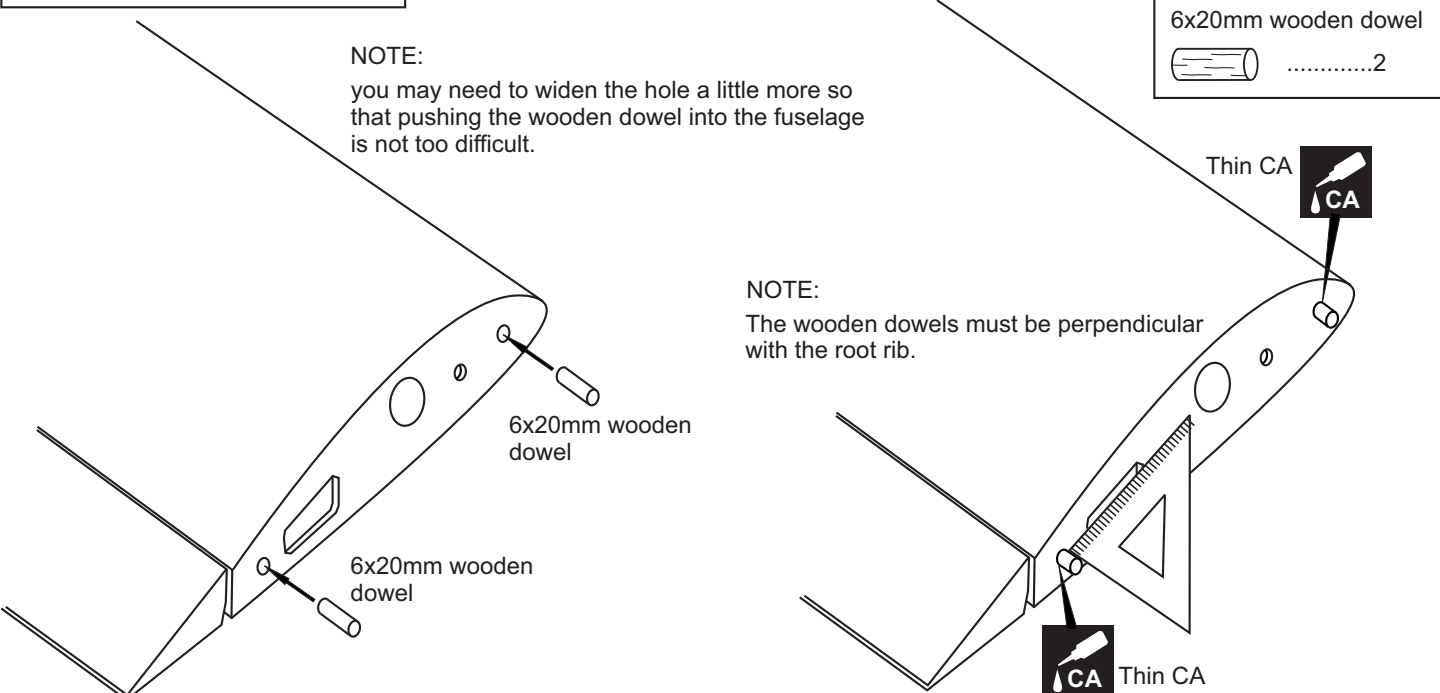
QUEST KODIAK 21- Flap & Aileron linkages



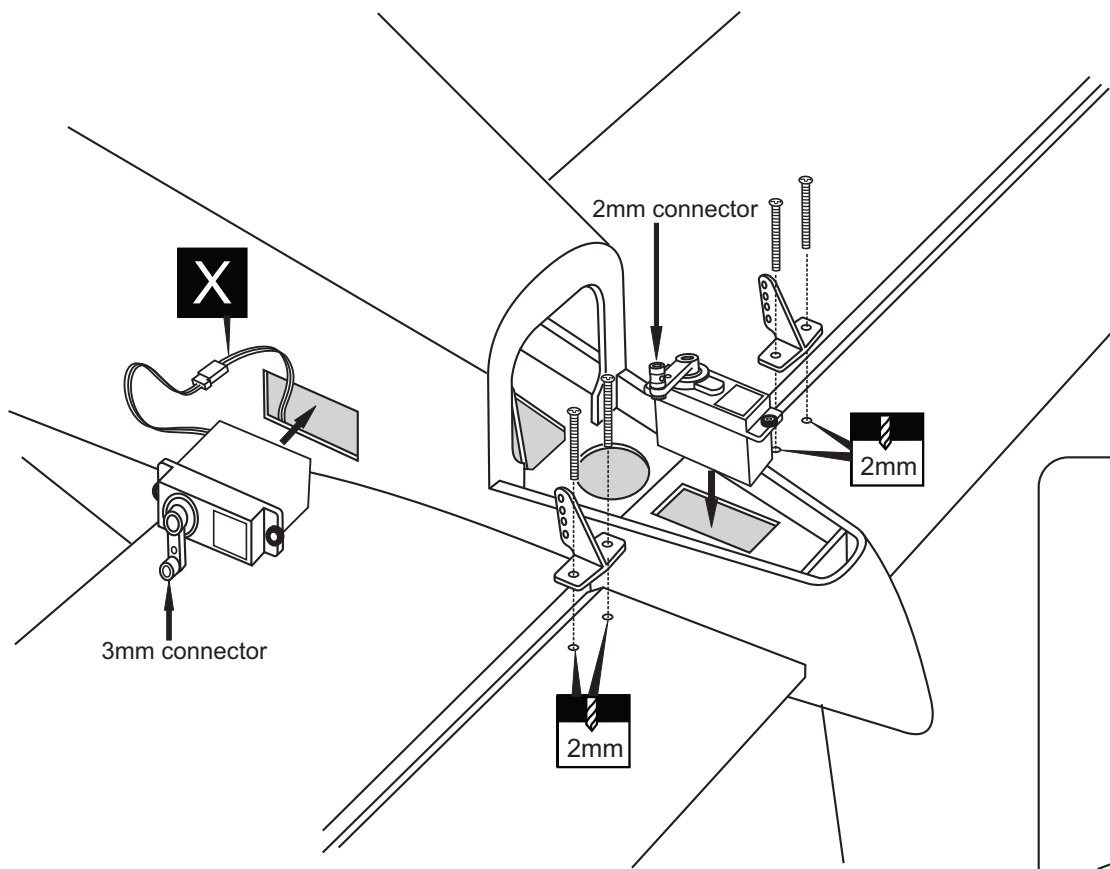
Light



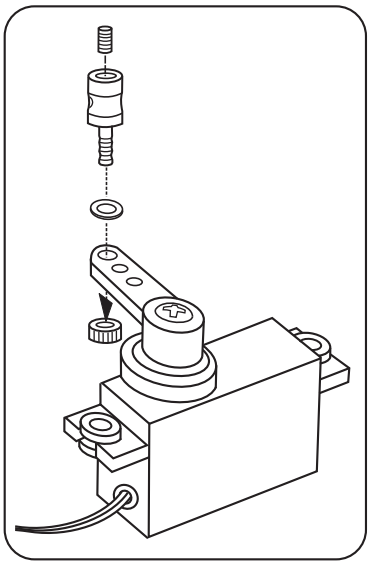
22- Dowel installation



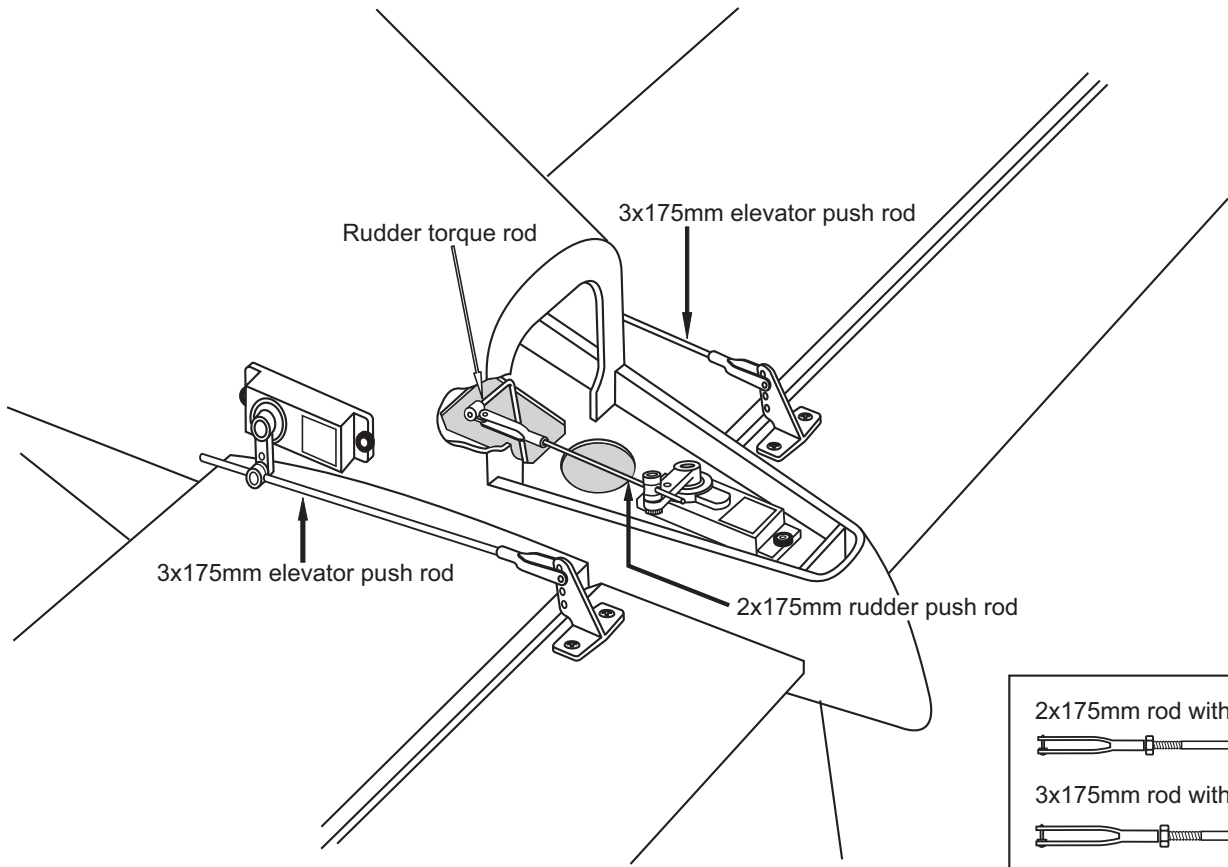
QUEST KODIAK 23- Elevator & Rudder servo



- Control horn2 set
- 2mm connector1
- 3mm connector2

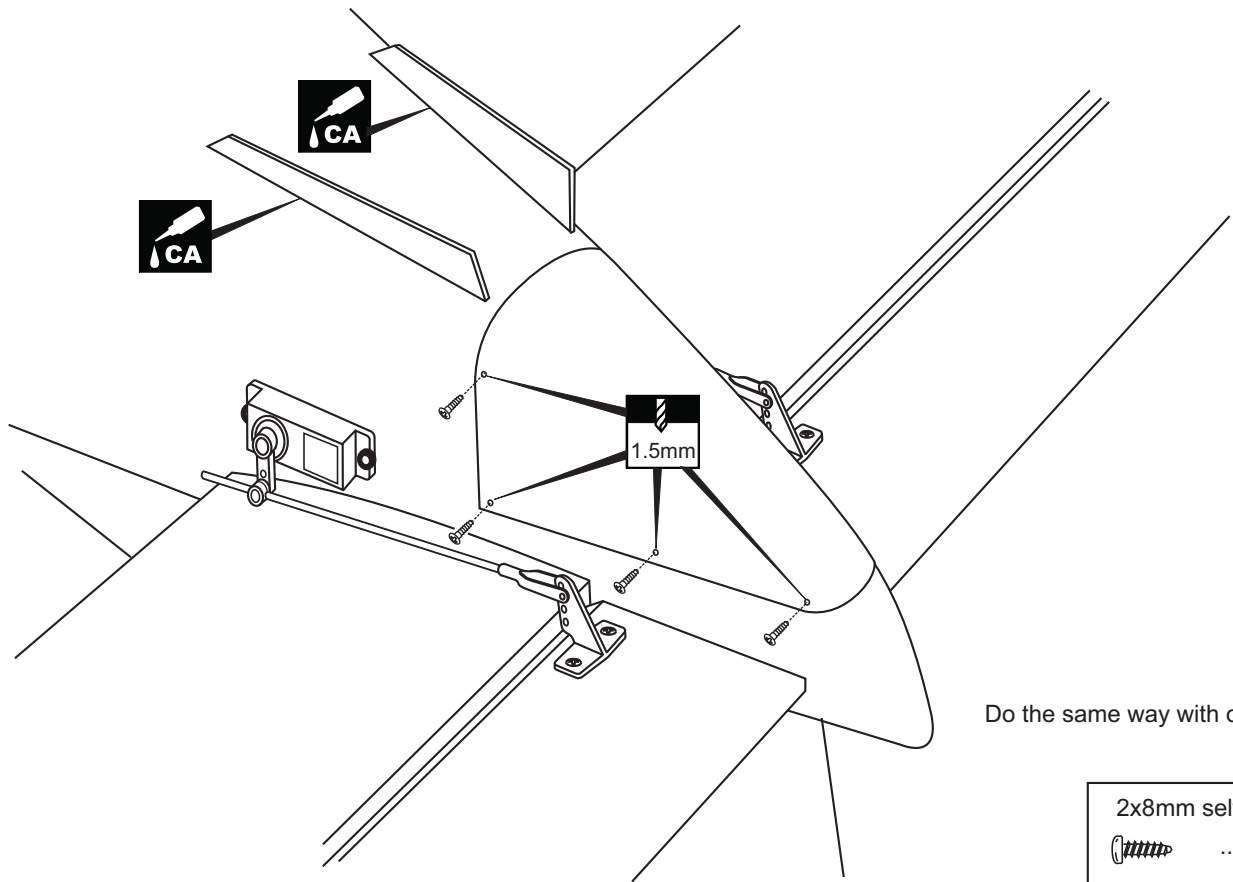


24- Elevator & Rudder linkages



- 2x175mm rod with clevis one end1 set
- 3x175mm rod with clevis one end2 set

QUEST KODIAK 25- Plastic shield

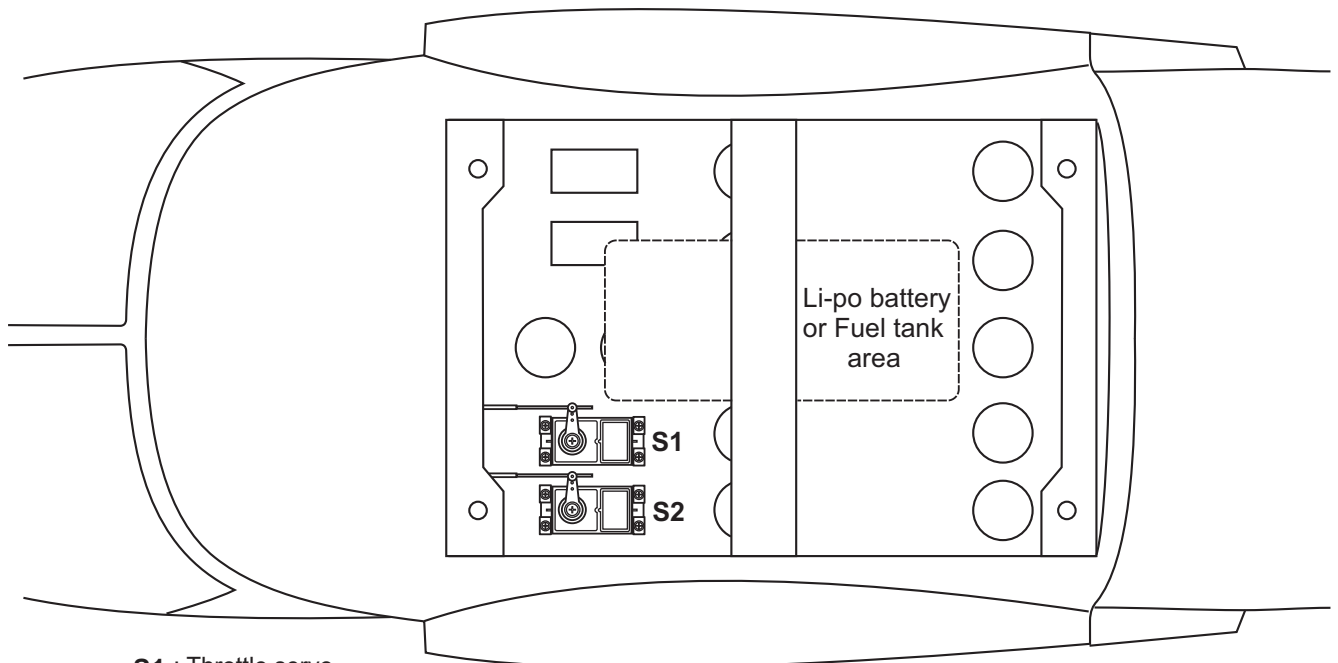


Do the same way with other side.

- | | |
|---------------------------|--------|
| 2x8mm self-drilling screw |8 |
|---------------------------|--------|

26- Throttle & Nose gear serv

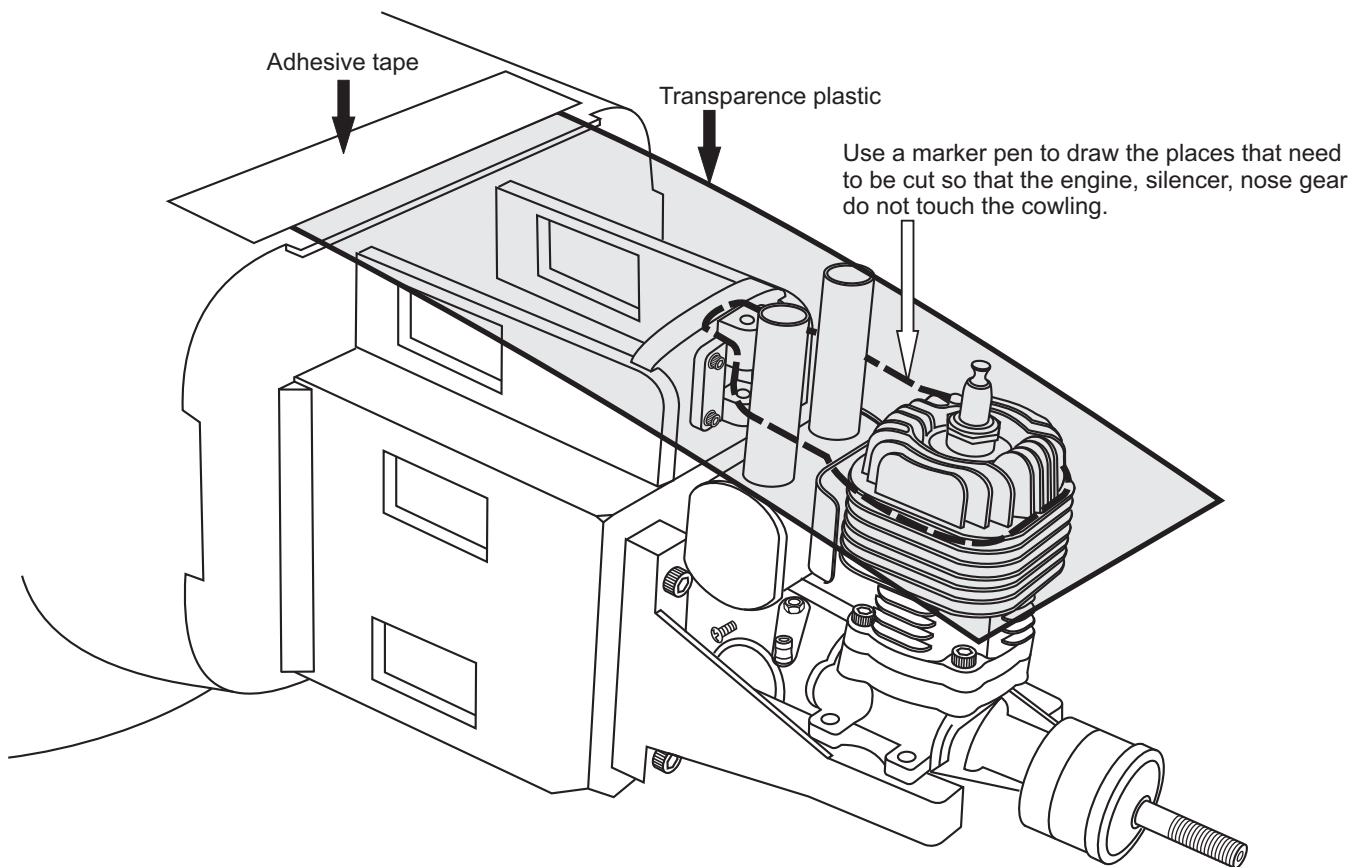
- | | |
|--|--------|
| 1.2x500mm nose gear push rod |1 |
| 2x500mm throttle rod with clevis one end |1 |
| 2mm connector |2 |



S1 : Throttle servo

S2 : Nose gear servo

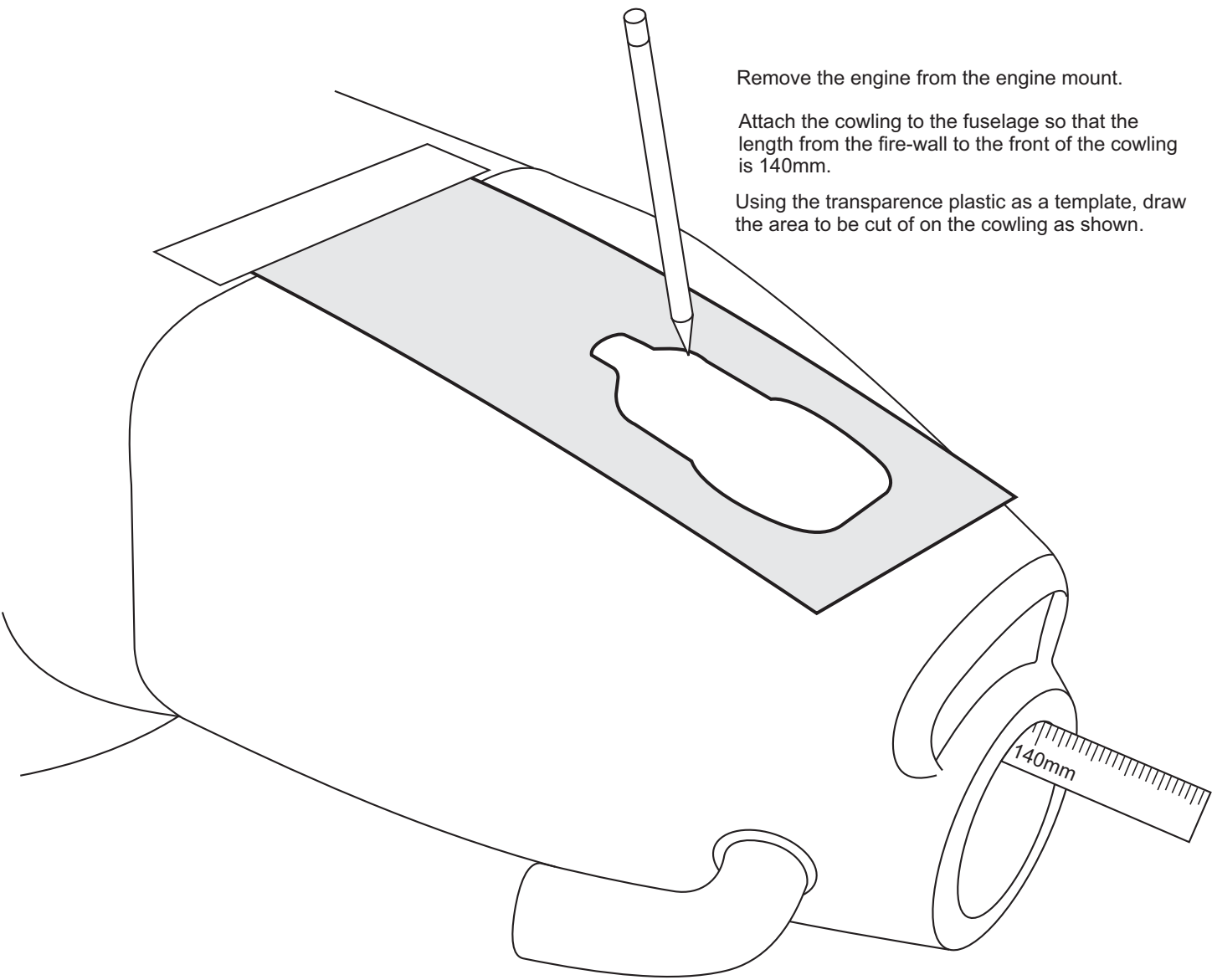
QUEST KODIAK 27- Cowling



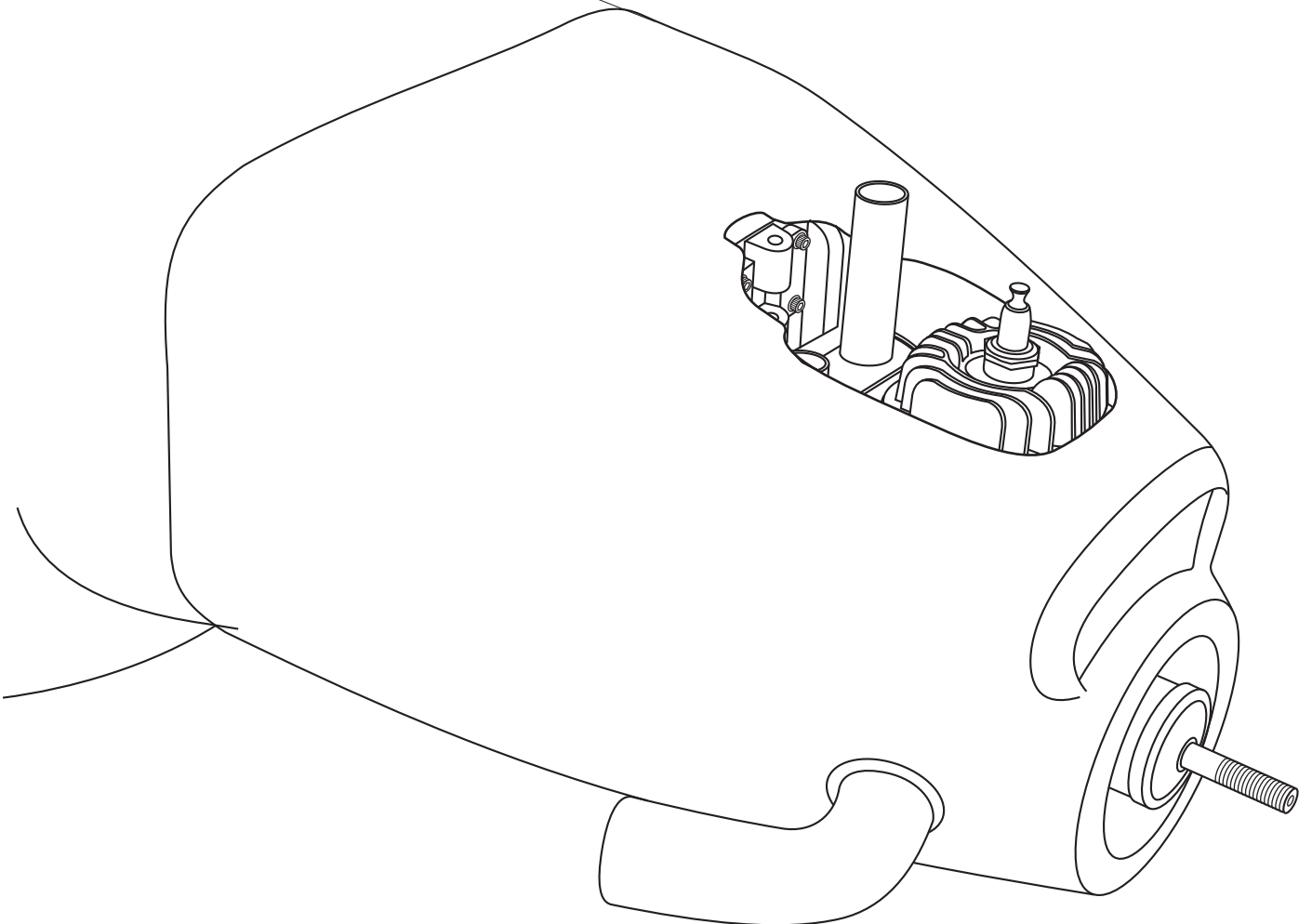
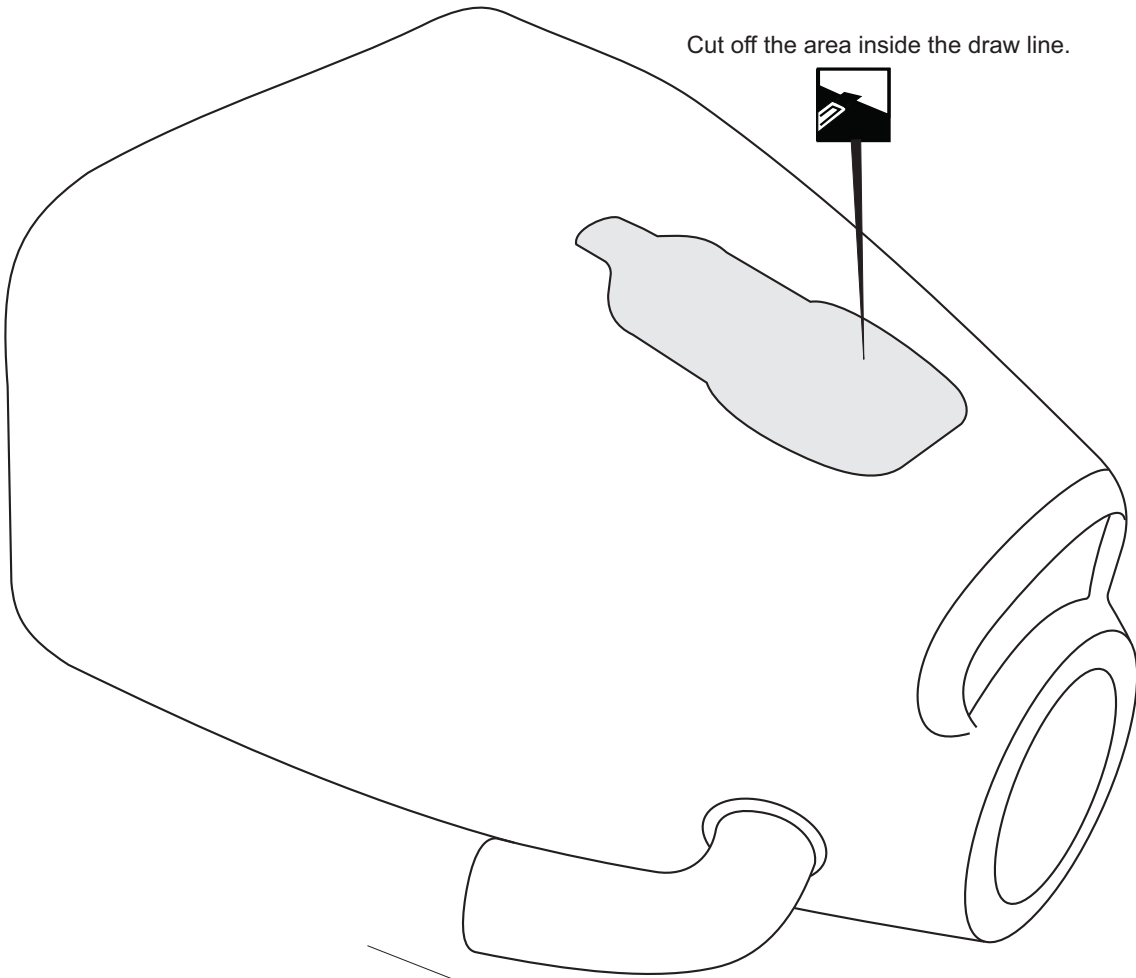
Remove the engine from the engine mount.

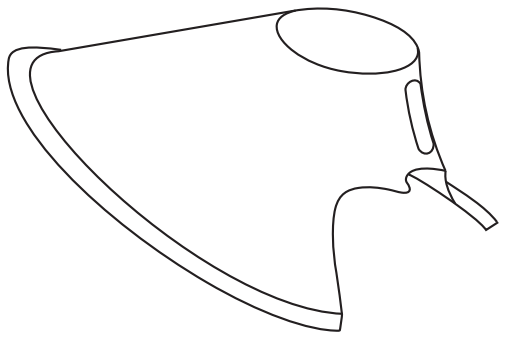
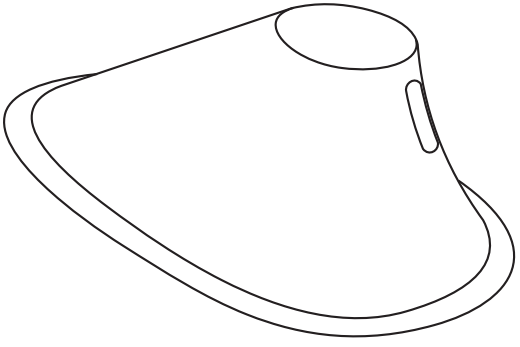
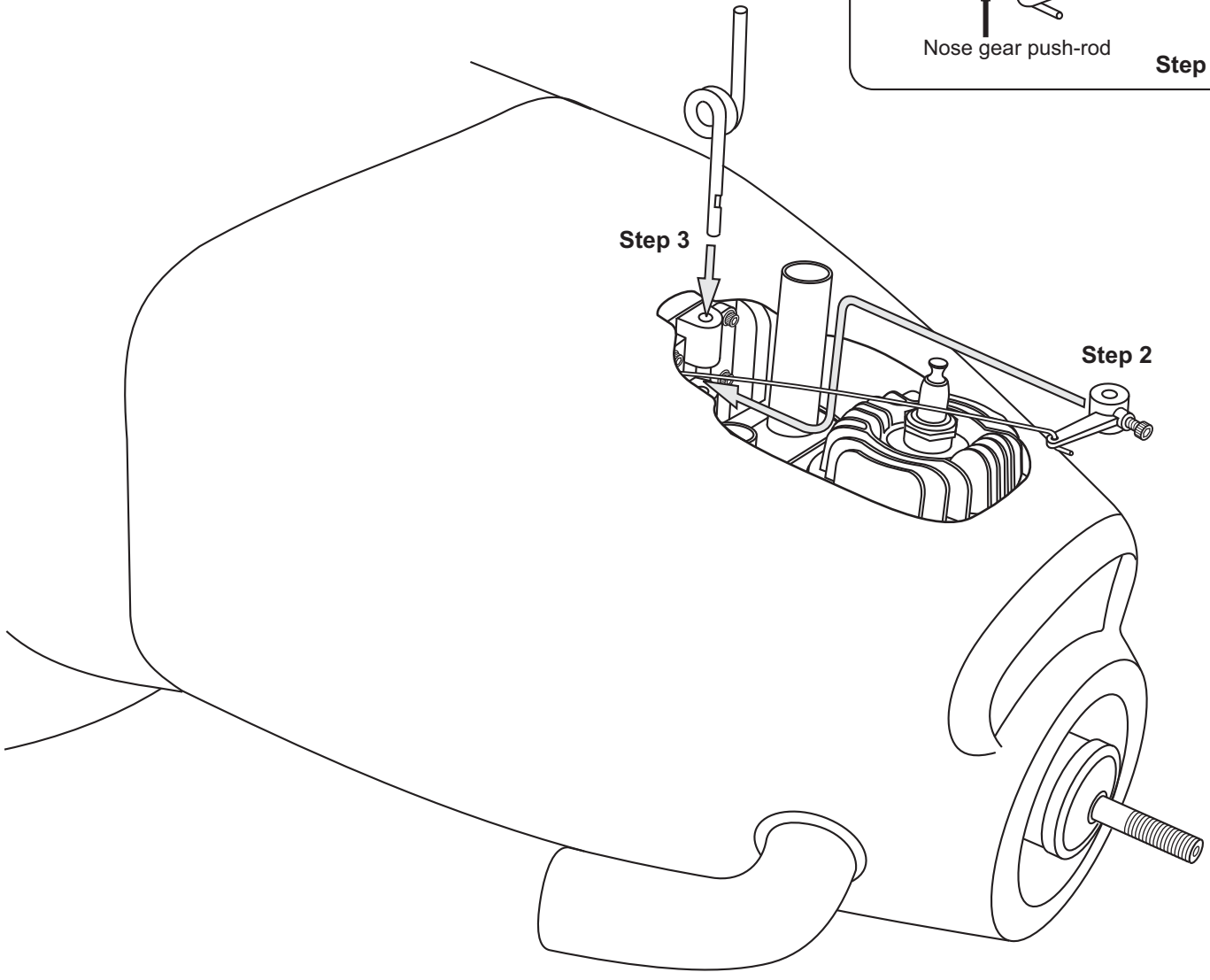
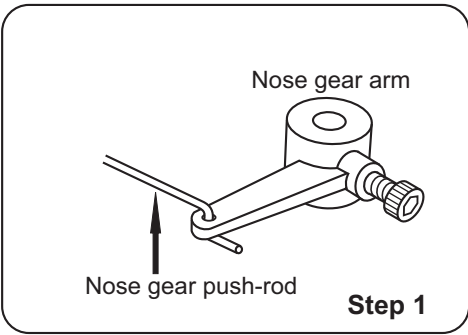
Attach the cowling to the fuselage so that the length from the fire-wall to the front of the cowling is 140mm.

Using the transparence plastic as a template, draw the area to be cut of on the cowling as shown.

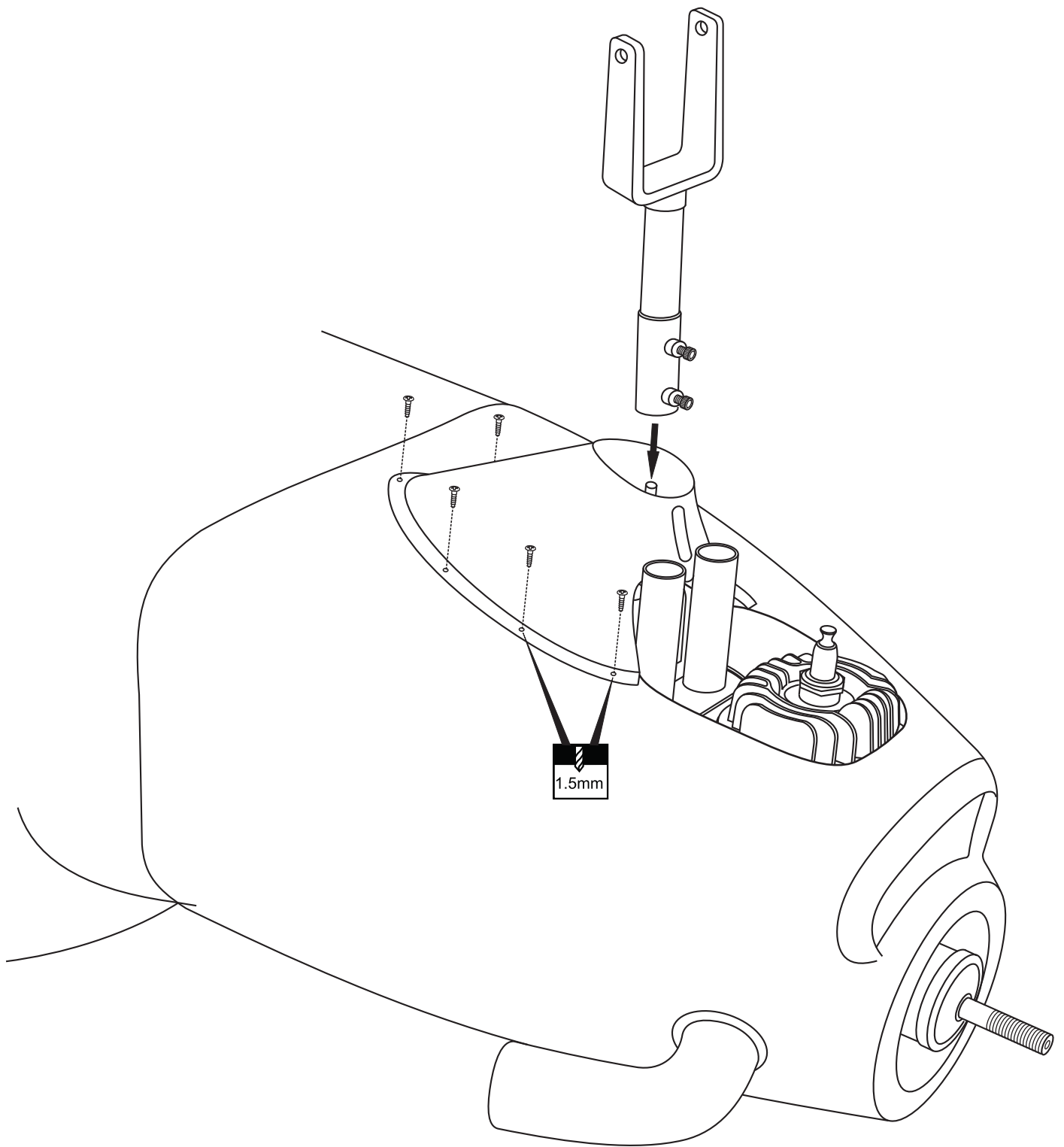


Cut off the area inside the draw line.

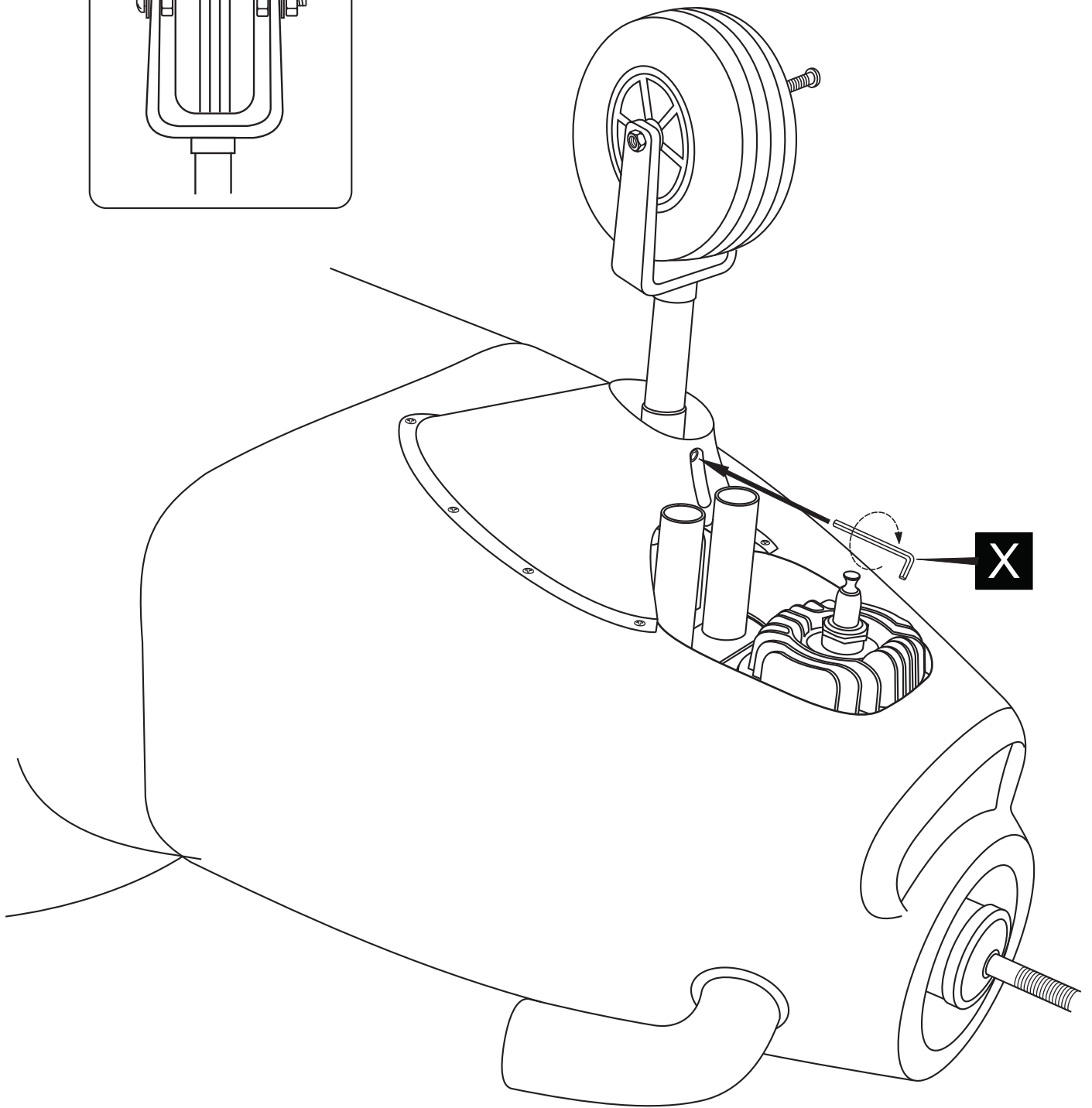
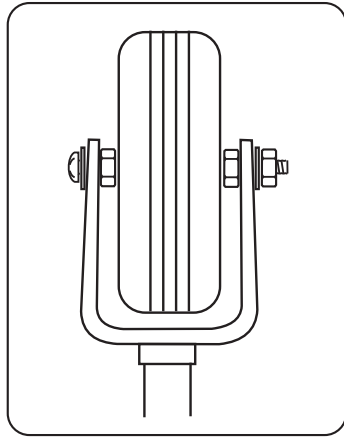




QUEST KODIAK 30- Nose gear



QUEST KODIAK 31- Nose wheel



4x40mm screw



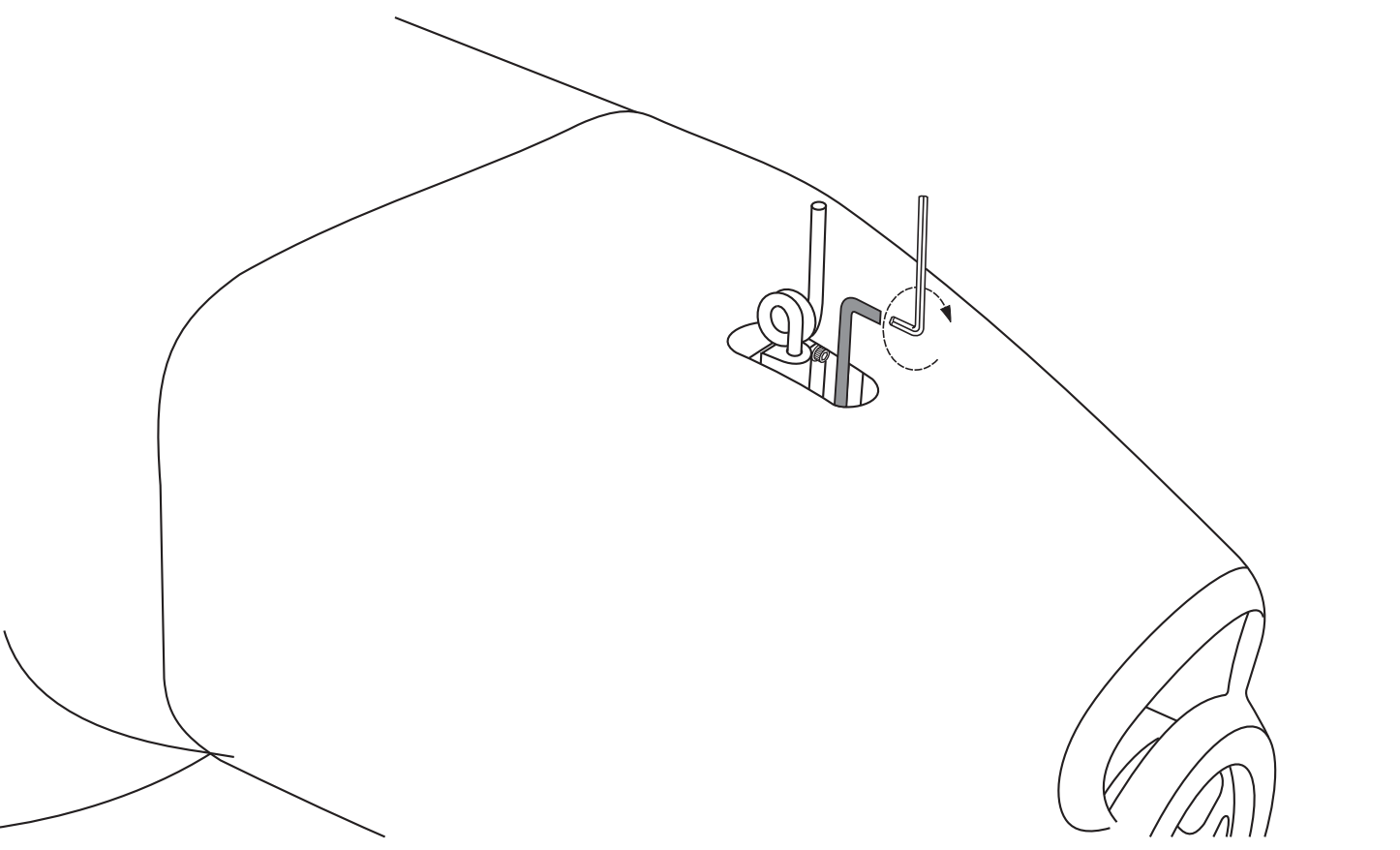
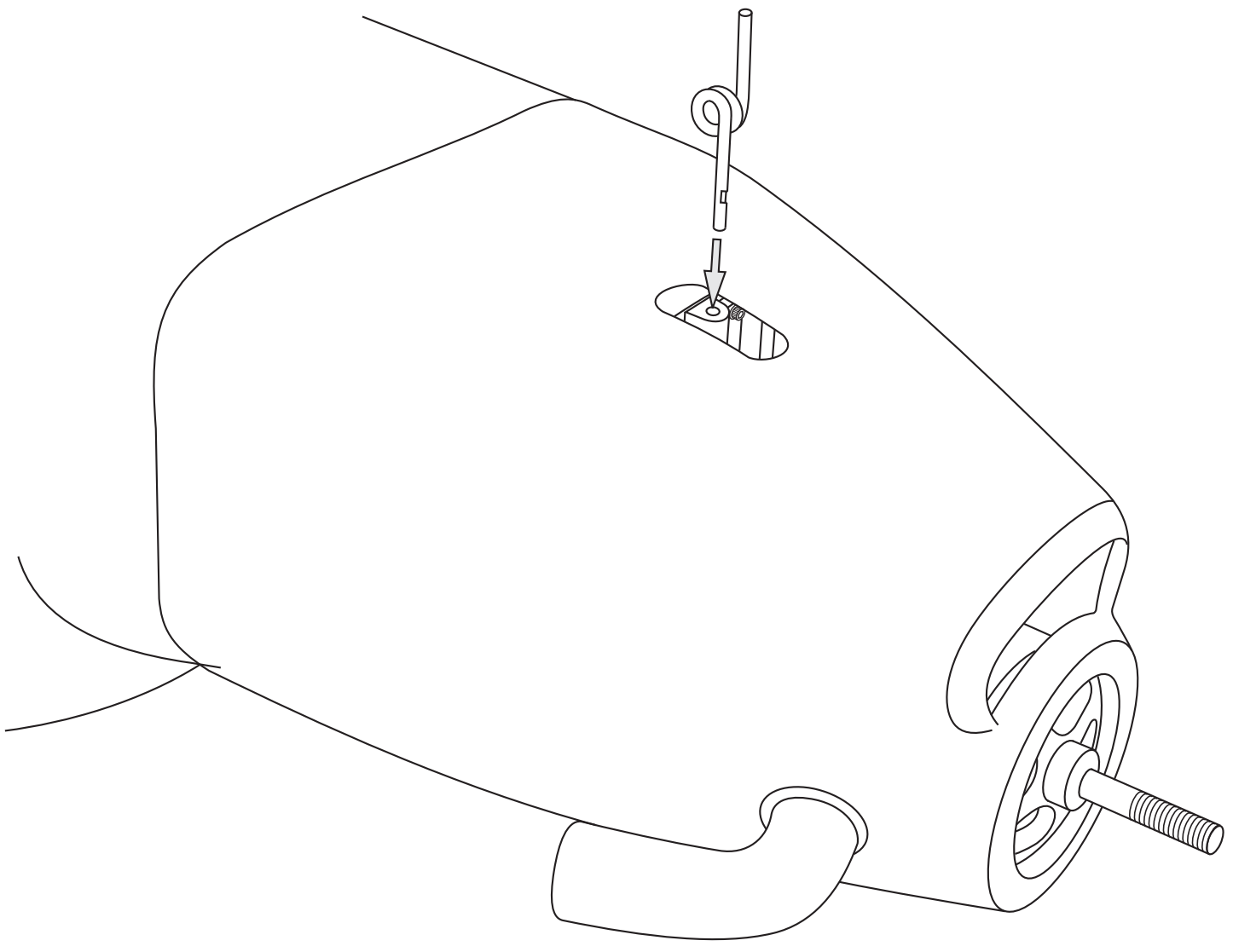
4mm washer



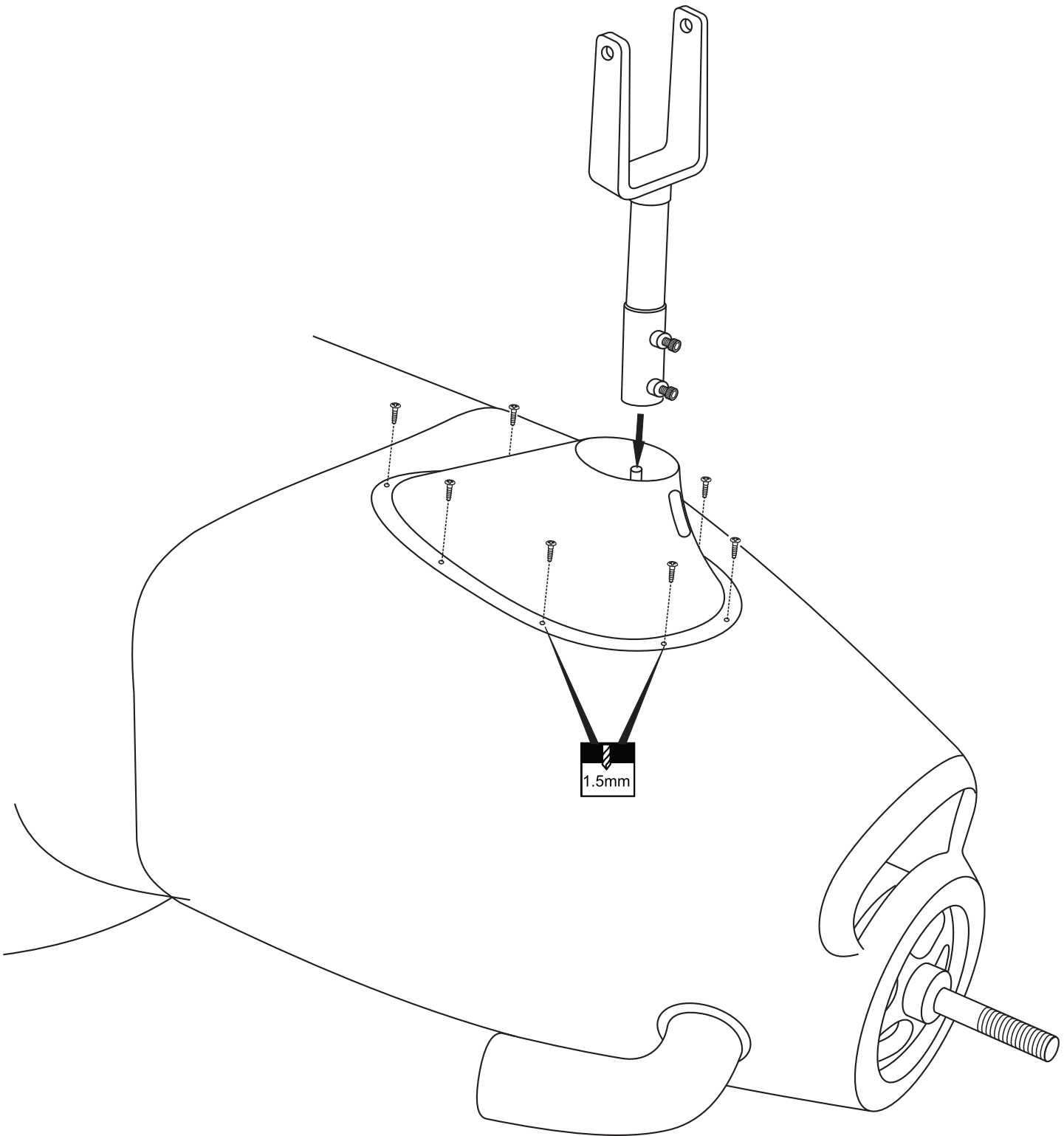
4mm nut




QUEST KODIAK 32- Nose wheel (in case of Electric motor using)



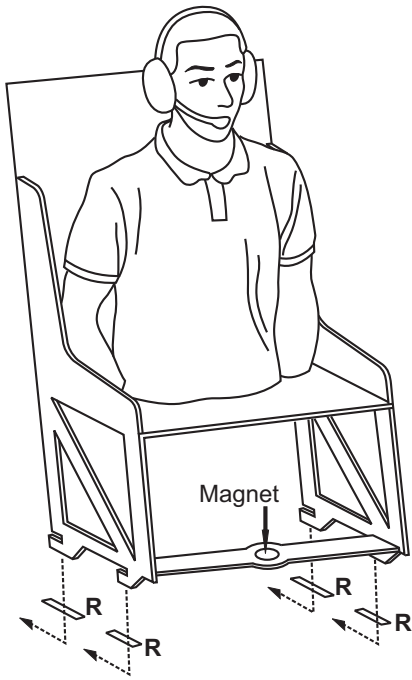
QUEST KODIAK 33- Nose wheel (in case of Electric motor using)



2x8mm self-drilling screw

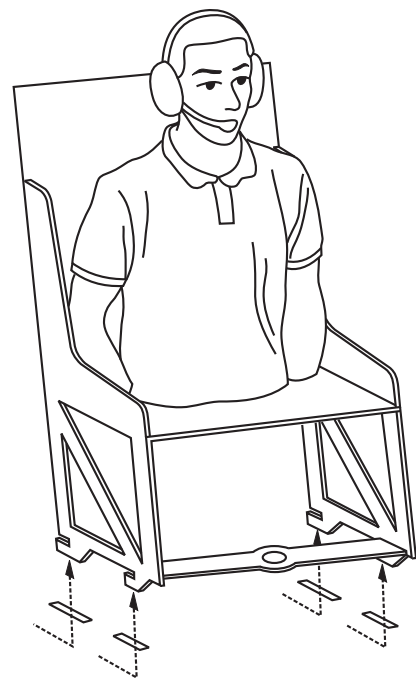
 12

QUEST KODIAK 34- Pilot's seat and canopy

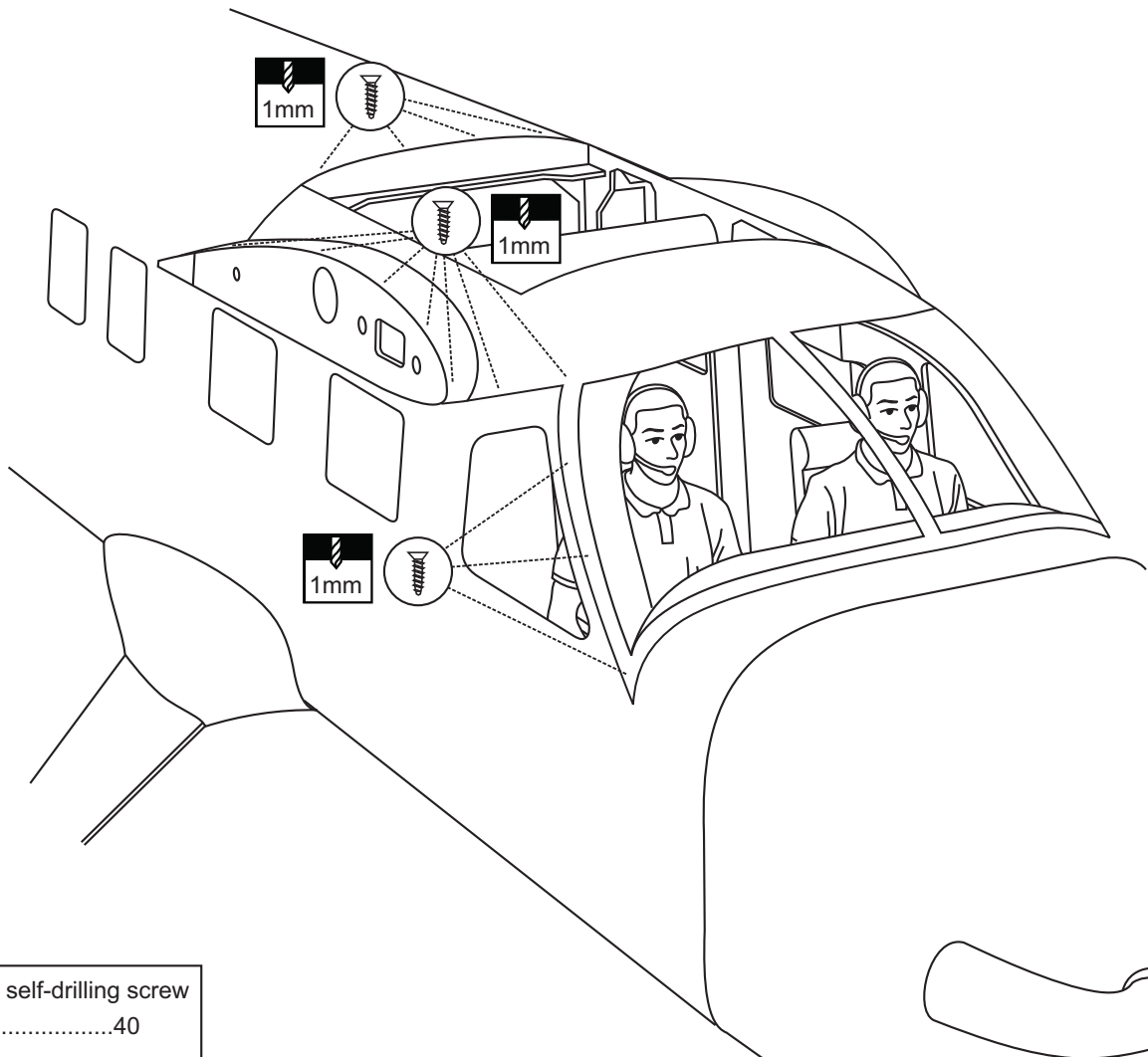



R=Rectangular slots on the floor.

Put the pilot seat in place: Press the 4 ledges under the base of the pilot's seat into the 4 slots in the floor of the plane. Gently push the seat back until it can't be pushed any more.

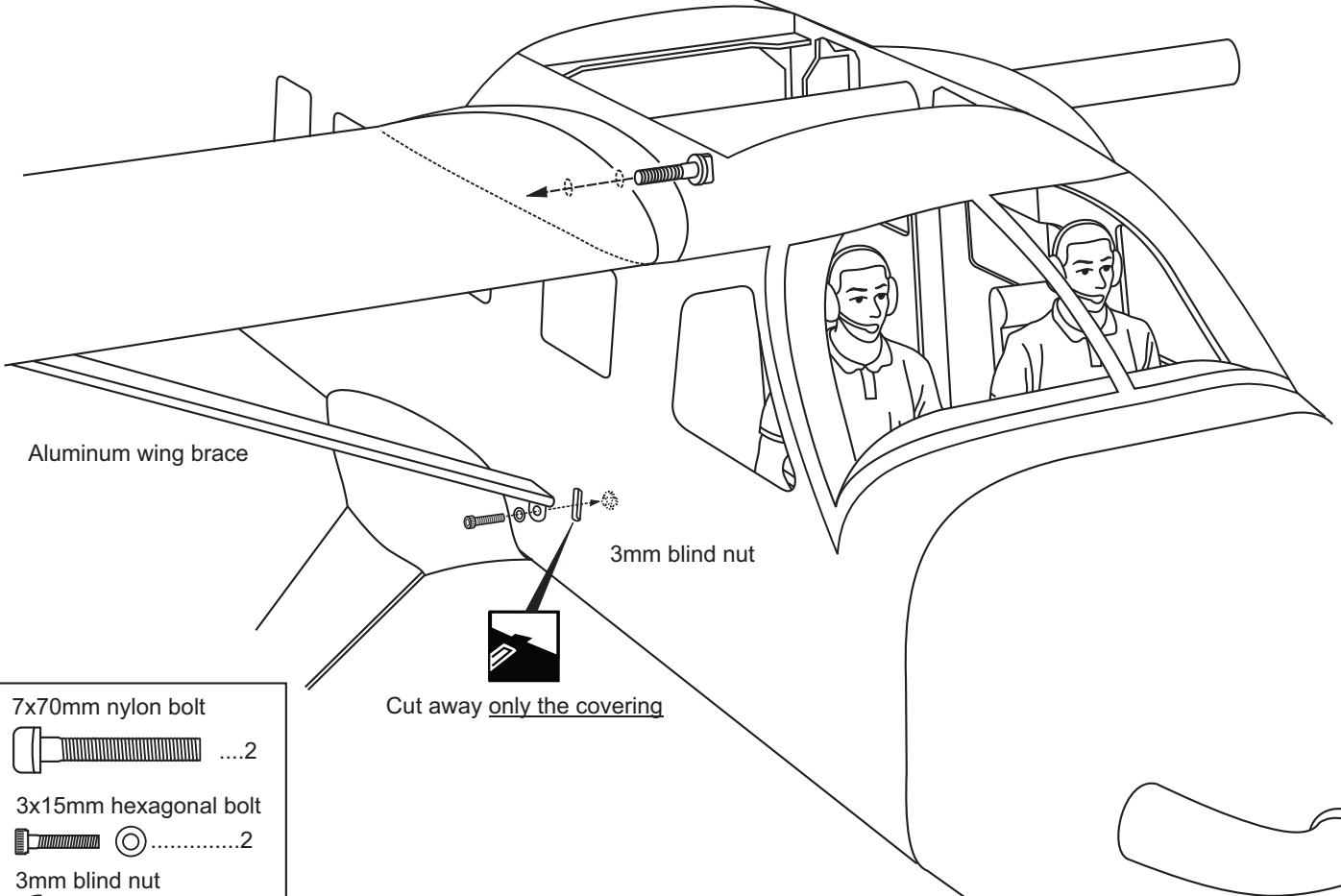
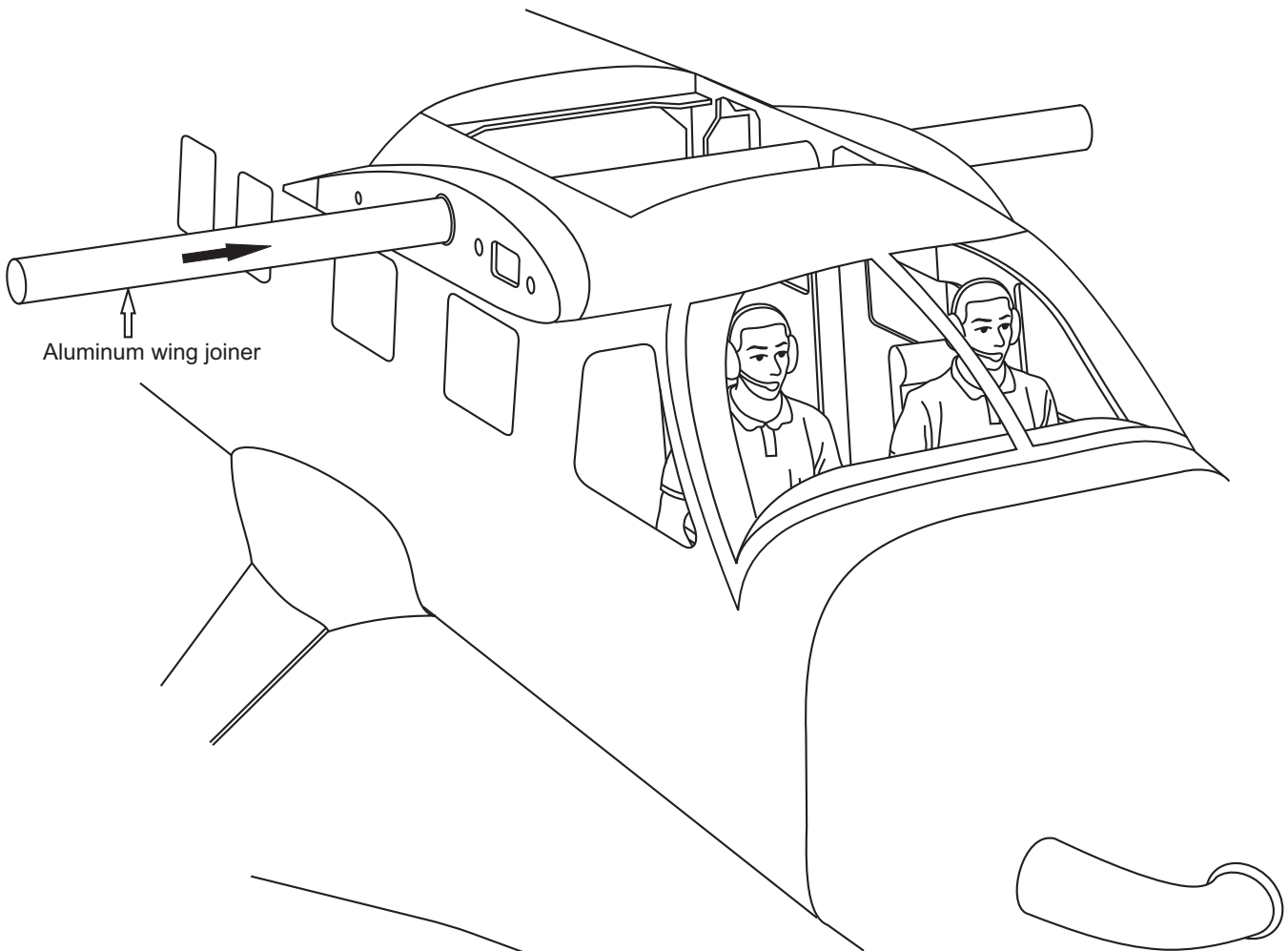


Remove the pilot's seat: gently push the seat forward and lift it.



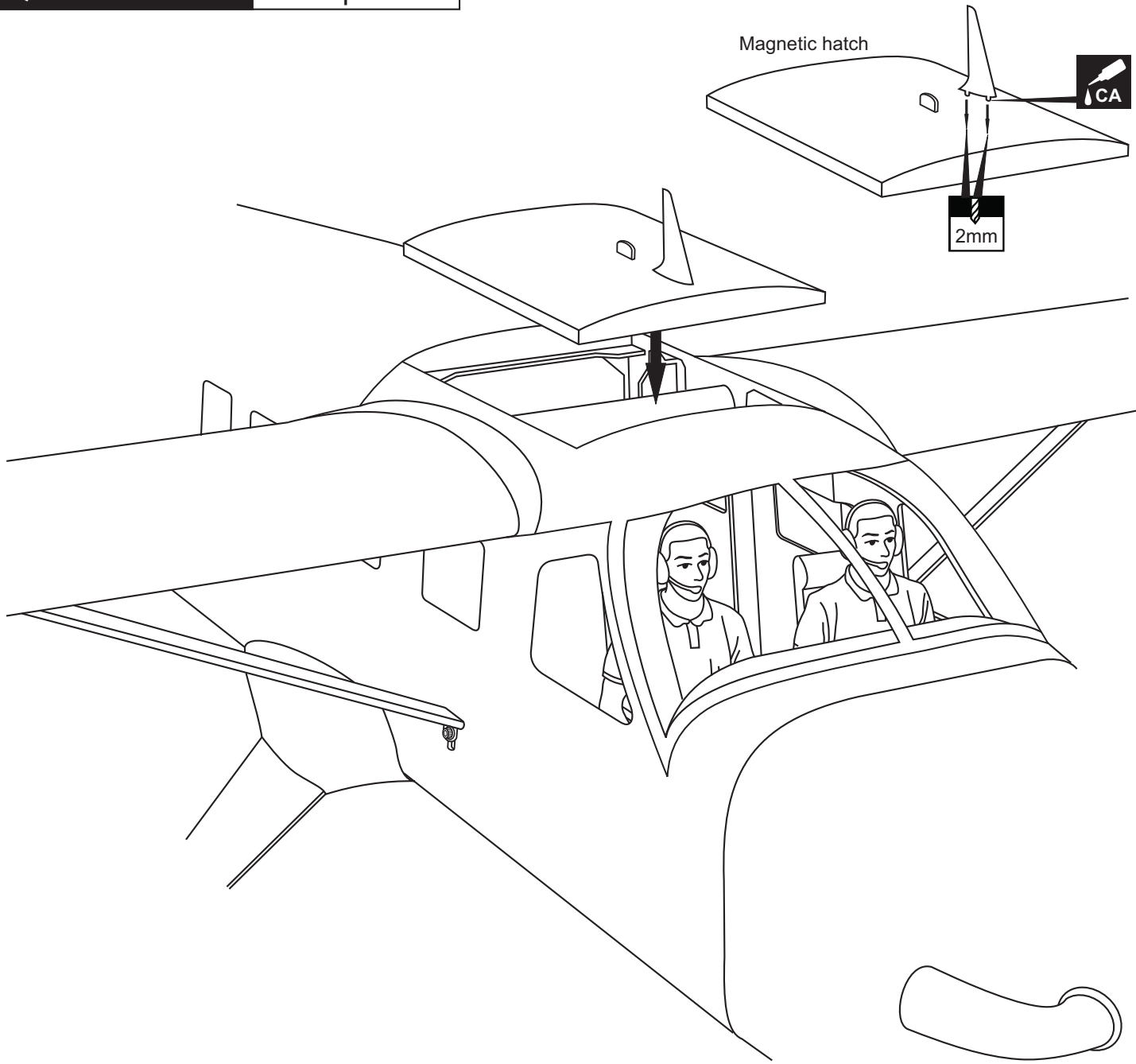
1.2x8mm self-drilling screw
40

QUEST KODIAK 35- Installing the wings



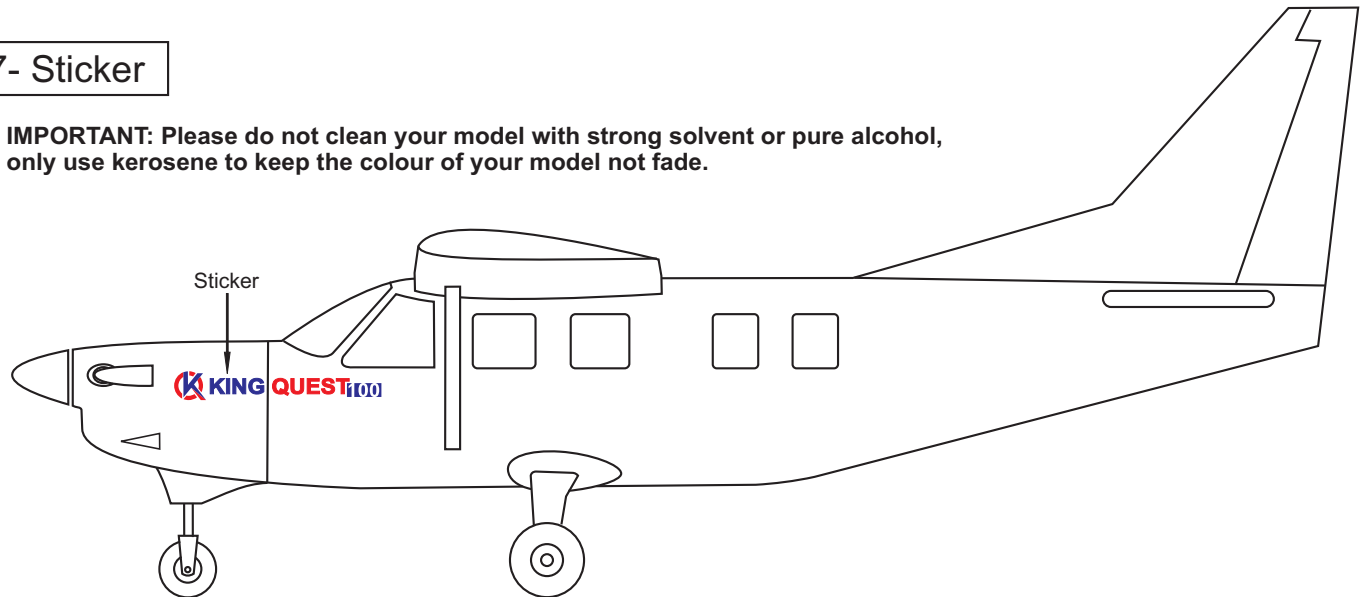
- 7x70mm nylon bolt2
- 3x15mm hexagonal bolt2
- 3mm blind nut2
-2

QUEST KODIAK 36- Top hatch

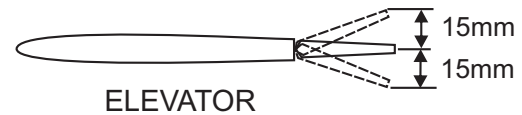
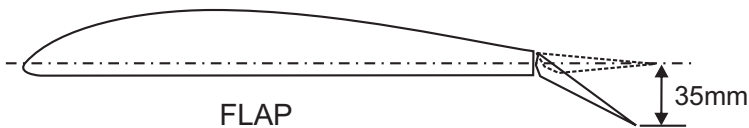
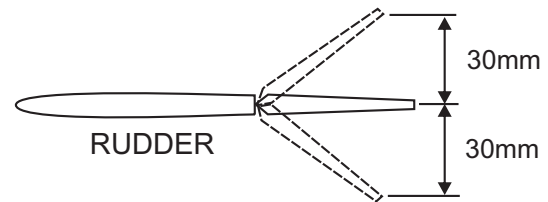
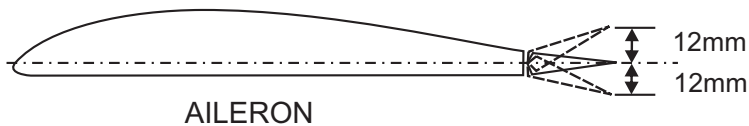
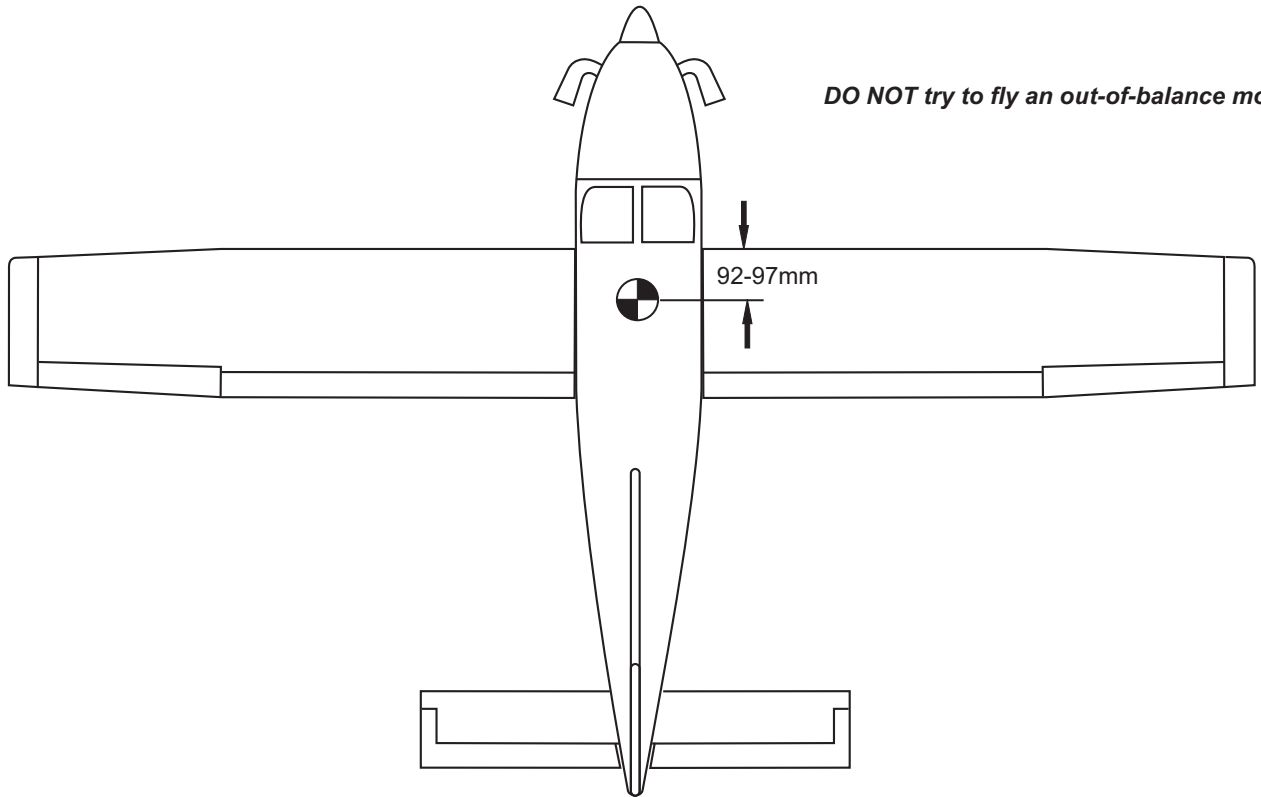


37- Sticker

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.



THE CENTER OF GRAVITY IS LOCATED 92 - 97mm BACK FROM THE LEADING EDGE OF THE WING, AT THE FUSELAGE. BALANCE A PLANE UPSIDE DOWN WITH THE FUEL TANK EMPTY.



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 King Quest 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".

BEFORE FLYING CHECK EVERYTHING

Before each flight, inspect the airplane for any loose parts. Check the hinges, make sure the pushrods are still firmly attached, and check the engine mounting bolts. In general, check everything on the plane that might possibly come loose.