

H·KING

R/C Flugmodell

R/C Airplane Model

TIGER MOTH

DH-82



ALL BALSA, PLYWOOD CONSTRUCTION AND ALMOST READY TO FLY

Anleitung / Instructions

VQ No: VQA139R/Y/DK

TECHNISCHE DATEN

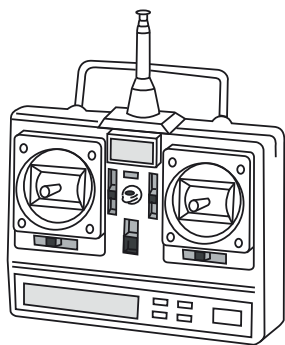
Spannweite1400mm
Länge1180mm
Elektroantrieb..... 750W
Verbrennerantrieb7.45cc - 11.5cc
Fluggewicht3,5Kg
Fernsteuerung 5 Kanal / 4 .. 5 Servos

SPECIFICATIONS

Wingspan:.....1400mm
Length:.....1180mm
Electric Motor:.....750W
Glow Engine:..... .46 2-T / .70 4-T
RTF Weight: 3.Kg (will vary with equipment use)
Radio:.....5 Channel / 4-5 Servos
Function: Ailerons-Elevator-Rudder-Throttle

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 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 Unterstützung, 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.



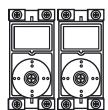
Luftschraube 12x5 (Holz), # C9714
Propeller 12x5 (Wooden)

Fernsteuerung GigaProp 6
C8802

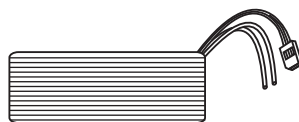
Radio Set GigaProp 6



MASTER SERVO
DS3012MG x2, # C7578



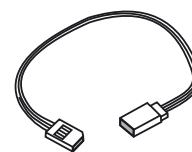
MASTER SERVO
DS4020 x2, # C4994



LiPo Akku 4500 - 11,1V # C9421
LiPo Battery 4500- 11,1V

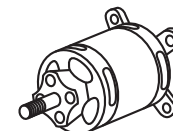
Akku Klettbander
C4738

Battery Straps



Servokabelverlängerung x2, # C2036
Servo Extensionwire

Servokabelverlängerung x2, # C1393
Servo Extensionwire



Brushless Power Set
BOOST 40 # C9109

Passendes Zubehör finden Sie hier:
Find all suitable accessories here:

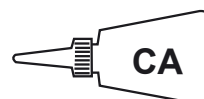
www.hobbyking.com

Klebstoff /Glue

(separat erhältlich - available seperately)



5-Minute Epoxy, # X3598-120



Sekundenkleber / CA Glue, # X3572

Werkzeug / Tools

(nicht im Lieferumfang / not included)

Hobby knife



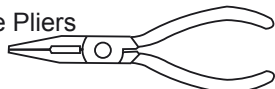
Phillip screw driver



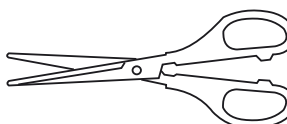
Hex Wrench



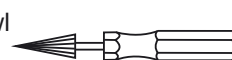
Needle nose Pliers



Scissors



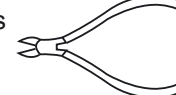
Awl



Sander



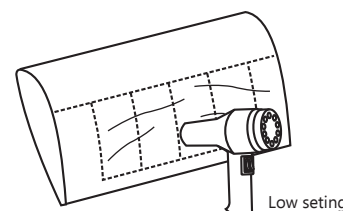
Wire Cutters



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 edges by using a hot iron.

Bei Sonneneinstrahlung und/oder Wärme kann die Folie erschlaffen bzw. Falten entstehen. Verwenden Sie einen Haartrockener, um die Folie ggf. zu spannen. Die Kanten können Sie vorsichtig mit einem Bügeleisen behandeln. Nicht zuviel Hitze anwenden !



Low setting

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



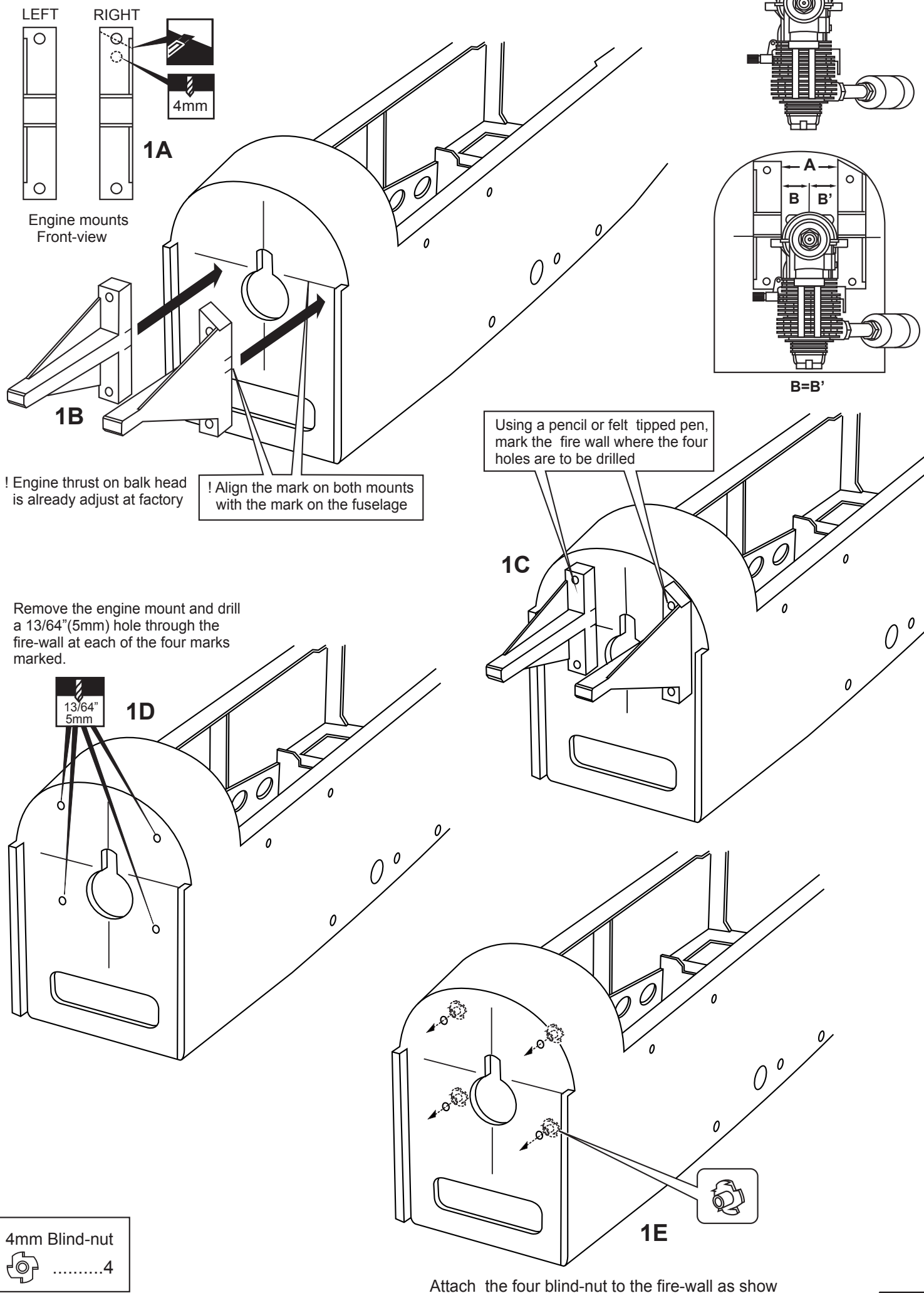
Nicht enthalten. Teile müssen separat gekauft werden.

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"	

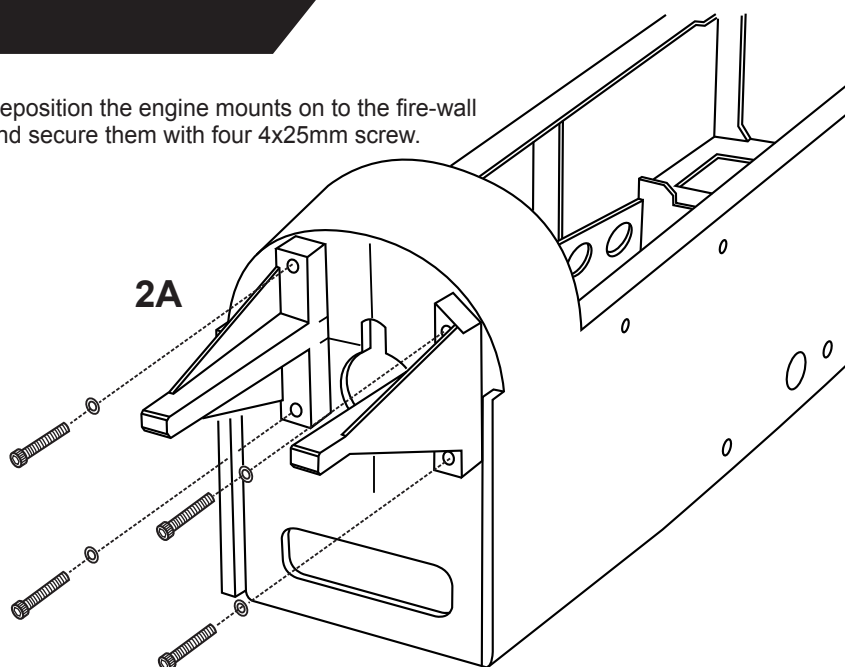
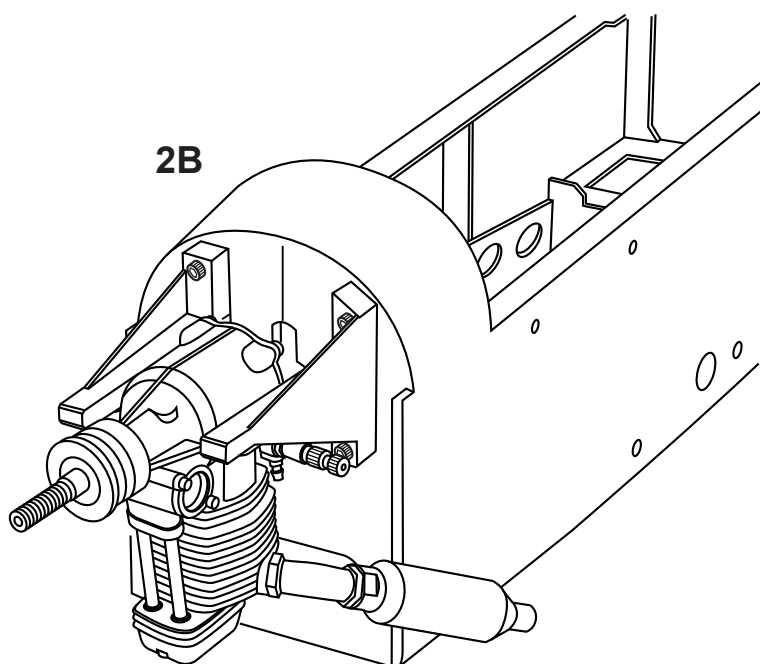
1- Engine installation



2- Engine installation

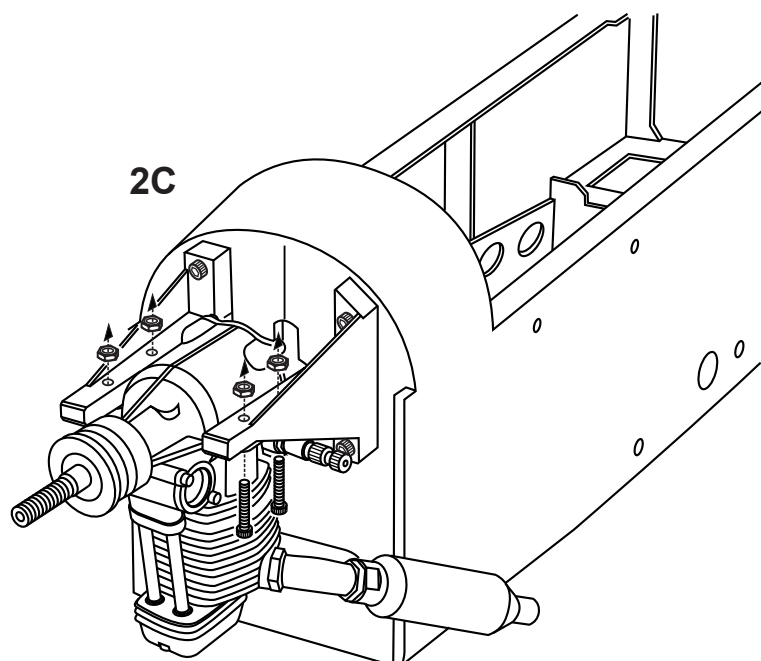
4x25mm screw - washer	4
3x25mm screw - washer	4

Reposition the engine mounts on to the fire-wall and secure them with four 4x25mm screw.

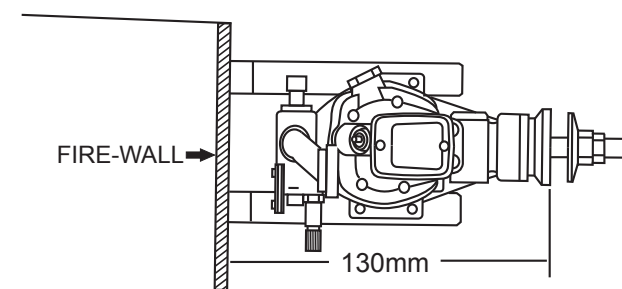


Reposition the engine on to the engine mounts so the distance from the prop hub to the fire wall is 130mm.

- Mark the engine mounting plate where the four holes are to be drilled.
Note: Mark the mounting plate through the engine mounting flanges.
- Remove the engine and drill a 1/8"(3mm) holes through the beam at each of the four marks made above.
- Reposition the engine on the engine mount beams, aligning it with the holes. Secure the engine to the engine mount using four 1/8x51/64"(3x25mm) screws.



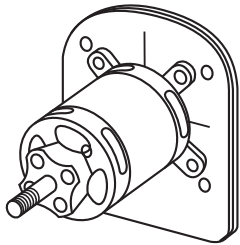
Note: Apply Silicon sealer to each of the 3x25mm screw.



FUSELAGE - BOTTOM VIEW

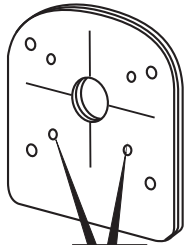
3- Electric Motor installation

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



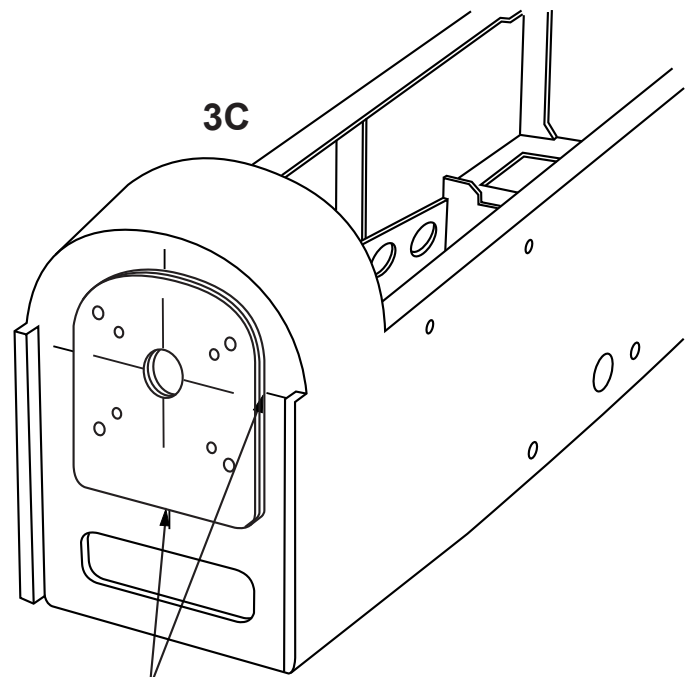
Using an aluminum motor mounting plate as a template, mark the plywood motor mounting plate where the four holes are to be drilled.

3A

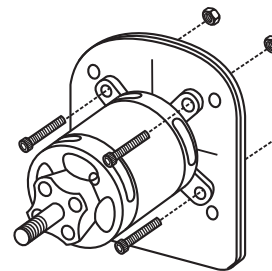


Remove the aluminum motor mounting plate and drill a 1/8" (3mm) hole through the plywood at each of the four marks marked.

3B



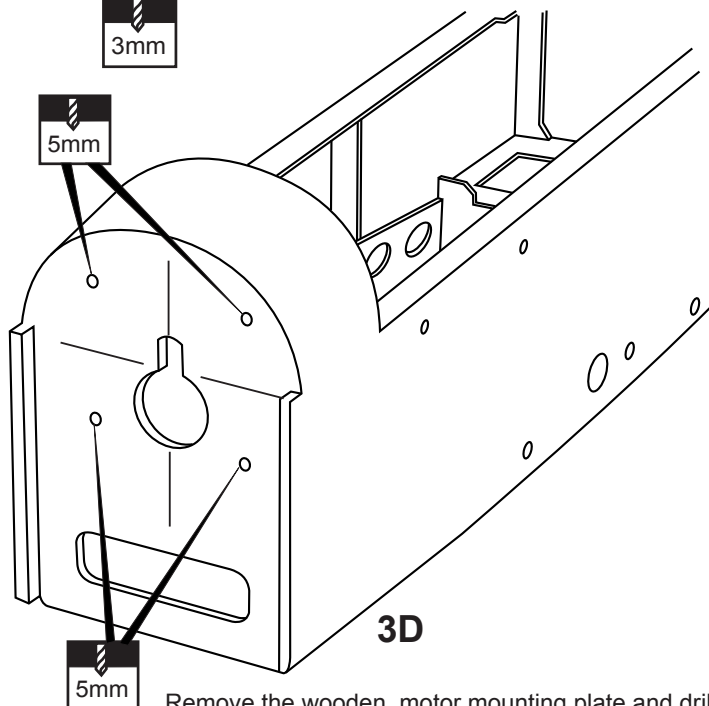
! Align the mark on wooden motor mounting plate with the mark on the fire-wall.



3F

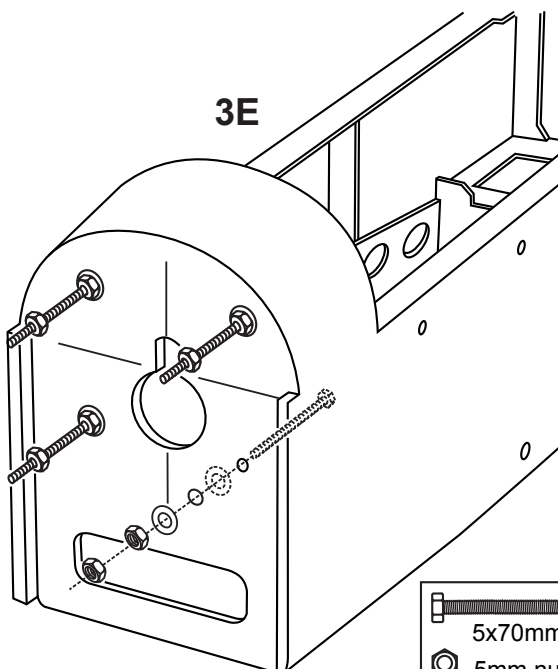
3mm bolt / nut...4

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



3D

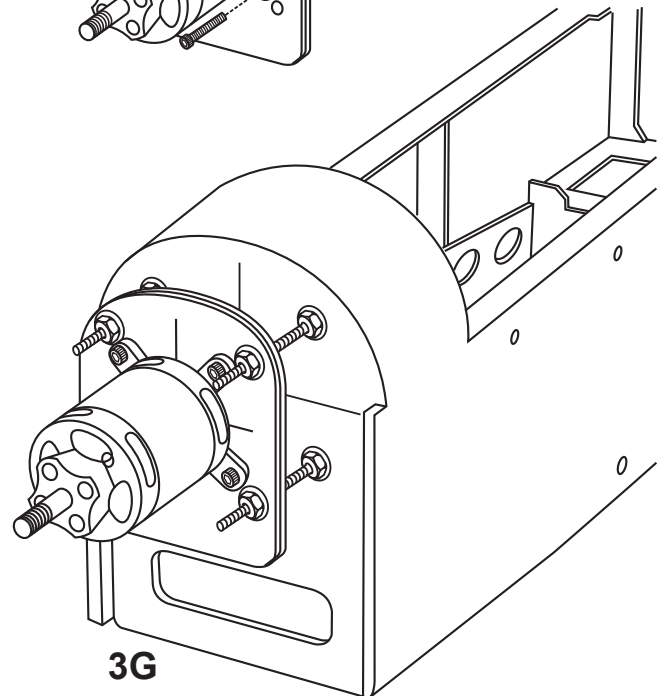
Remove the wooden motor mounting plate and drill a 5mm hole through the fire-wall at each of the four marks marked.



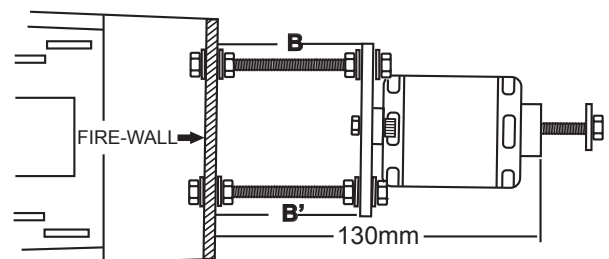
3E

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

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



3G

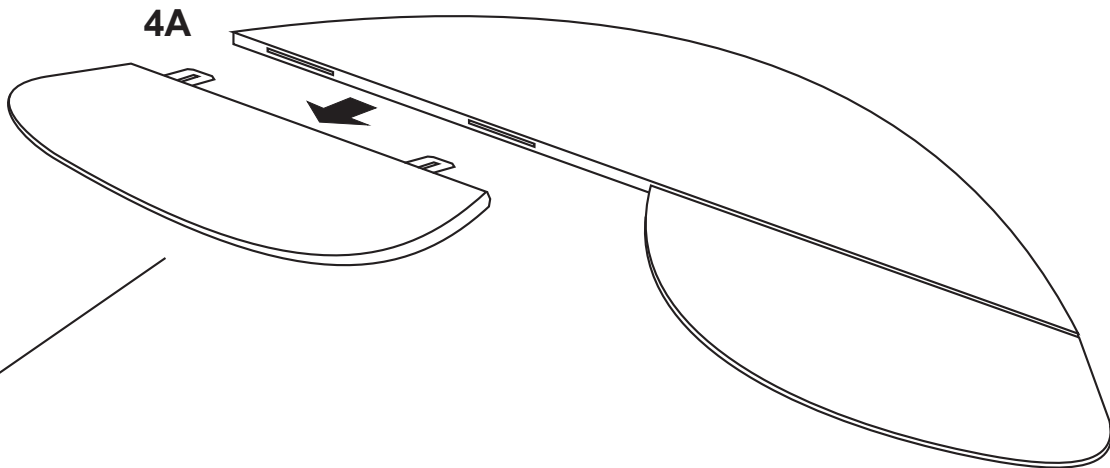


FUSELAGE - TOP VIEW

4- Horizontal Stabilizer

Full the elevator out of the horizontal stabilizer.

4A



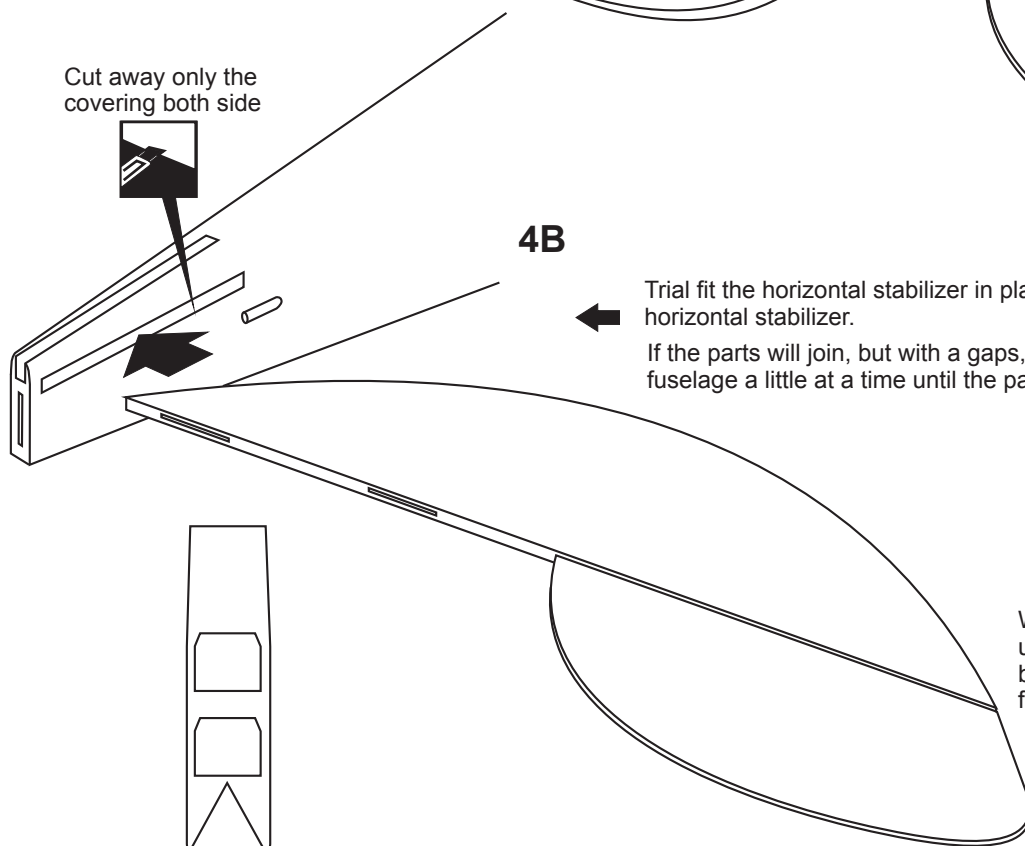
Cut away only the covering both side



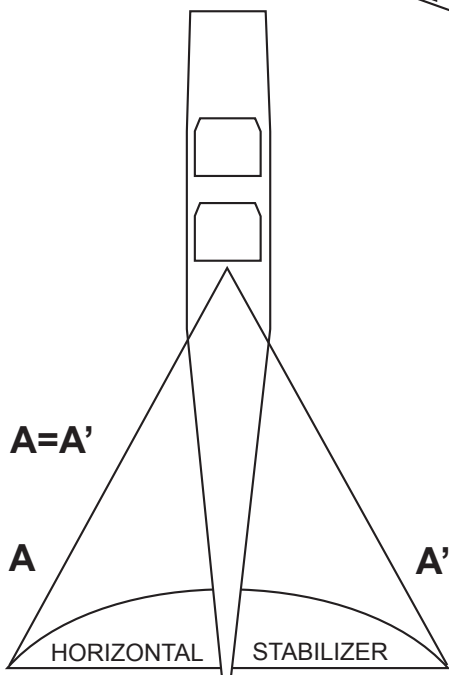
4B

Trial fit the horizontal stabilizer in place. Check the alignment of the horizontal stabilizer.

If the parts will join, but with a gaps, sand or the rectangular hole on the fuselage a little at a time until the parts meet exactly with no gaps.



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.



4C

A=A'

A

A'

HORIZONTAL STABILIZER

TOP VIEW

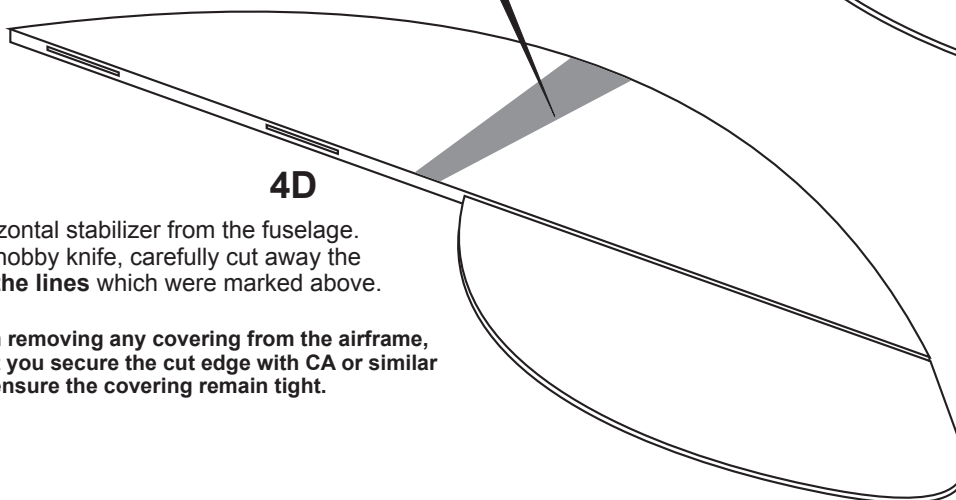
Cut away only the covering both side



4D

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

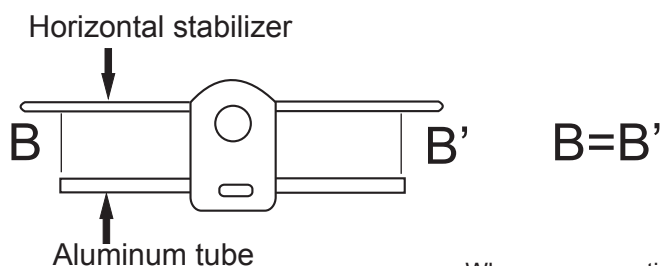
*** WARNING:** When removing any covering from the airframe, please ensure that you secure the cut edge with CA or similar cement. This will ensure the covering remain tight.



5- Horizontal Stabilizer

Install the horizontal stabilizer into the fuselage and adjust the alignment as described in step 4C.

5A



FRONT VIEW

When you are satisfied with the alignment, with the **thin CA** glue around the top and bottom of the stabilizer where it meets the fuselage and inside the slot on the top of the fuselage.

Thin CA



5B

Thin CA



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

TOP-SIDE

HORIZONTAL STABILIZER

Apply a thin layer of petroleum jelly



Apply **thin CA** glue on the top (and bottom) of the hinge

TOP-SIDE

HORIZONTAL STABILIZER

Apply **thin CA** glue on the top and bottom of the hinge



5C

5D

Without using glue yet, push the elevator and its hinges into the hinge slots in trailing edge of the horizontal stabilizer.

6- Vertical Stabilizer

Pull the rudder out of the vertical fin.

Carefully, push the vertical fin into the slot on the fuselage as shown .

6A

6B

6C

Trial fit the vertical fin in position. Using a 90 degree triangle, 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.

6D

Using a sharp hobby knife, carefully cut away the covering **below the lines** which were drawn in the previous step. **Do not cut into the woods** as this will affect the structural integrity of the stabilizer .

Cut away only the covering

6E

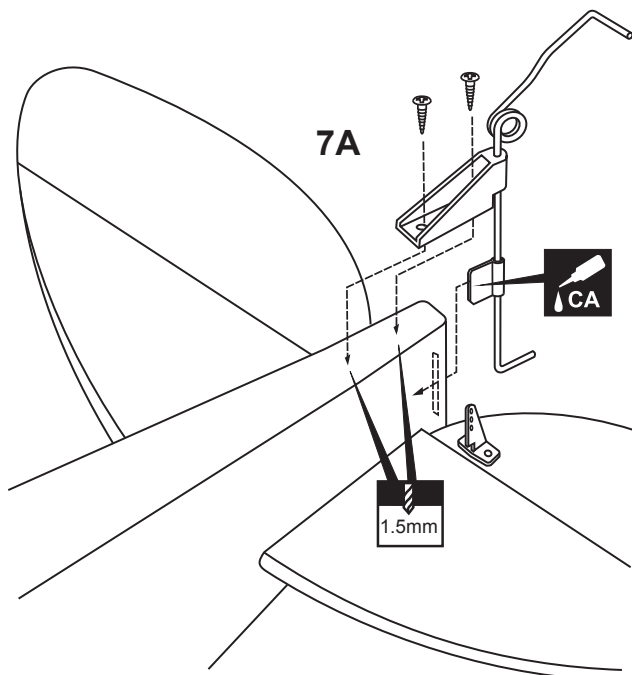


Insert the vertical fin into the fuselage, precisely align the vertical stabilizer as described in step 6C.

Apply the thin CA glue on the vertical stabilizer where it contacts the fuselage.

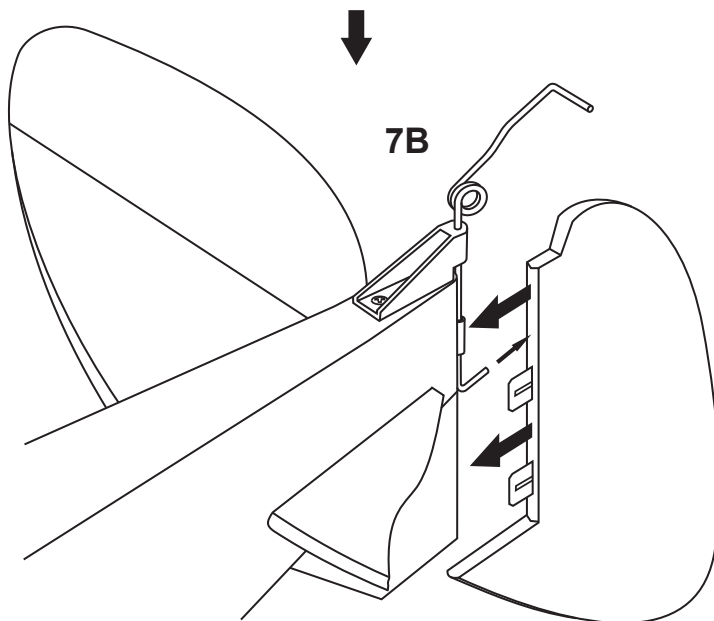
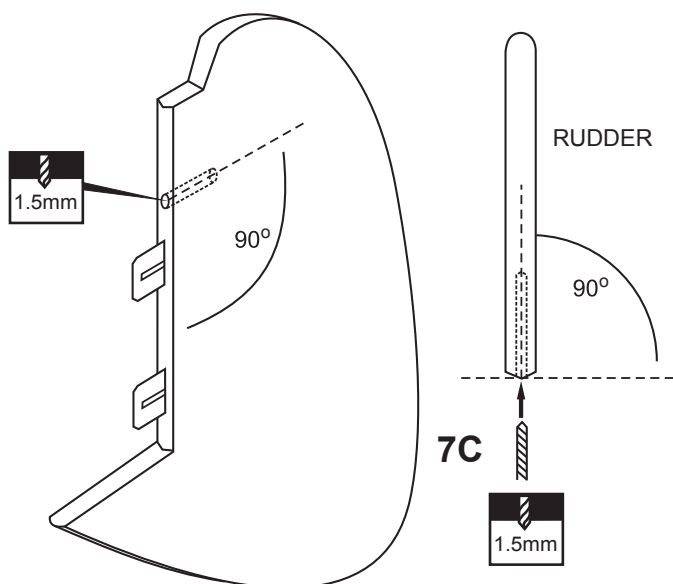
! Securely glue together! If coming off during fly, you lose control of your air plane.

7- Tail wheel and Rudder

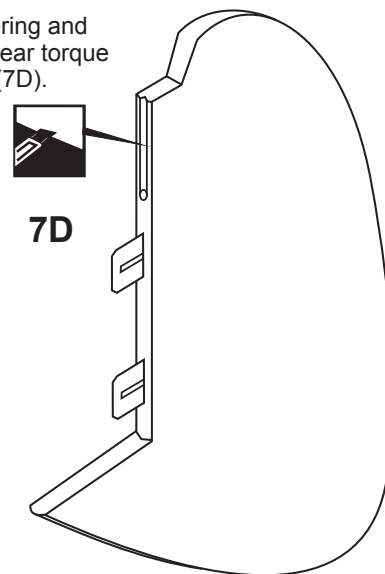


Without using glue yet, push the rudder and its hinges into the hinge slots in the trailing edge of the vertical stabilizer. There should be a minimal hinge gap and the bottom edge of the rudder should not rub against the vertical stabilizer.

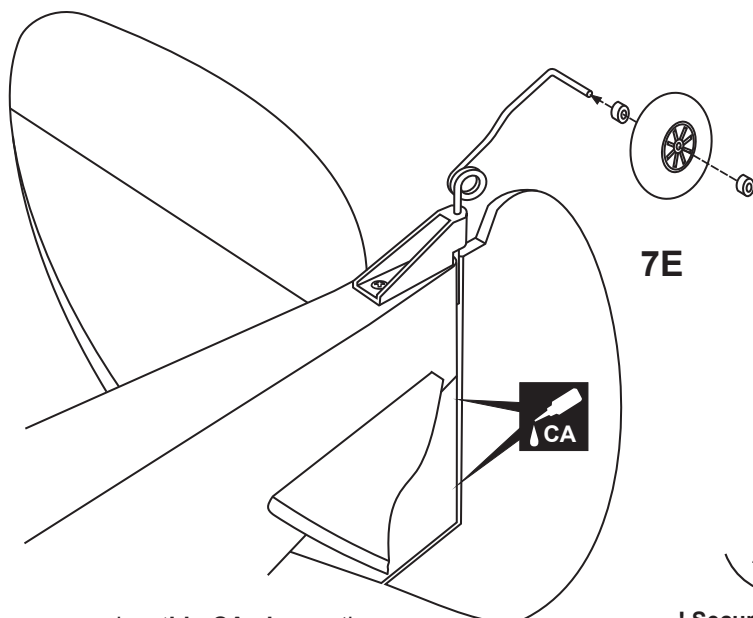
When satisfied with the alignment, mark the mounting hole position, where the tail gear torque rod meets the rudder with a pencil.



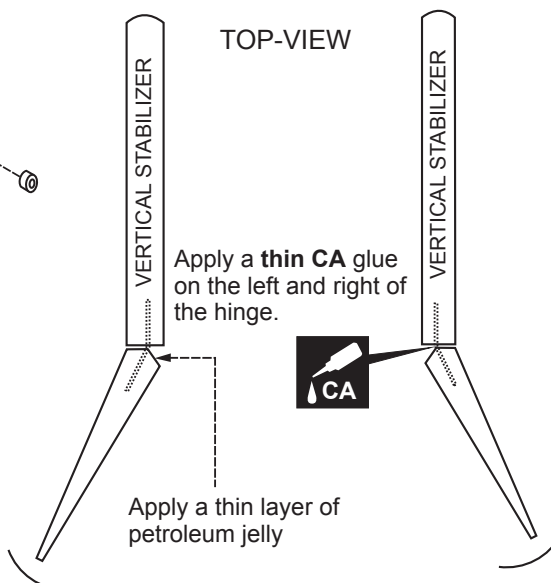
Cut away the covering and balsa for the tail gear torque rod mounting slot (7D).



Remove the rudder and drill 1.5mm hole at the mark marked before. Marking sure that you drill the hole perpendicular to the leading edge of the rudder (7C).

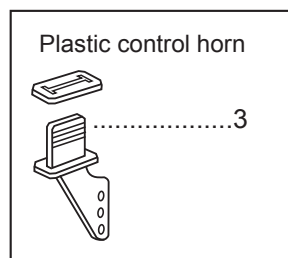
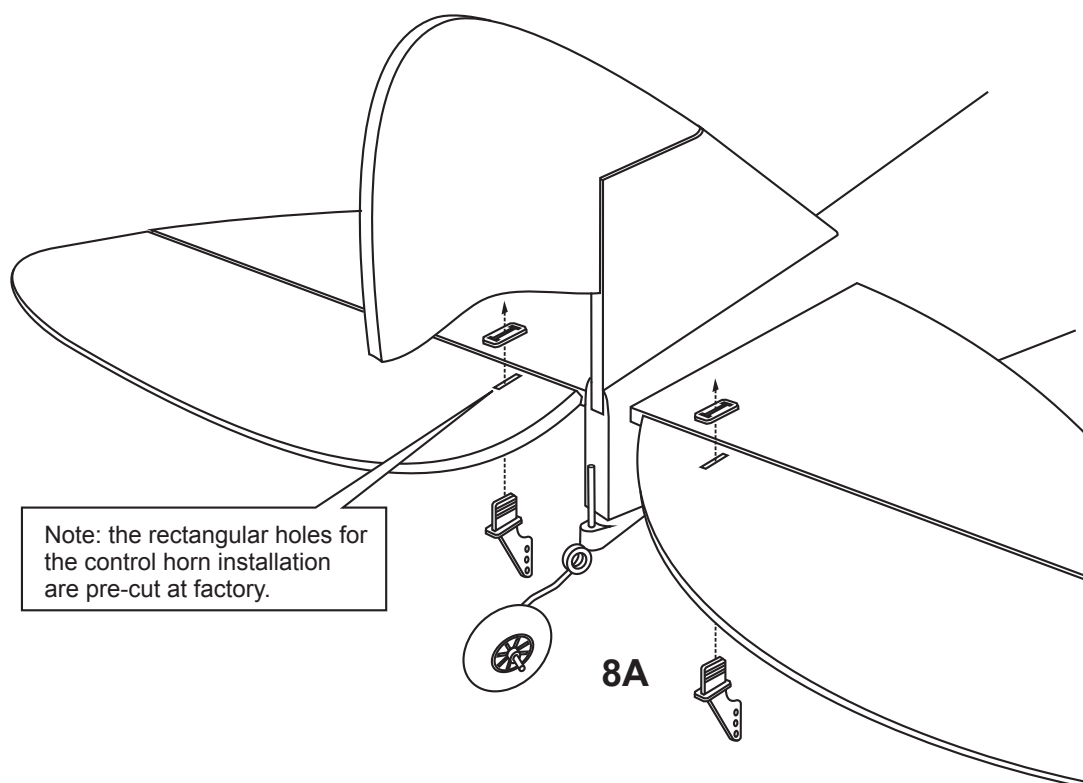
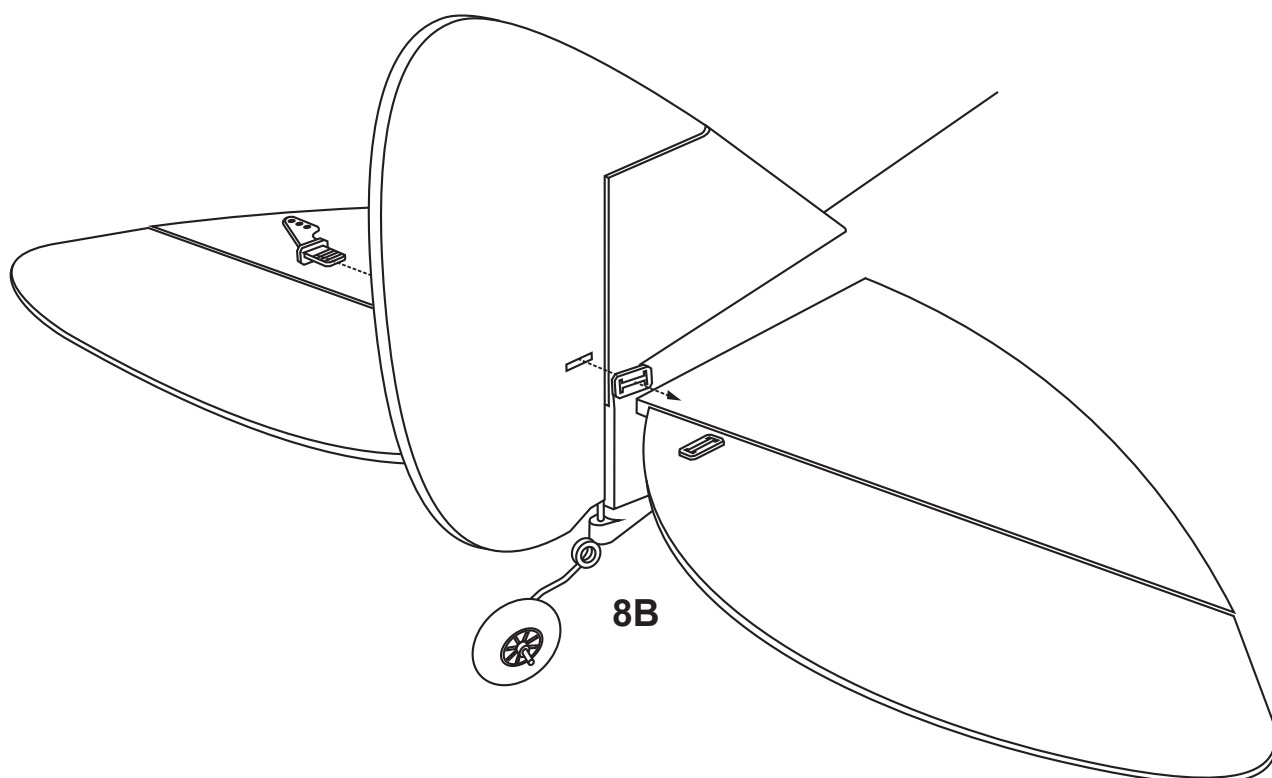


apply a **thin CA glue** on the left and right of the hinge.



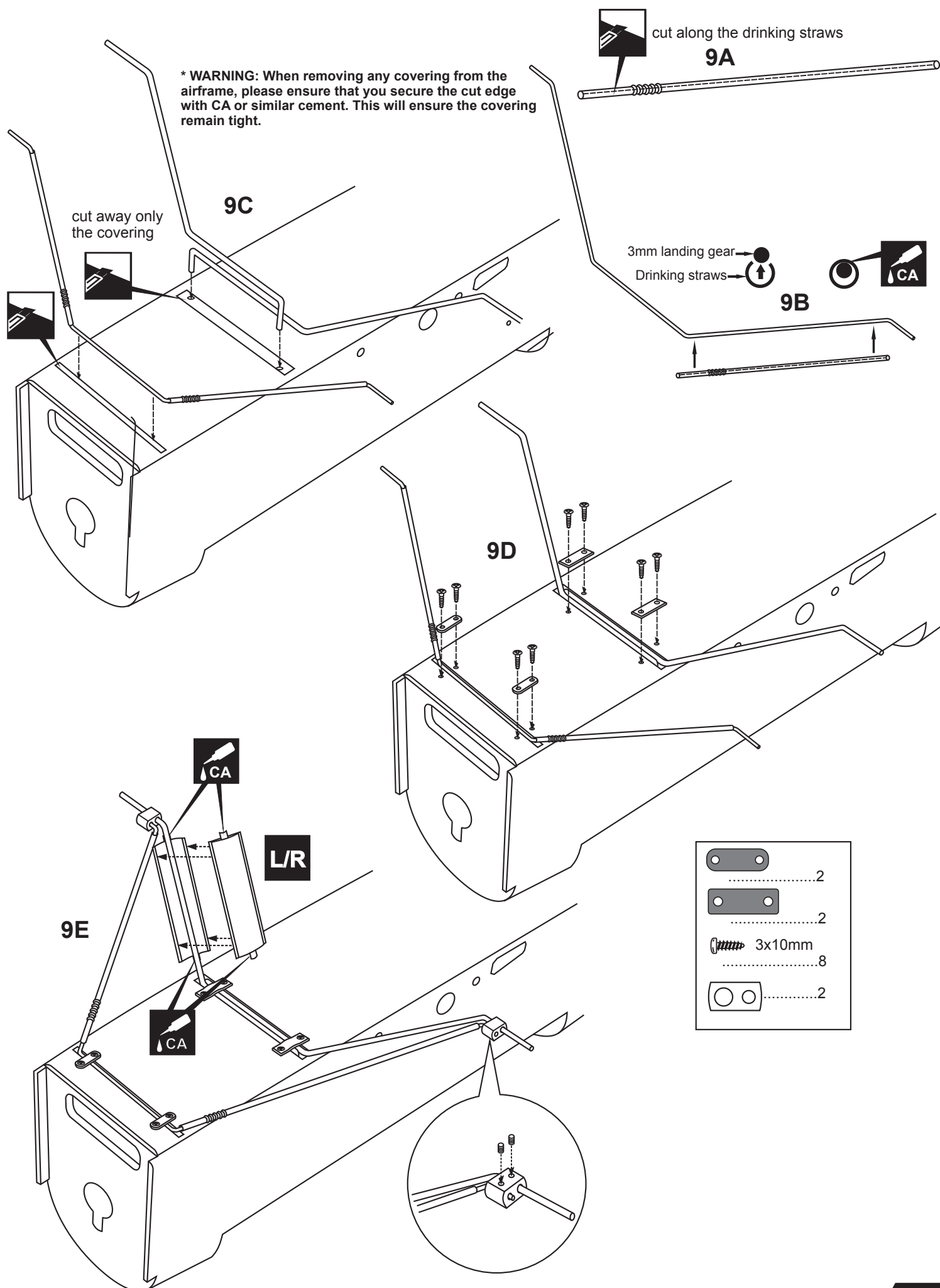
! Securely glue together. If coming off during fly, you lose control of your air plane.

8- Control horn



9- Main landing gear

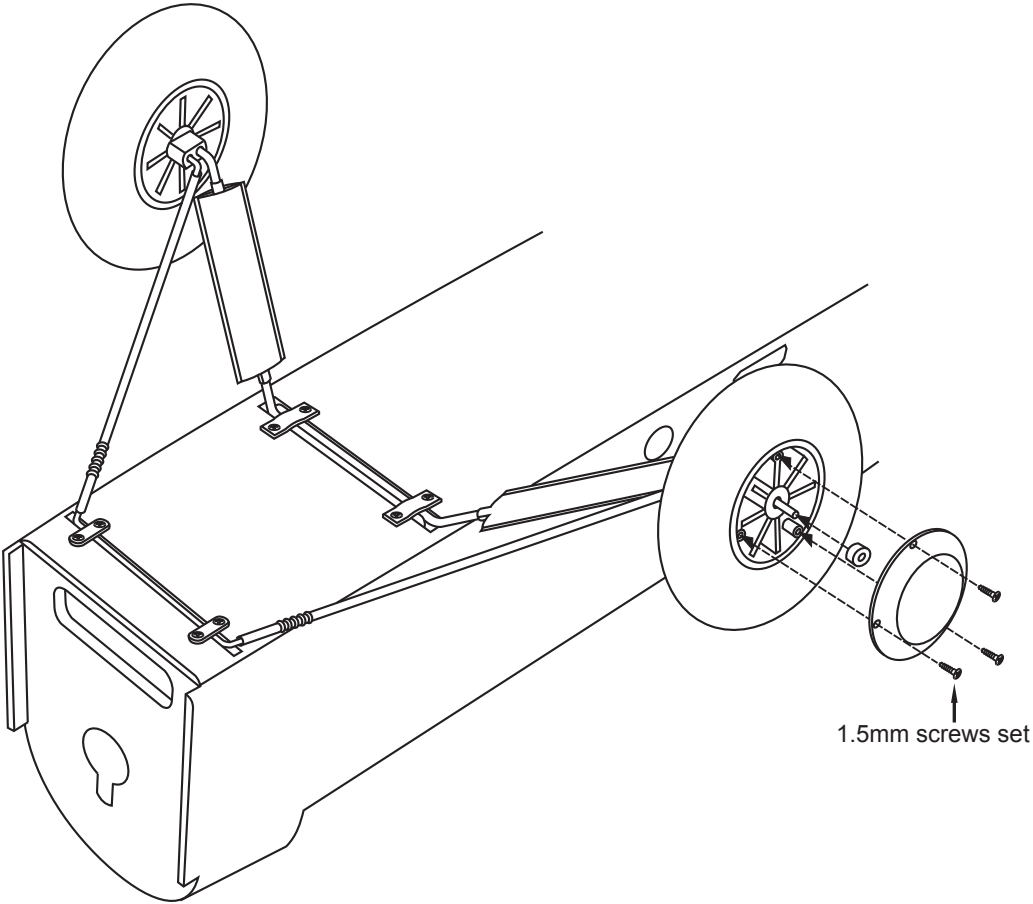
*** WARNING:** When removing any covering from the airframe, please ensure that you secure the cut edge with CA or similar cement. This will ensure the covering remain tight.



10- Main landing gear

2mm ID collar

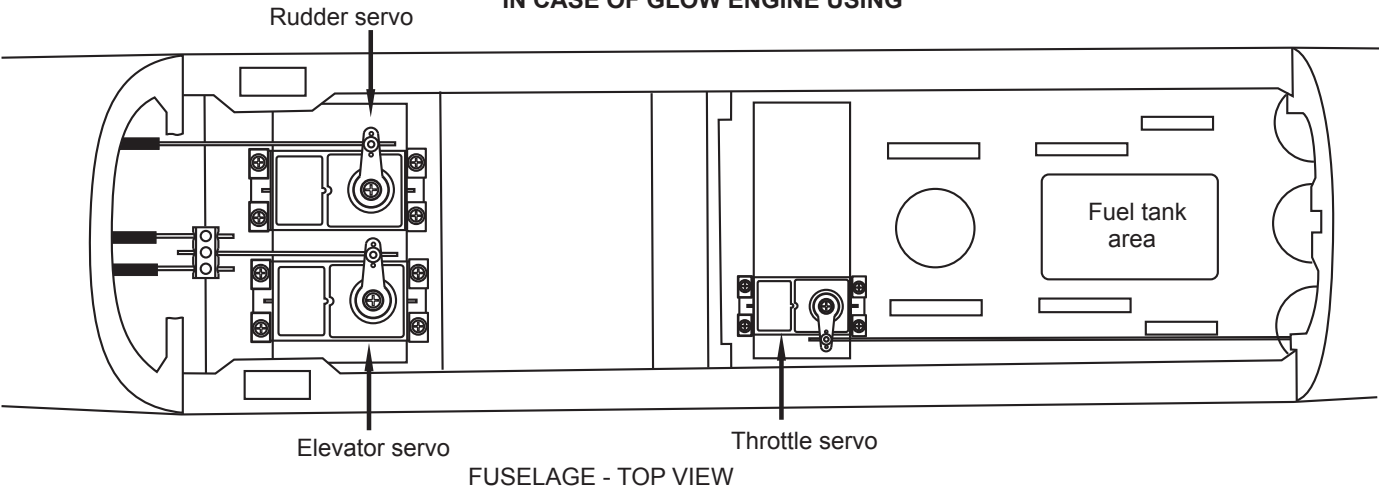
 2



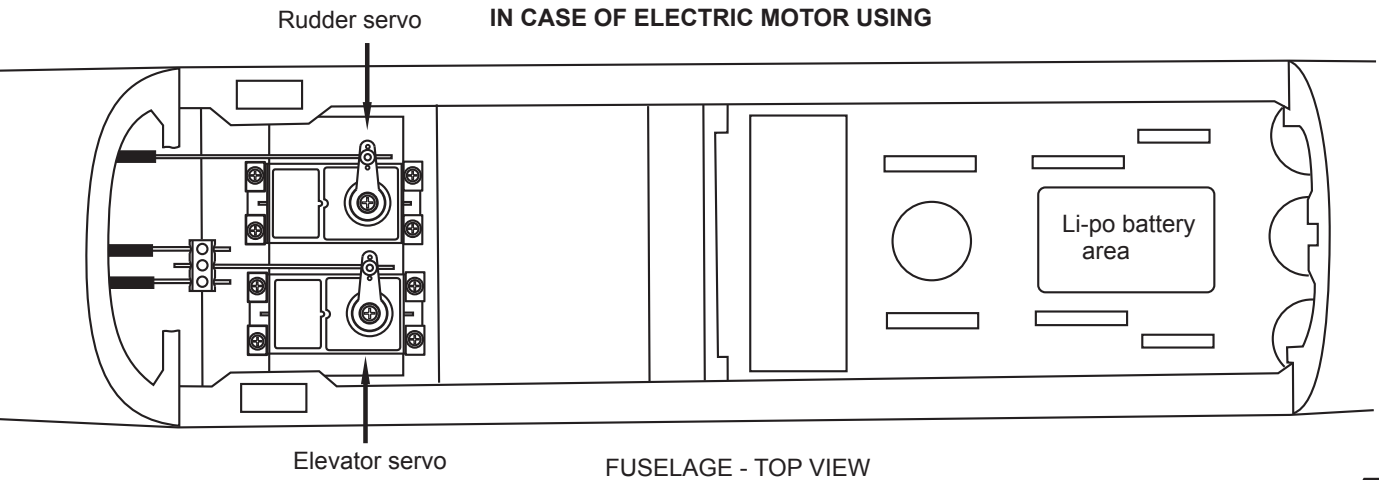
11- Servo and linkages

Connector	Connector
 2	  ...1

IN CASE OF GLOW ENGINE USING

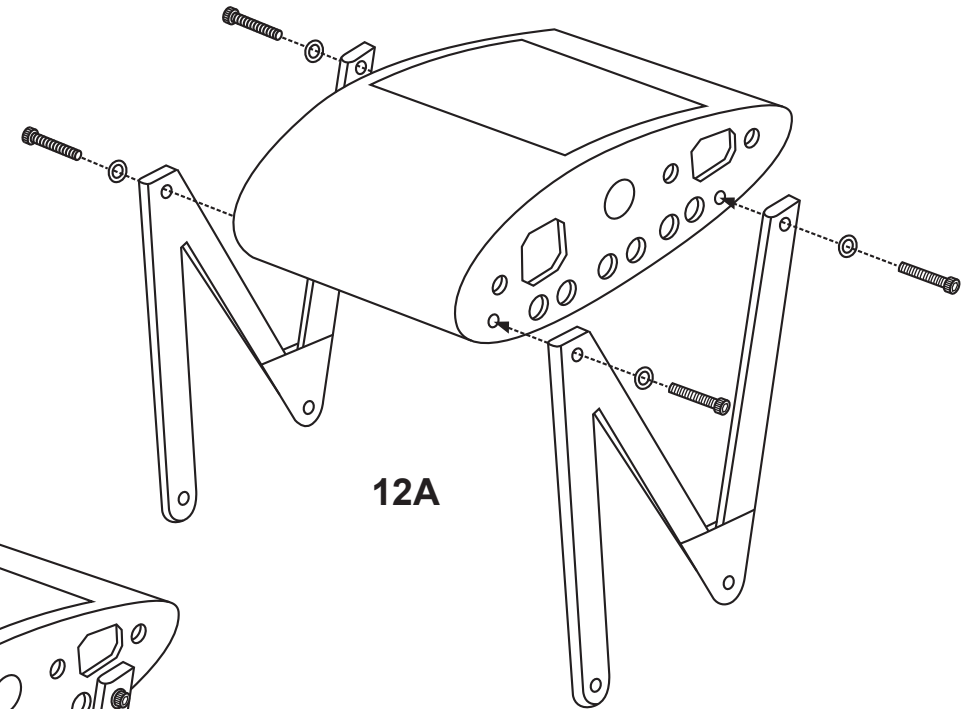


IN CASE OF ELECTRIC MOTOR USING

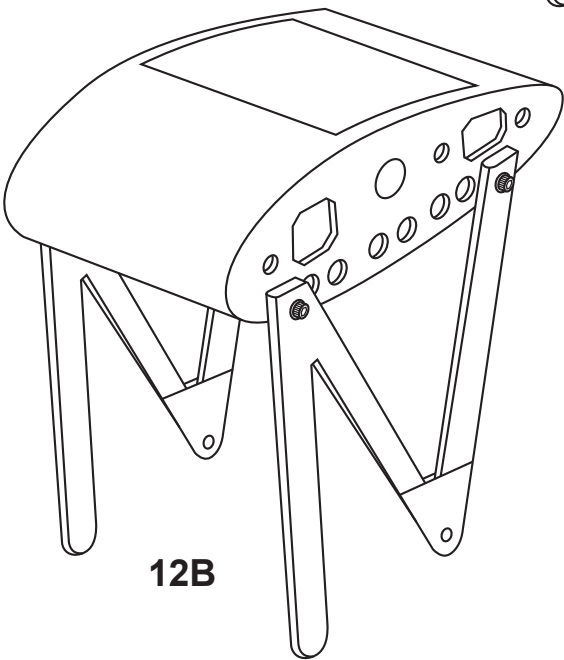


12- Wing Strut

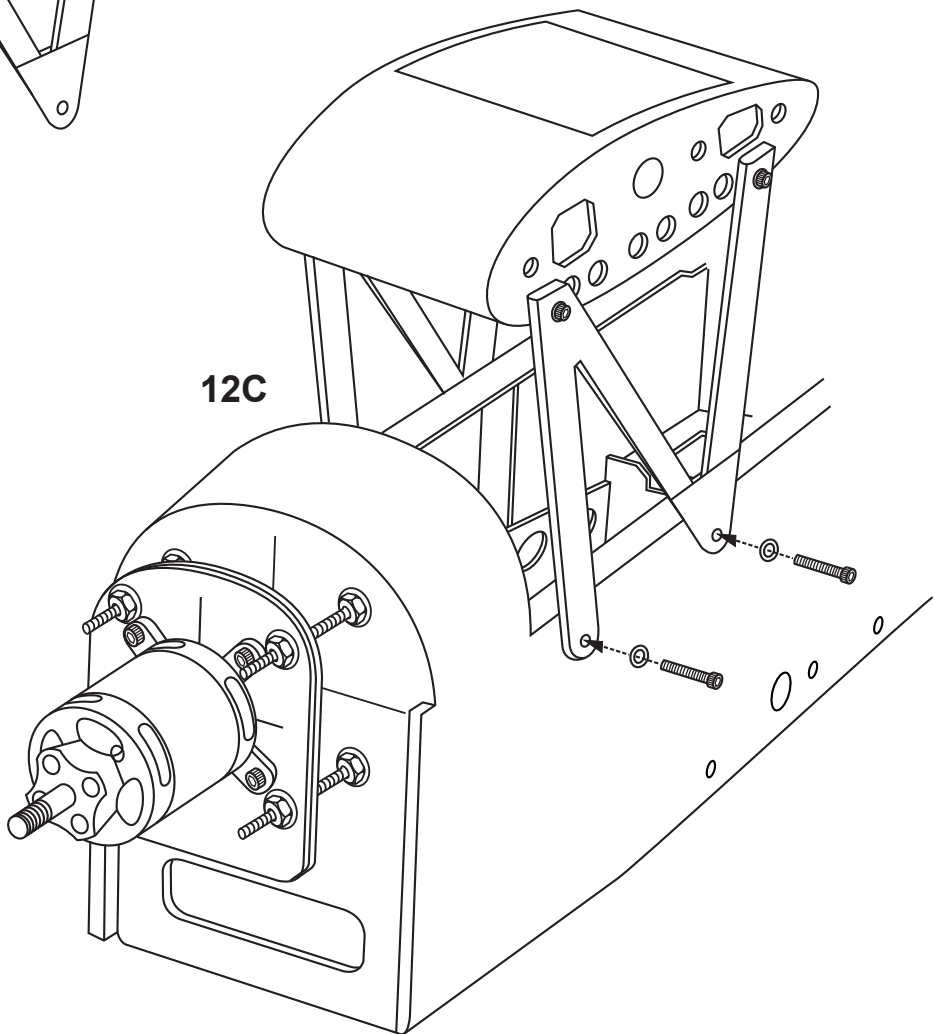
3x25mm screw
8



12A

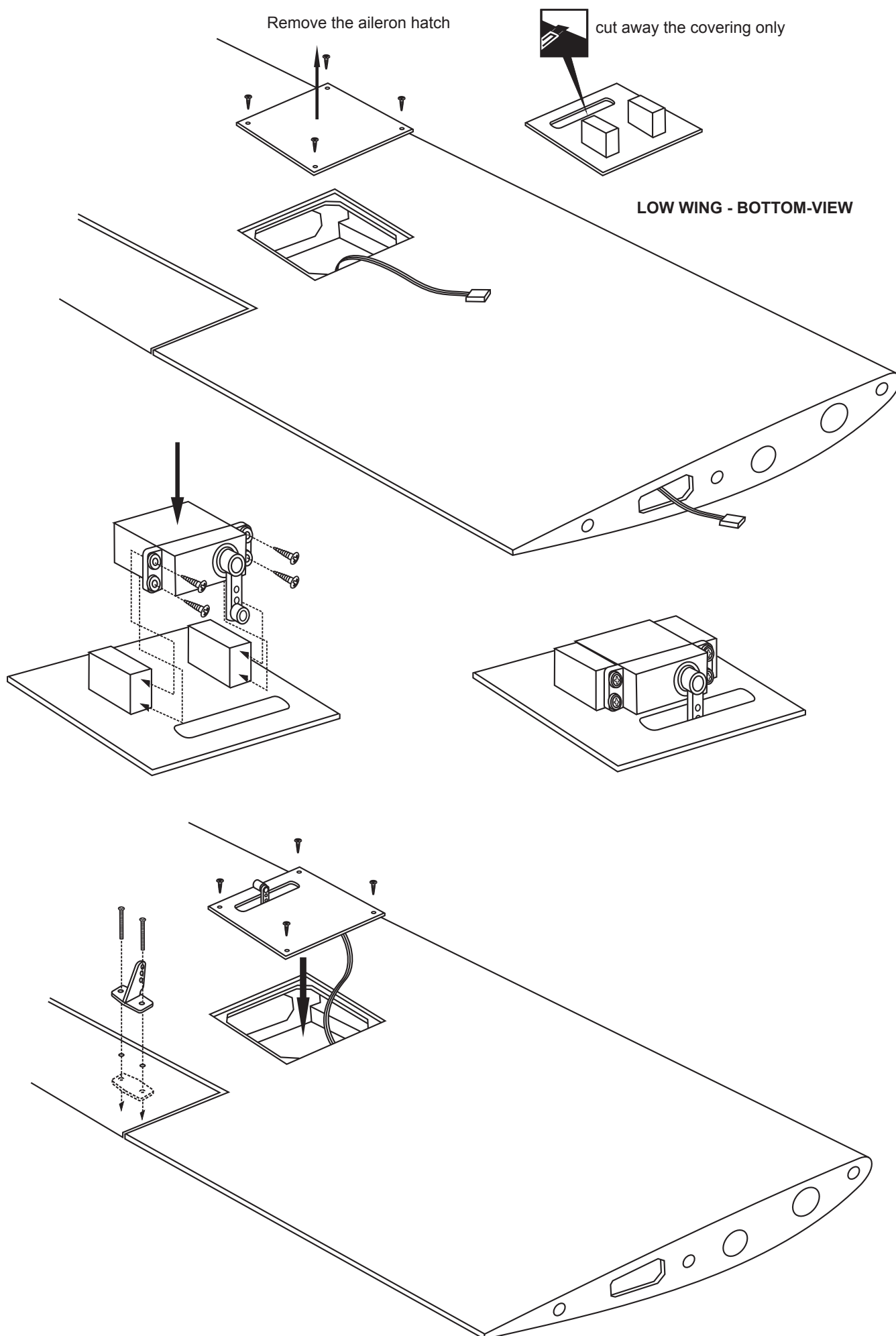


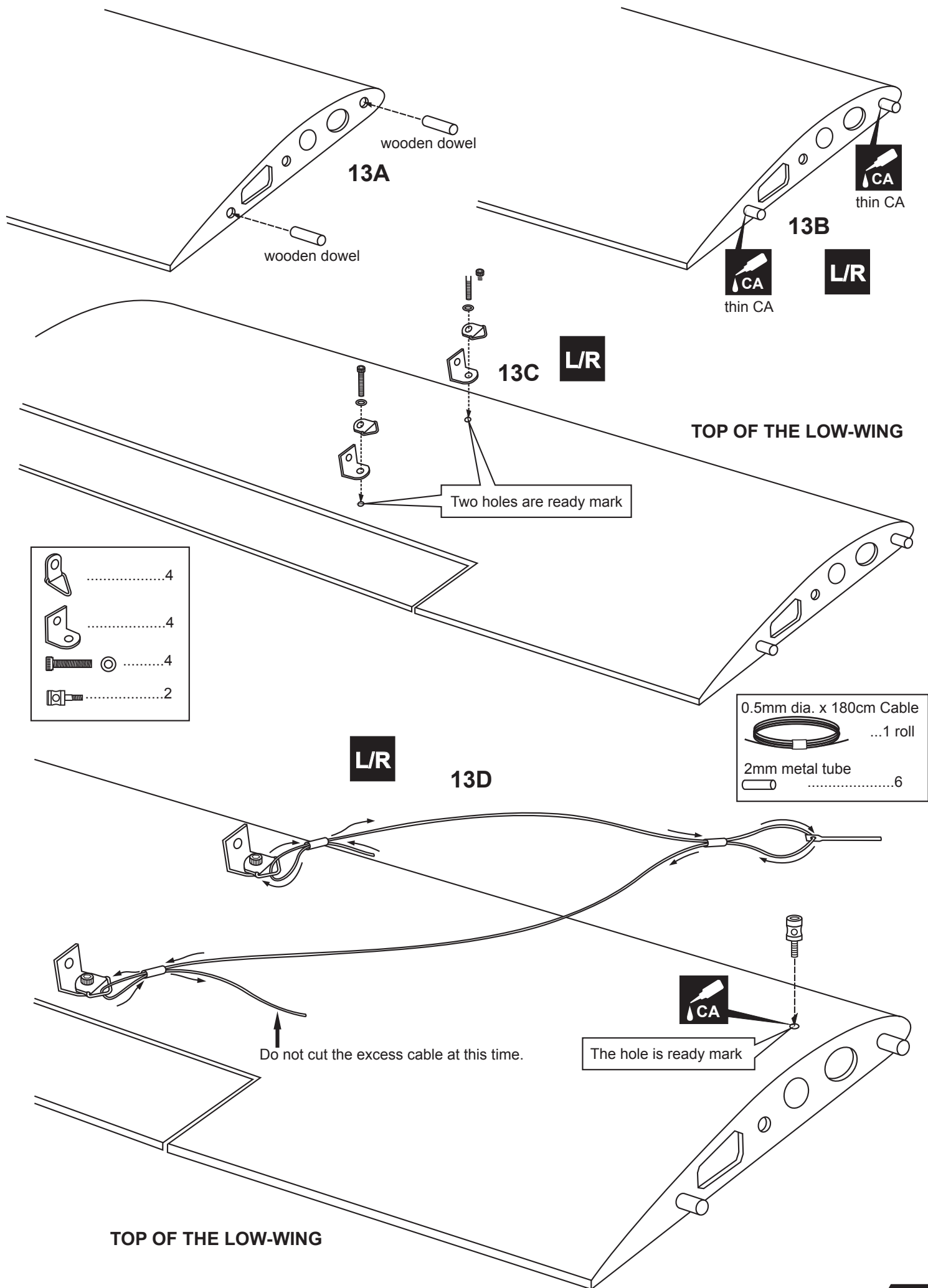
12B



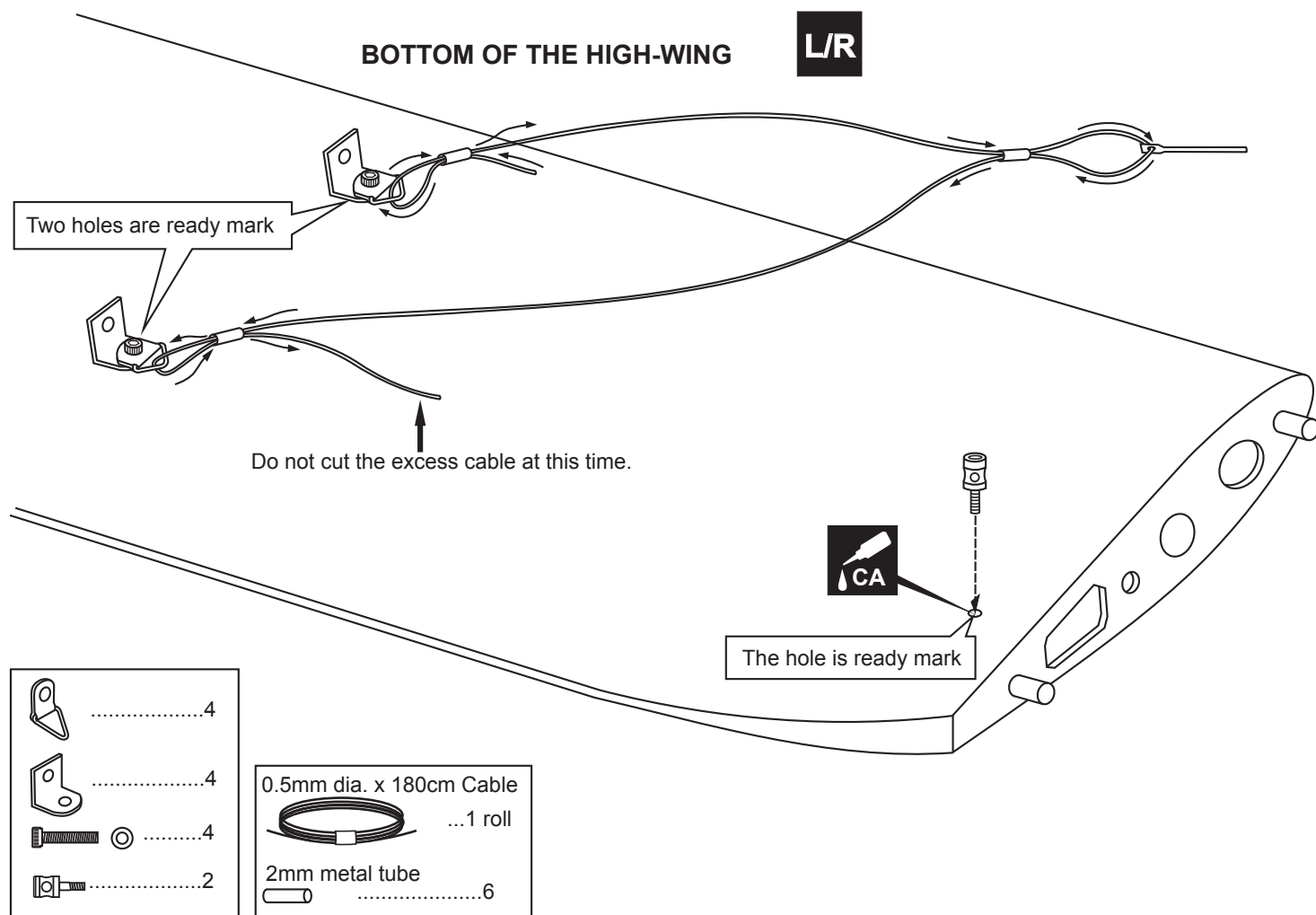
12C

13- Aileron servo

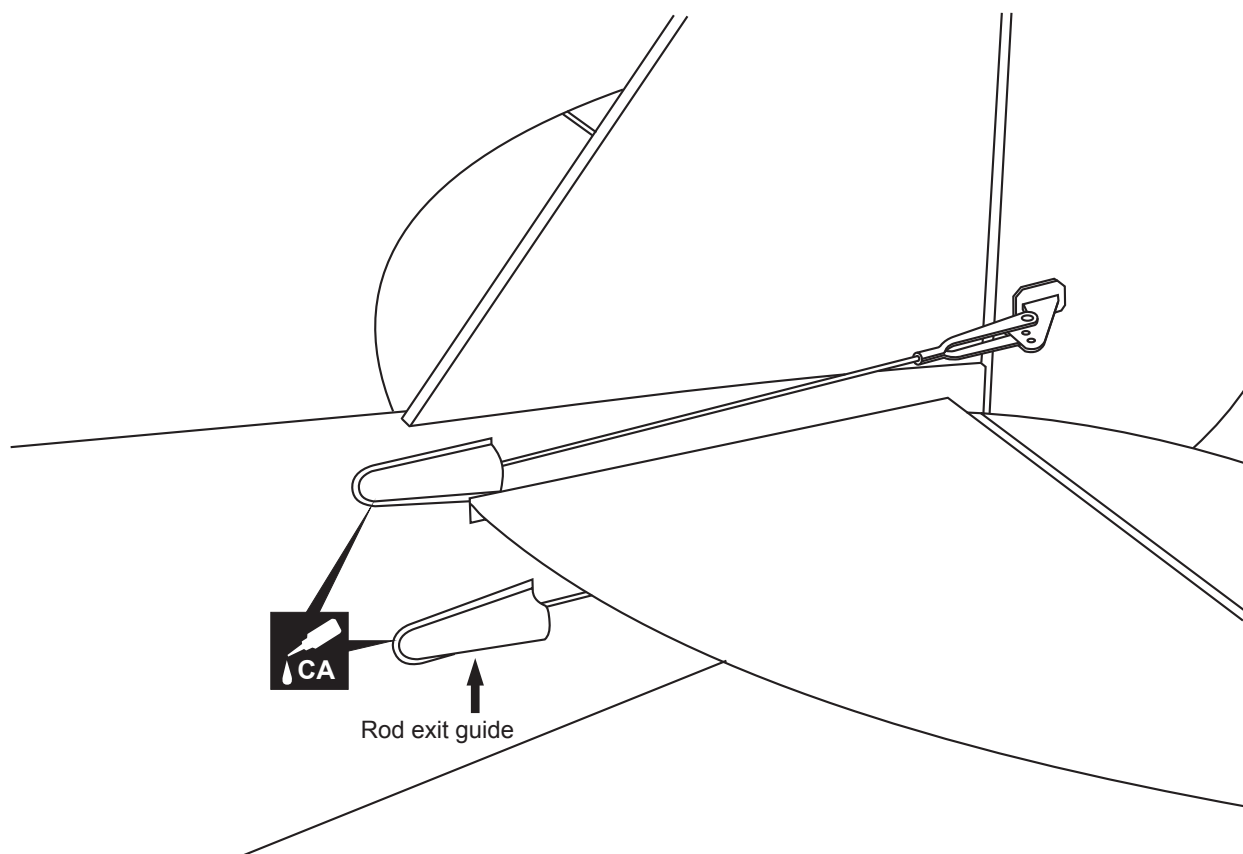




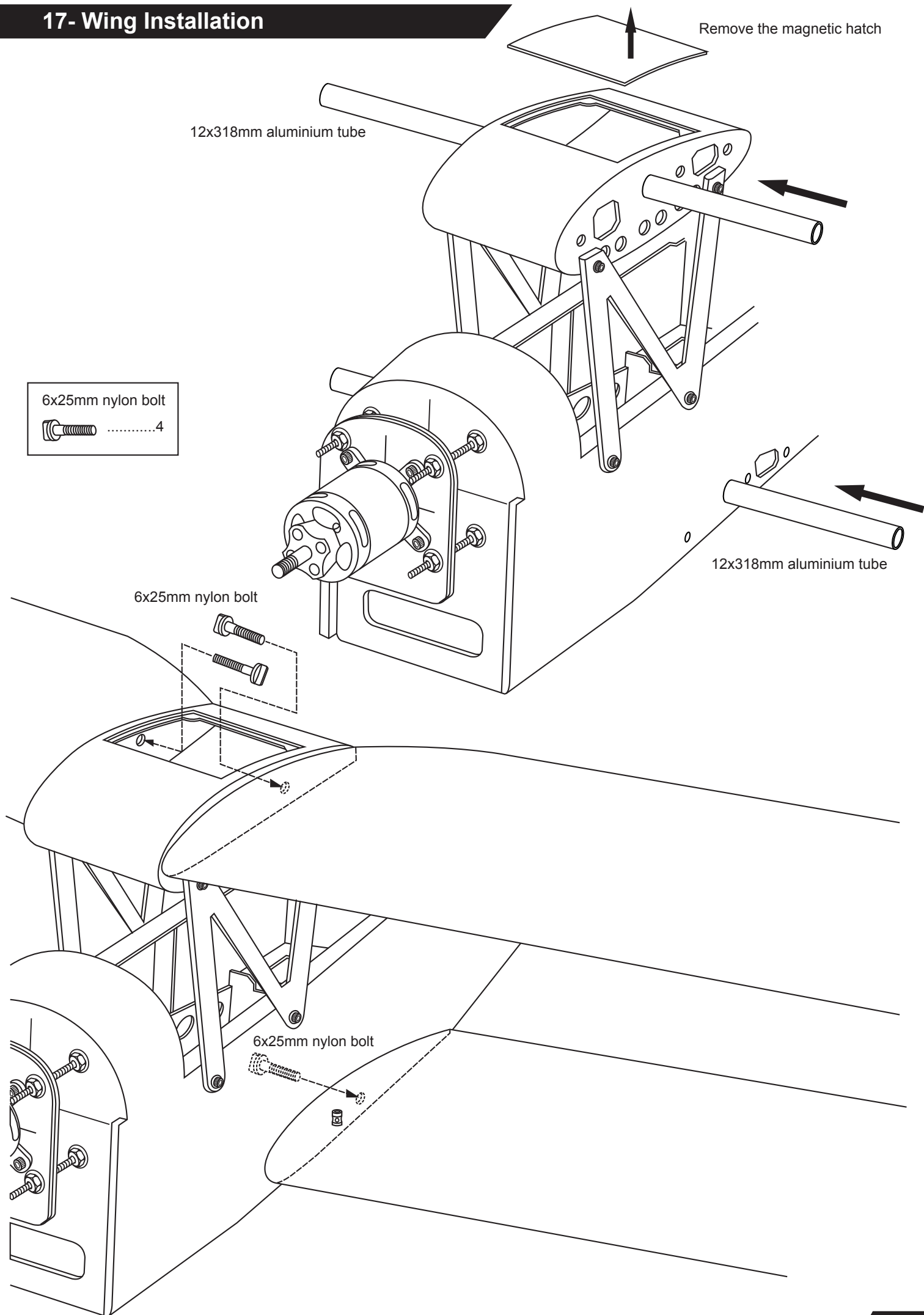
15- High Wing

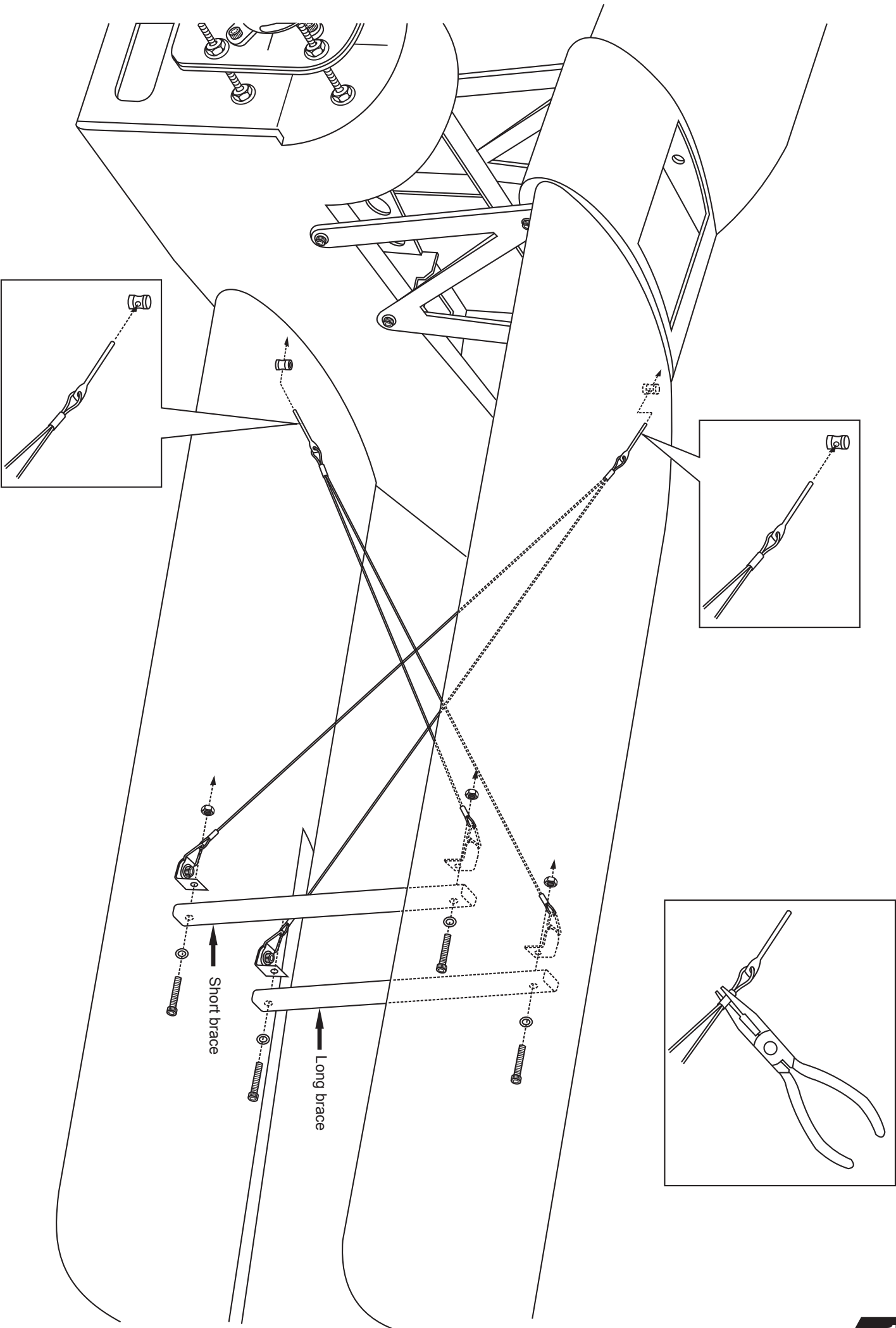


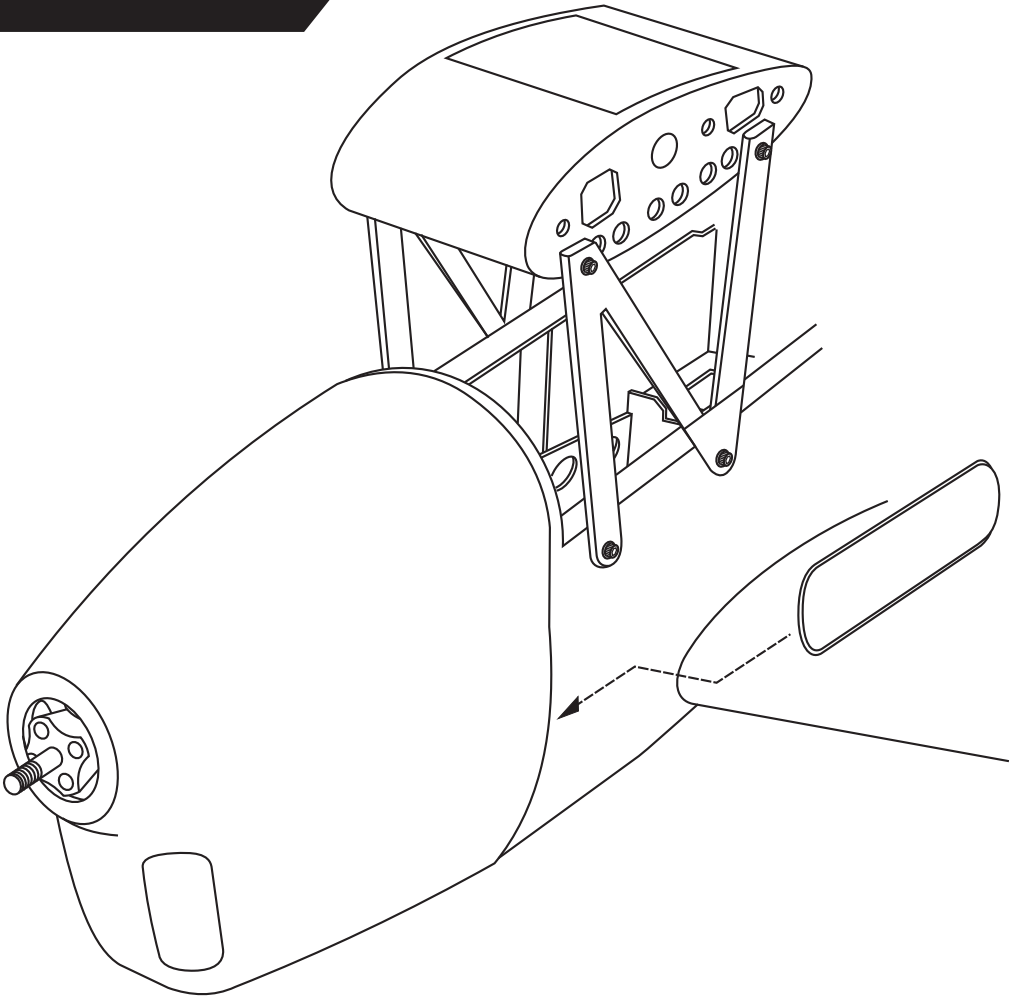
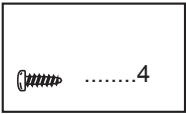
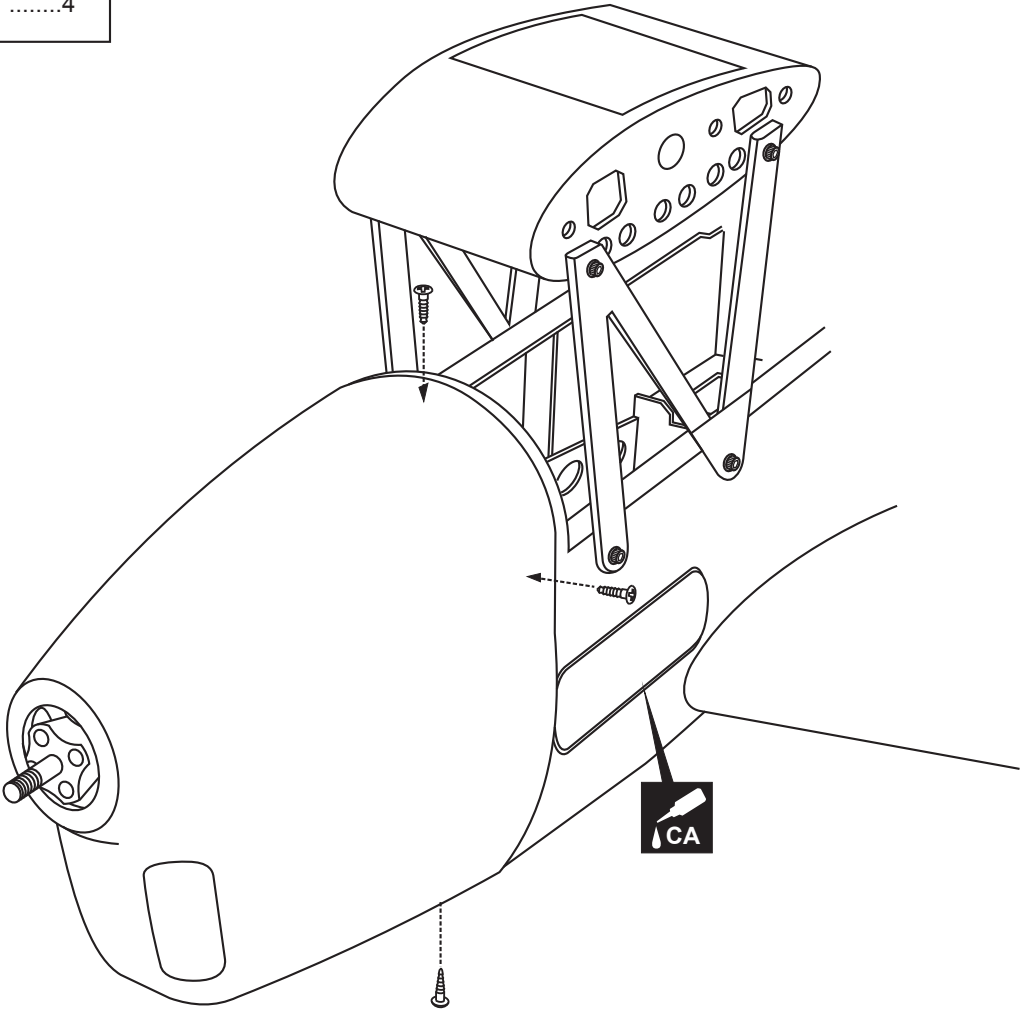
16- Rod exit guide



17- Wing Installation



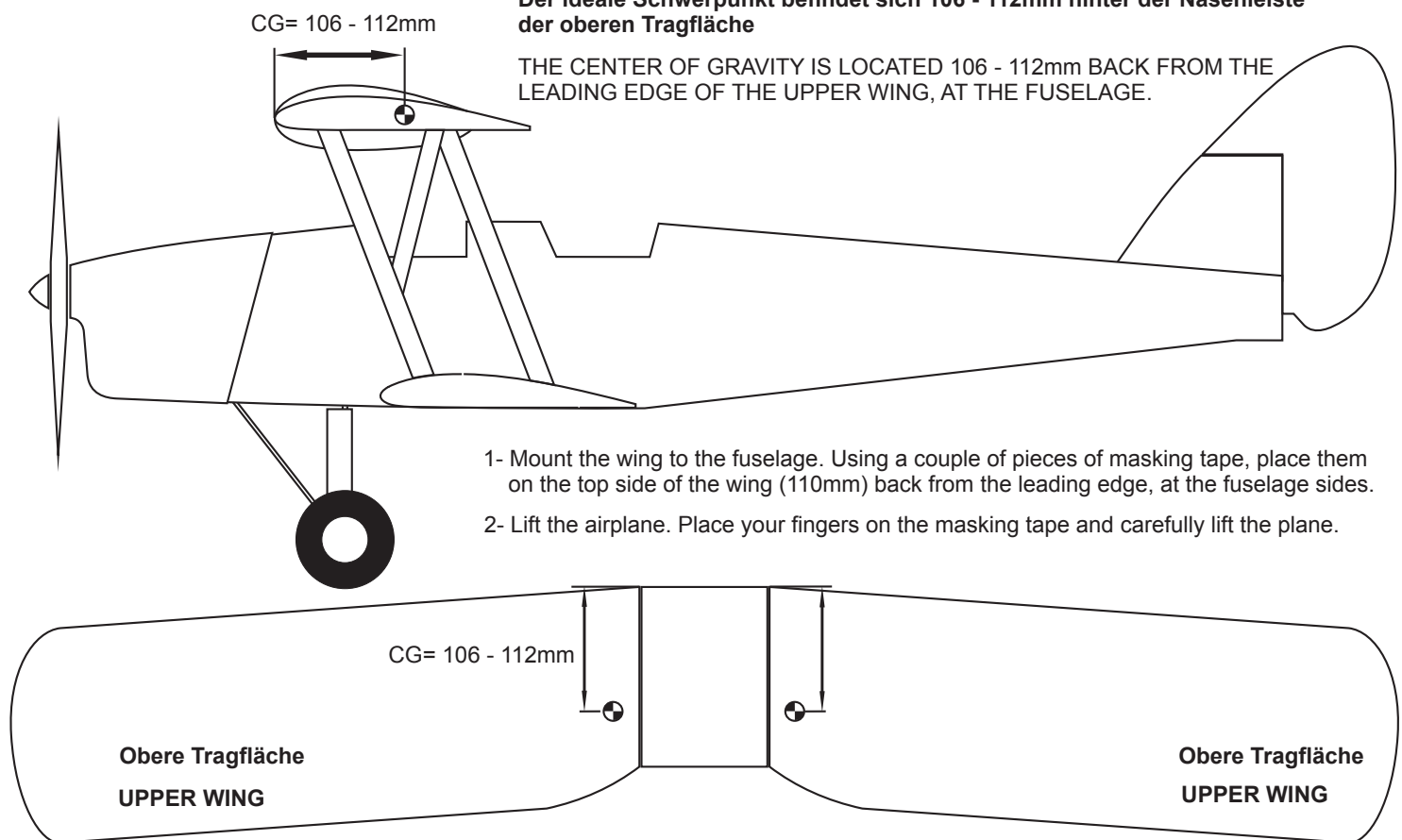




20- Balance

Der ideale Schwerpunkt befindet sich 106 - 112mm hinter der Nasenleiste der oberen Tragfläche

THE CENTER OF GRAVITY IS LOCATED 106 - 112mm BACK FROM THE LEADING EDGE OF THE UPPER WING, AT THE FUSELAGE.



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

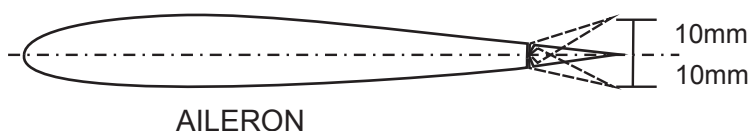
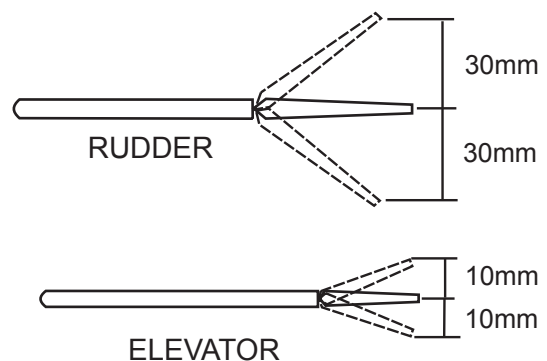
After you have balanced a plane on the CG, you should laterally balance it. Doing this will help the airplane track straighter.

- 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 !

21- Control surface

Ruderausschläge



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 P-51 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".

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.