

Radio control model / Flugmodell

JAPANESE DIVE BOMBER

AICHI D3A1 "VAL"



VQ No: VQA138 GREEN

VQ No: VQA138 GRAY

ALL BALSA, PLYWOOD CONSTRUCTION AND ALMOST READY TO FLY

Instruction manual / Montageanleitung

SPECIFICATIONS

Wingspan:.....1540mm
Length:.....1120mm
Electric Motor:.....See next page
Glow Engine:..... .46 2-T / .70 4-T
RTF Weight: 3.5Kg (will vary with equipment use)
Radio:.....6 Channel / 8-9 Servos
Function: Ailerons-Elevator-Rudder-Throttle
Flaps.

TECHNISCHE DATEN

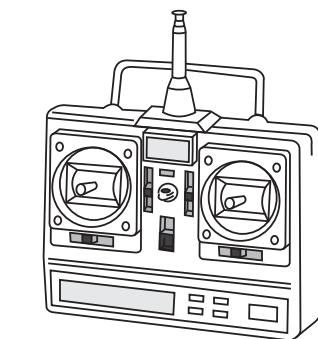
Spannweite:.....1540mm
Länge:.....1120mm
Elektroantrieb:.....(siehe nächste Seite)
Verbrennerantrieb:.....7.45cc - 11.5cc
Fluggewicht:.....3.5Kg
Fernsteuerung:.....6 Kanal / 8-9 Servos



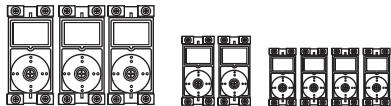
WARNING! This radio controlled model is NOT a toy. If modified or flown carelessly it could go out of control and cause serious human injury or property damage. Before flying your airplane, ensure the air field is spacious enough. Always fly it outdoors in safe areas and seek professional advice if you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

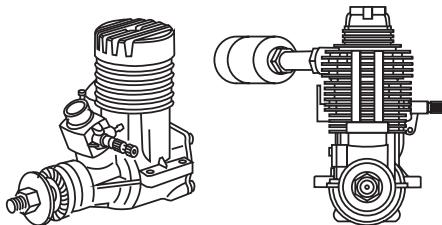
REQUIRED FOR OPERATION (Purchase separately)



10.5x6 for .40 - 2 cycle engine
11x6 for .46 - 2 cycle engine
12x6 for .60 - 4 cycle engine
12x7 for .70 - 4 cycle engine
13x7 - 13x8 for electric motor



Standard
Mini
Micro
Minimum 6 channel radio
Elevator: 1 standard servo
Rudder: 1 standard servo
Aileron: 2 mini servo
Flaps: 4 micro servo
Throttle: 1 standar servo (for glow engine only)

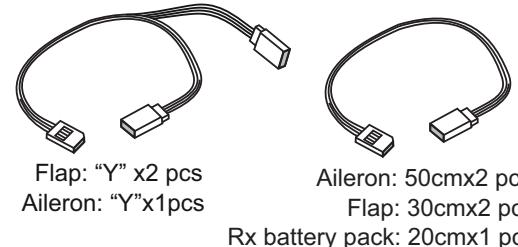


.46 ~ .50 - 2 cycle

.60 ~ .70 - 4 cycle



Silicone tube

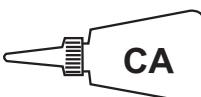


5 cell 4500mAh LiPo battery

GLUE (Purchase separately)



Silicon sealer



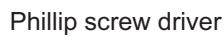
Cyanoacrylate Glue (thin type)



Epoxy Glue
(30 minute type)

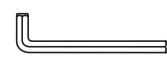


TOLLS REQUIRED (Purchase separately)

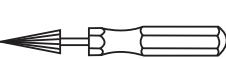


Scissors

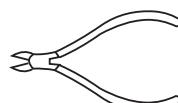
Hex Wrench



Awl



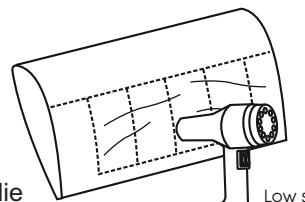
Wire Cutters



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

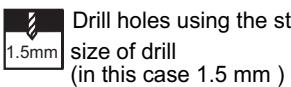
If exposed to direct sunlight and/or heat, wrinkles can appear. Storing the model in a cool place will let the wrinkles disappear. Otherwise, remove wrinkles in covering film with a hair dryer, starting with low temperature. You can fix the corners by using a hot iron.

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 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"
1.5mm = 1/16"
2.0mm = 5/64"
2.5mm = 3/32"

3.0mm = 1/8"
4.0mm = 5/32"
5.0mm = 13/64"
6.0mm = 15/64"

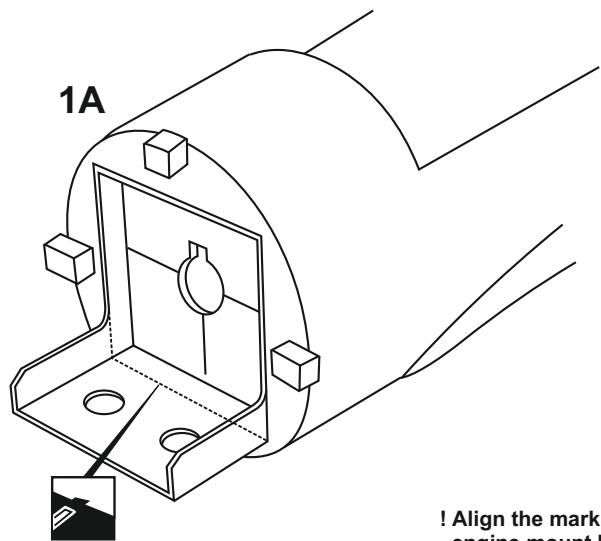
10mm = 13/32"
12mm = 15/32"
15mm = 19/32"
20mm = 51/64"

25mm = 1"
30mm = 1-3/16"
45mm = 1-51/64"

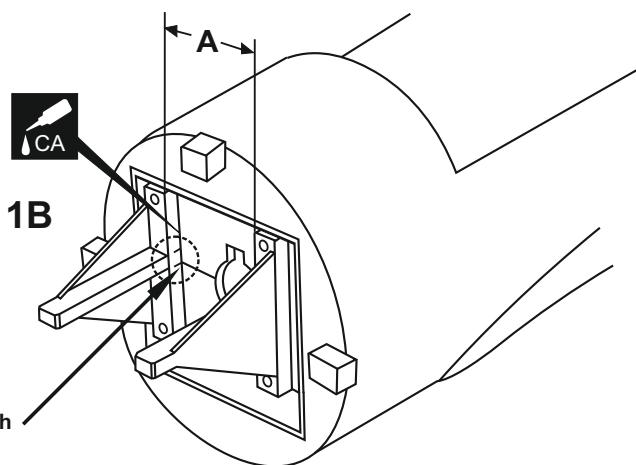
1- ENGINE MOUNT

Push left (or right) the magnetic fuel tank hatch and full it out of the fuselage.

Cut the wood along the line as shown (1A) in case of 4T engine using



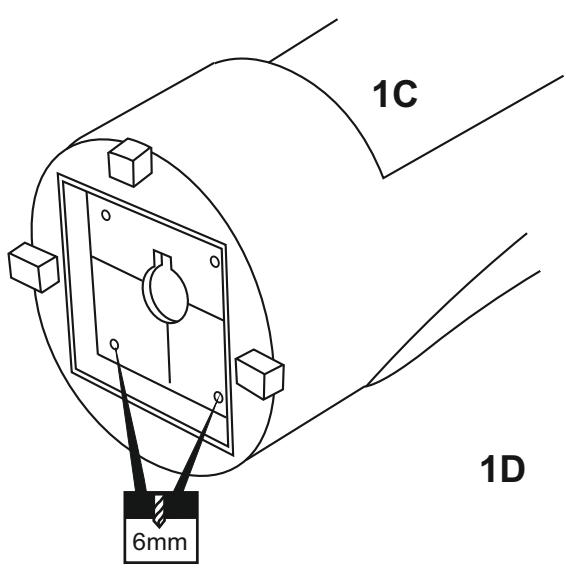
! Align the mark on both engine mount beams with the mark on the fire-wall.



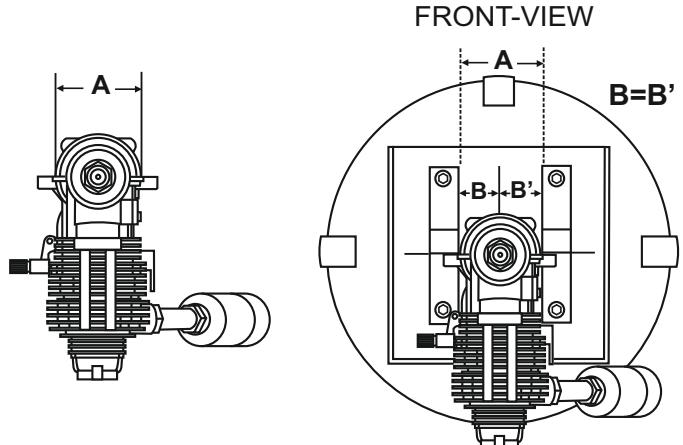
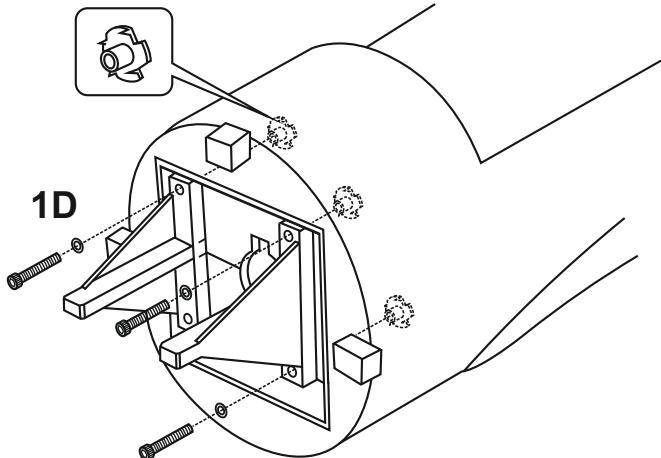
1B

1C

Carefully remove the engine mount beams and drill a 6mm hole through the fire-wall at each of the four marks made above (1C)



1D



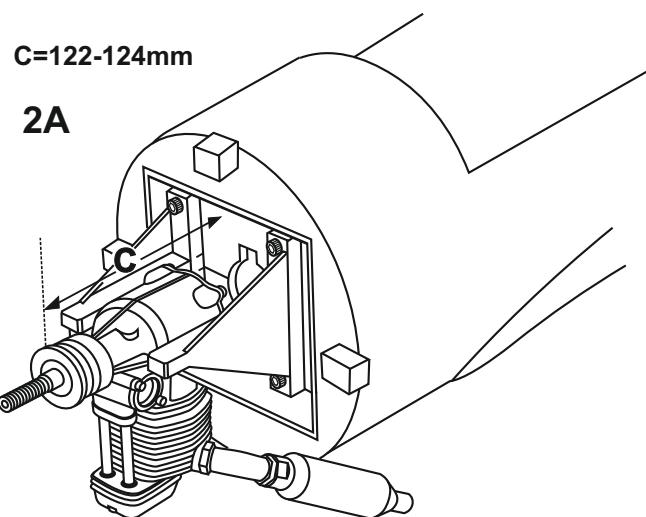
Insert the blind-nut onto each of the four holes made above (1D).

Reposition the engine mount beams on to the fire-wall and secure them with four 4x25mm screw (1D)

4x25mm screw - washer	.....	4
Blind-nut	.....	4

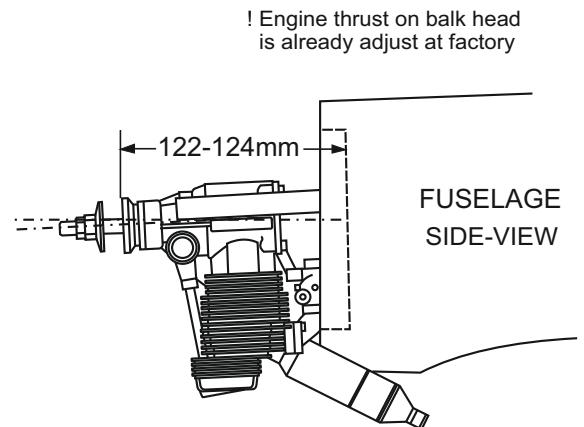
..... 4

2- ENGINE

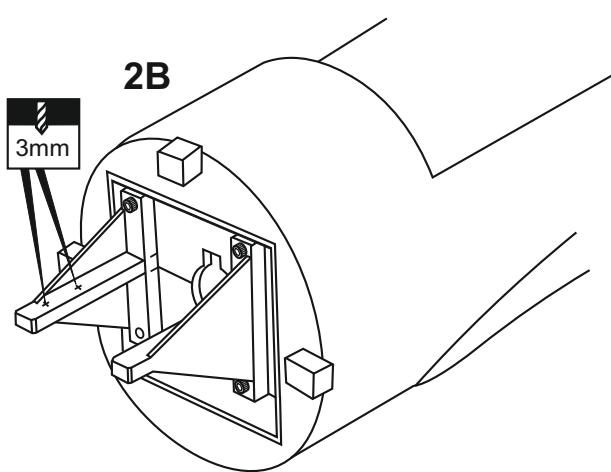


Position the engine to the engine mounts so the distance from the prop hub to the fire-wall is 122 - 124mm.

Mark the engine mounting plate where the four holes are to be drilled (2A)

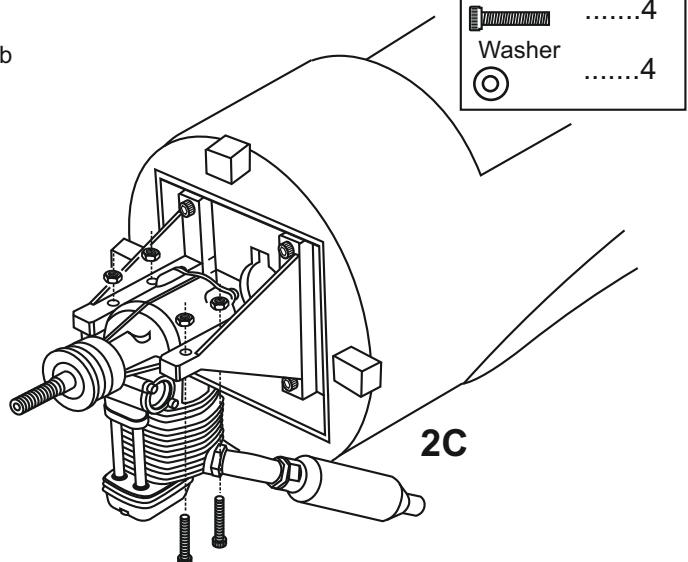


3x25mm screw	.....4
Washer	.....4



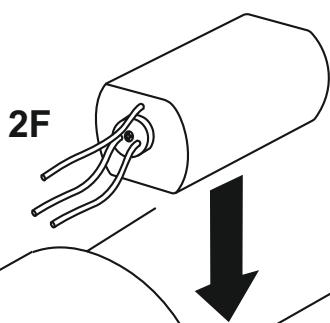
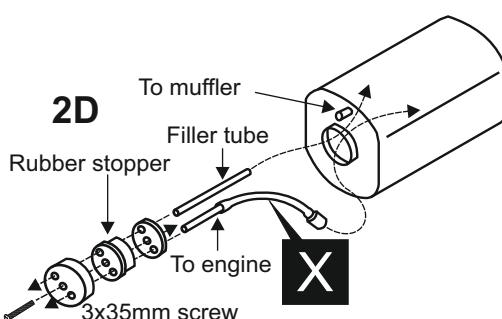
Remove the engine and drill a 3mm holes through the beam at each of the four marks made above (2B)

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

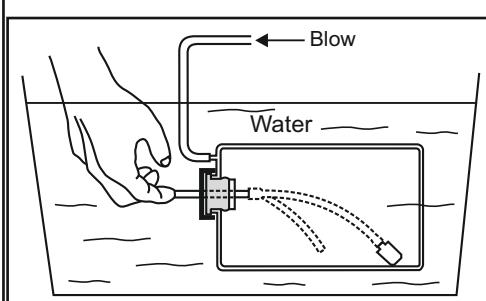


Reposition the engine on the engine mount beams, aligning it with the holes. Secure the engine to the engine mount using four 3x25mm screws (2C)

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

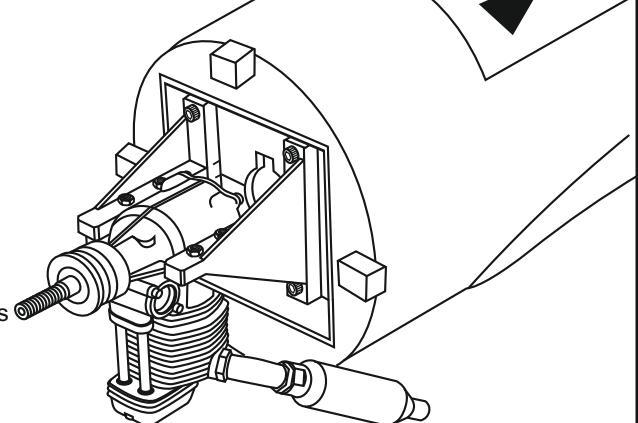


Carefully install the fuel tank to ensure that they will not shift during flight (2F).

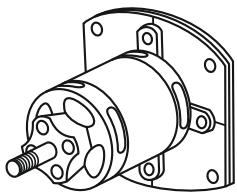


2E

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.

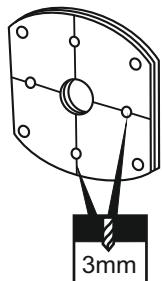


3- ELECTRIC MOTOR



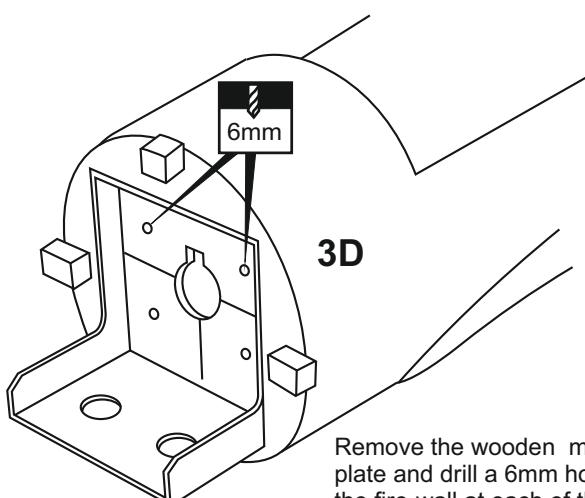
Using a aluminum motor mounting plate as a template, mark the plywood motor mounting plate where the four holes are to be drilled.

3A



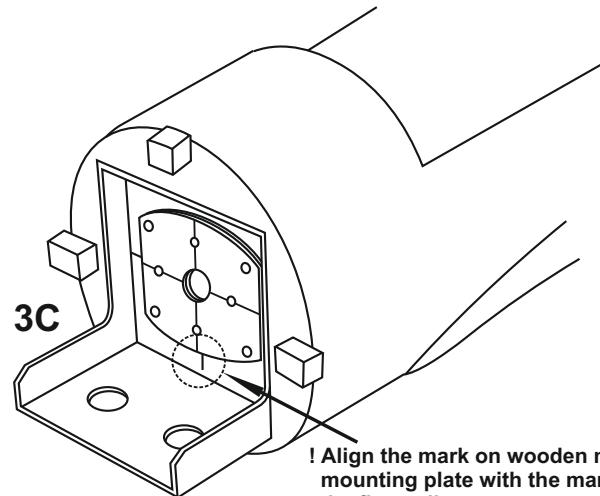
Remove the aluminum motor mounting plate and drill a 1/8"(3mm) hole through the plywood at each of the four marks marked .

3B



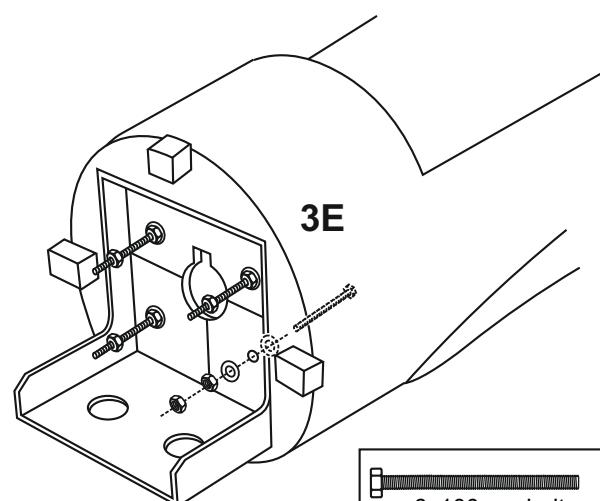
Remove the wooden motor mounting plate and drill a 6mm hole through the fire-wall at each of the four marks marked (3D) .

3D



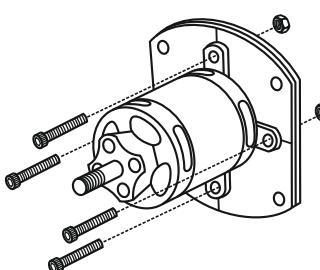
! Align the mark on wooden motor mounting plate with the mark on the fire-wall.

Using a wooden motor mounting plate as a template, mark the fire-wall where the four holes are to be drilled (3C).



Attach the four 5x70mm bolts and nuts to the fire-wall as shown (3E).

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

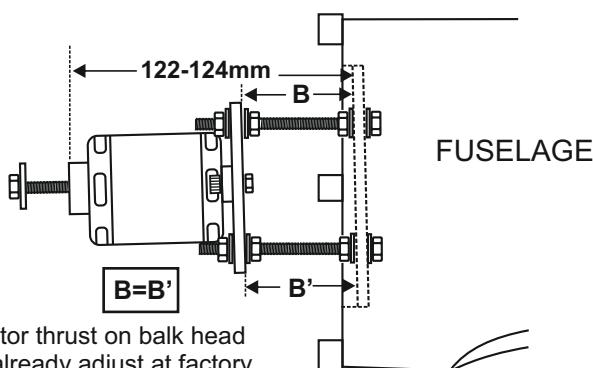


3F

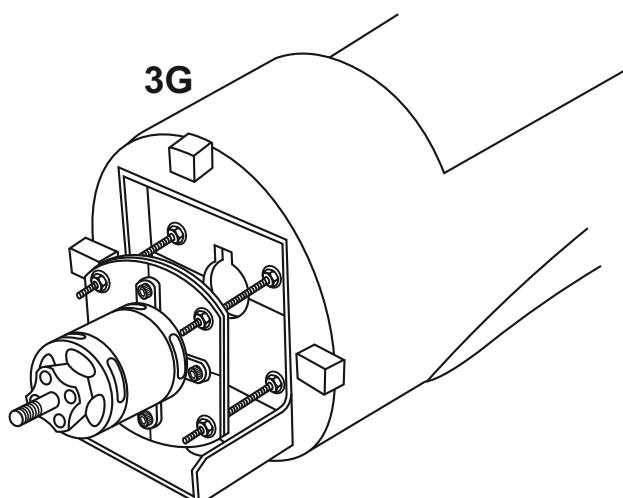
Secure the Motor to the wooden motor mounting plate using the four 3mm bolts.

	3mm bolt / nut...4
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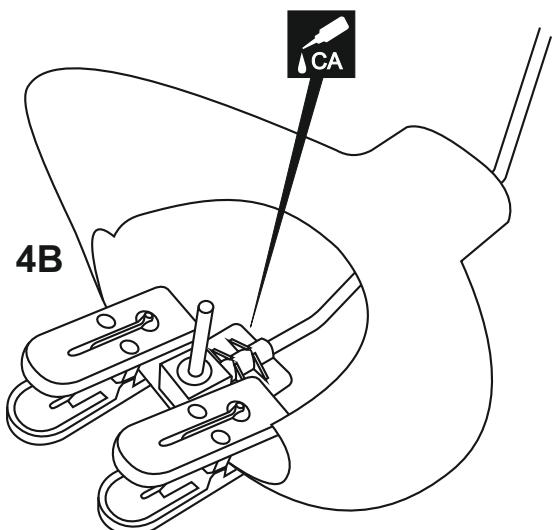
SIDE-VIEW / Seitenansicht



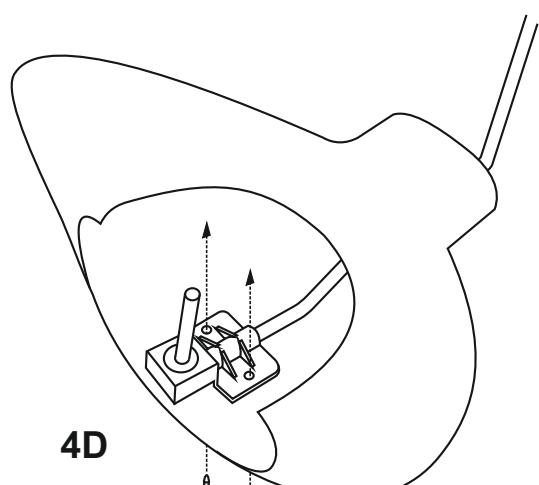
! Motor thrust on balk head is already adjust at factory



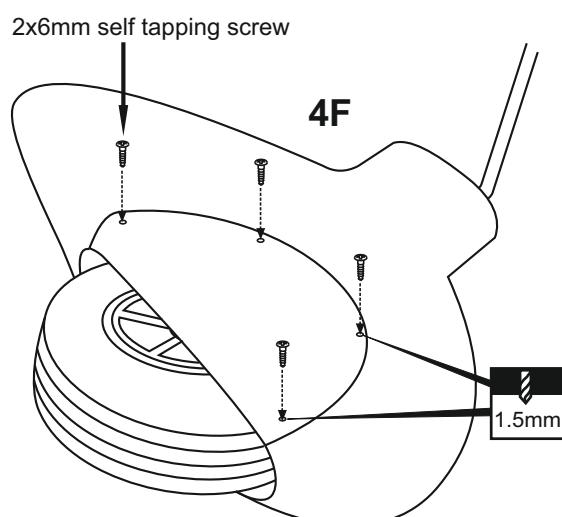
4- WHEEL PANT



Slide the landing gear with the wheel pant into the fiber glass wheel pant and secure it in place using the two clothespin and litter thin CA glue as shown (4B).

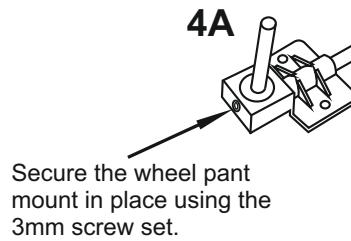


2.5x10mm
self tapping screw

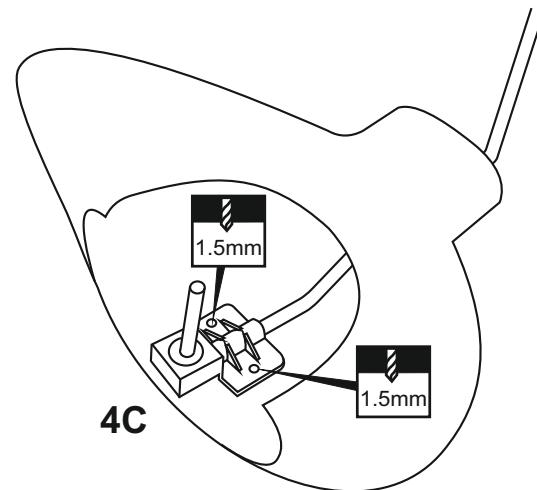


2x6mm self tapping screw

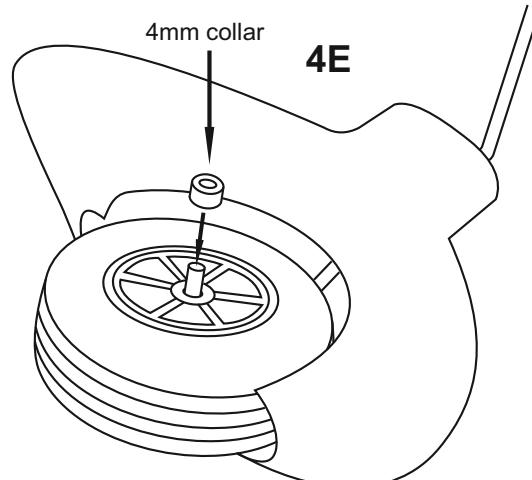
Slide the wheel pant mount onto the landing gear



Secure the wheel pant
mount in place using the
3mm screw set.

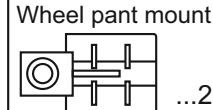


Remove the clothespin and drill the two 1.5mm holes
as shown (4C).



2x6mm self tapping
screw8

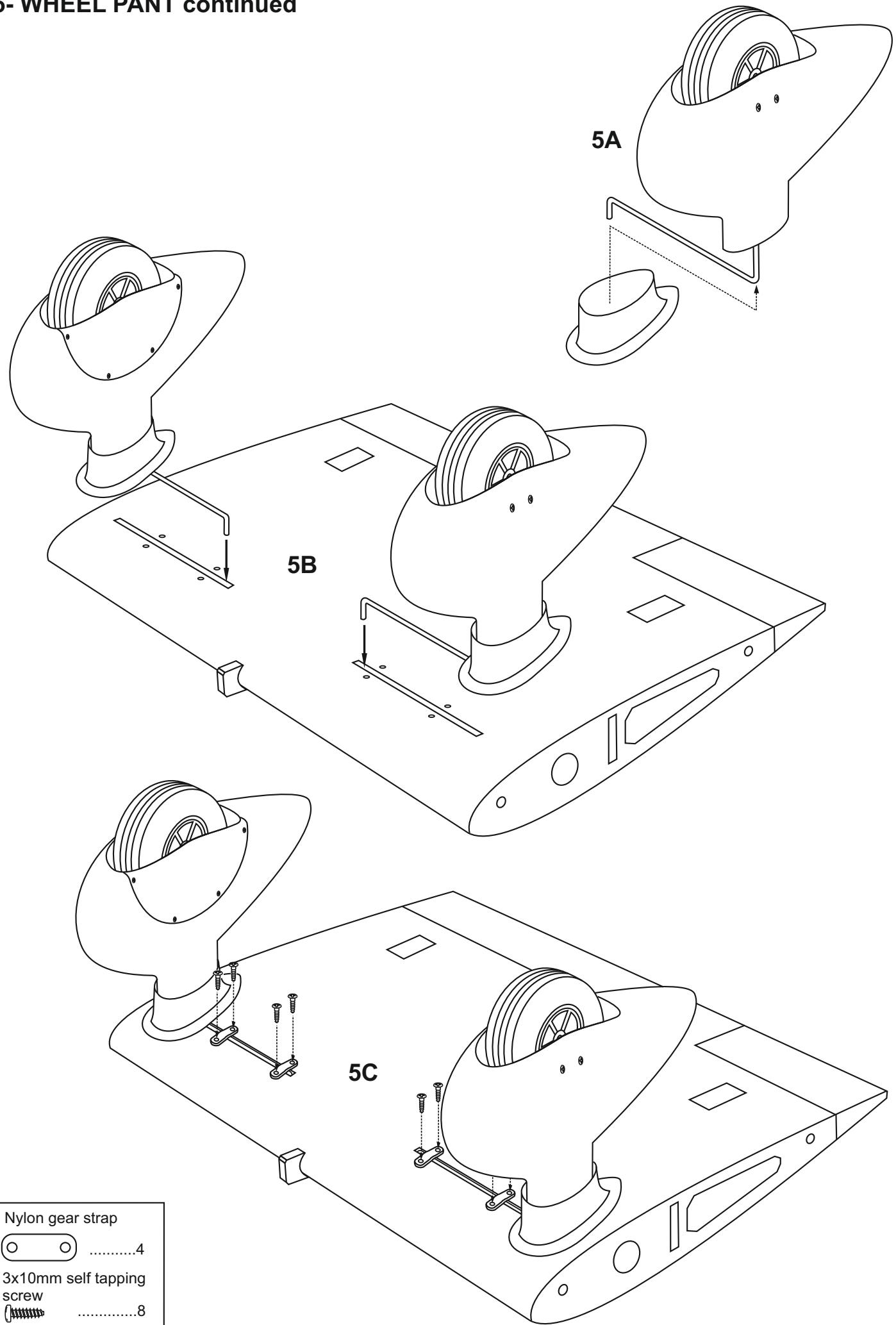
Wheel pant mount



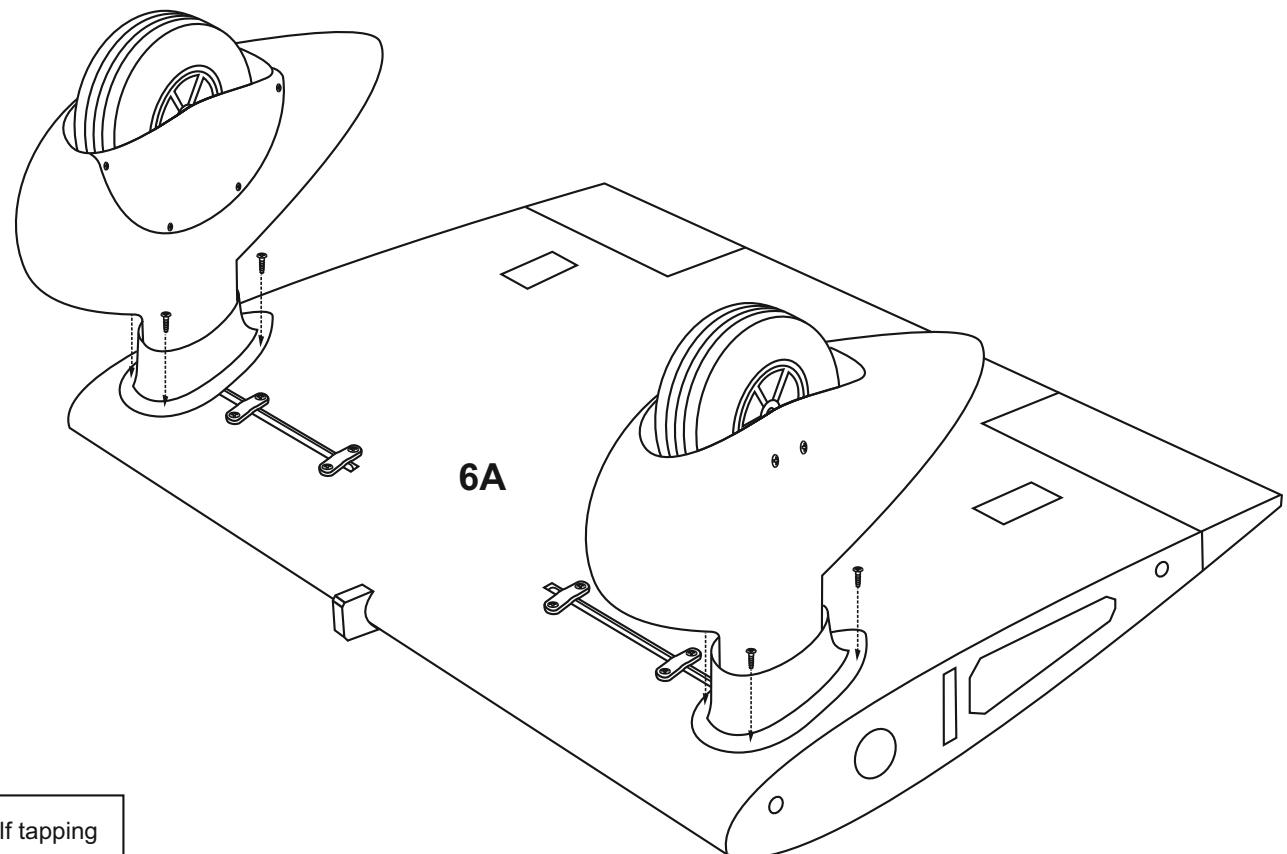
4mm collar2

2.5x10mm self
tapping screw4

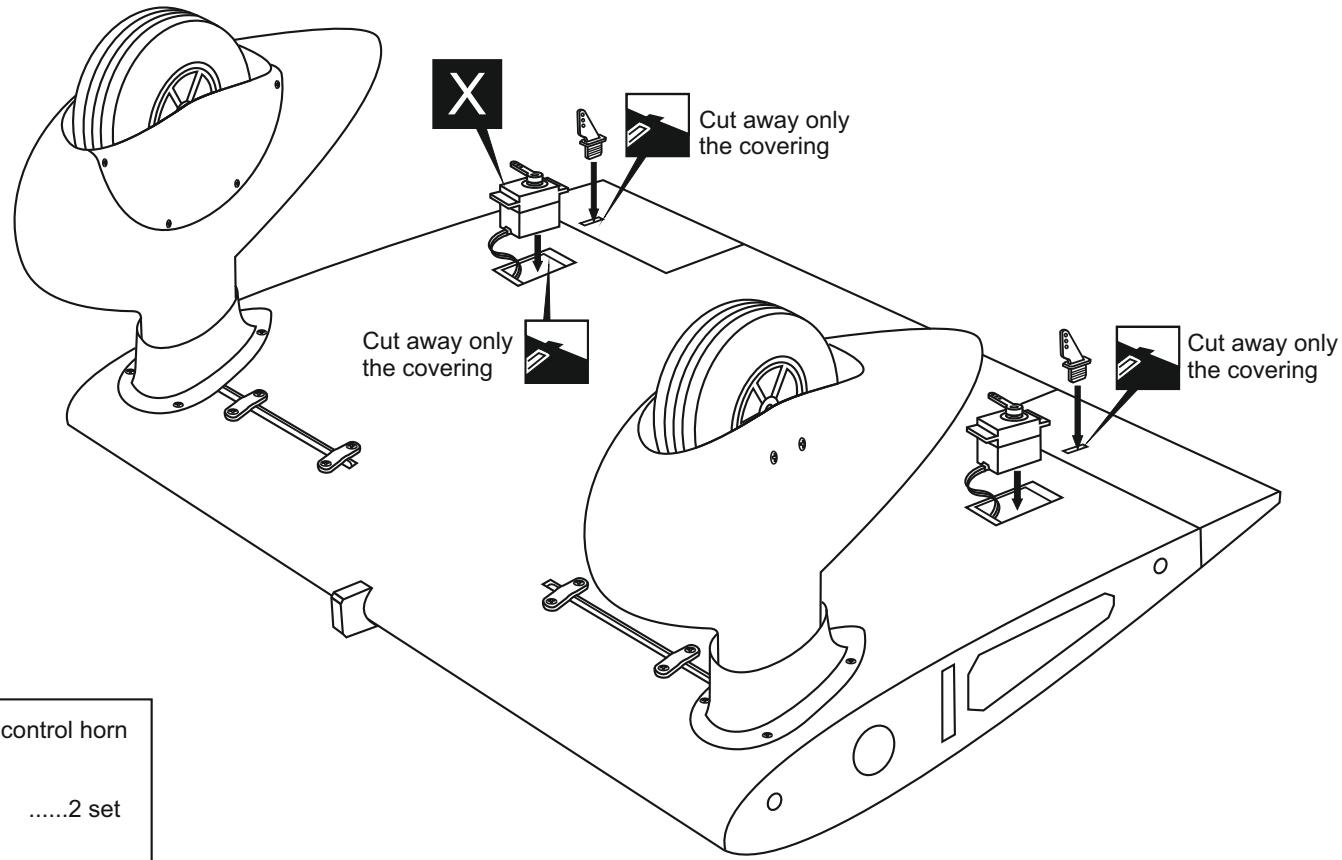
5- WHEEL PANT continued



6- WHEEL PANT continued



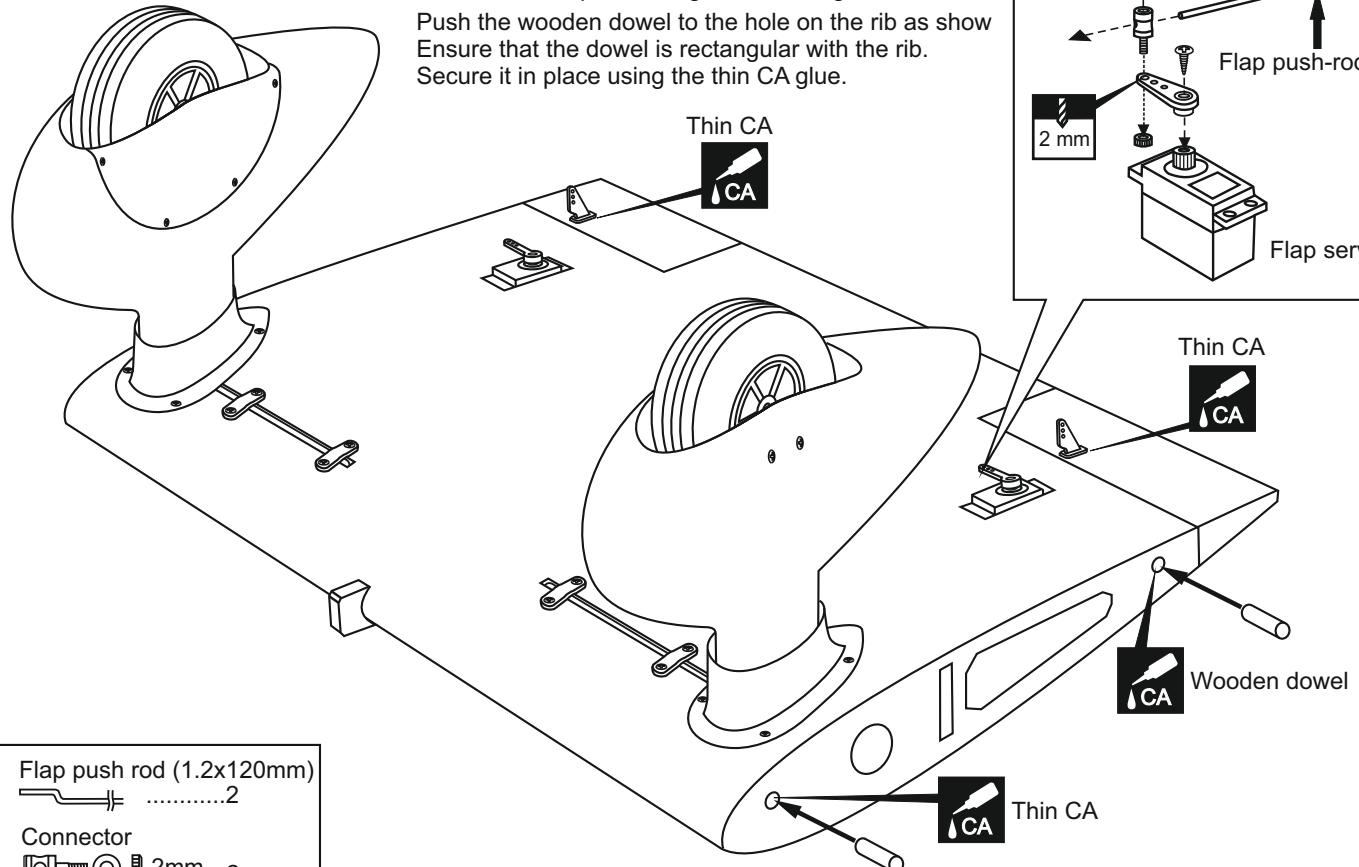
7- SERVO & CONTROL HORN



8- LINKAGES

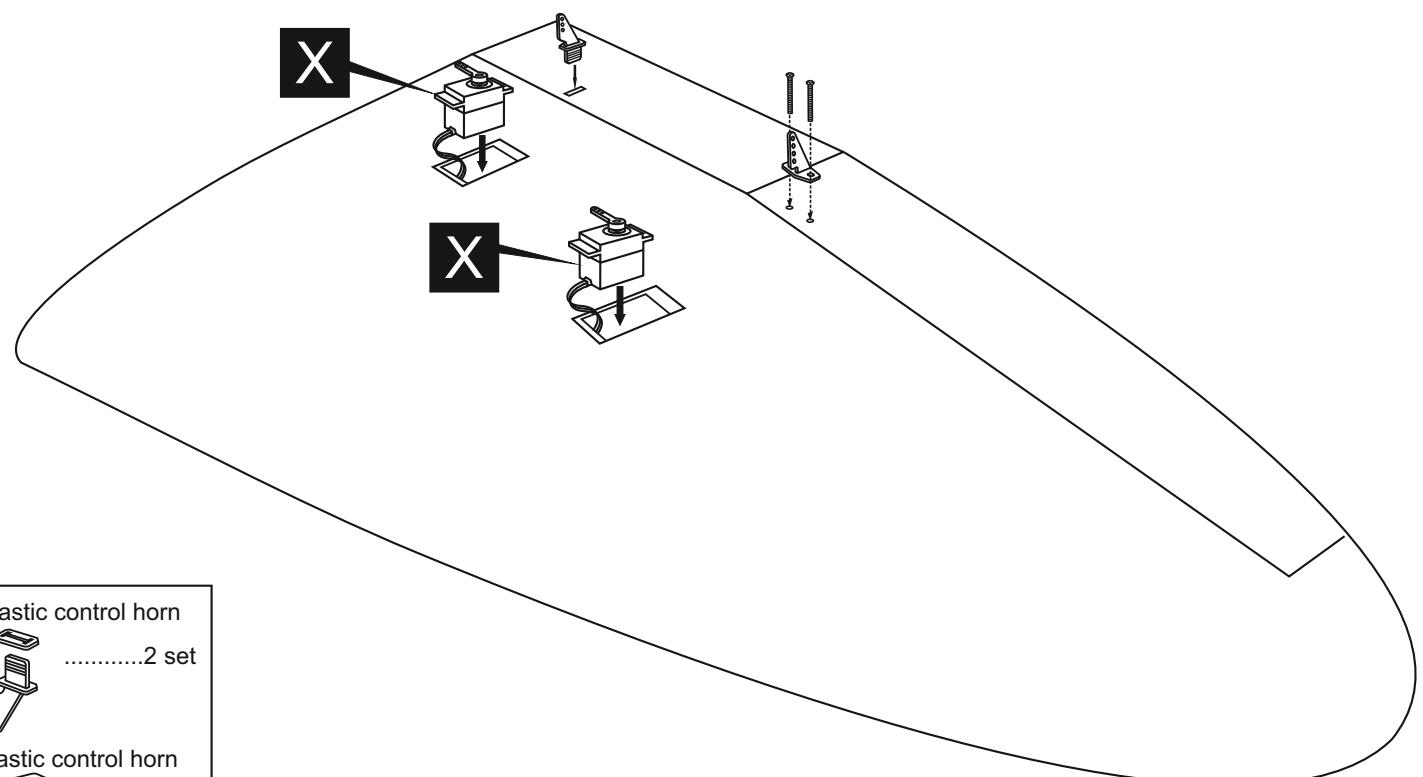
Secure the plastic control horn in place using the thin CA glue.

Push the wooden dowel to the hole on the rib as show. Ensure that the dowel is rectangular with the rib. Secure it in place using the thin CA glue.

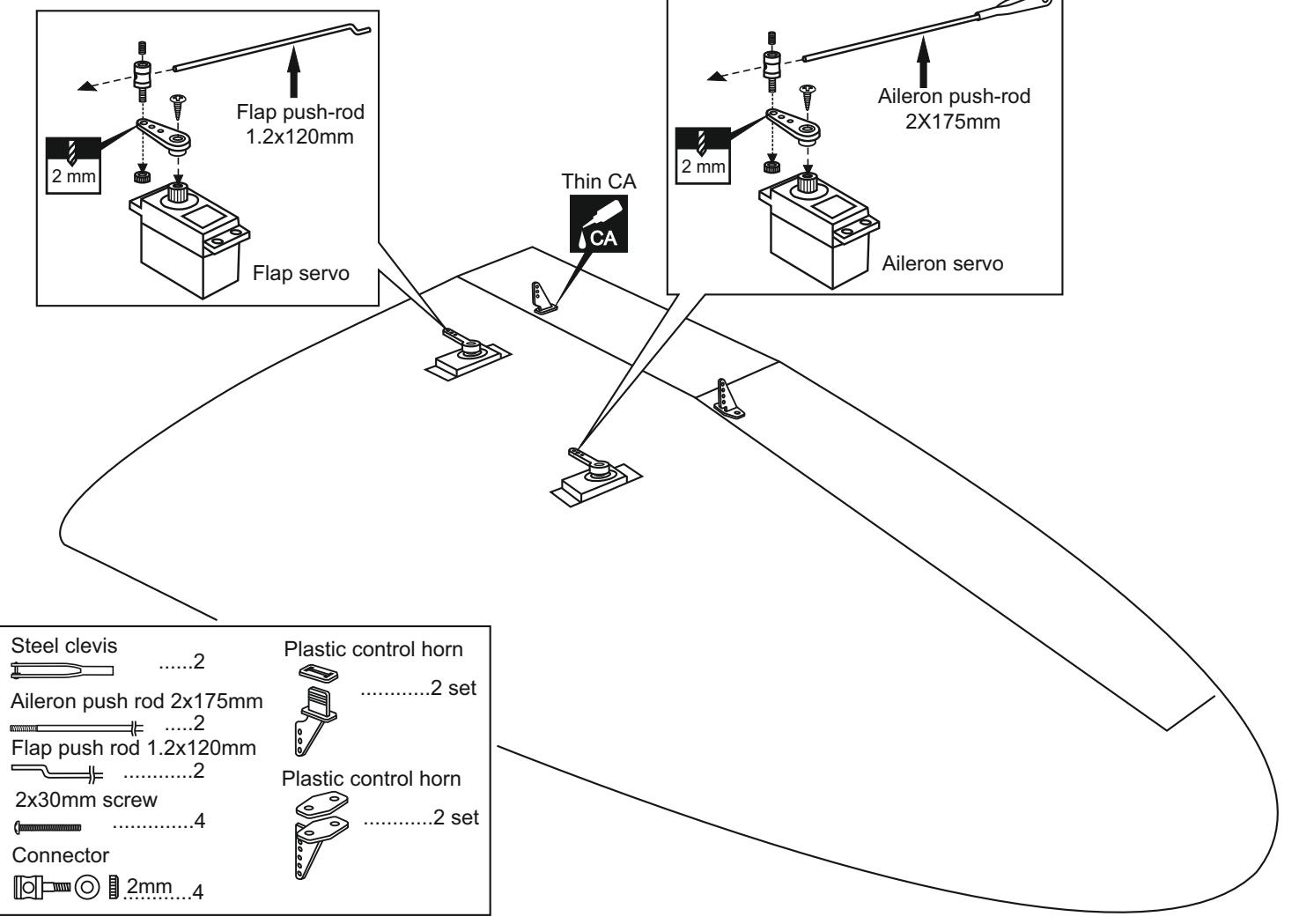


9- OUTER WING: SERVO & CONTROL HORN

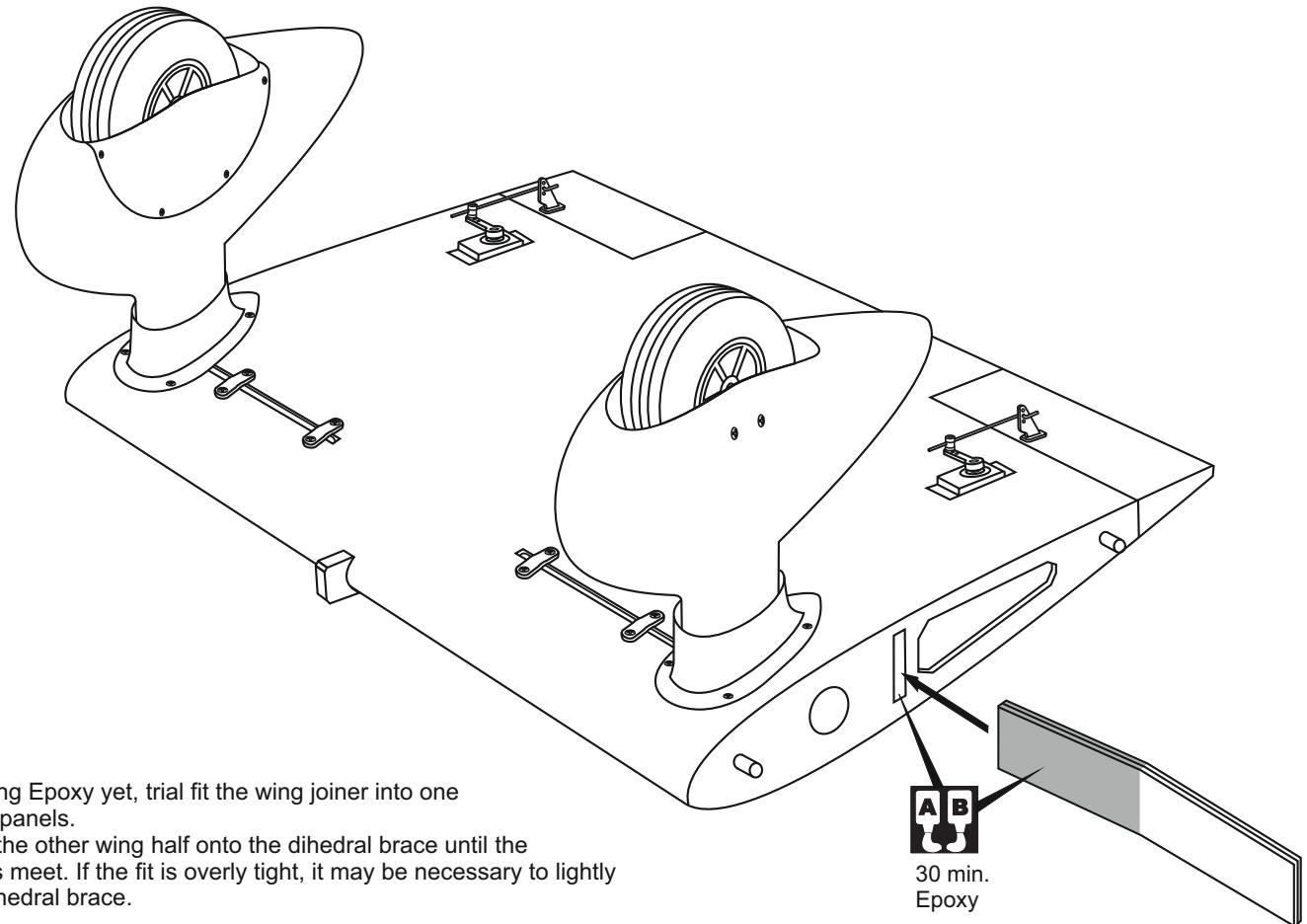
Plastic control horn	.....2 set
Plastic control horn	.....2 set
2x30mm screw	.....4



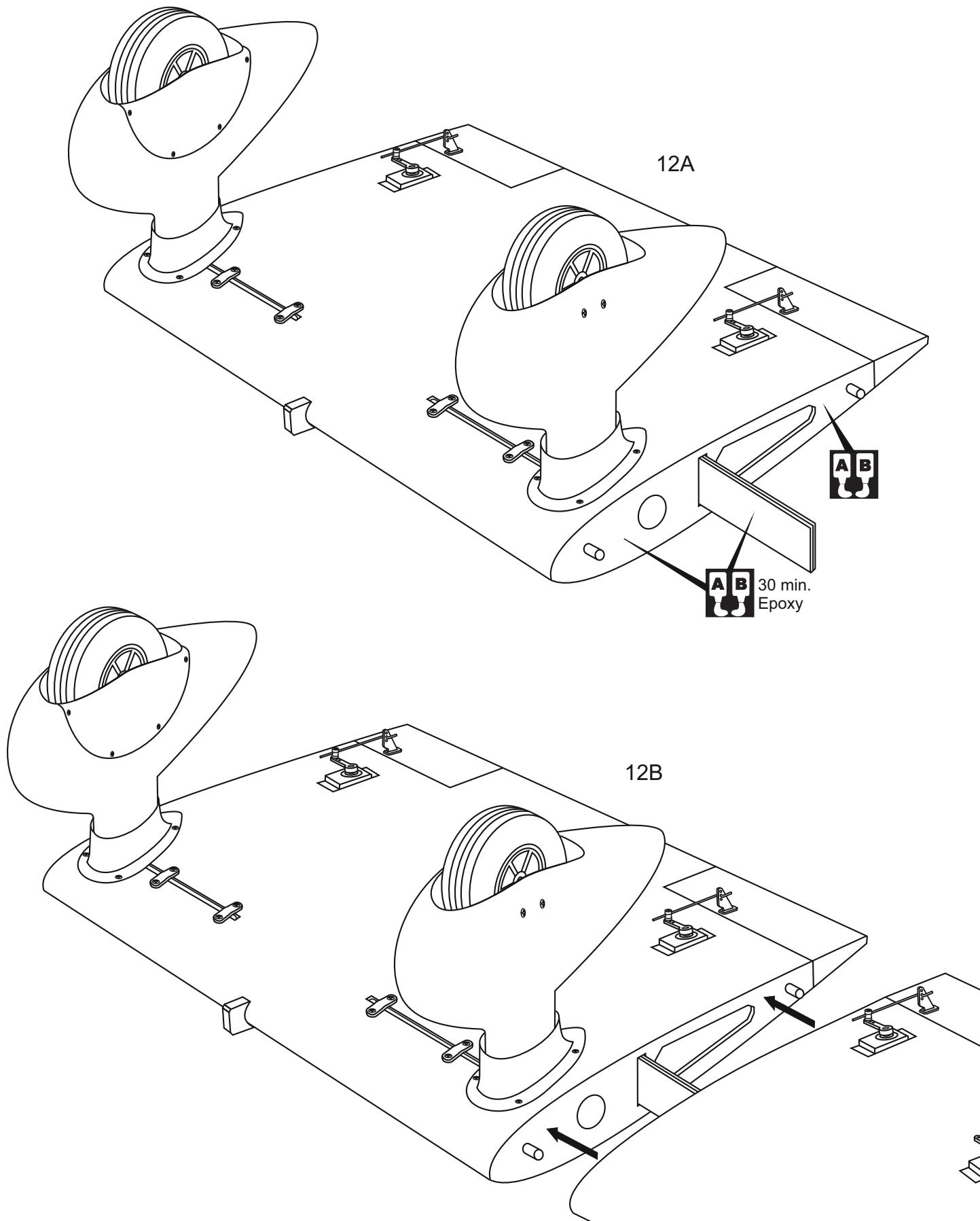
10- OUTER WING: LINKAGES



11- JOINING THE WING



12- JOINING THE WING continued



Carefully slide the wing halves together, ensuring that they are accurately aligned.

Firmly press the two halves together, allowing the excess epoxy to run out. Using a paper towel, clean off the excess epoxy.

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

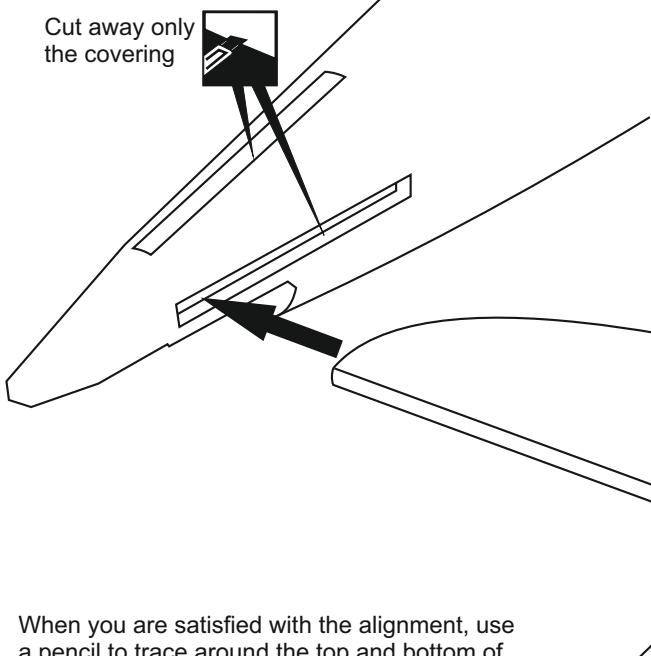
13- HORIZONTAL STABILIZER

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

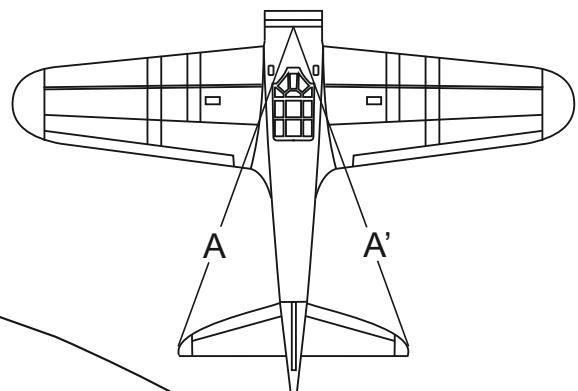
Remove the left and right elevator out of the horizontal stabilizer.

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 (see picture below: A=A').

13A

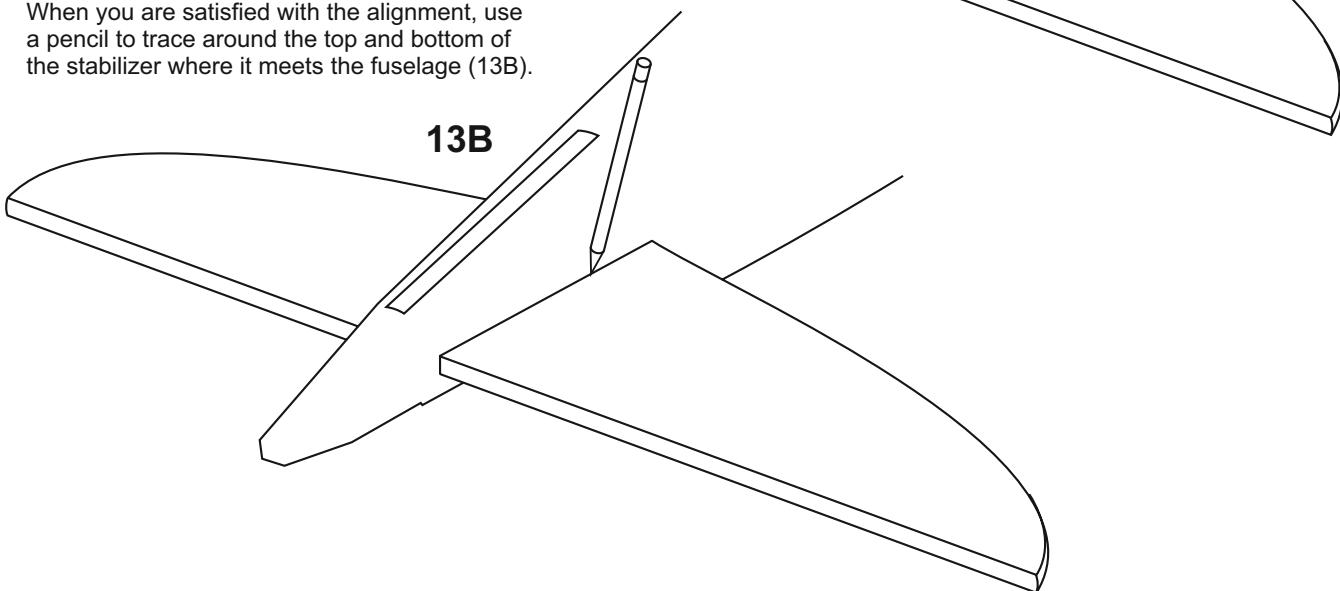


A = A'



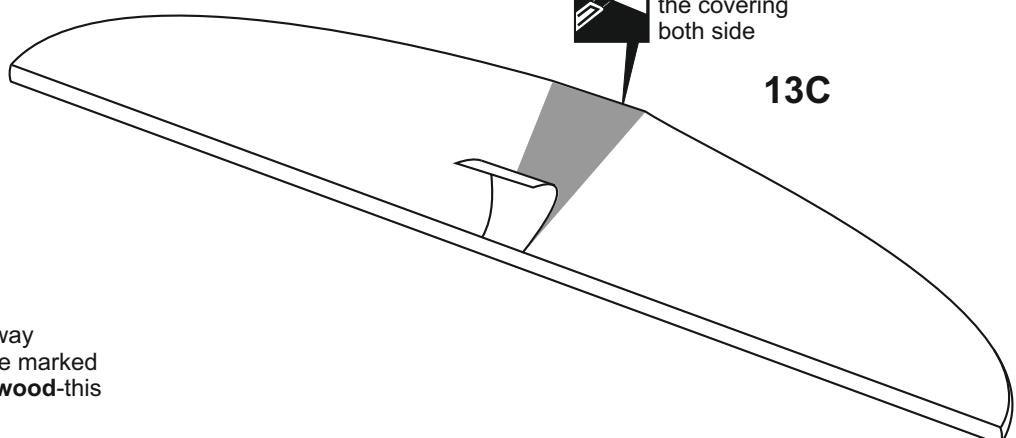
When you are satisfied with the alignment, use a pencil to trace around the top and bottom of the stabilizer where it meets the fuselage (13B).

13B



Cut away only the covering both side

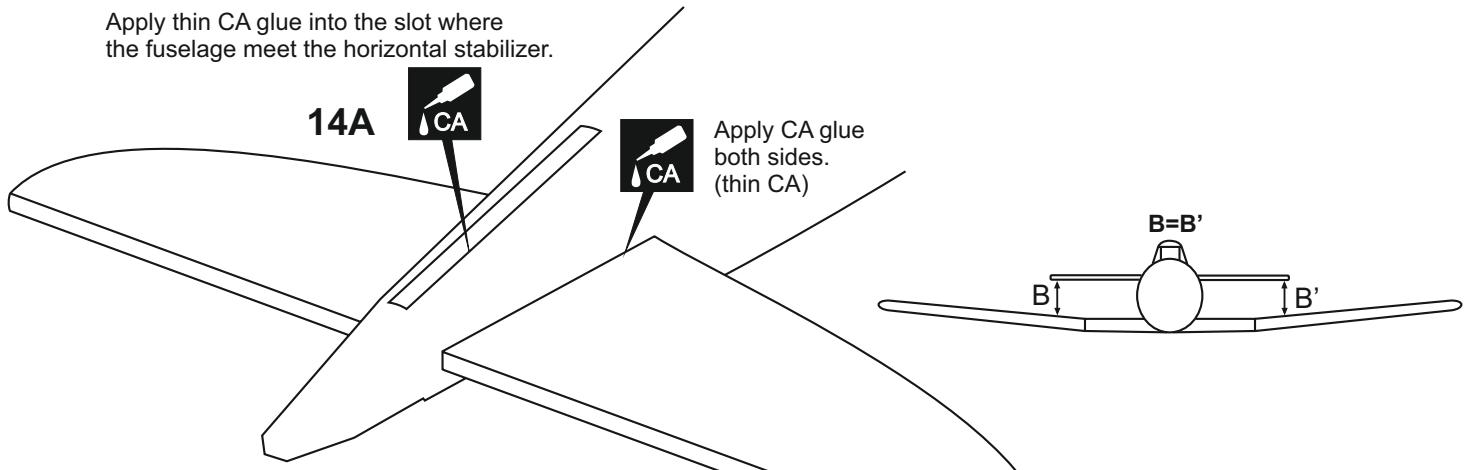
13C



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 (13C).

14- HORIZONTAL STABILIZER & VERTICAL STABILIZER

Apply thin CA glue into the slot where the fuselage meet the horizontal stabilizer.



Install the horizontal stabilizer onto the fuselage and adjust the alignment as described in step 13A.

Note: it is important to ensure that the horizontal stabilizer is also level in regards to the fuselage.

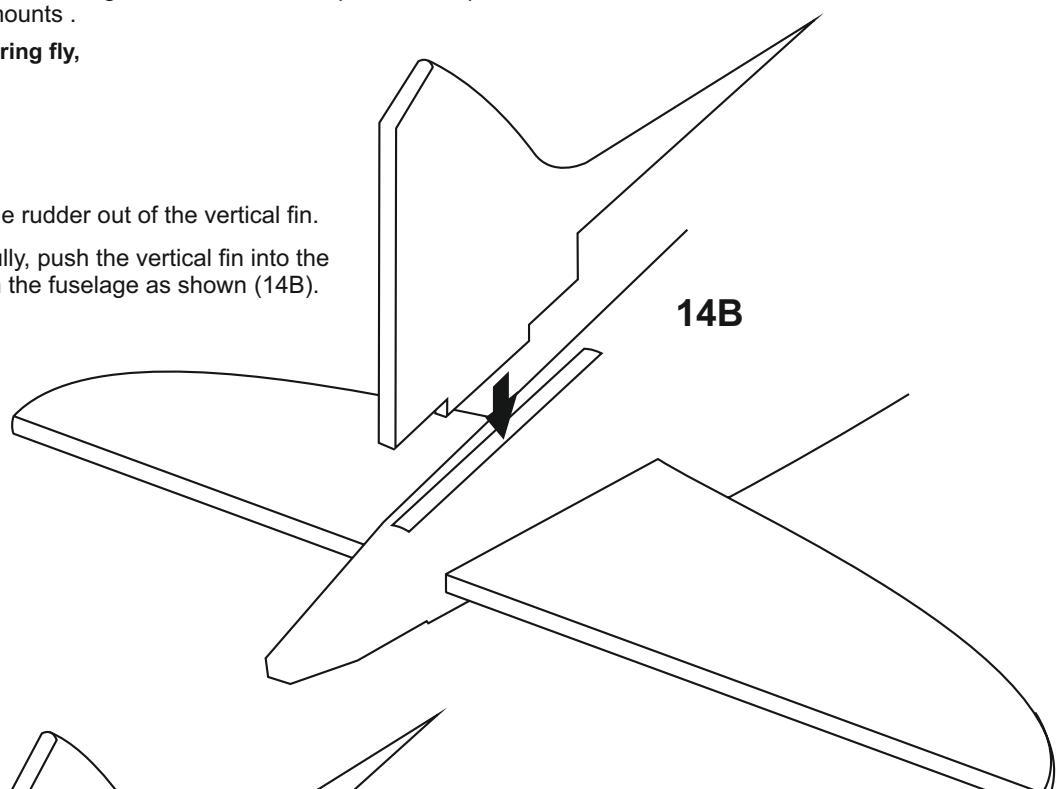
Apply the thin CA along the area where the covering was removed in the previous step and to the fuselage where the horizontal stabilizer mounts.

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

Pull the rudder out of the vertical fin.

Carefully, push the vertical fin into the slot on the fuselage as shown (14B).

14B

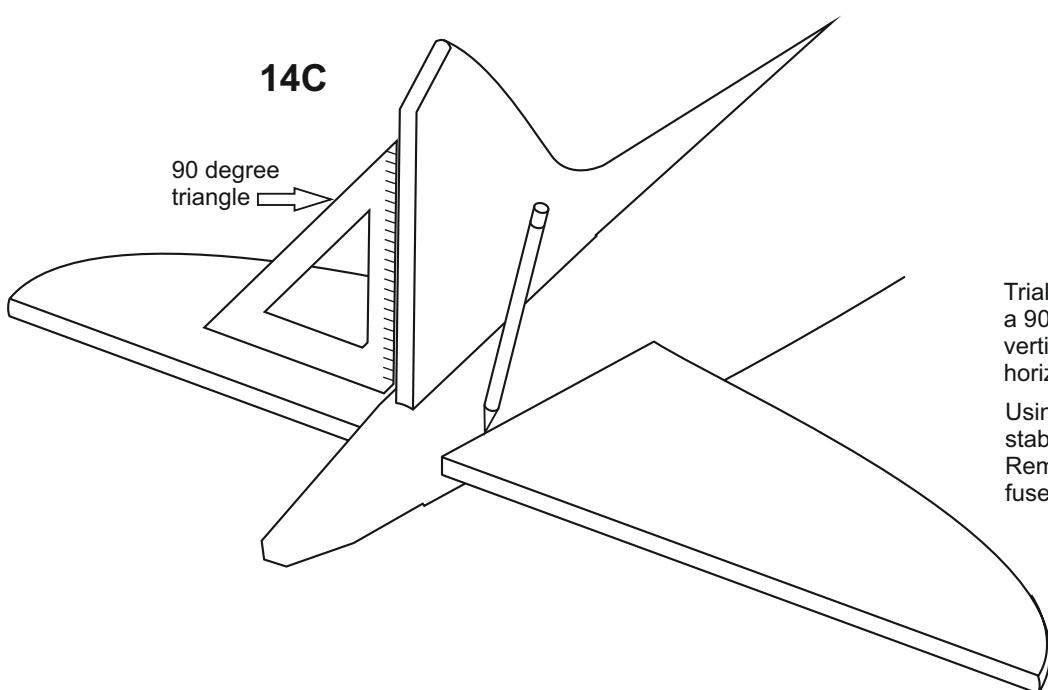


14C

90 degree triangle

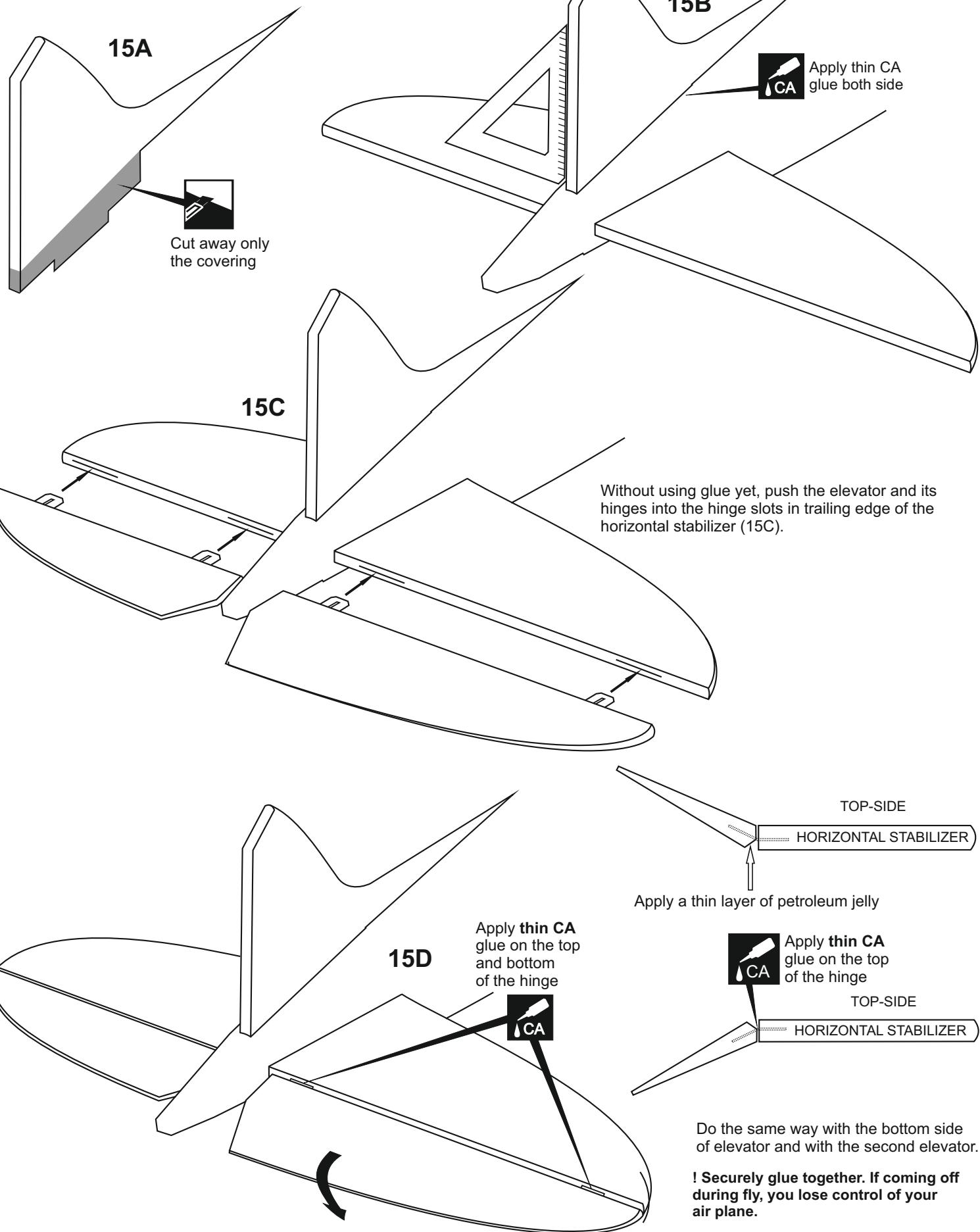
Trial fit the vertical fin in position. Using a 90 degree triangle, ensure that the vertical stabilizer is perpendicular to the horizontal stabilizer (14C).

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

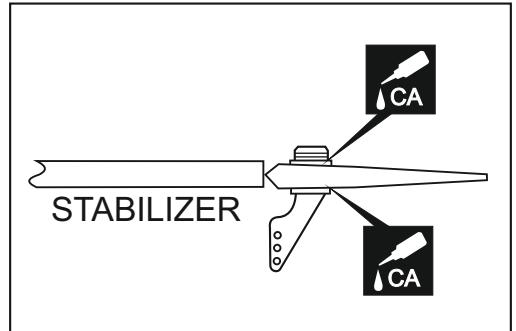
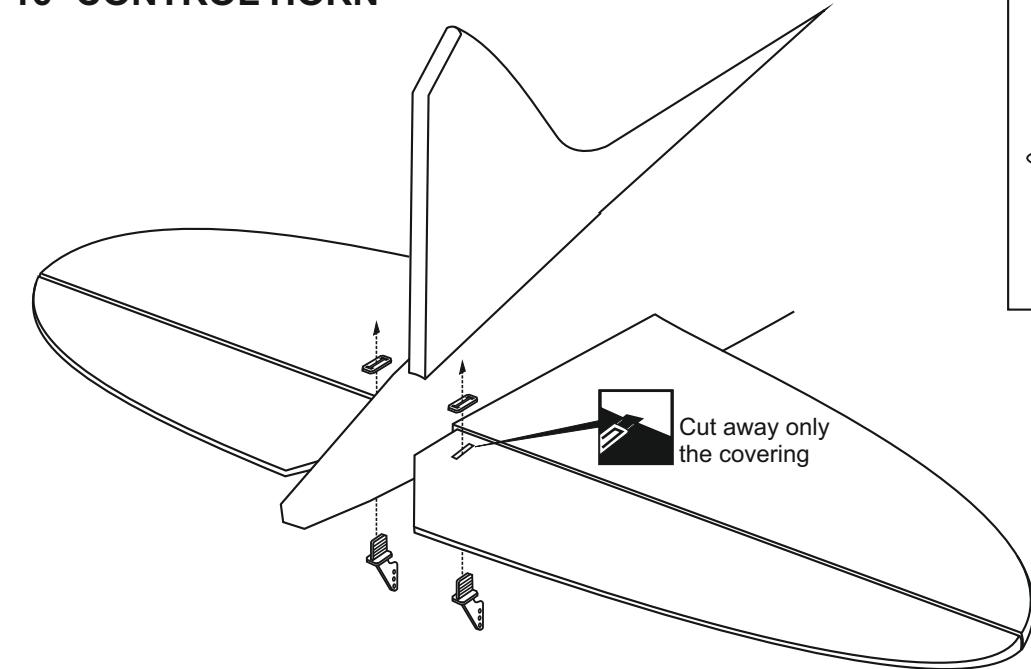


15- VERTICAL STABILIZER

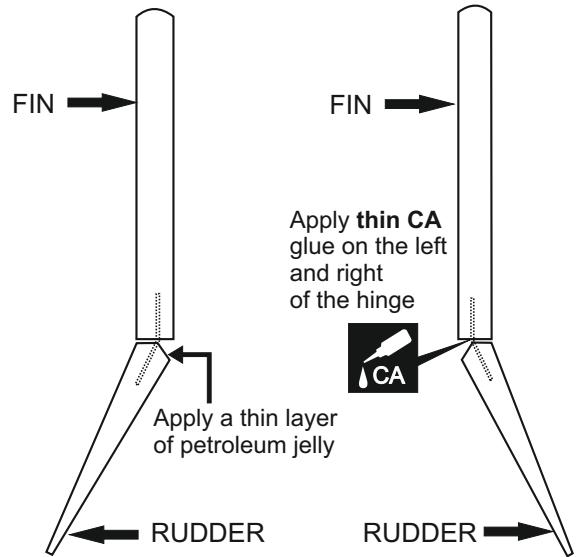
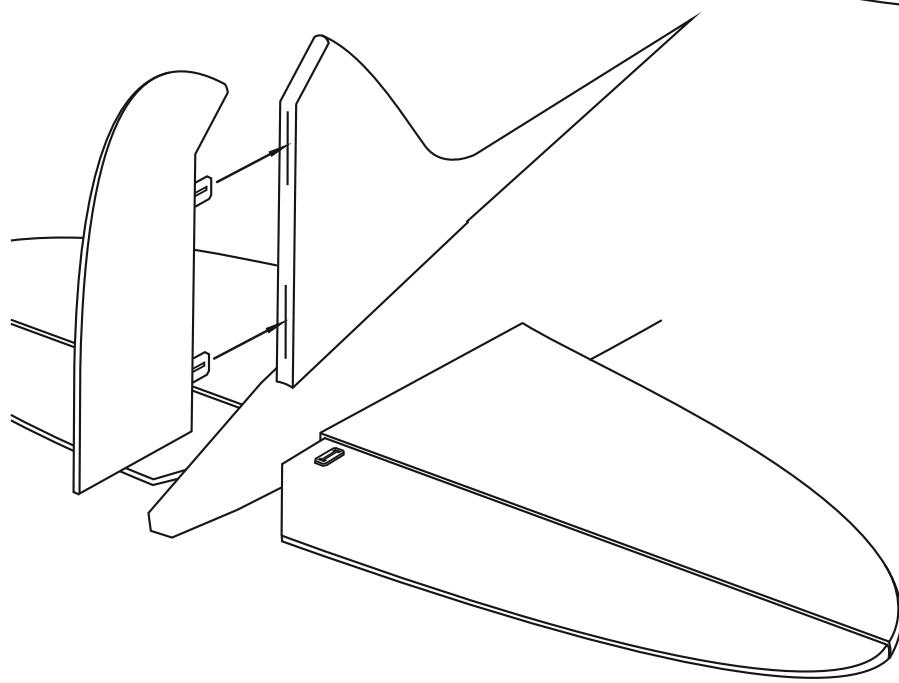
Remove the vertical stabilizer from the fuselage. Using a sharp hobby knife, carefully cut away the covering **below the lines** which were drawn in the previous step. **Do not cut into the woods** as this will affect the structural integrity of the stabilizer (15A).



16- CONTROL HORN

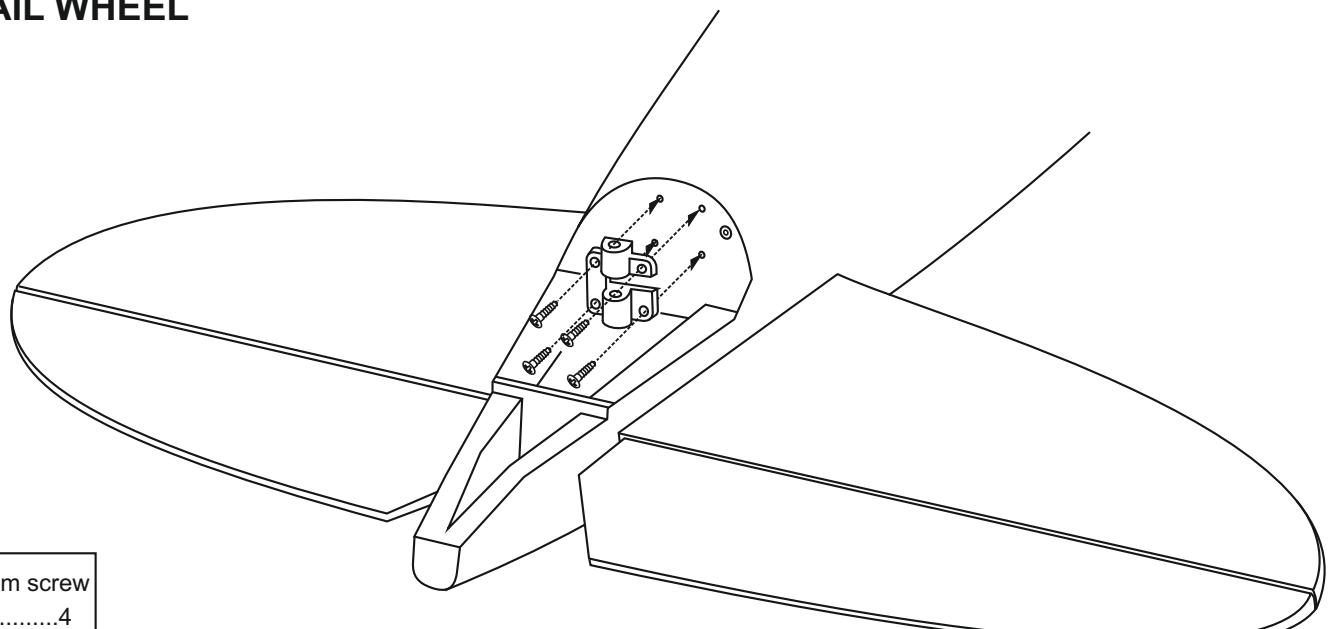


Plastic control horn 2 set



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

17- TAIL WHEEL



3x10mm screw 4

18- TAIL WHEEL continued

Insert the tail wheel push-rod into the hole on the tail gear control horn as show (18A).

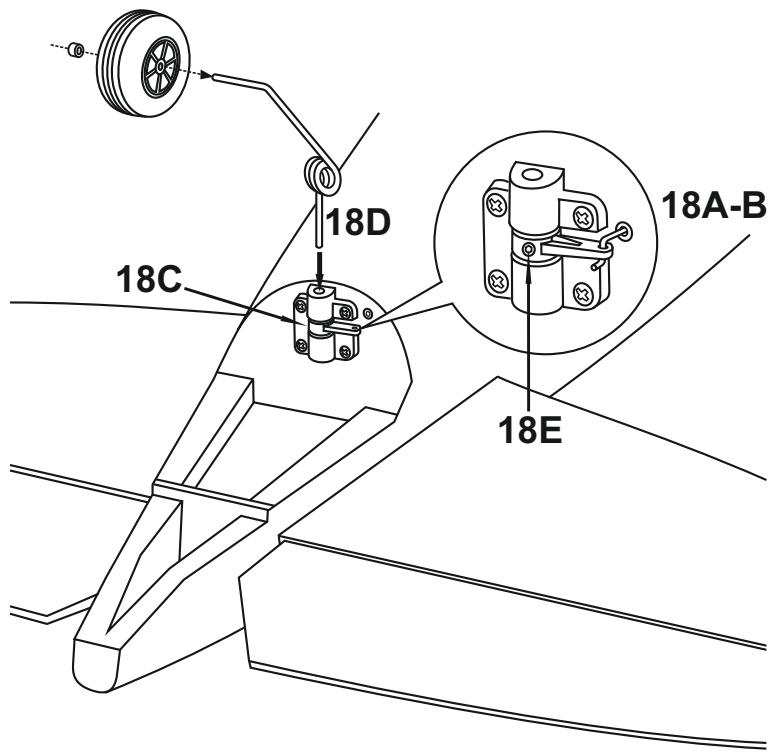
Insert the tail wheel push-rod with the tail gear control horn connected into the fuselage (18B).

Install the tail wheel control horn in place (18C).

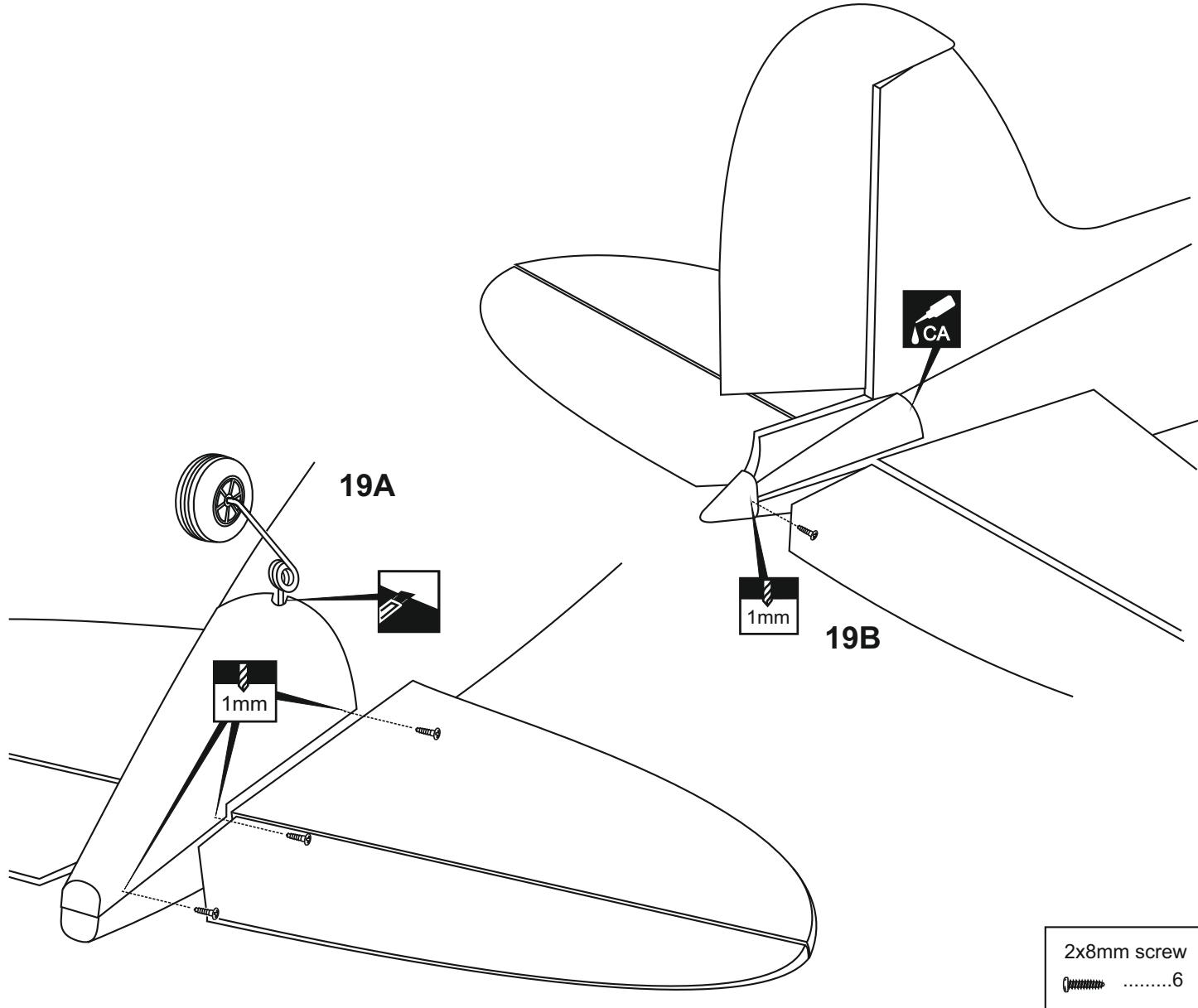
Install the tail wheel gear in place (18D).

Secure the tail wheel control horn in place using a 2mm screw set (18E).

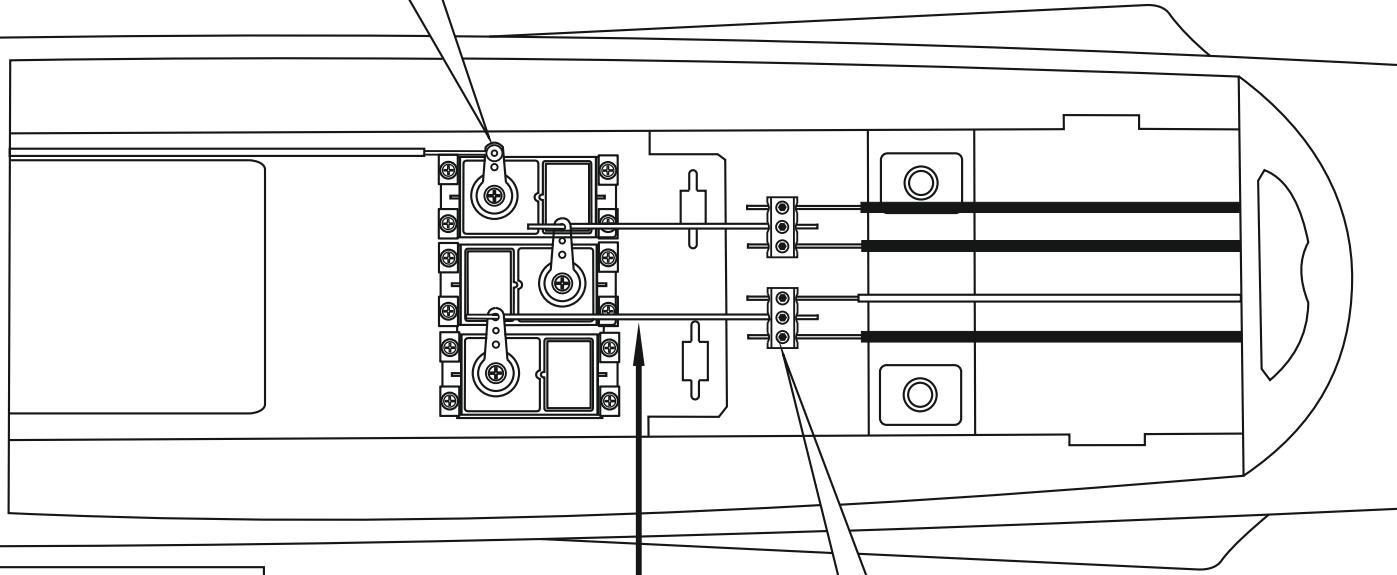
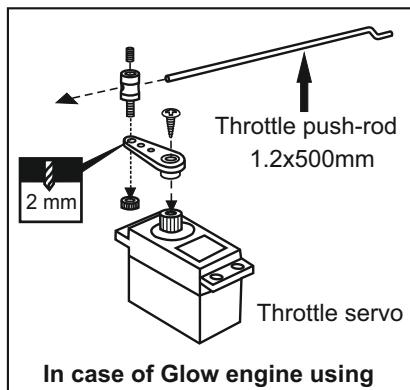
1.2x800mm rod	.....1
3x3mm screw	.....1
2mm I.D. collar	.....1
3x10mm screw	.....4
25mm wheel	.....1
Tail wheel control-horn	
.....1	
Tail landing gear	
.....1	



19- PLASTIC SHIELD

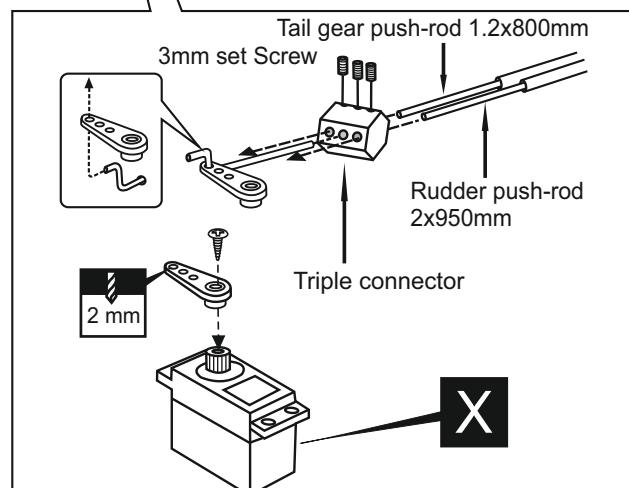


20- SERVO & LINKAGES

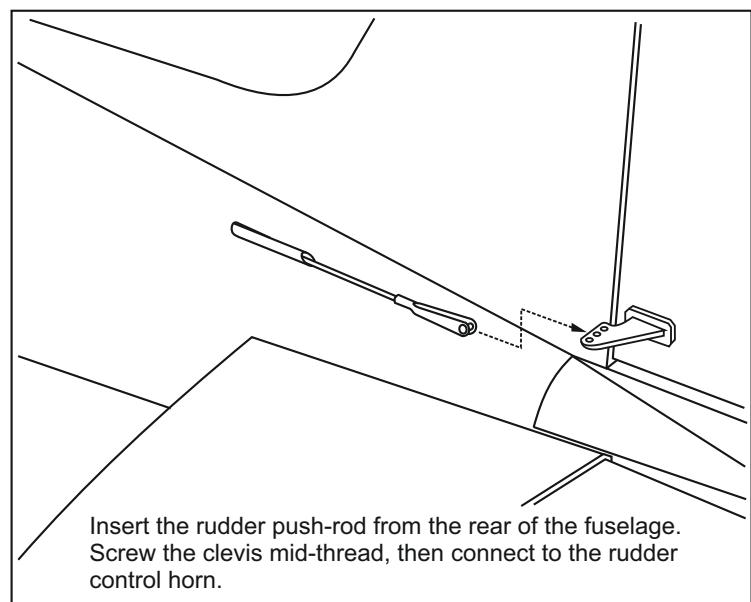


Steel clevis	.....3
2x950mm rod	.....3
(2 x120mm) rod	.....2
(1.2 x500mm) throttle rod	.....1
Triple connector	.....2
2mm	.....1

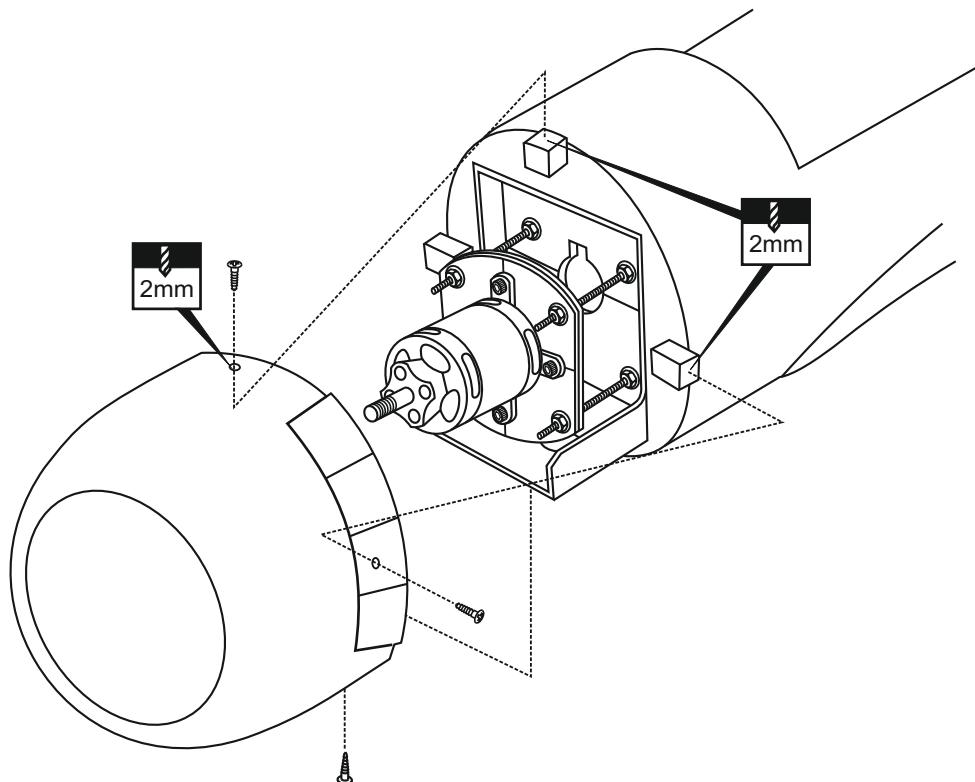
2x120mm rod



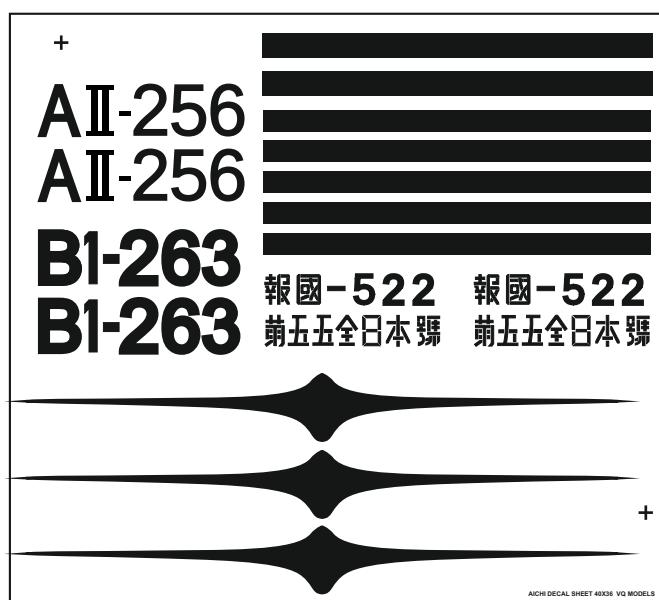
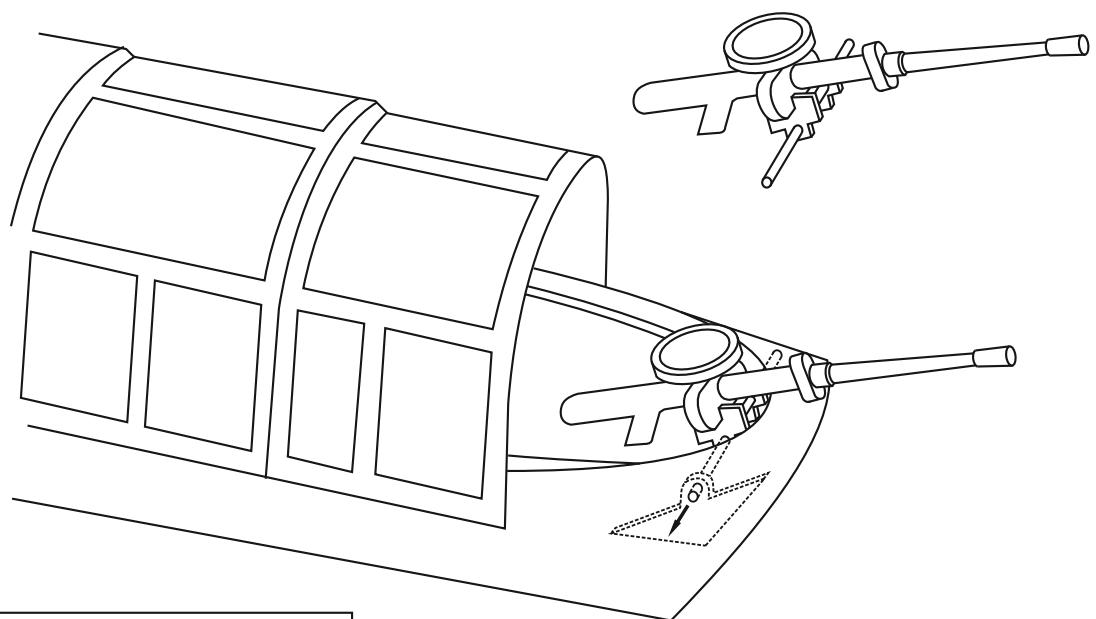
Cut the rudder push-rod excess length.
 Cut the tail wheel push-rod excess length.
 Insert all into the triple connector and tighten everything.
 Do the same way with the elevator linkages.



21- COWLING



22- GUN & DECAL



Note: Cut out the stickers and apply them in the proper area. Do not peel the backing paper off all at once.

Peel off one corner of the backing and cut off with scissors.

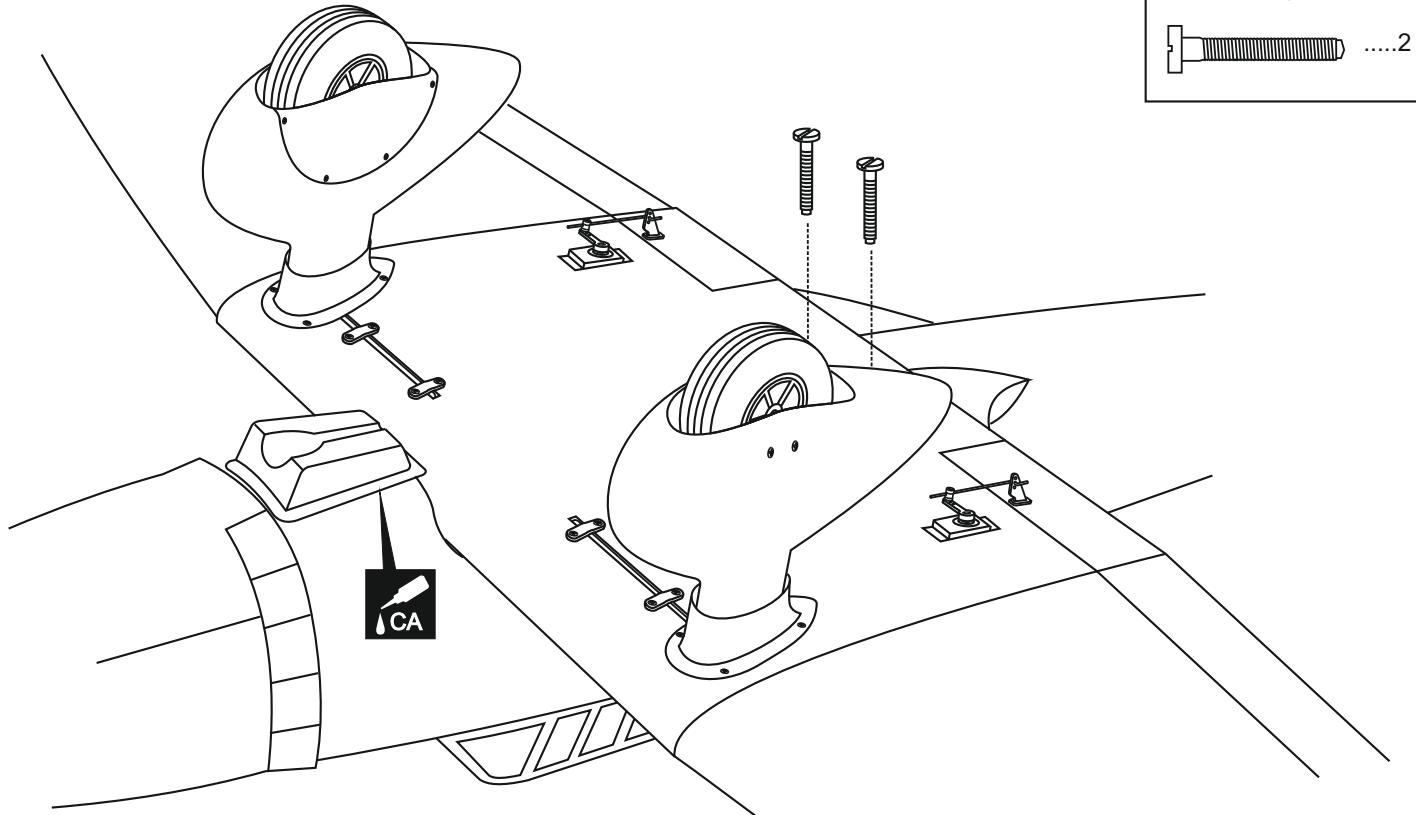
Arrange sticker on model and when satisfied adhere the corner without backing.

Carefully peel back the rest of the backing while at the same time adhering the rest of the sticker.

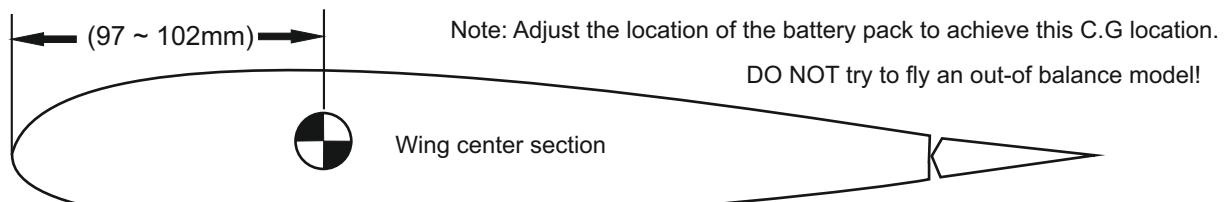
Try not to make air bubbles, if there are some, carefully puncture sticker (center of bubble) but not model surface with the tip of the knife or sharp pin and squeeze out the air.

At curves stretch sticker and apply a little heat so that no ceases occur. Cut off the excess that is produced.

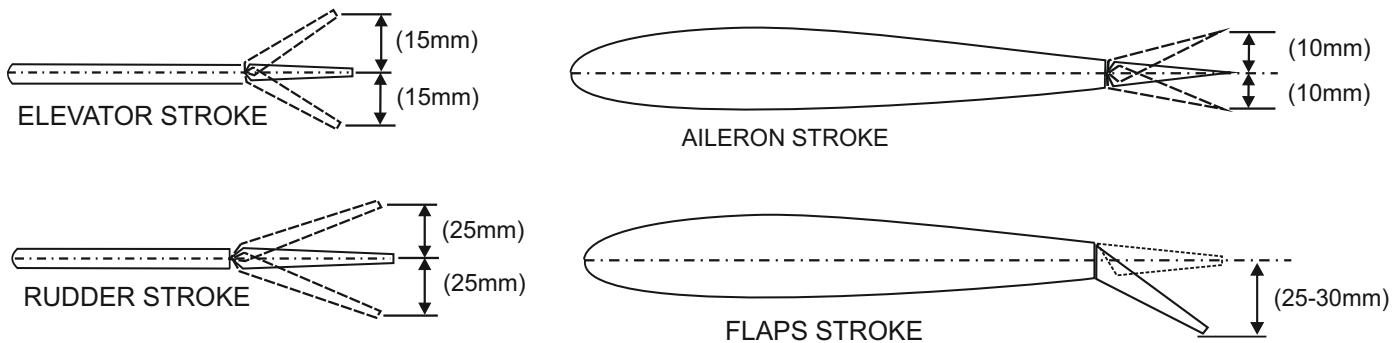
23- INSTALLATION THE WING



24-BALANCE



25-CONTROL SURFACE



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

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