

40 Class  
2-cycle engine

52 Class  
4-cycle engine

Or Electric equivalent

# P-39 Q/N AIRACOBRA

**BUILDING INSTRUCTIONS / MONTAGEANLEITUNG**

VQA09 / VQA091



**RADIO CONTROLLED ALMOST READY-TO-FLY ENGINE POWERED ALL Balsa PLANE**

## SPECIFICATIONS

Wingspan	1580mm
Length	1160mm
Flying weight	2500g
Electric Motor	650 Watt
Glow Engine	6,5cc 2T / 8,5cc 4-T
Radio	7 Channel / 7 Servos

## Technische Daten

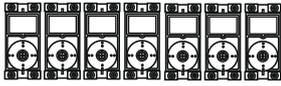
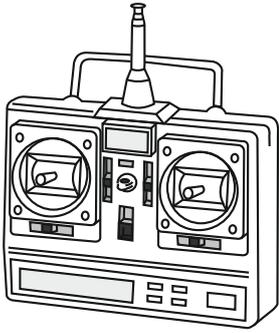
Spannweite	1580mm
Länge	1160mm
Fluggewicht	2500g
Elektroantrieb	650 Watt
Verbrennerantrieb	6,5cc 2T / 8,5cc 4T
Fernsteuerung	7 Kanal / 7 Servos



**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.

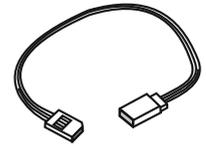
# OPTIONAL ACCESSORIES



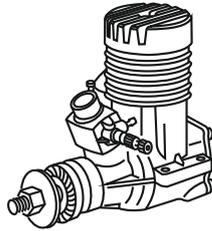
Minimum 7 channel radio for airplane with 7 mini servos  
 .Motor control x1  
 .Aileron x 2  
 .Flap x 2  
 .Elevator x 2  
 .Rudder x1



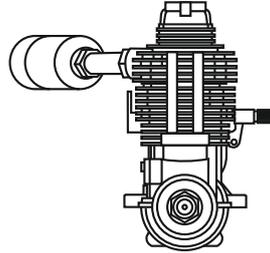
10.5x6 for .40 - 2 cycle engine  
 11x6 for .46 - 2 cycle engine  
 11X7 for .52 - 4 cycle engine  
 13X8 for Electric motor.



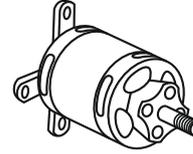
Extension for ailerons, flaps, elevators, rudder servo.



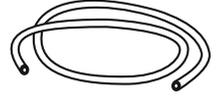
.40-.45 - 2 cycle



.52-.60 - 4 cycle



G-46 HP Motor  
 5 cell 4500mAh.  
 or equivalent.



Silicone tube

# GLUE (Purchase separately)



Silicon sealer

Cyanoacrylate  
 Glue  
 Klebstoff



CA



EPOXY A

Epoxy Glue (5 minute type)  
 Epoxy-Klebstoff (5min-Typ)

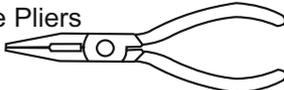


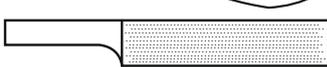
EPOXY B

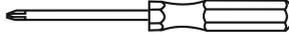
Epoxy Glue (30 minute type)  
 Epoxy-Klebstoff (30min-Typ)

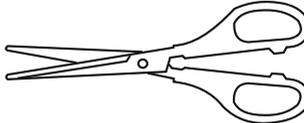
# TOLLS REQUIRED (Purchase separately)

Hobby knife 

Needle nose Pliers 

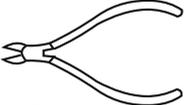
Sander 

Phillip screw driver 

Scissors 

Hex Wrench 

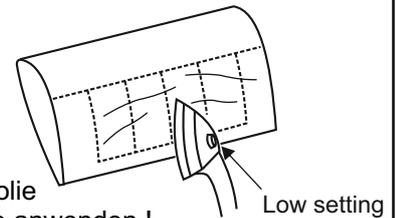
Awl 

Wire Cutters 

Masking tape - Straight Edged Ruler - Pen or pencil - Rubbing alcohol - 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 Warmluftgebläse (Haartrockner) um evtl. Falten aus der Folie zu bekommen. Die Kanten können Sie mit einem Bügeleisen behandeln. Nicht zuviel Hitze anwenden !



 1.5mm Drill holes using the stated size of drill (in this case 1.5 mm Ø)	 Take particular care here	 Hatched-in areas: remove covering film carefully	 Check during assembly that these parts move freely, without binding
 Use epoxy glue	 Apply cyano glue	 Assemble left and right sides the same way.	 Not included. These parts must be purchased separately

 1.5mm 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.

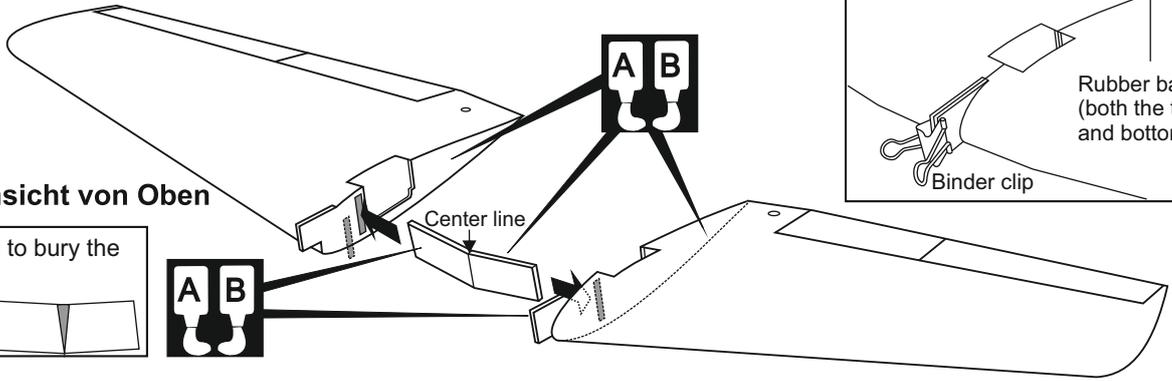
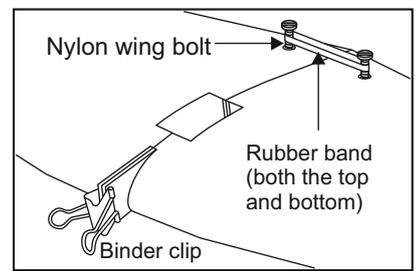
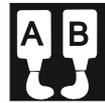
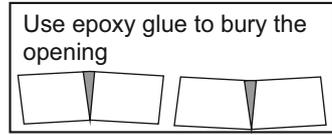
Read through the manual before you begin, so you will have an overall idea of what to do.

## 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- JOINING THE WING

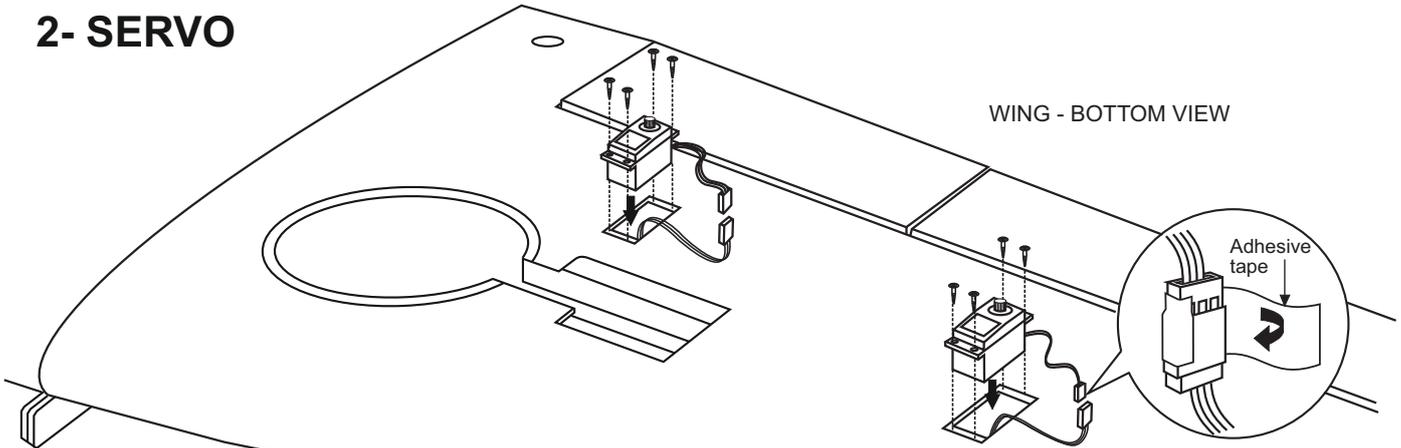
Top view / Ansicht von Oben



- 1- Using a pencil, mark the center of the brace.
- 2- Trial fit the wing joiner into one of the wing panels. It should insert smoothly up to the center line marked above.
- 3- Slide the other wing half onto the dihedral brace until the wing panel meet. If the fit is over tight, it may be necessary to lightly sand the dihedral brace.
- 4- Check for the correct dihedral angle.
- 5- Mix up some 30 minute epoxy and apply a generous amount of epoxy into the wing joiner cavity of one wing half.
- 6- Coat one half of the dihedral brace with epoxy up to the center line. Install the epoxy-coated side of the dihedral brace into the wing joiner cavity up to the center line, marking sure that the "V" of the dihedral brace is positioned correctly
- 7- Do the same way with the other wing half.
- 8- 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. Clean off the excess epoxy with paper towel and kerosene.

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

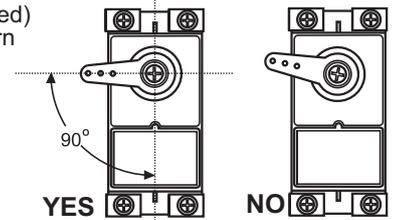
# 2- SERVO



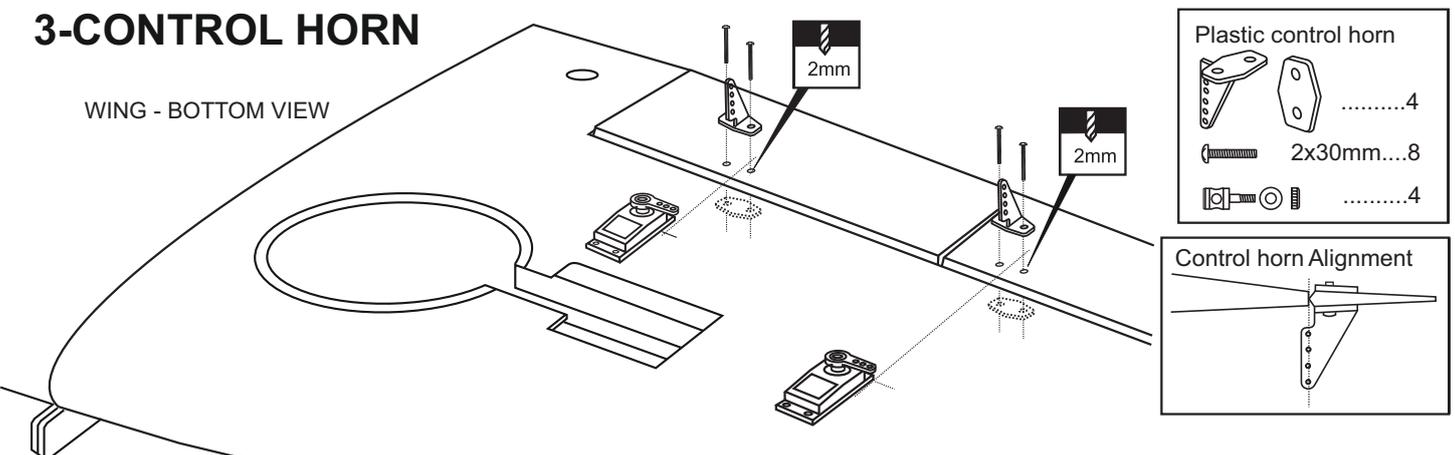
- 1-Cut away the covering of the wing bottom where the aileron servo goes.
- 2-Connect the aileron servo cord to the aileron extension cord.
- 3-Install the aileron servo on the servo mount.

Do the same way with second wing half

-Switch on the radio (trims centered) then mount the ailerons servo horn in neutral position.  
-The servo horn should be perpendicular to the servo



# 3-CONTROL HORN

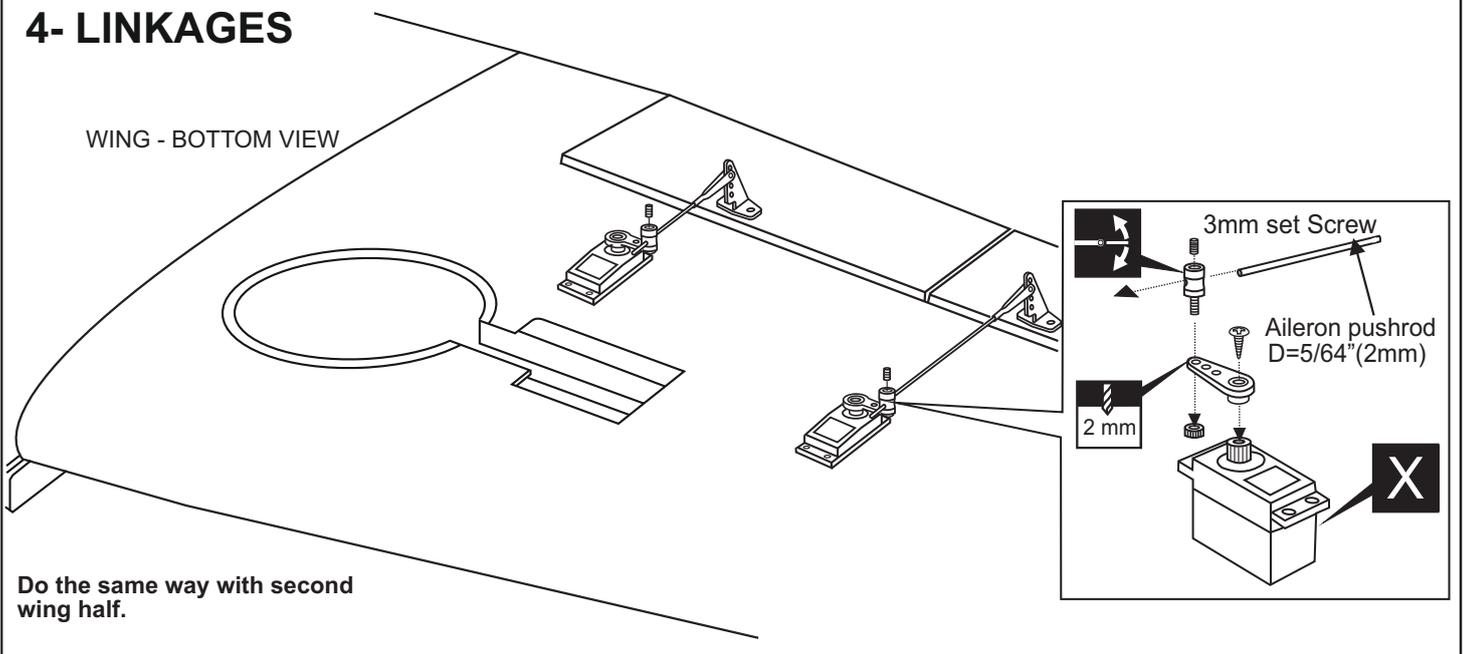


Do the same way with second wing half.

- 1-Depending on the position of the linkage, determine the location of aileron control horn. The horn holes must be perfectly aligned with the axis of articulation.
- 2-Mark the position of the "foot" of the horn on the aileron. Then, with the drill, make the 2 holes.
- 3-Install the aileron control horn as shown.

## 4- LINKAGES

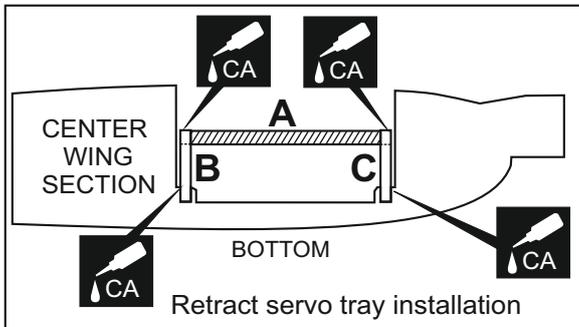
WING - BOTTOM VIEW



Do the same way with second wing half.

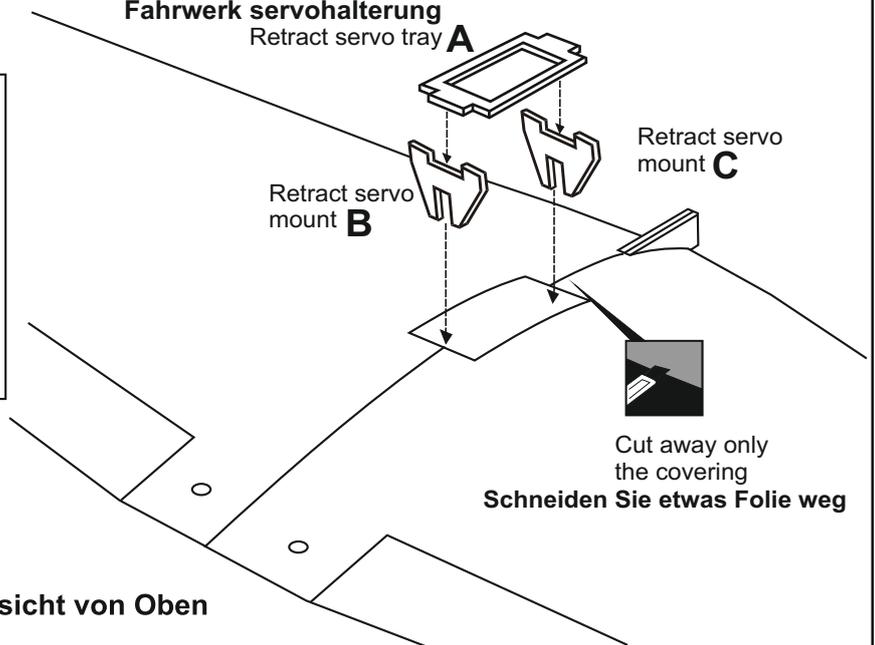
## 5- RETRACT SERVO TRAY

Fahrwerk servohalterung  
Retract servo tray **A**



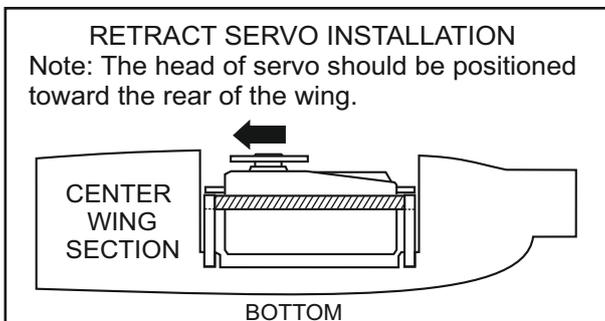
Retract servo tray installation

Top view / Ansicht von Oben



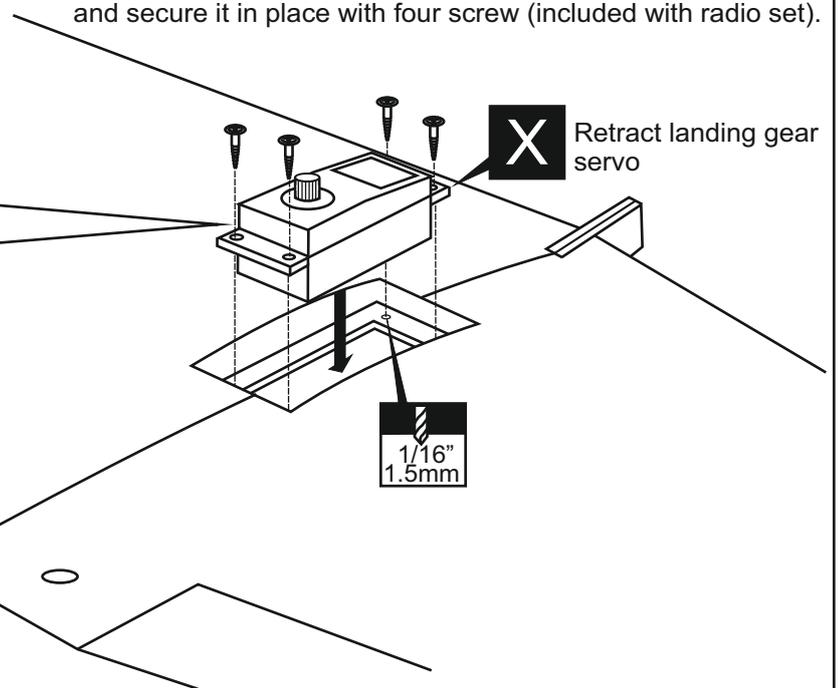
## 6- RETRACT SERVO

Install the retract servo onto the retract servo mount and secure it in place with four screw (included with radio set).



BOTTOM

Top view / Ansicht von Oben



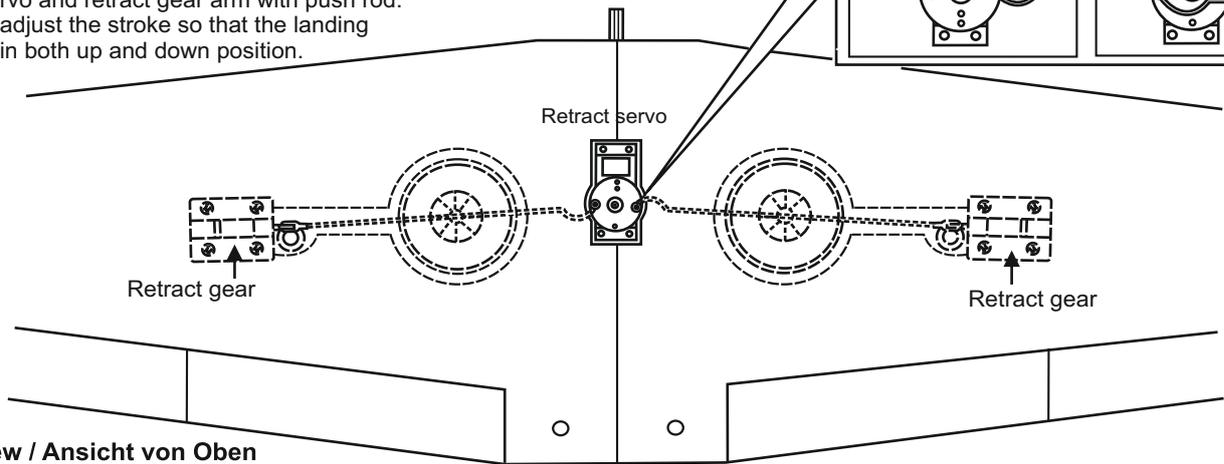
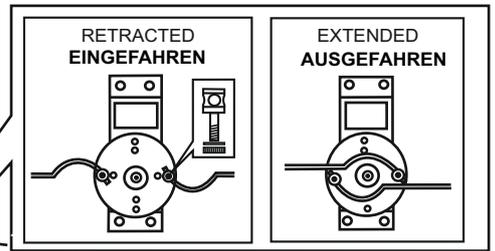
Retract landing gear servo

1/16"  
1.5mm

## 7- LINKAGES

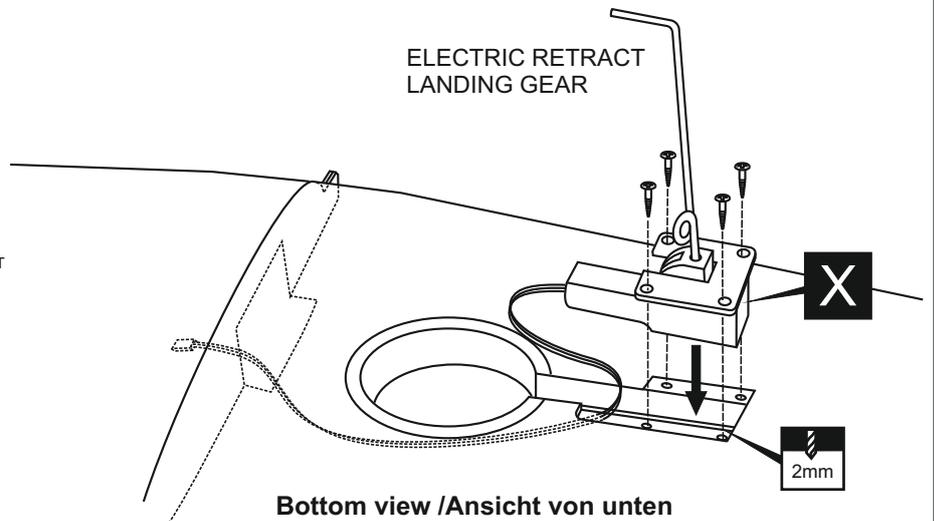
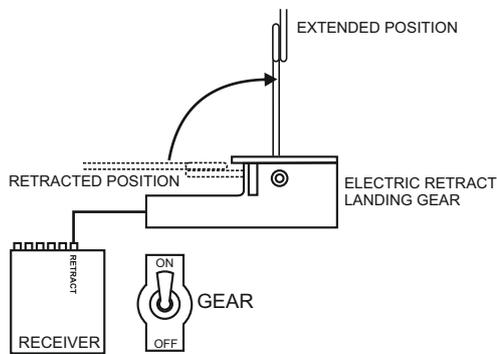
With the retract and retract servo in the retracted position, mark the position where each of the pushrod will attach to the servo arm, a small piece of masking tape works well for this. Cut off the excess length each rod.

Link the servo and retract gear arm with push rod. Be sure to adjust the stroke so that the landing gear locks in both up and down position.



Top view / Ansicht von Oben

## 8- ELECTRIC RETRACT



Bottom view / Ansicht von unten

## 9- FIXED GEAR

3x12mm screw

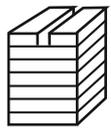
.....8

3x20mm screw

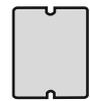
.....16

Nylon gear strap

.....4



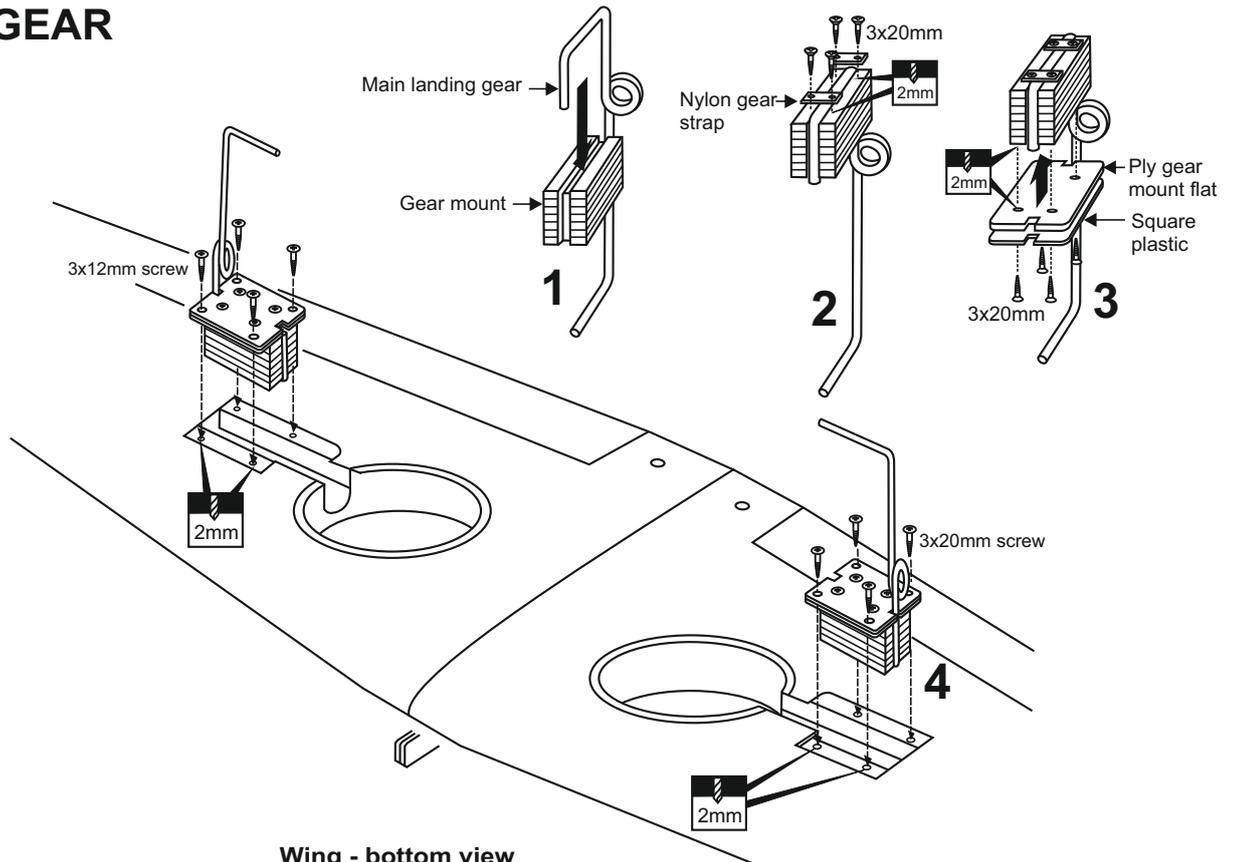
Gear mount x 2



Ply gear mount plate x 2



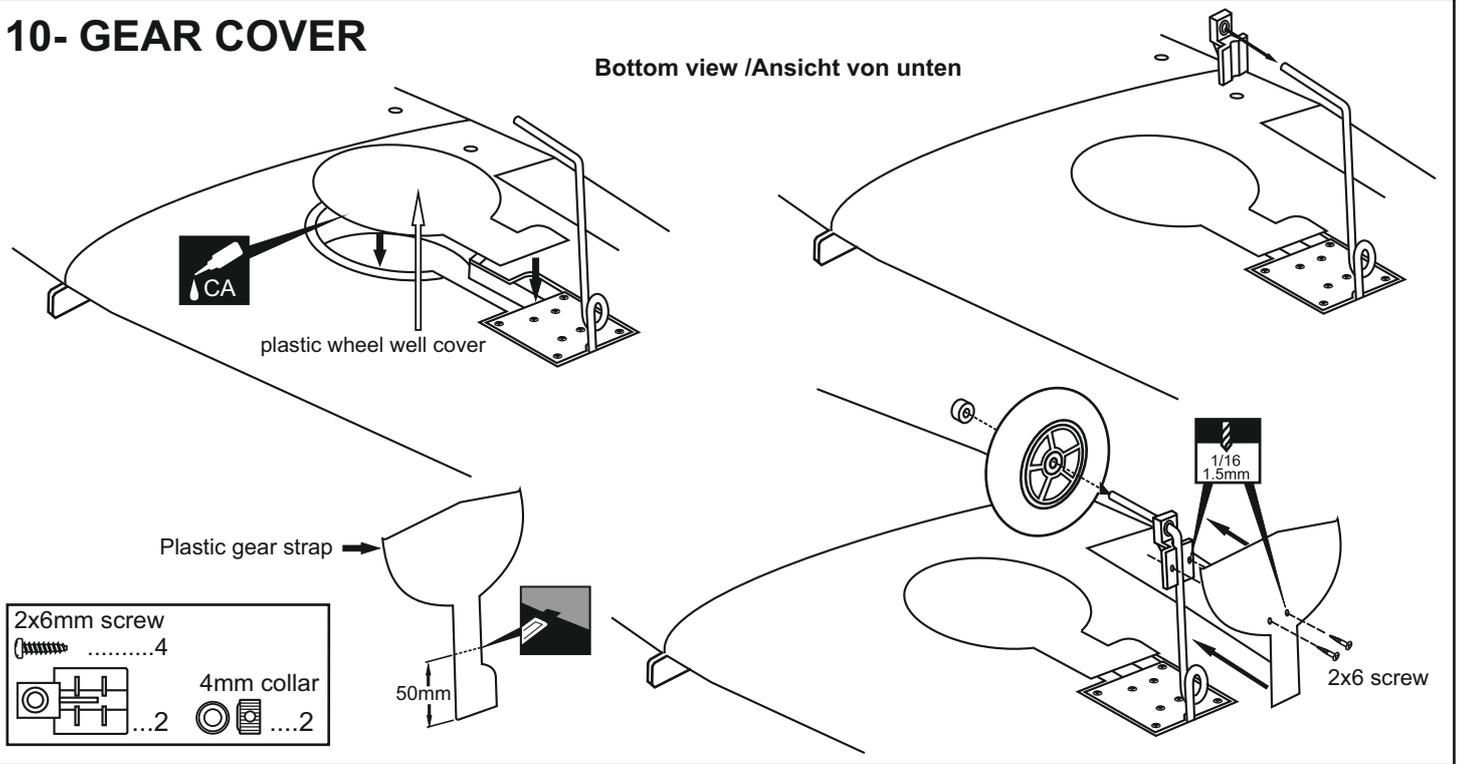
Square plastic x 2



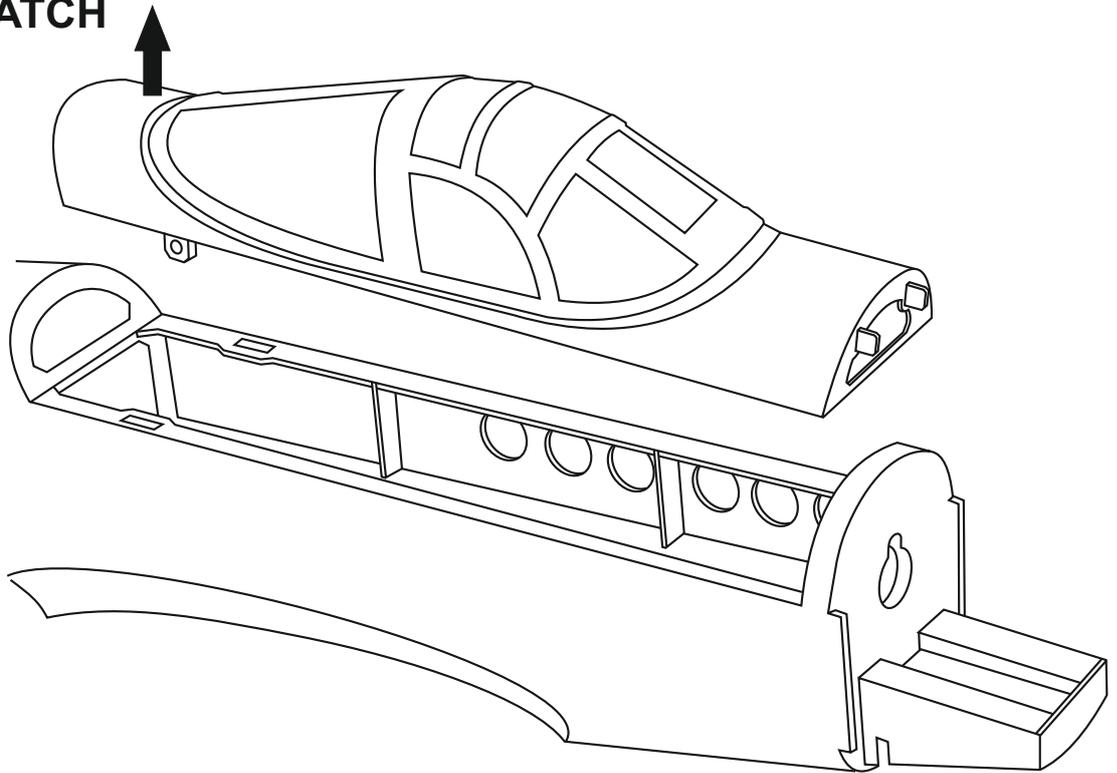
Wing - bottom view

# 10- GEAR COVER

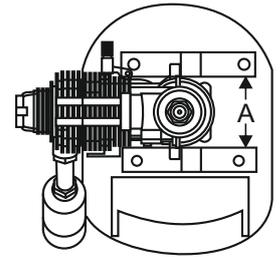
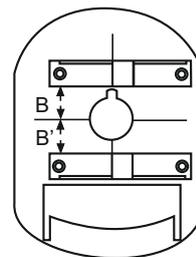
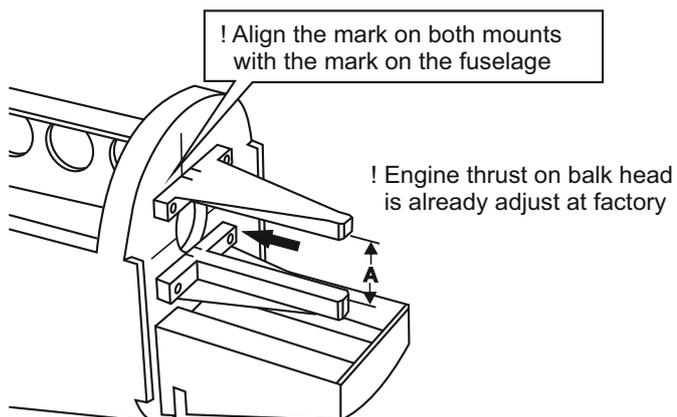
Bottom view / Ansicht von unten



# 11- CANOPY HATCH



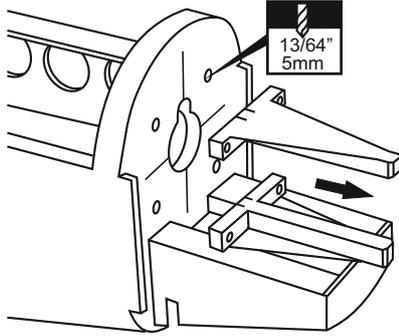
# 12- ENGINE MOUNT



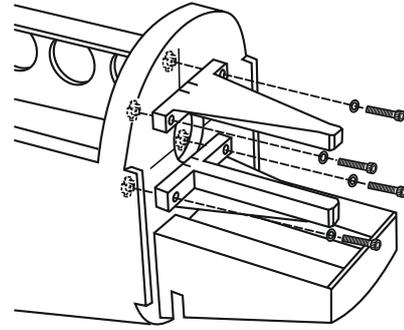
FRONT-VIEW

- Position the top and bottom engine mounts to the fire-wall, using a pencil or felt tipped pen, mark the fire-wall where the four holes are to be drilled.

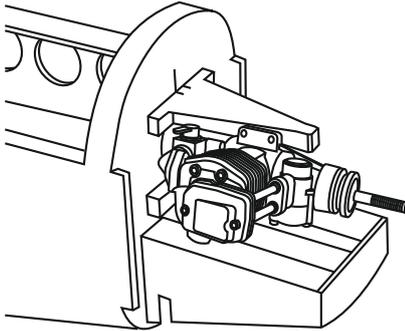
# 13- ENGINE MOUNT



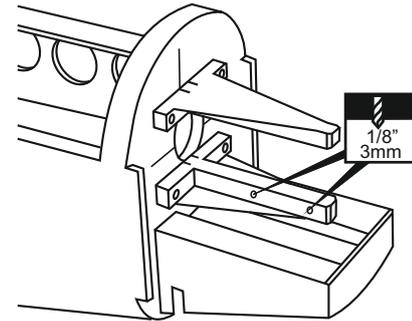
- Remove the engine mounts and drill a 13/64" (5mm) hole through the fire-wall at each of the four marks marked.
- Attach the four blind-nut to the fire-wall as show



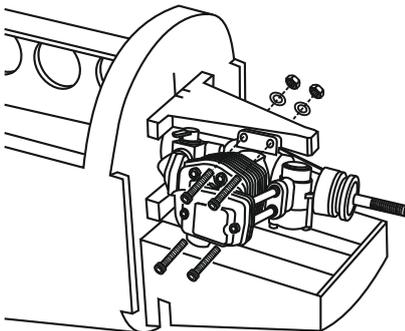
- Reposition the engine mounts on to the fire-wall and secure them with four 4x25mm screw



- Position the engine on to the engine mounts so the distance from the prop hub to the fire wall is 4.6" (118mm).
- Mark the engine mounting plate where the four holes are to be drilled.



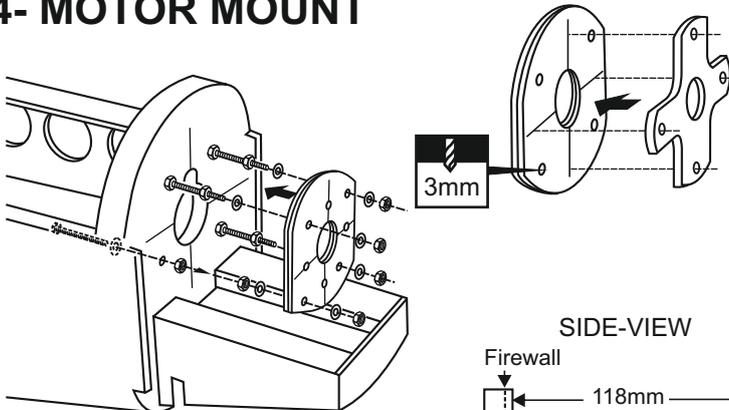
- Remove the engine and drill a 1/8" (3mm) holes through the beam at each of the four marks make before.



- 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.

5/32x1" 4x25mm screw	1/8x5-1/64" 3x20mm screw
...4	...4
Blind-nut	1/8" (3mm) nut
.....4	.....4

# 14- MOTOR MOUNT

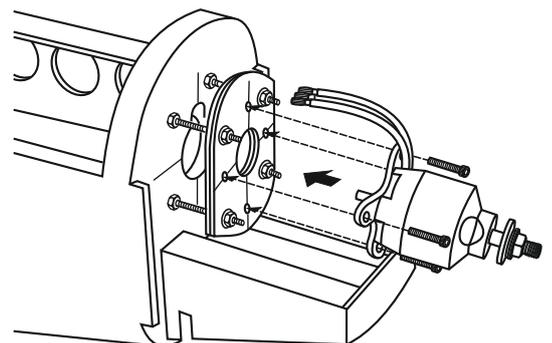
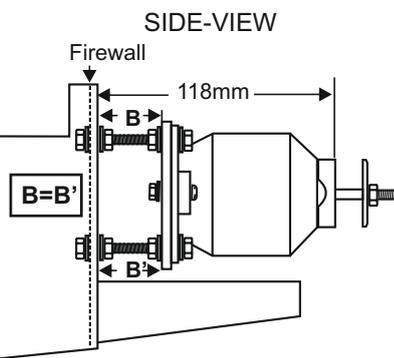


- Using a aluminum motor mounting plate as a template, mark the plywood motor mounting plate where the four holes are to be drilled.

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

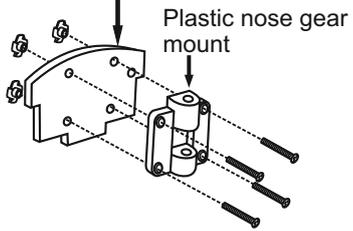
Note: The aluminum motor mounting included with electric motor set.

	5x70mm.....4
	5mm nut.....12
	5mm washer...16
	3mm screw/nut...4

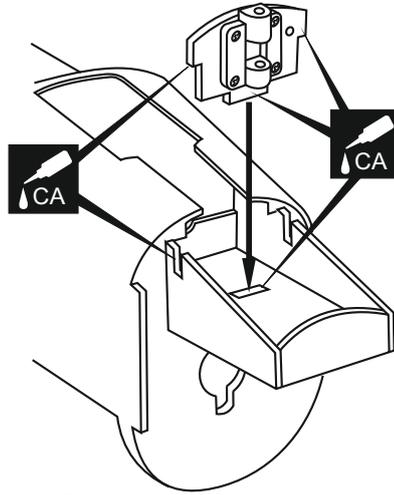


## 15- NOSE GEAR

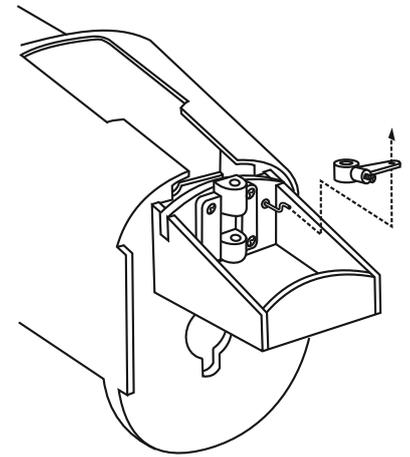
Plywood nose gear plate



Attach the plastic nose gear mount to the plywood nose gear plate using four 3x20mm screws and blind nuts.

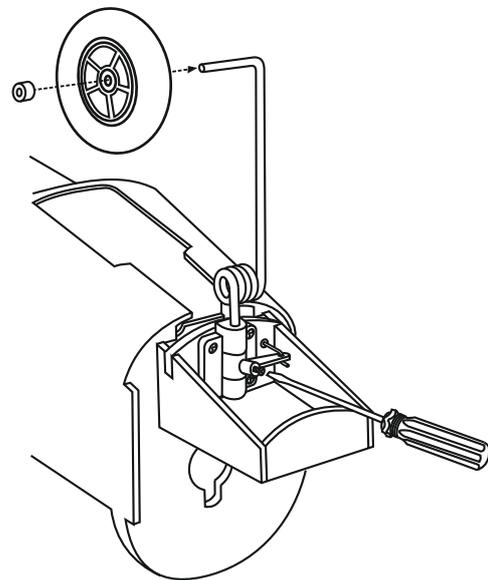
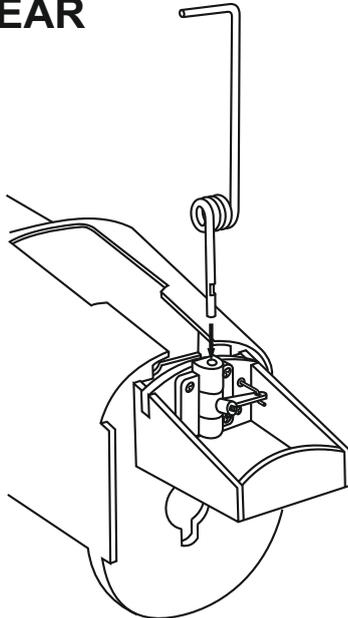


Secure the plywood nose gear plate in place using CA glue.



Insert the nose gear pushrod into the fuselage with the "Z" bend in front.  
Insert the "Z" bend into the hole on the nose gear control horn.

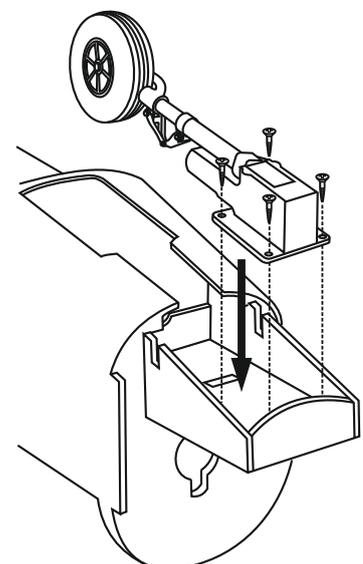
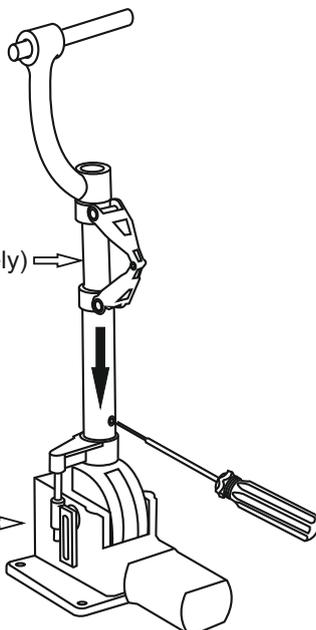
## 16- NOSE GEAR



## 17- STRUTS (NOSE GEAR)

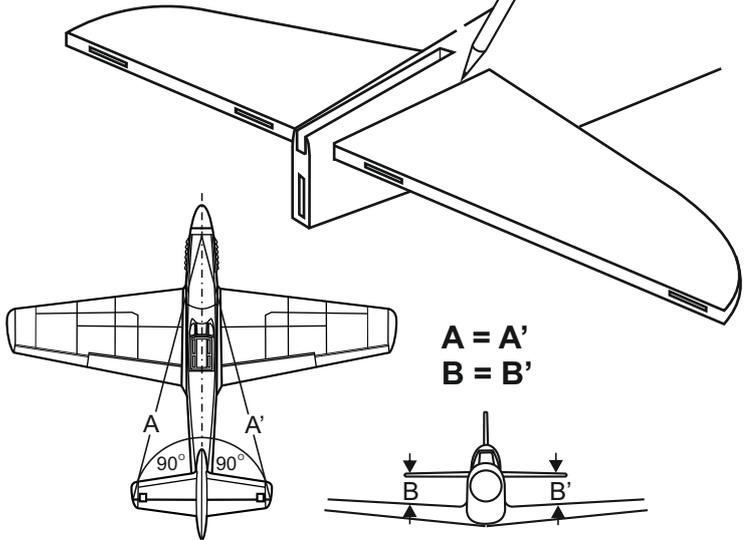
Struts (purchase separately) →

Electric retract (purchase separately) →



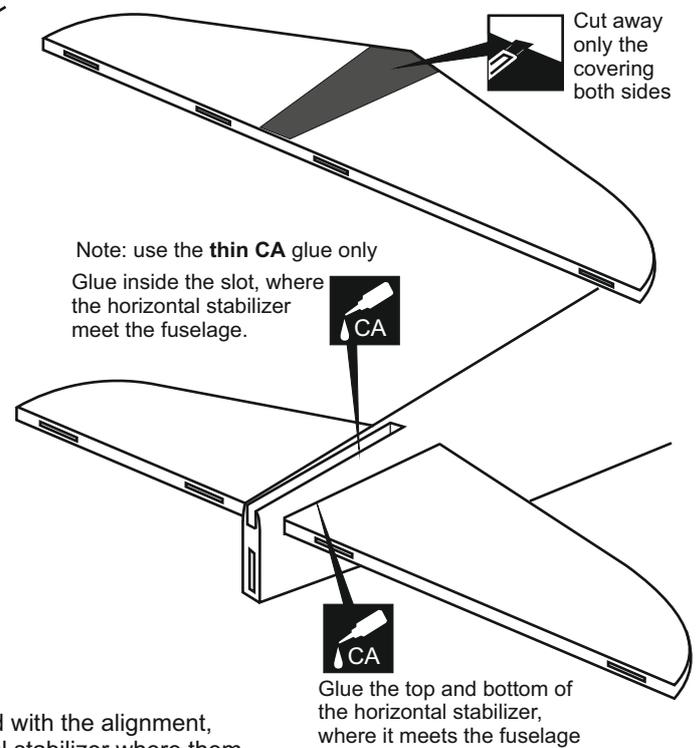
## 18- HORIZONTAL STABILIZER

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.



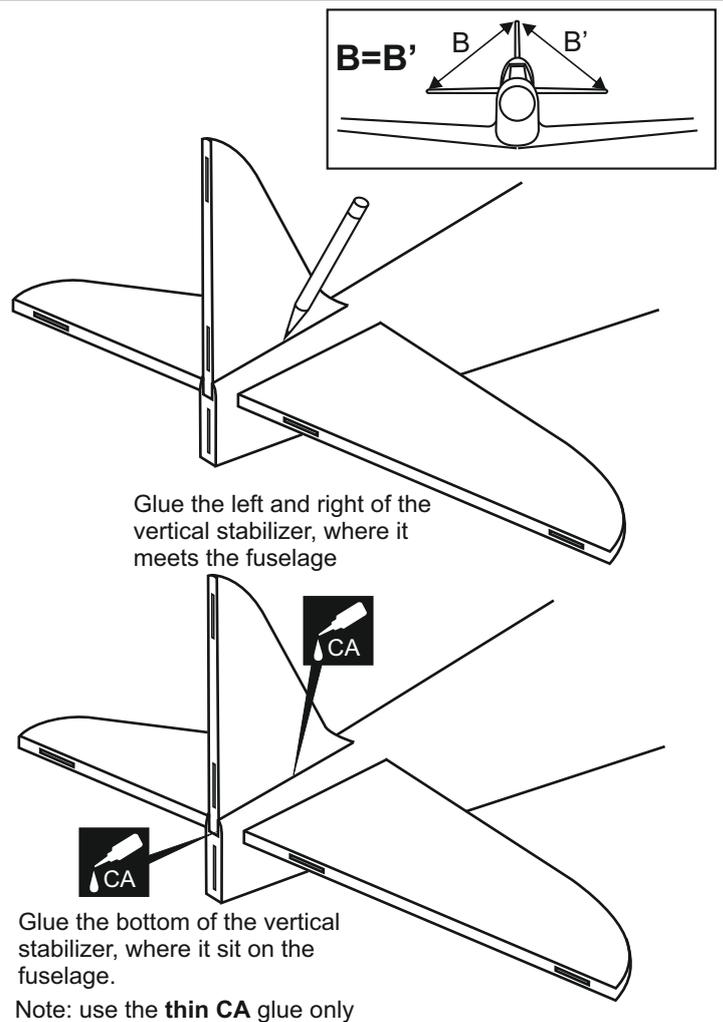
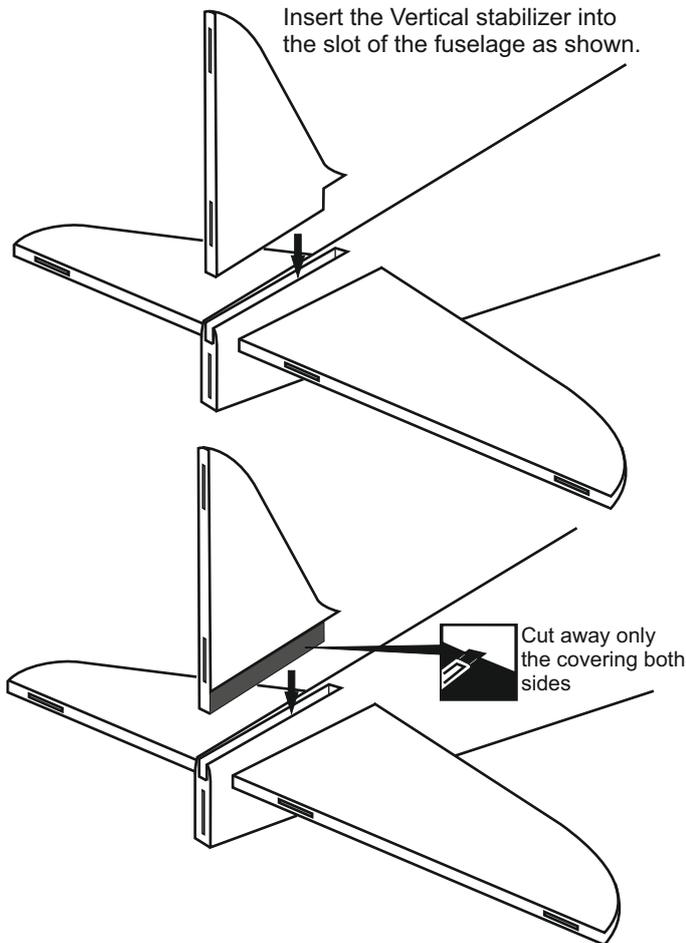
Slide the Horizontal stabilizer into the fuselage. When you are satisfied with the alignment, use a pencil to carefully trace around the left and right of the Horizontal stabilizer where they meet the fuselage. Note, it is important not to disturb the alignment of the stabilizer.

Remove the Horizontal stabilizer from the fuselage, **cut away the covering inside the lines**. Not to cut into the wood. Reposition the stabilizers into the fuselage, ensuring that they are accurately aligned. Secure the horizontal stabilizer in place using thin CA glue.



## 19- VERTICAL STABILIZER

Insert the Vertical stabilizer into the slot of the fuselage as shown.

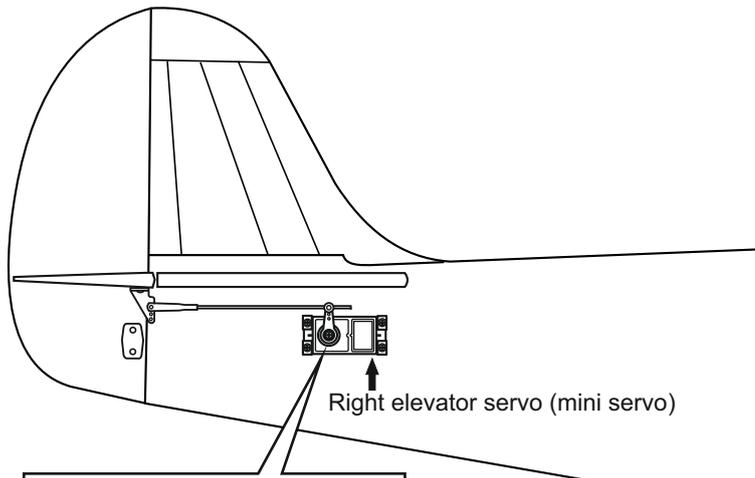
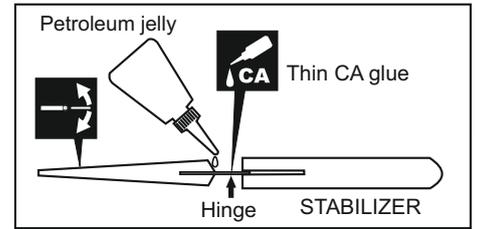


When you are satisfied with the alignment, use a pencil to carefully trace around the left and right of the Vertical stabilizer where it meets the fuselage. Note, it is important not to disturb the alignment of the stabilizer.

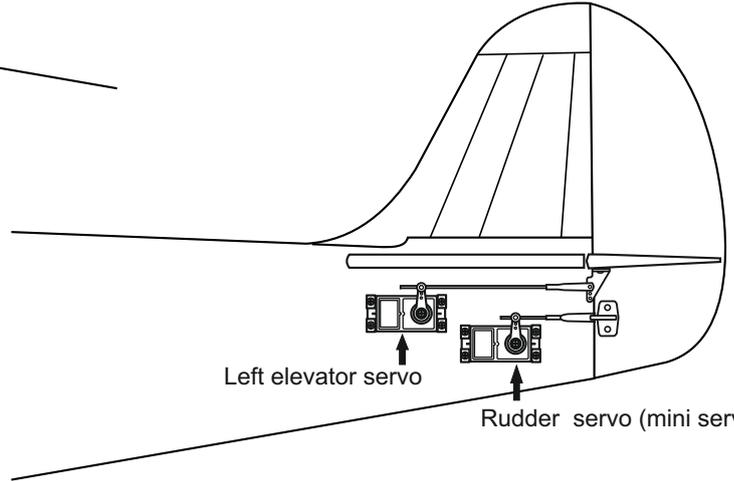
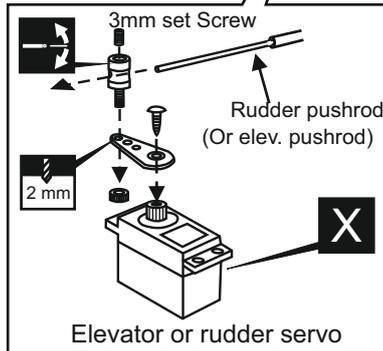
Remove the vertical stabilizer from the fuselage. Cut away the covering inside the lines. Not to cut into the wood.

Reposition the stabilizers onto the fuselage, ensuring that they are accurately aligned. Secure the horizontal stabilizer in place using thin CA glue.

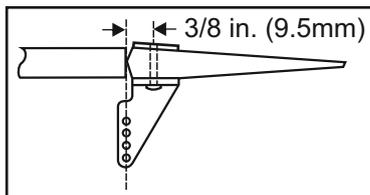
## 20- SERVOS AND LINKAGES



Apply a thin layer of machine oil or petroleum jelly to only the **top and bottom of the trailing edge of the elevator**, then push the elevator and its hinges into the hinge slots in the trailing edge of the horizontal stabilizer. When satisfied with the alignment, hinge the elevator to the horizontal stabilizer using CA glue. Do the same way with the rudder.

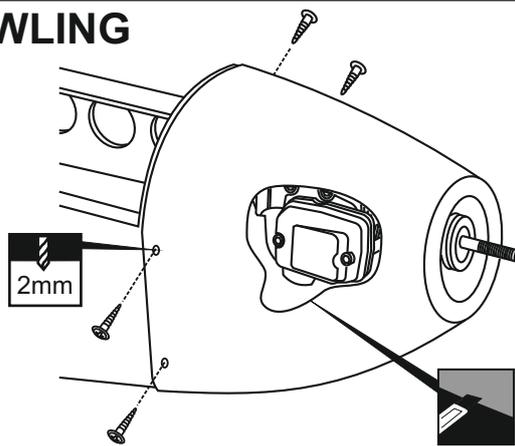


- ..... 3
- 2x12mm screw
- ..... 6
- Connector
- ..... 3

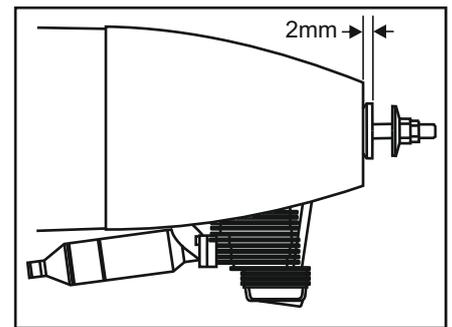


When you are satisfied with the alignment of the control horn mark the mounting hole positions with a felt tipped pen or a pencil. Remove the control horn and drill two 2mm (5/64") holes through the rudder and elevator. Attach the rudder and elevators control horn using two 5/64X15/32"(2x12mm) screws and a back plate.

## 21- COWLING

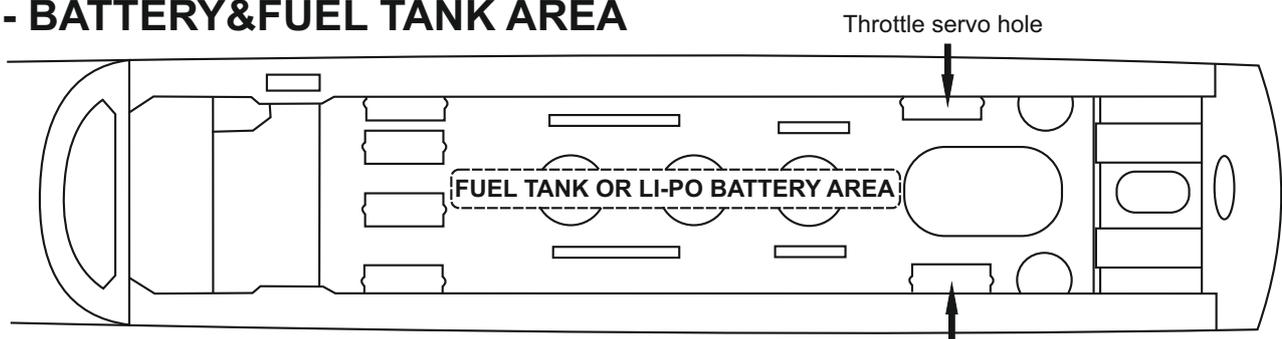


- 3/32x13/32"
- 2.5x10mm.....4



Relieve the cowl to clear the engine head

## 22- BATTERY & FUEL TANK AREA

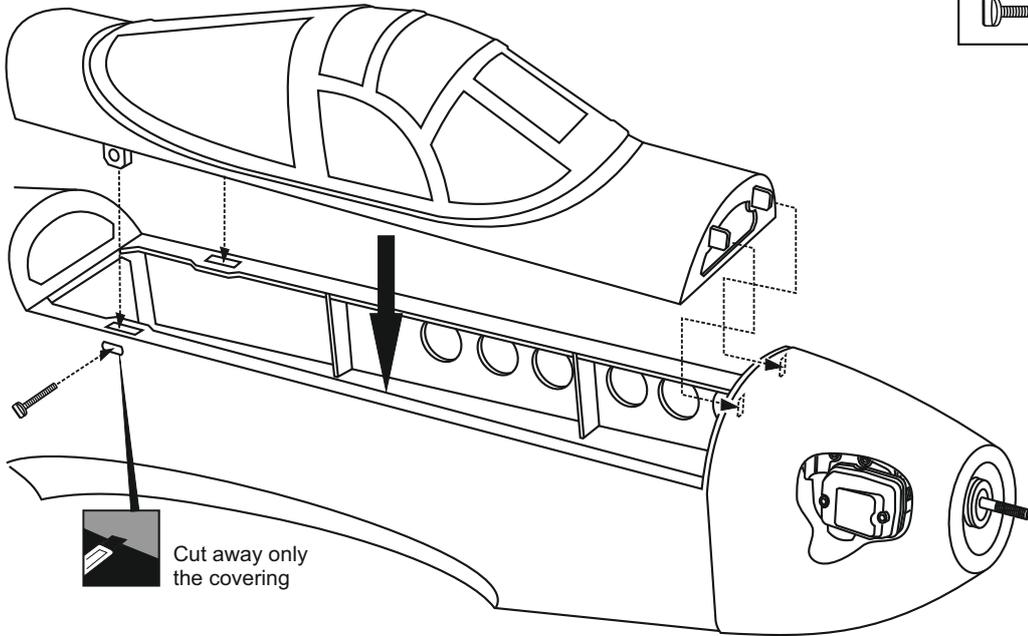


FUSELAGE - TOP VIEW

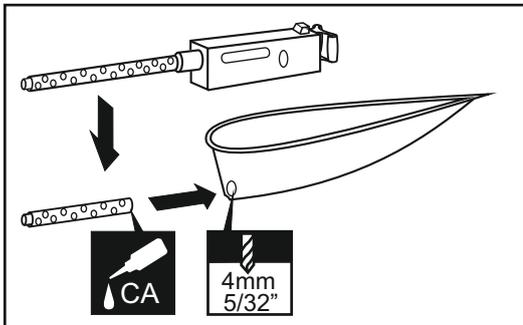
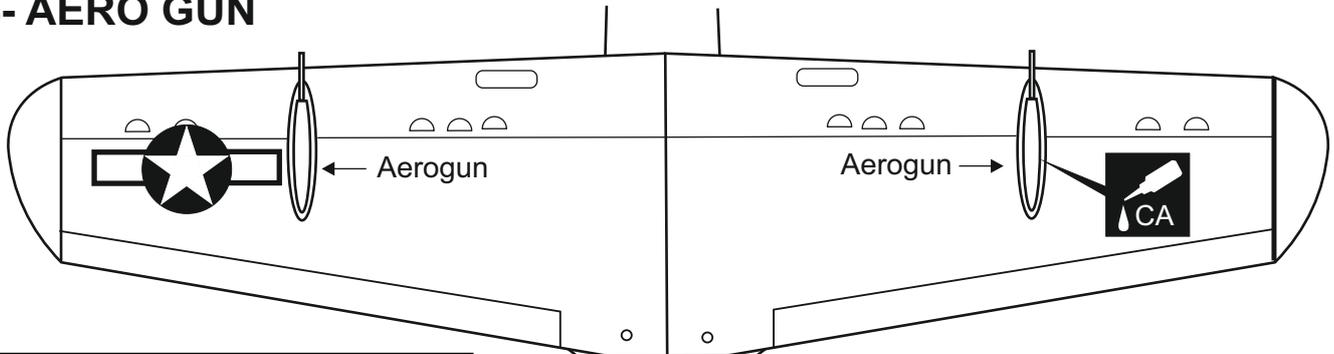
## 23- CANOPY HATCH

30x4mm nylon bolt

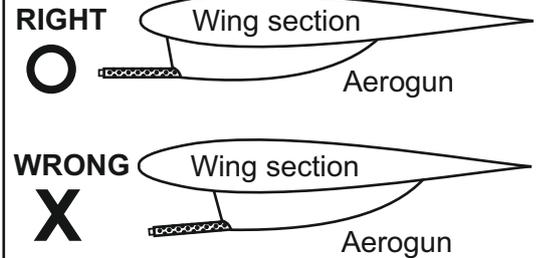
 .....2



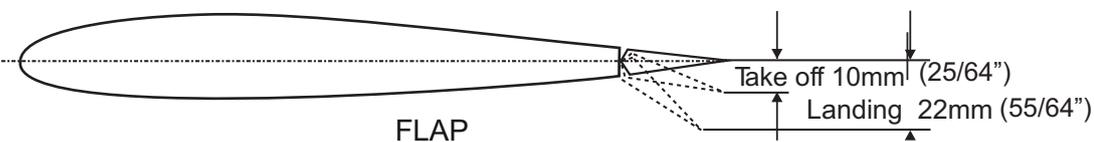
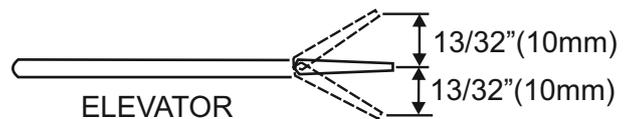
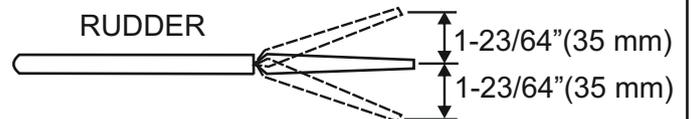
## 24- AERO GUN



BOTTOM VIEW



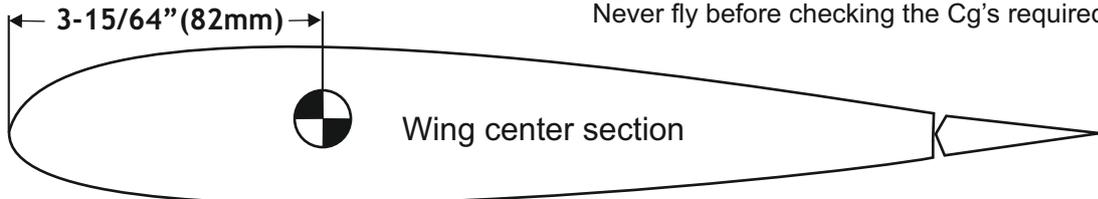
## 25- CONTROL SURFACE



**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 P-39 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".

## 26- BALANCE

**WARNING !** Securely install the receiver and power pack, ensuring they will not come loose or rattle during flight.  
Never fly before checking the Cg's required position.

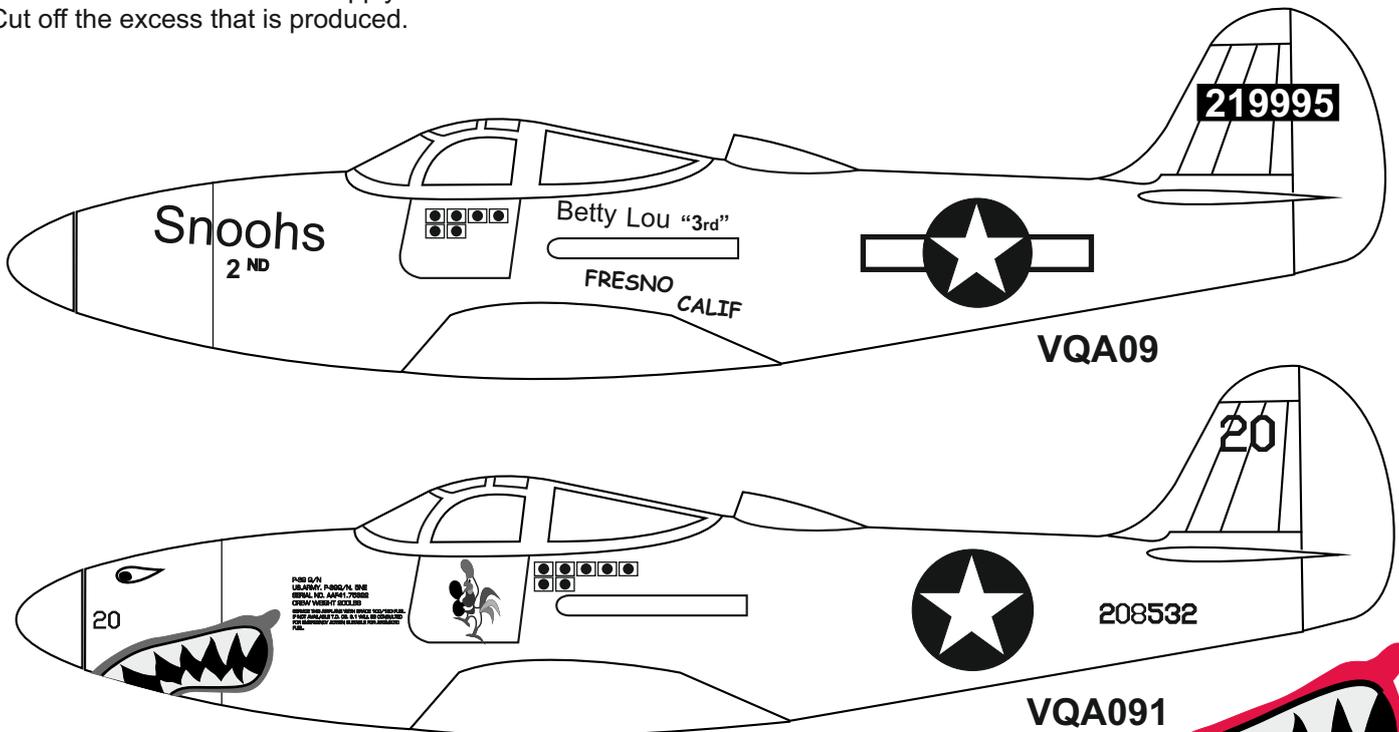


In order to obtain the CG specified, reposition the receiver and power pack

## 27- DECALS

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 creases occur. Cut off the excess that is produced.



VQA09 DECAL SHEET



VQA091 DECAL SHEET



VQA091 DECAL SHEET



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

### WARNING

Do not put in a large-than recommended engine. A bigger engine does not necessarily mean better performance.