

Radio control model / Flugmodell

# T-28 "Trojan"



ALL Balsa, PLYWOOD CONSTRUCTION AND ALMOST READY TO FLY

## Instruction manual / Montageanleitung

### SPECIFICATIONS

Wingspan:.....1870mm  
Length:.....1350mm  
Electric Motor:.....900Watt - 80A. ESC  
Glow Engine:.....120 4T / 75-95 2T  
Gas Engine: .....17-20cc  
RTF Weight: 5.3 - 5.6Kg (Will vary with  
Equipment Used).  
Radio:.....See next pager

All balsa and  
plywood  
Construction



**RC**  
RADIO CONTROL

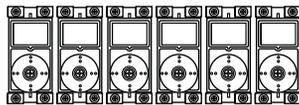
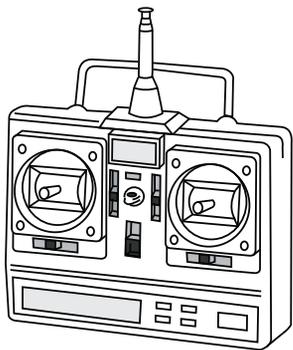
**ARF**  
VERSION

CE Made in Vietnam

**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.

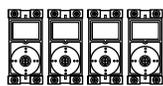
**ACHTUNG!** Dieses ferngesteuerte Modell ist KEIN Spielzeug! Es ist für fortgeschrittene Modellflugpiloten bestimmt, die ausreichende Erfahrung im Umgang mit derartigen Modellen besitzen. Bei unsachgemäßer Verwendung kann hoher Personen- und/oder Sachschaden entstehen. Fragen Sie in einem Modellbauverein 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)



6 standard servos:

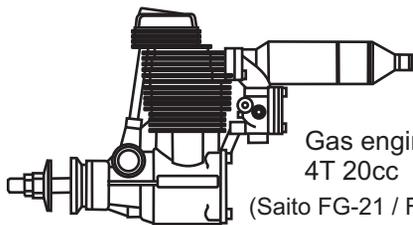
- Aileron: 2
- Elevator: 2
- Rudder: 1
- Nose gear: 1



4 mini servos:

- Flap: 2
- Gear door: 1
- Throttle: 1

Minimum 8-9 channels radio

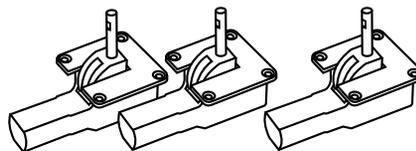


Gas engine:  
4T 20cc

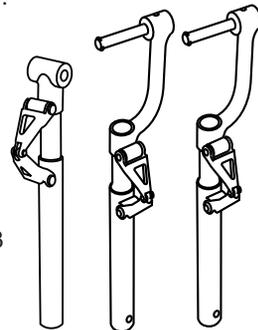
(Saito FG-21 / FG19R3)



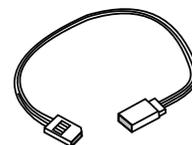
Brushless motor: 900w / 60A  
ESC:80A



Erertract and Strut  
set for T-28: VQ-ARE33



Fiber glass or wooden propeller, depend of the engine or Electric motor.

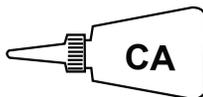


- Extension cord for aileron servos: 60cm(x2)
- Extension cord for flap servos: 40cm(x2)
- Extension cord for retract servos: 40cm(x2)
- Extension cord for Rx battery pack: 30cm(x1)
- Extension cord for gear door servo: 30cm(x1)

## GLUE (Purchase separately)



Silicon sealer



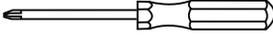
Cyanoacrylate Glue (thin type)

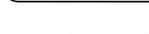


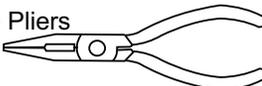
Epoxy Glue  
(5 - 30 minute type)

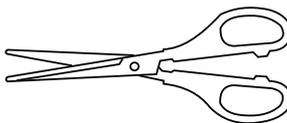
## TOLLS REQUIRED (Purchase separately)

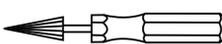
Hobby knife 

Phillip screw driver 

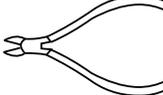
Hex Wrench 

Needle nose Pliers 

Scissors 

Awl 

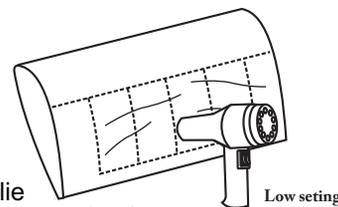
Sander 

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.

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 !



Low setting

 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

## SAFETY NOTES BEFORE ASSEMBLING

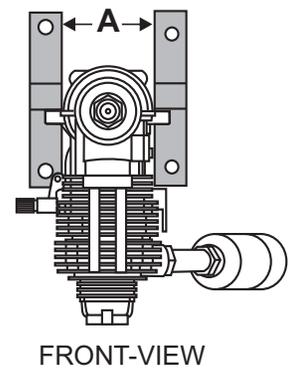
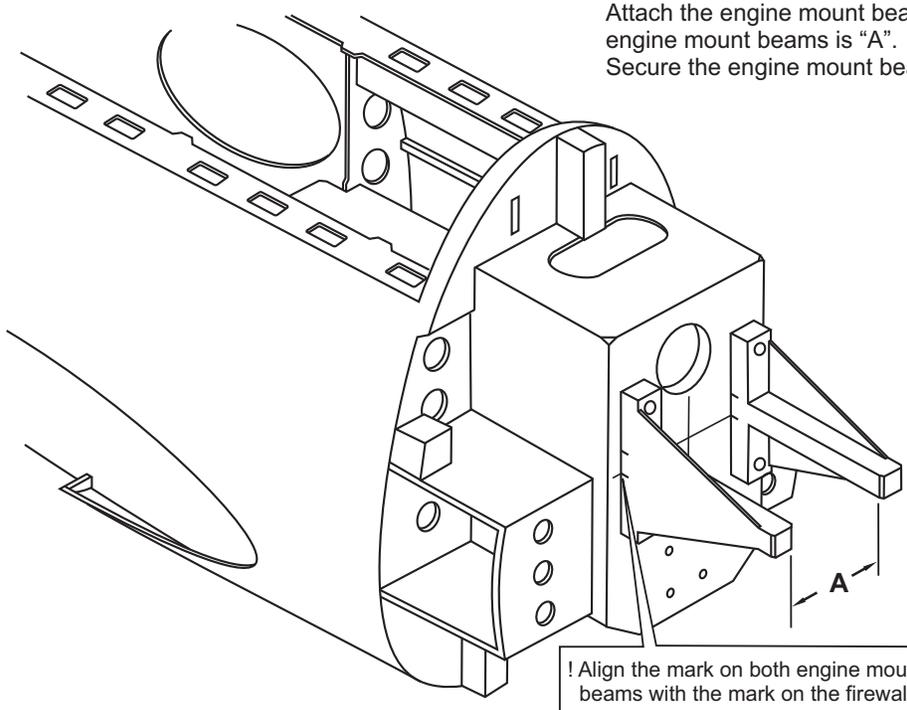
This model is highly pre-fabricated and can be built in a very short time. However, the work which you have to carry out is important and must be done carefully.

The model will only be strong and fly well if you complete your tasks competently - so please work slowly, accurately and check every joints, maybe apply more glue to be safe.

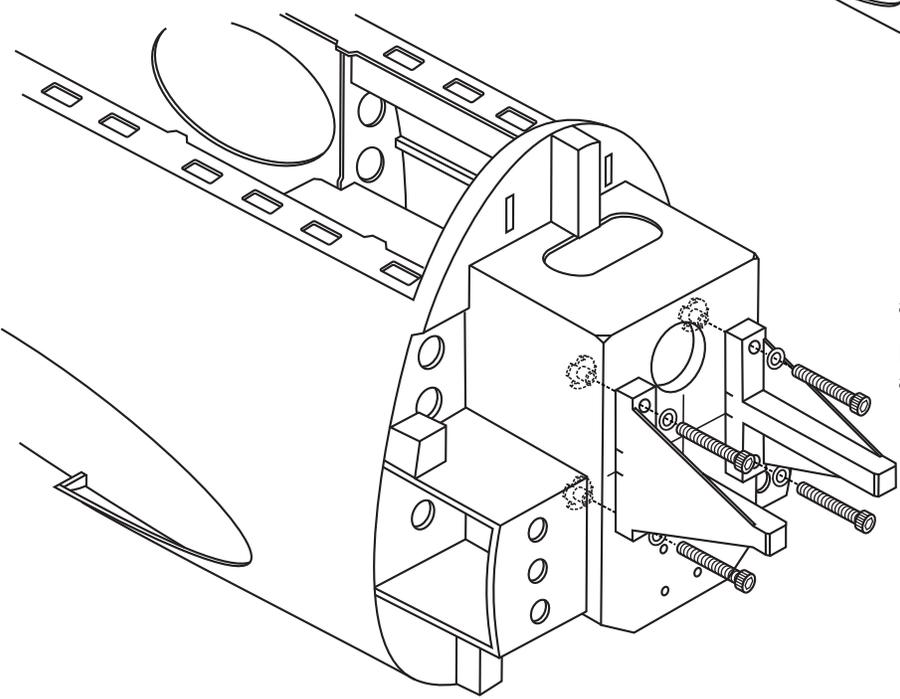
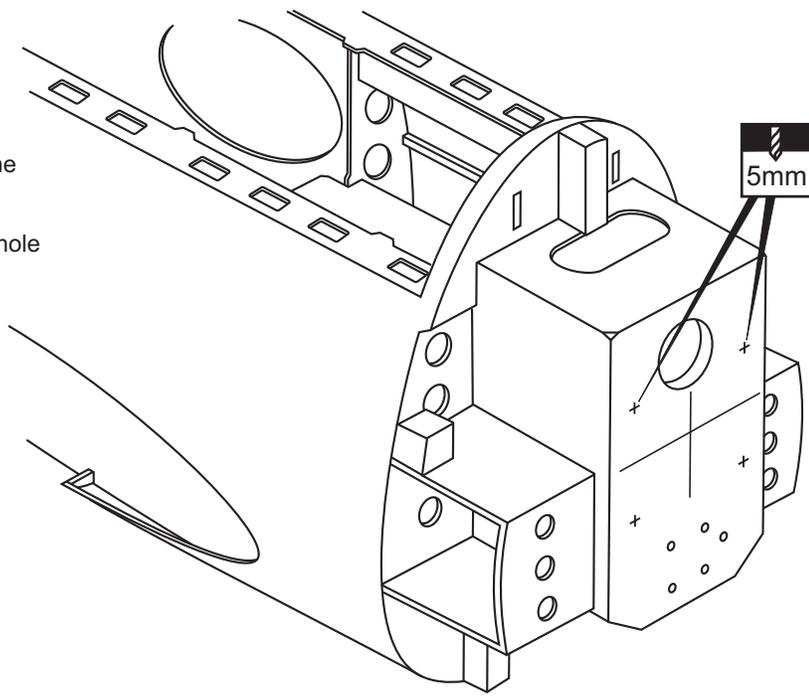
Read through the manual before you begin, so you will have an overall idea of what to do.

# T-28 TROJAN 1- Glow engine

Attach the engine mount beams onto the fire-wall so the distance between of two engine mount beams is "A".  
Secure the engine mount beams onto the fire-wall with litter CA glue.



Using a pencil or felt tipped pen, mark the fire wall where the four holes are to be drilled.  
Carefully remove the engine mount beams and drill a 5mm hole through the fire-wall at each of the four marks made above.



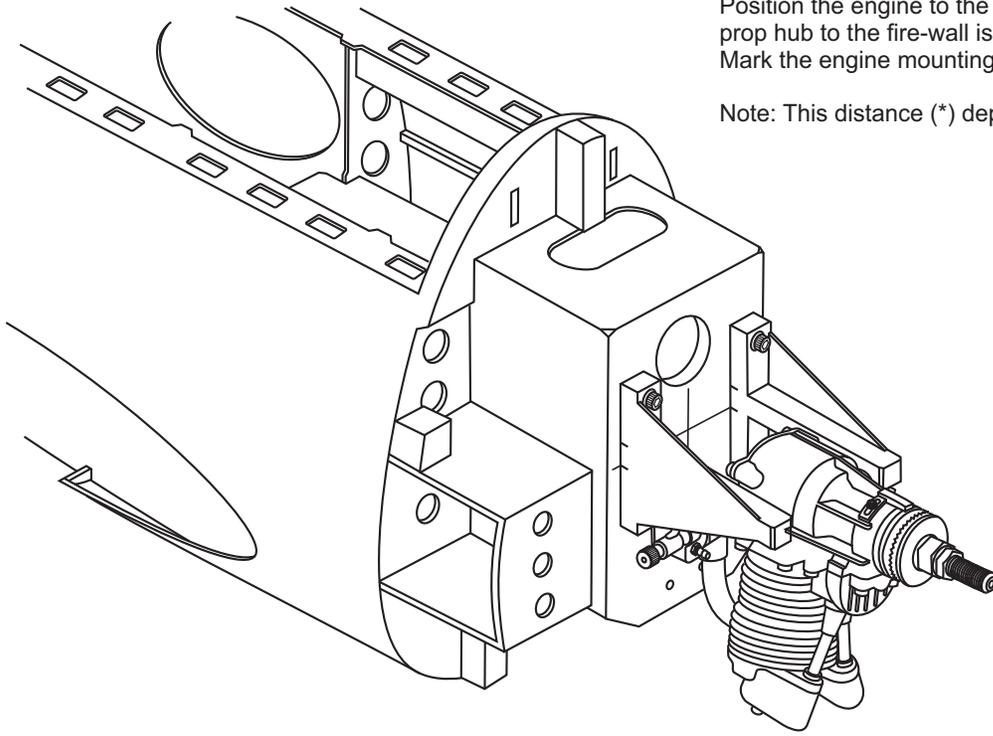
Insert the blind-nut onto each of the four holes make above.  
Reposition the engine mount beams on to the fire-wall and secure them with four 4x25mm hex bolt.

- 4x25mm hex bolt  .....4
- Blind-nut  .....4
- 4mm washer  .....4

# T-28 TROJAN 2- Glow engine

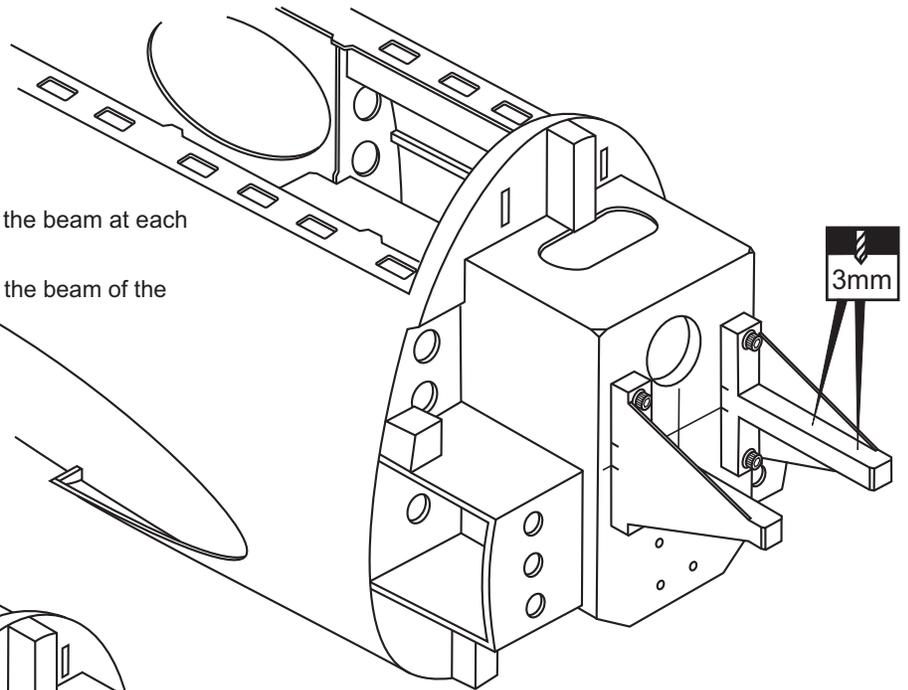
Position the engine to the engine mounts so the distance from the prop hub to the fire-wall is **135mm** (\*).  
Mark the engine mounting plate where the four holes are to be drilled.

Note: This distance (\*) depends on the type of engine you use.



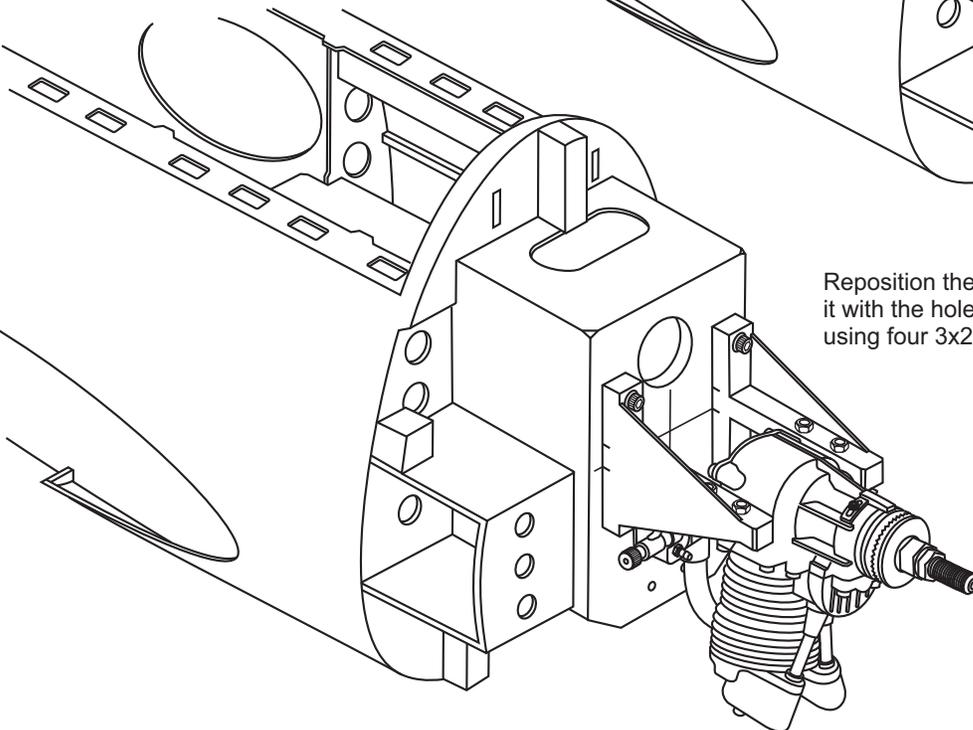
Remove the engine and drill a 3mm holes through the beam at each of the four marks made above.

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



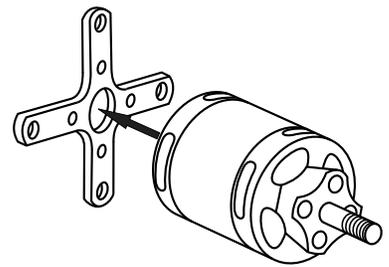
Reposition the engine on the engine mount beams, aligning it with the holes. Secure the engine to the engine mount using four 3x25mm hex bolts.

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

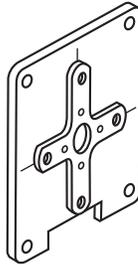


3x20mm screw			...4
Nut			.....4

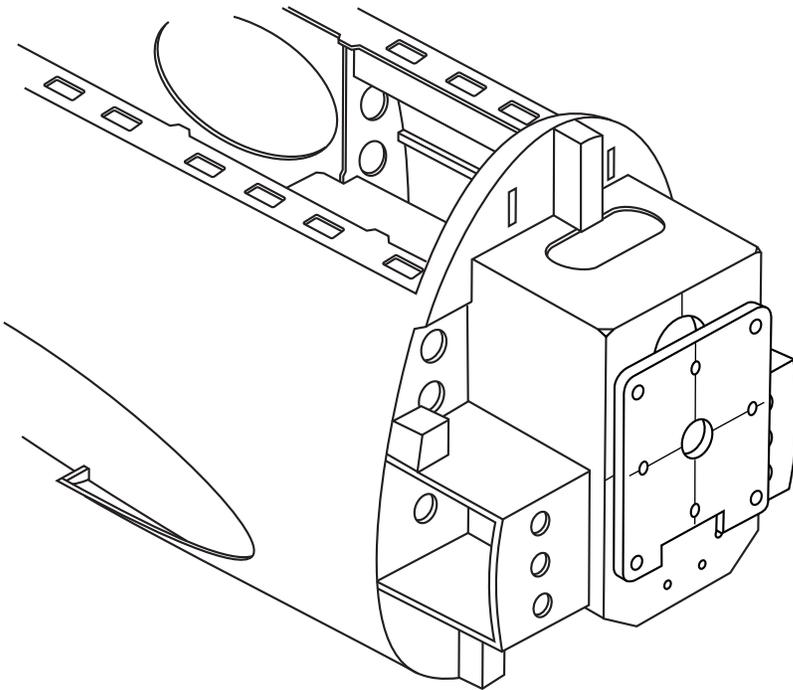
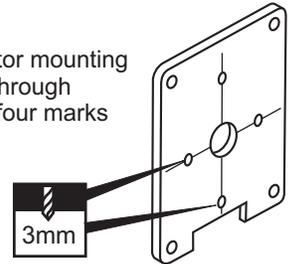
# T-28 TROJAN 3- Electric motor



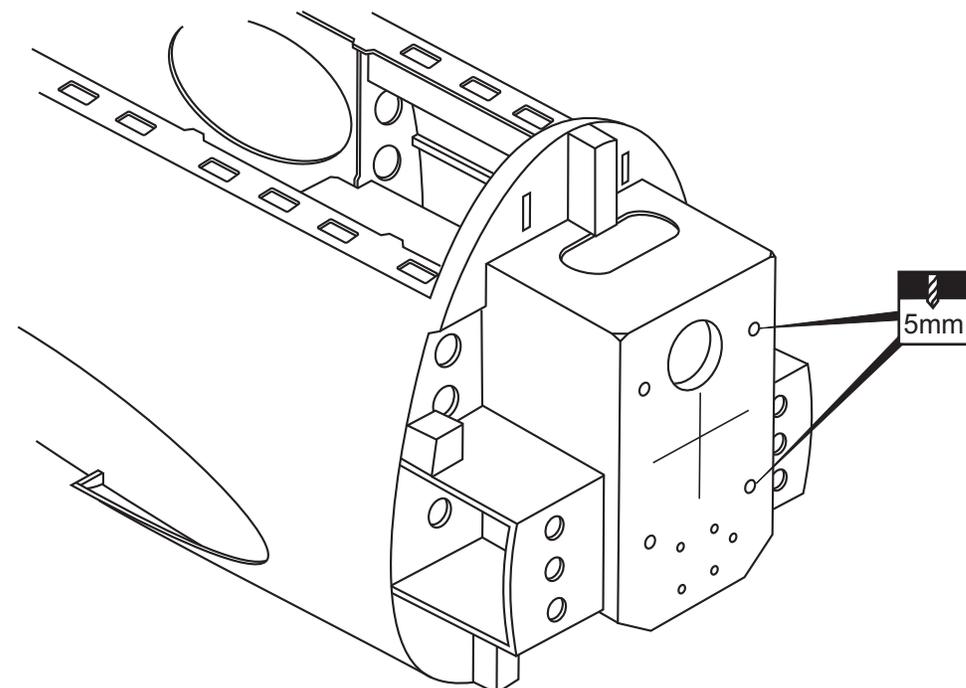
Using a aluminum motor mounting plate as a template, mark the plywood motor mounting plate where the four holes are to be drilled.



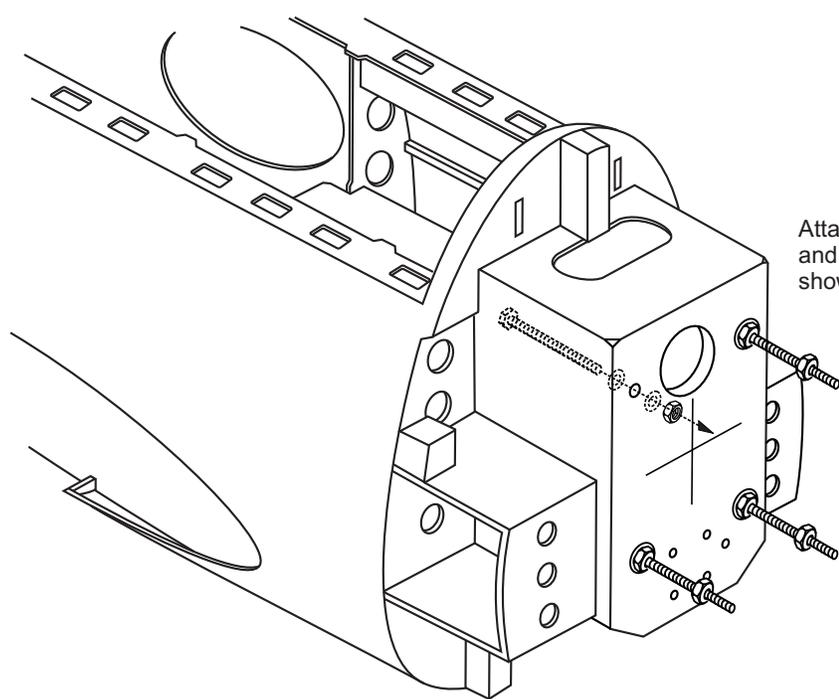
Remove the aluminum motor mounting plate and drill a 3mm hole through the plywood at each of the four marks marked .



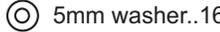
! Align the mark on the plywood motor mount with the mark on the firewall.

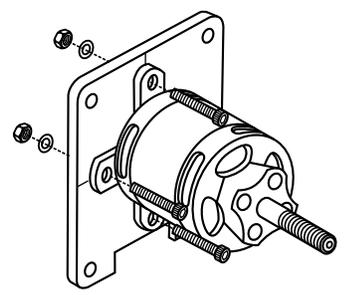


Remove the wooden motor mounting plate and drill a 5mm hole through the fire-wall at each of the four marks marked.



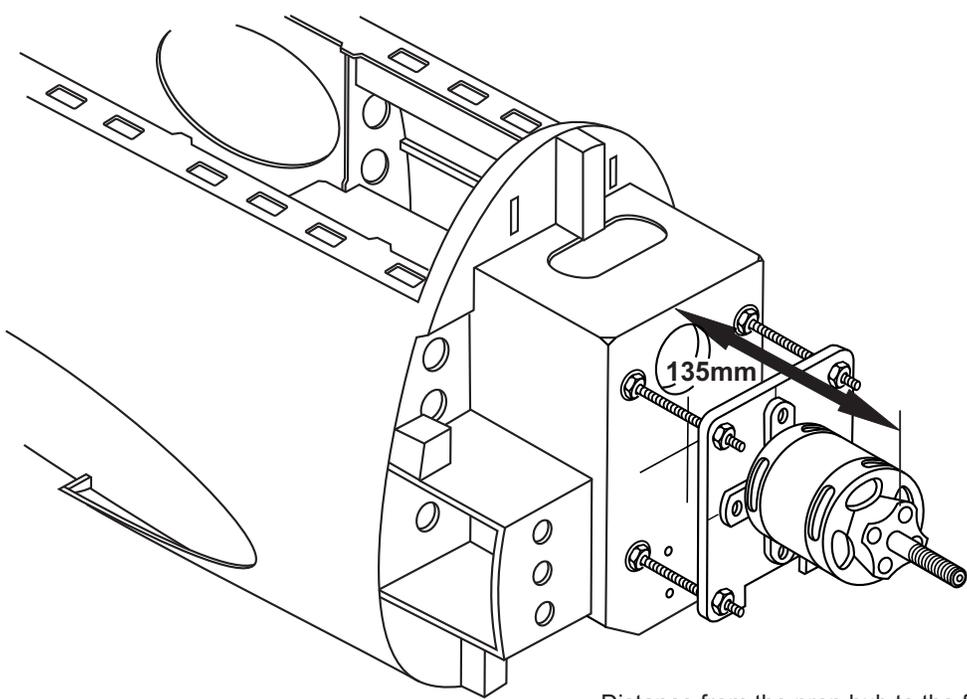
Attach the four 5x80mm bolts and nuts to the fire-wall as shown.

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



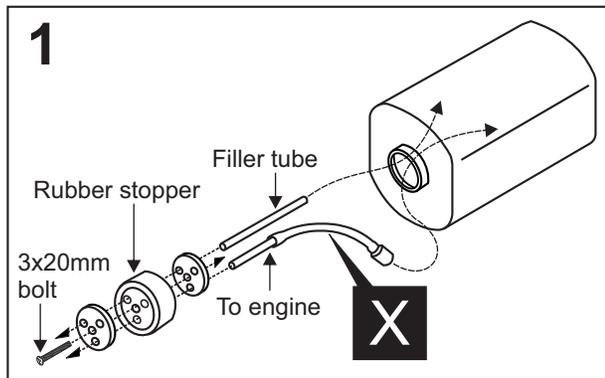
Secure the Motor to the wooden motor mounting plate using the four 3mm hex bolts.

-  3mm bolt / nut...4



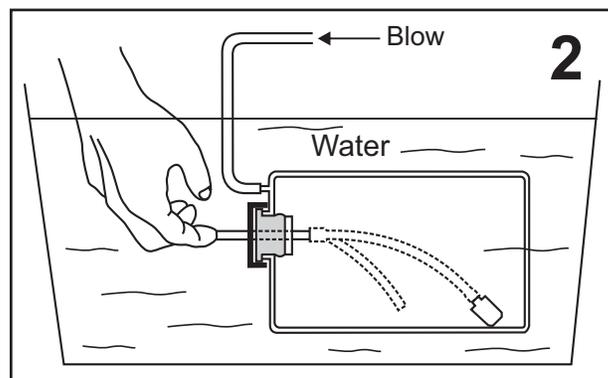
Distance from the prop hub to the fire-wall is **135mm**.

# T-28 TROJAN 5- Fuel tank

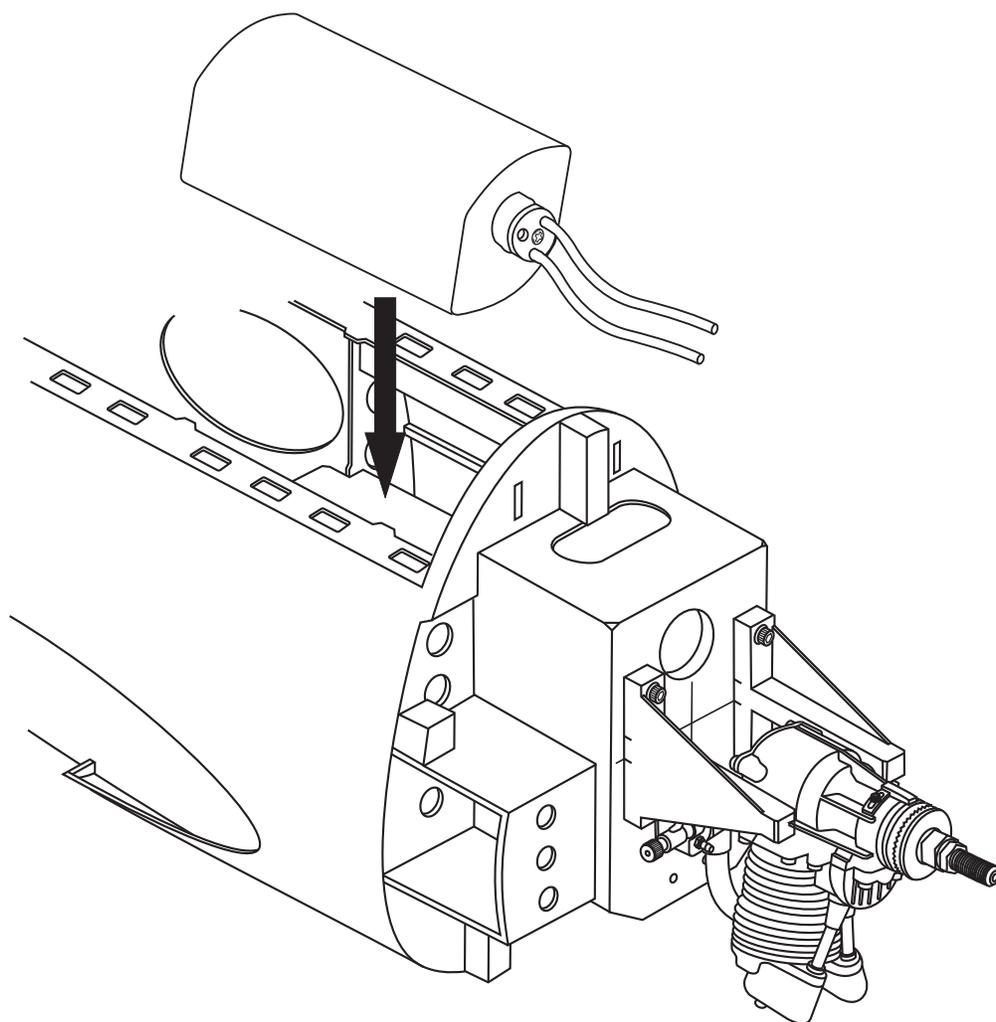


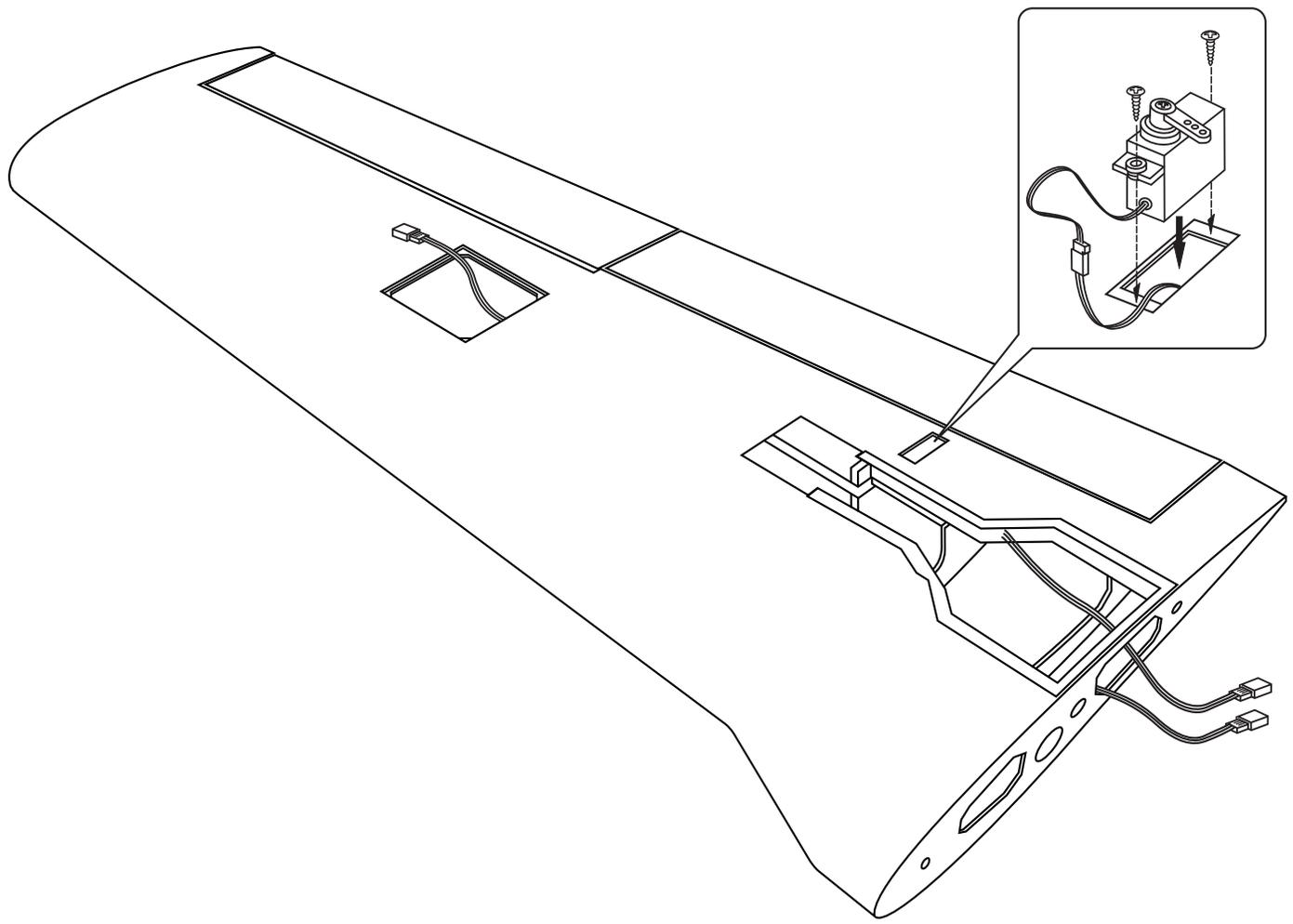
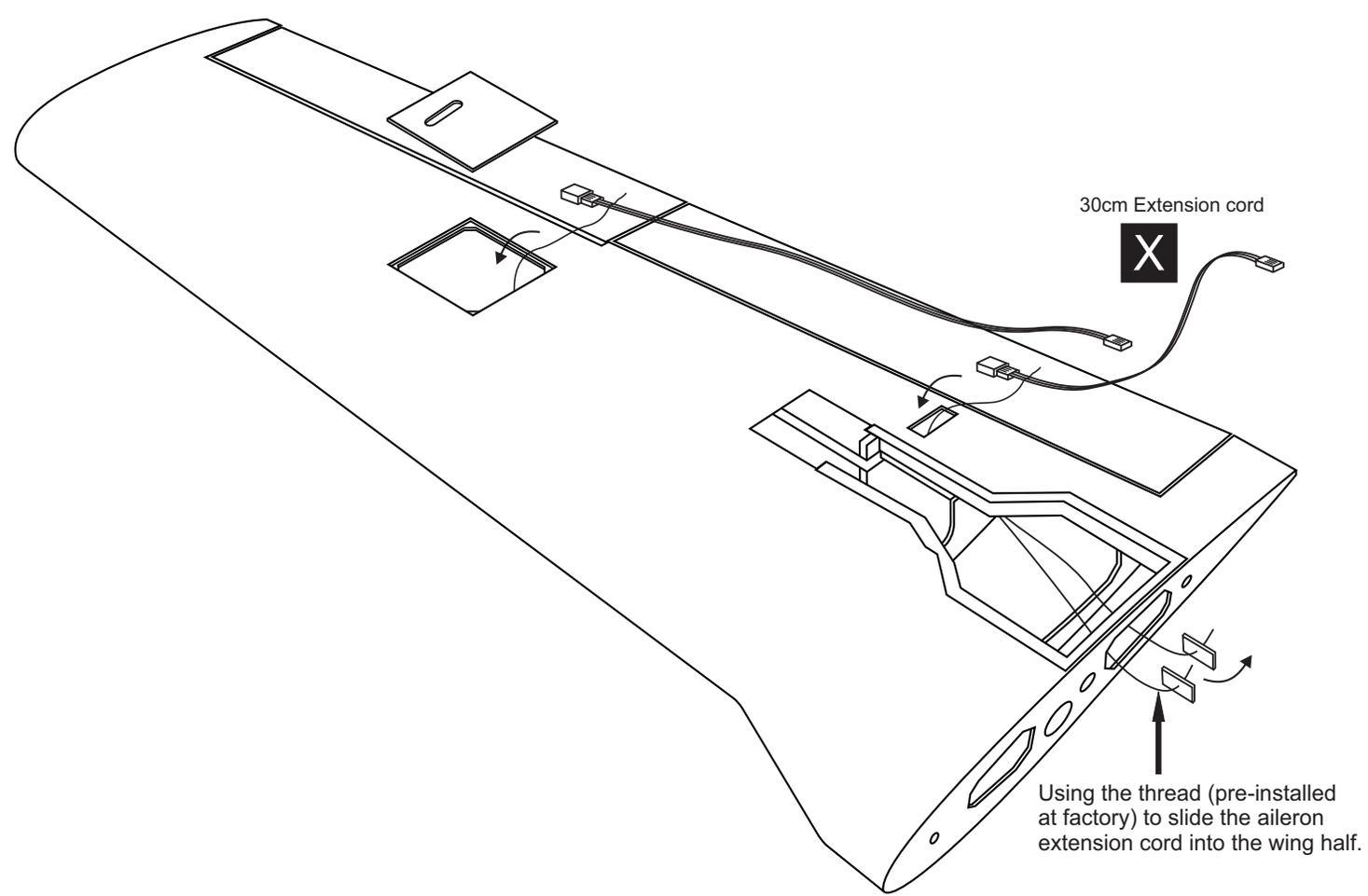
After confirming the direction . Insert this assembly, clunk end first, into the fuel tank and tighten and screw the fuel tank-cap on firmly.

Ensure that the fuel tank clunk does not touch the rear of the fuel tank.

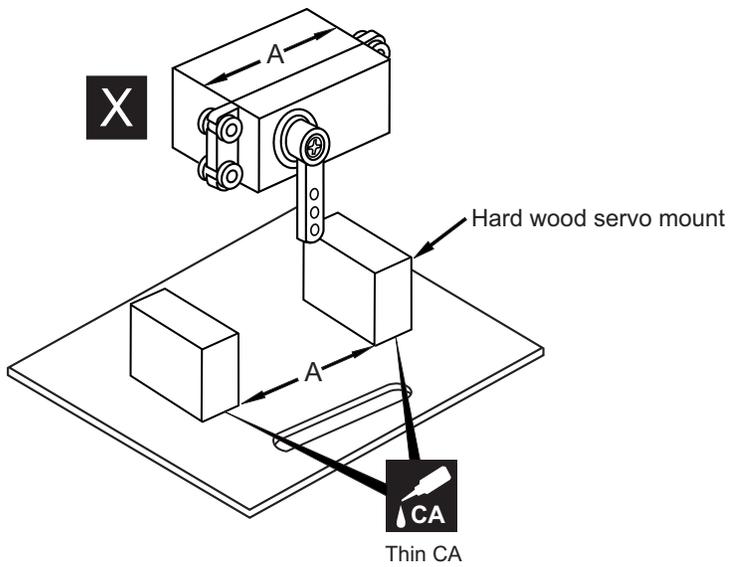


Checking for leaks - block the vents and blow into the feed, if in doubt submersing the tank in a blow of water will show up any problems.

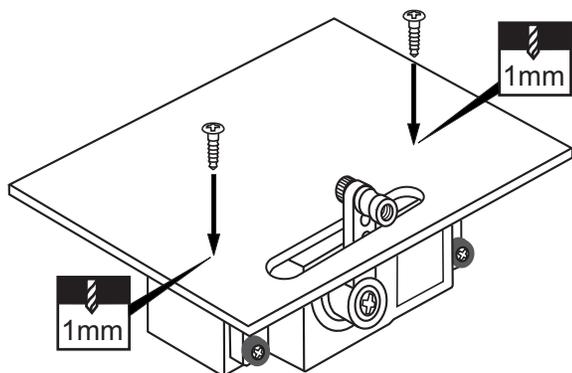
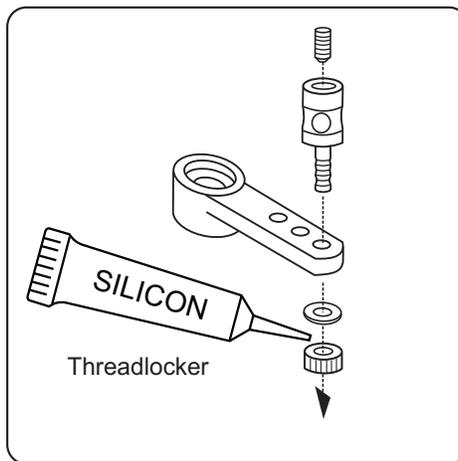
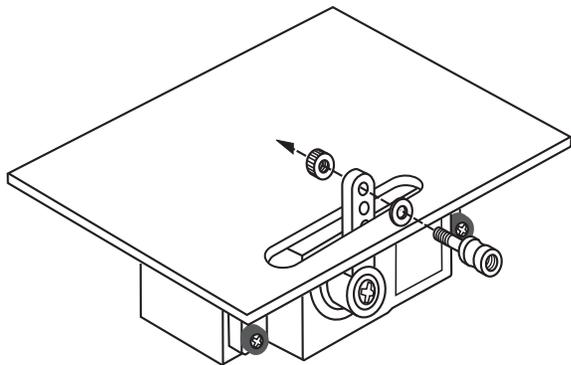
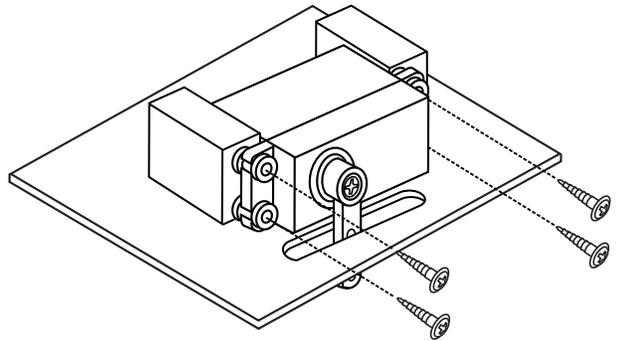




# T-28 TROJAN 7- Wing: aileron servo



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



**! IMPORTANT:**  
To be safe, you must attach the two 2x8mm screws as shown in this picture.

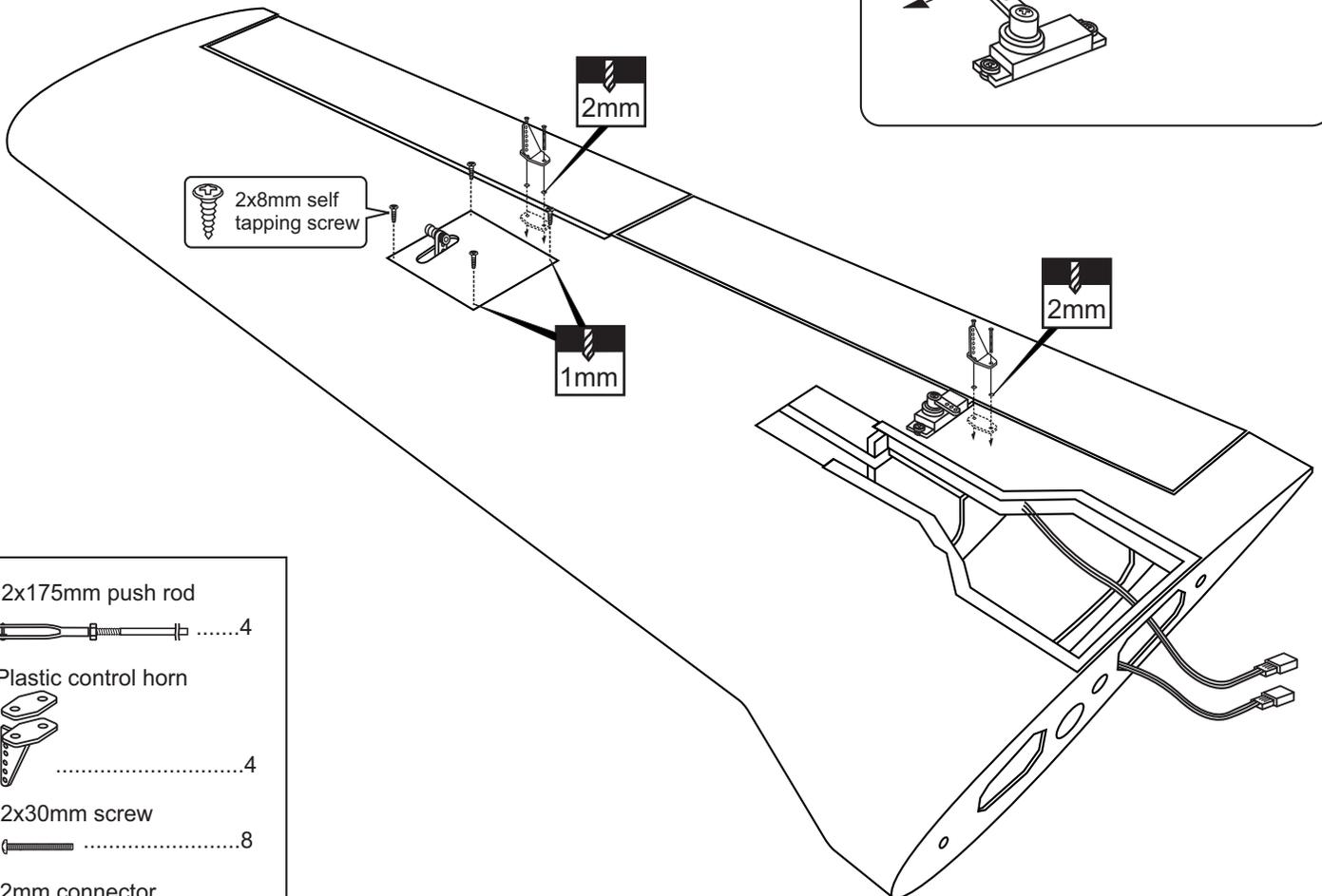
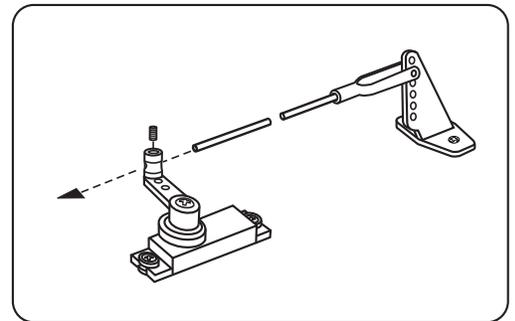
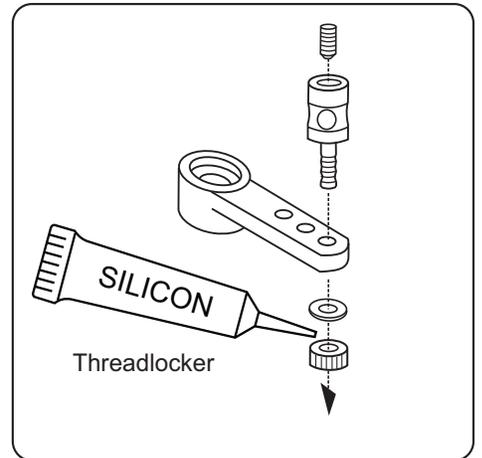
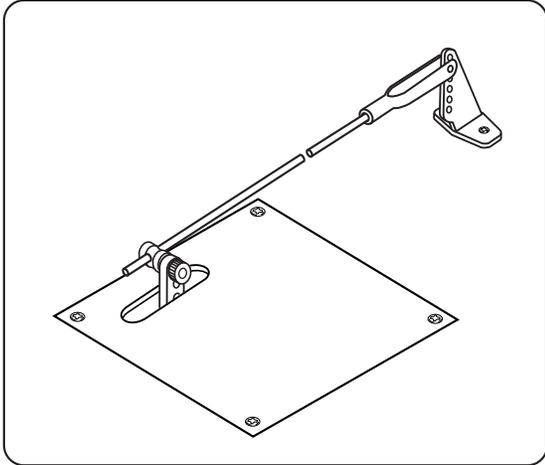
2x8mm screw

servo hatch

servo mount

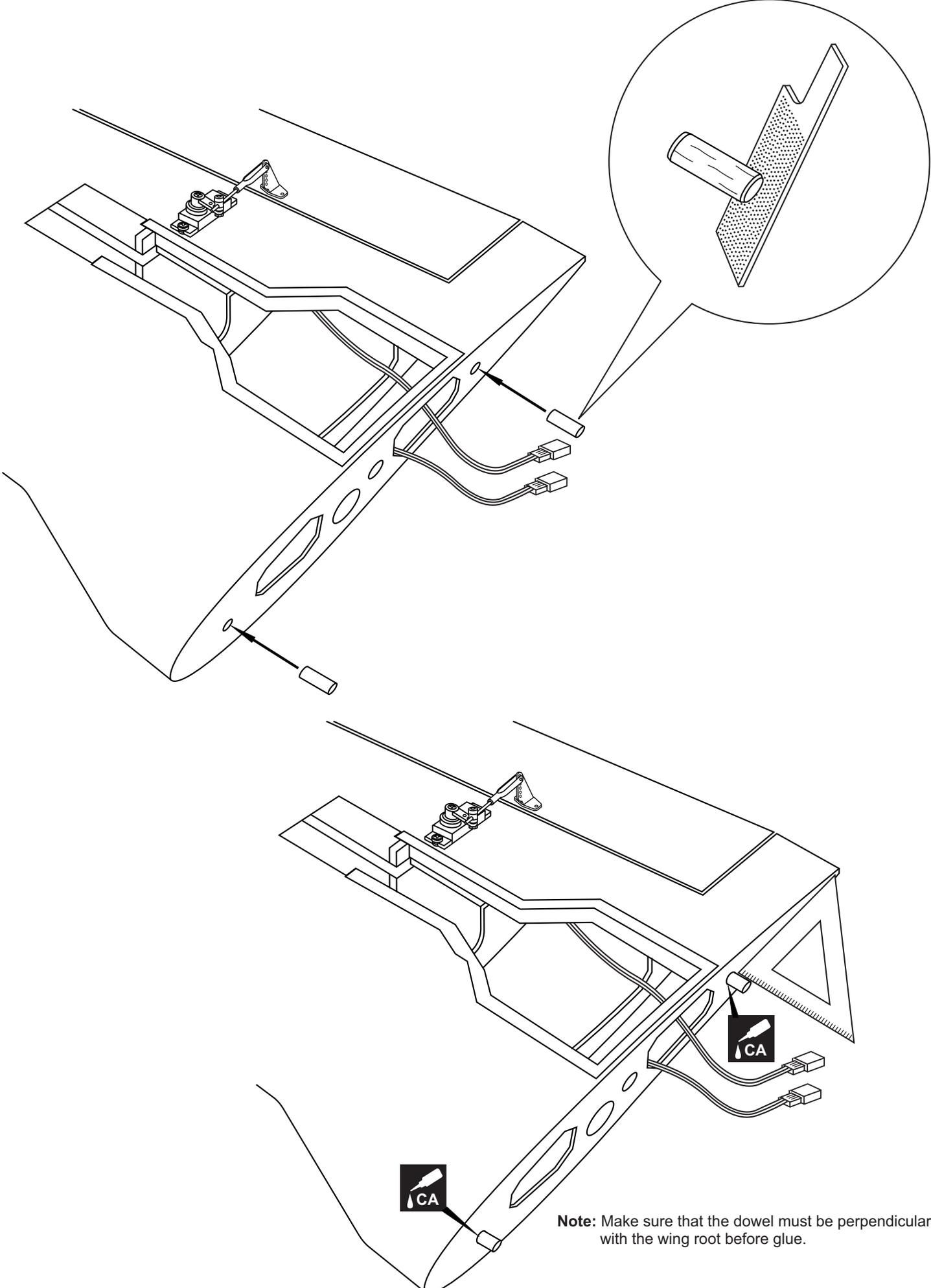
- 2mm connector  
 .....2
- 2x8mm self tapping screw  
 .....2

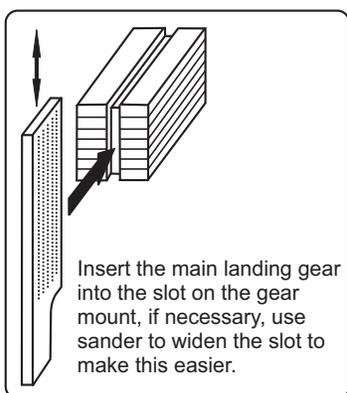
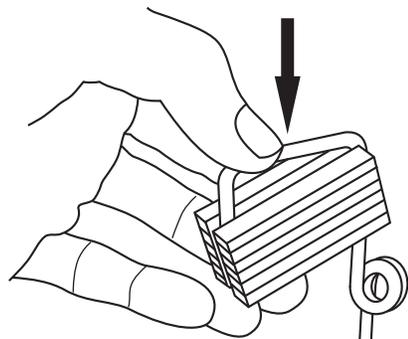
# T-28 TROJAN 8- Wing: aileron and flap linkages



- 2x175mm push rod  
 .....4
- Plastic control horn  
 .....4
- 2x30mm screw  
 .....8
- 2mm connector  
 .....2
- 2x8mm self tapping screw  
 .....8

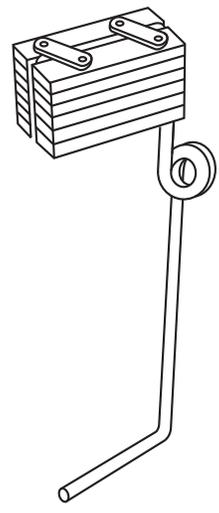
**T-28 TROJAN** 9- Wing: wooden dowel





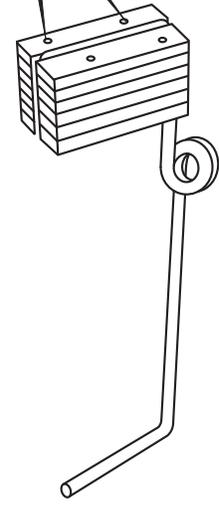
**1A**

**TOP VIEW**



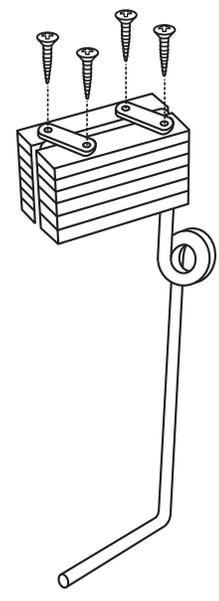
**1B**

Using the nylon gear strap as a template, mark the plywood gear mount where the four holes to be drill.



**1C**

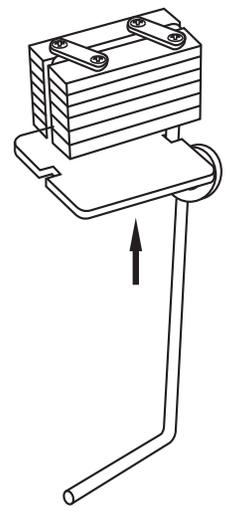
Remove the nylon gear strap and drill a 2mm hole at each of the four marks marked.



**1D**

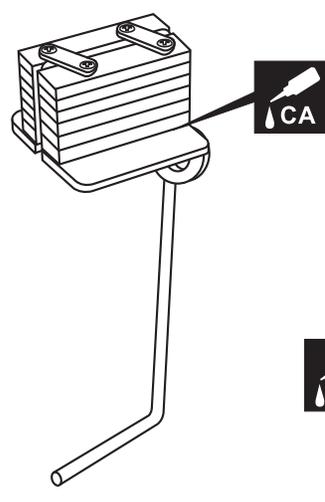
Reposition the nylon gear strap and secure them in place using four 3x20mm screws.

**BOTTOM VIEW**



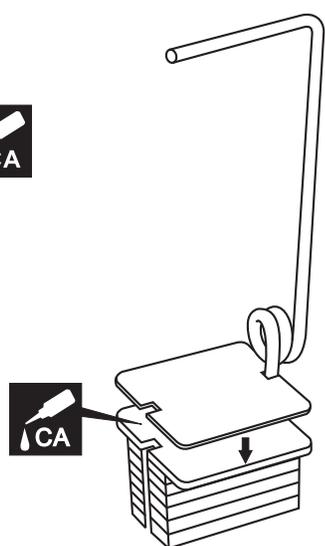
**1E**

Attach the ply gear mount plate to the plywood gear mount



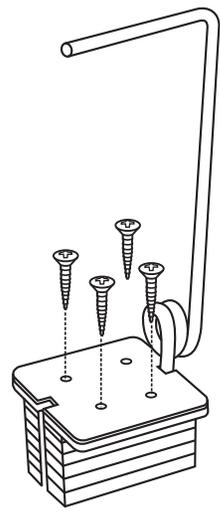
**1F**

Secure the ply gear mount plate in place using CA glue.



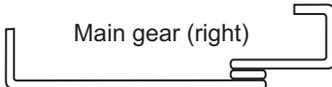
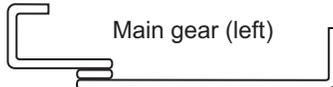
**1G**

Attach the square plastic onto the ply gear mount, secure it in place using CA glue.



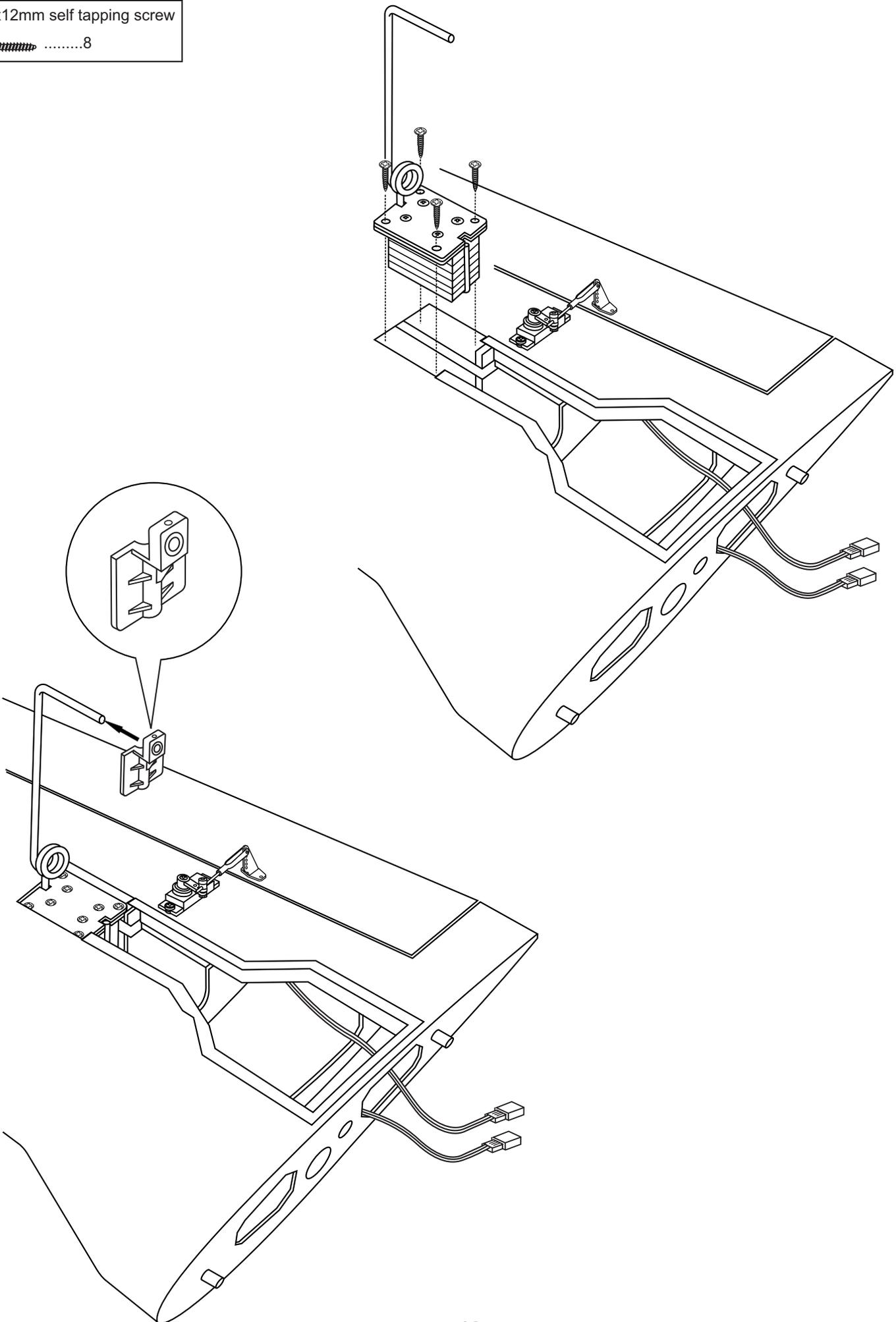
**1H**

Drill a 2mm holes through the square plastic and ply gear mount plate. Secure the ply gear mount using four 3x20mm screws.

<p>3x20mm screw   .....16</p>	<p> Plywood Gear mount x 2</p>	<p> Square plastic x2</p>	<p> Ply gear mount plate x 2</p>
<p>Nylon gear strap   .....4</p>	<p> Main gear (right)</p> <p> Main gear (left)</p>		

# T-28 TROJAN 11- Wing: fixed gear installation

3x12mm self tapping screw  
 .....8



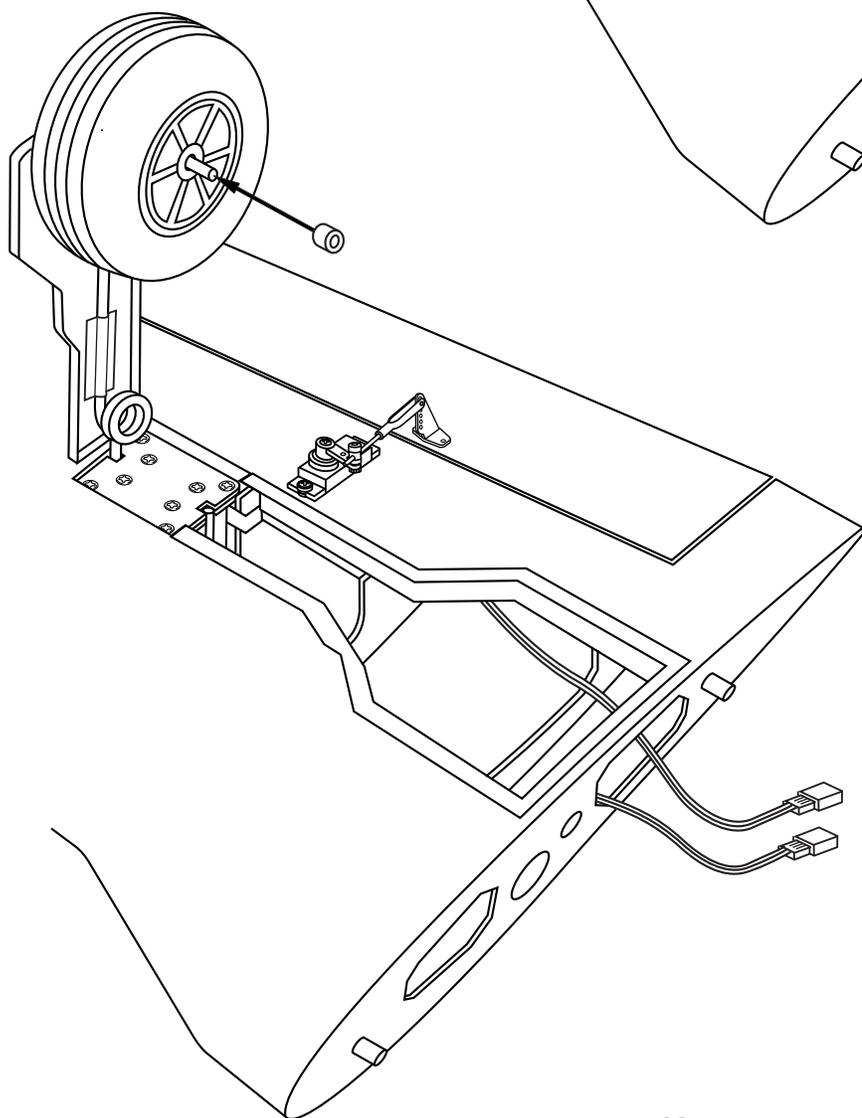
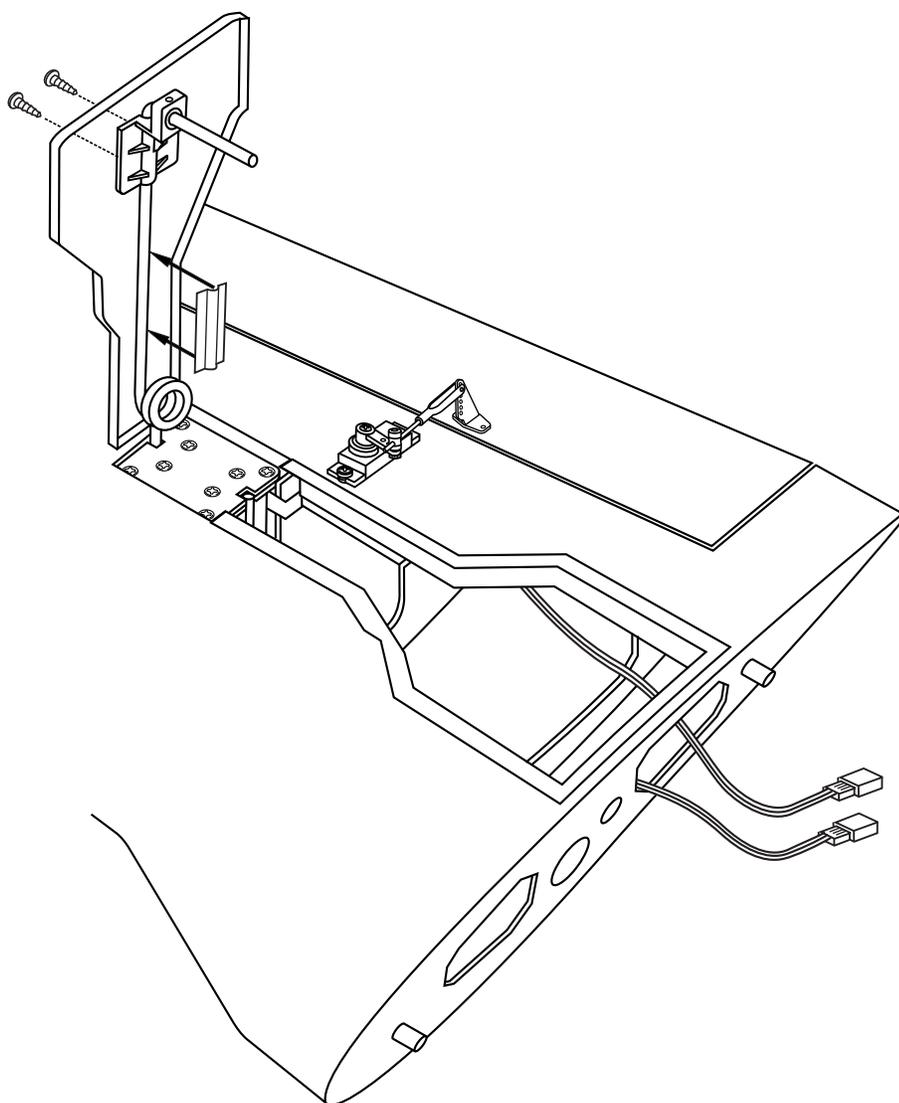
# T-28 TROJAN 12- Wing: fixed gear installation

4.2mm collar

 .....4

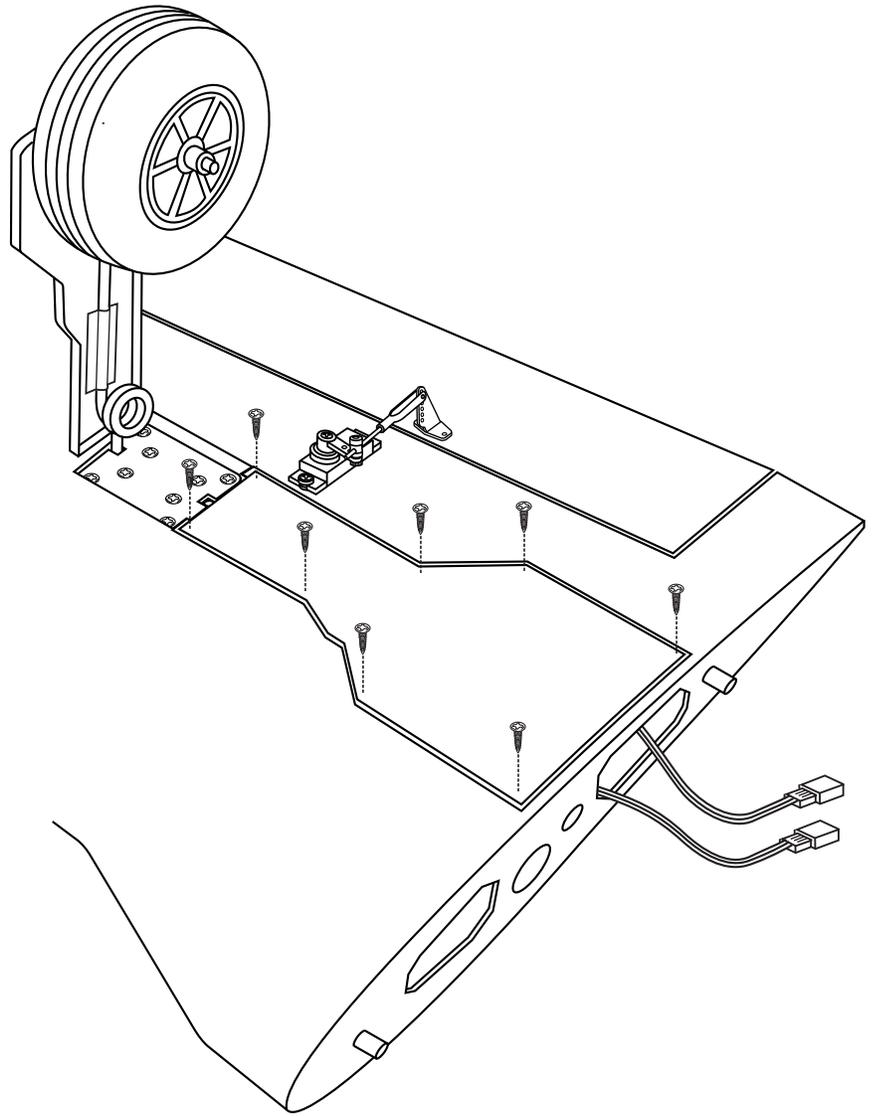
2x8mm self tapping screw

 .....4



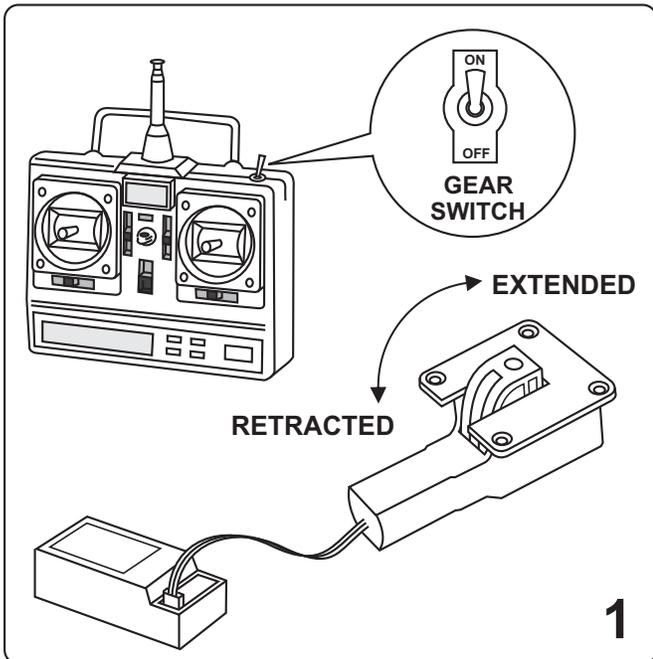
# T-28 TROJAN 13- Wing: main gear housing cover

2x8mm self tapping screw

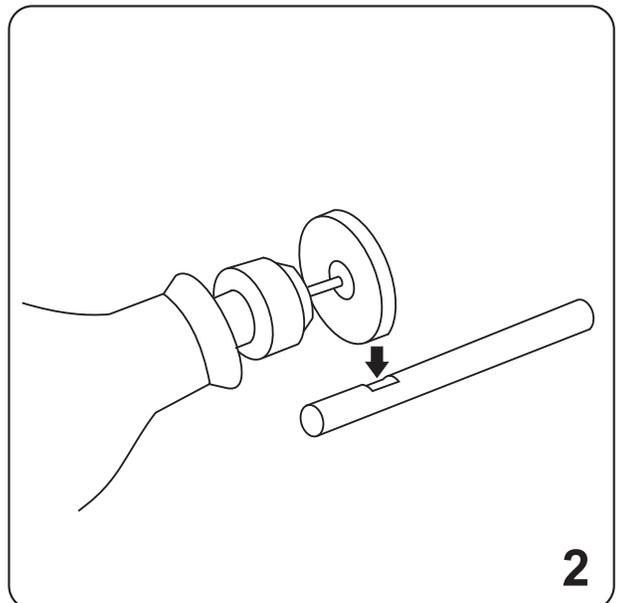


# T-28 TROJAN 14- Wing: Eretract landing gear

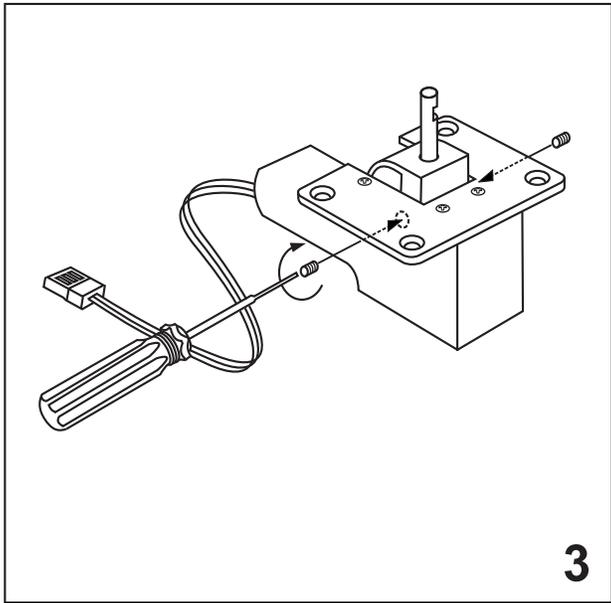
**Note:** Eretract and strut must purchase separately



Extend retract with your transmitter and receiver or with servo driver.

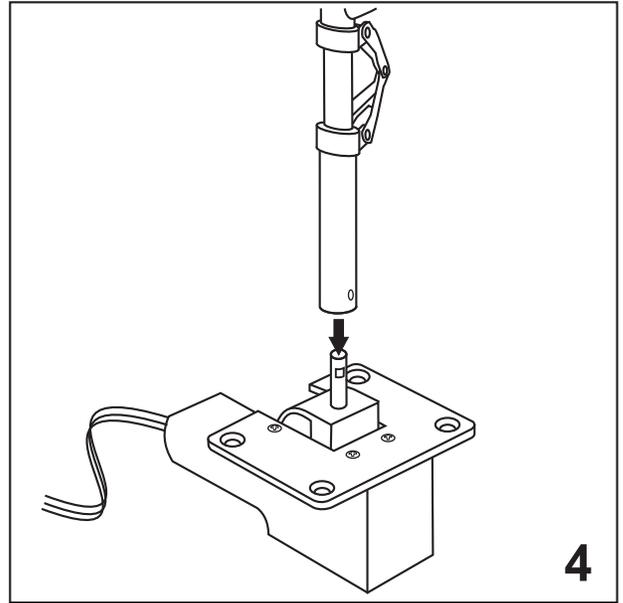


Make a key area with a file on music wire adapter.



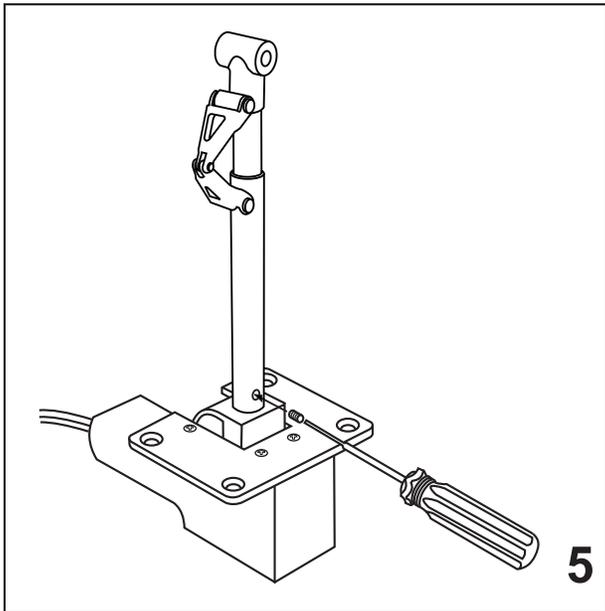
**3**

Fix the adapter in the retract with hexagon socket screws supplied with scale oleo strut.



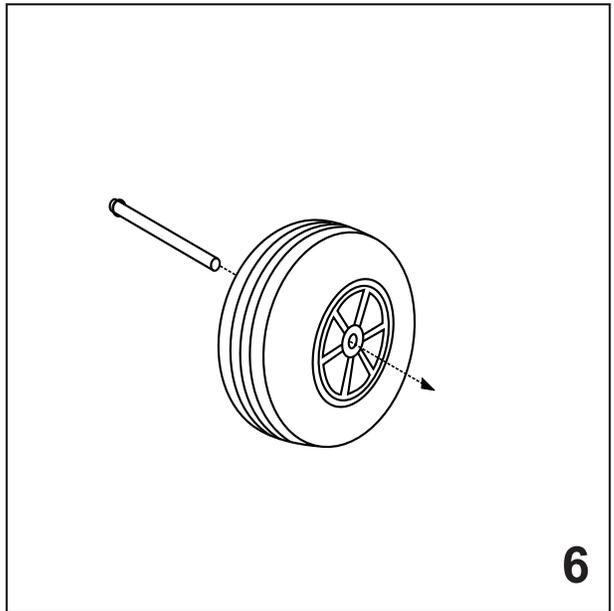
**4**

Fix the strut on the adapter....



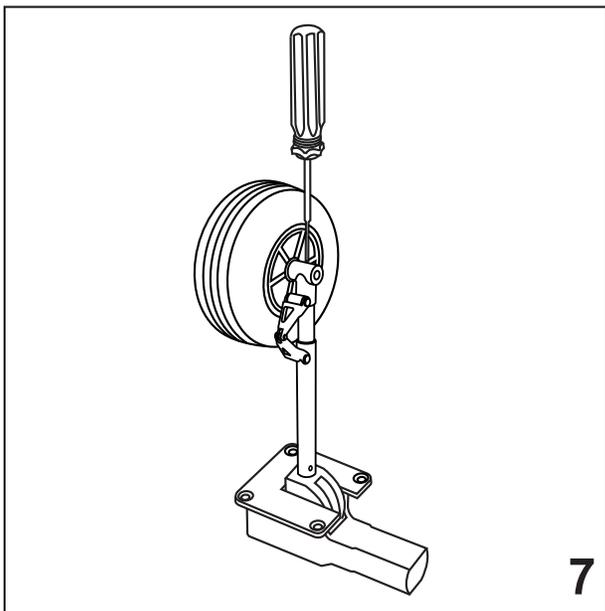
**5**

...then tighten the locking bolt.



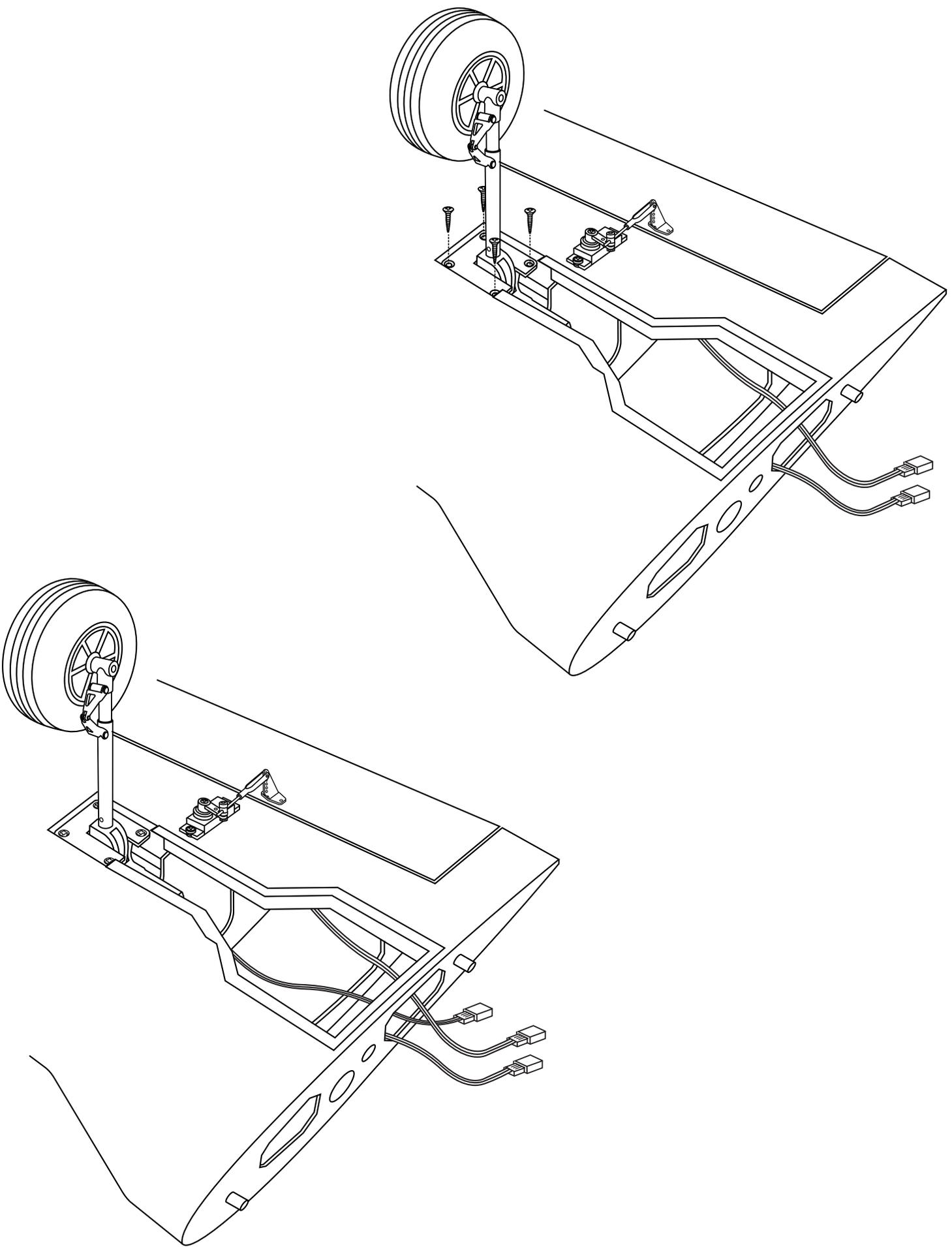
**6**

Slip the wheel on the axle with the circlip pointing away from the strut...



**7**

Attach the axle to the gear and tighten the locking bolt (use LOCTITE threadlocker on every bolt).



# T-28 TROJAN 17- Eretract: Radio connection & operation

## Radio connection

- 1-Plug the connector from each of the retract unit into the 2 in 1 wire harness (not supplied).
- 2-Plug the single lead from the wire harness into the gear channel of your receiver. An auxiliary channel can be used if the gear channel is occupied.

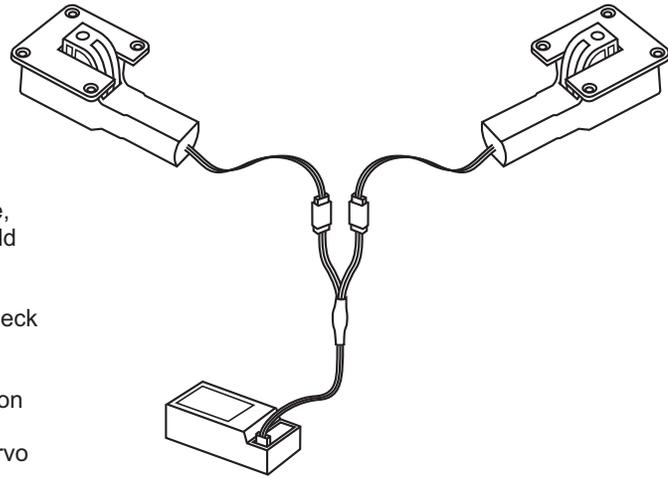
## Operation

Before operating the retracts in the model for the first time, check that there are no obstructions in the wheel that could impede operation of the gear.

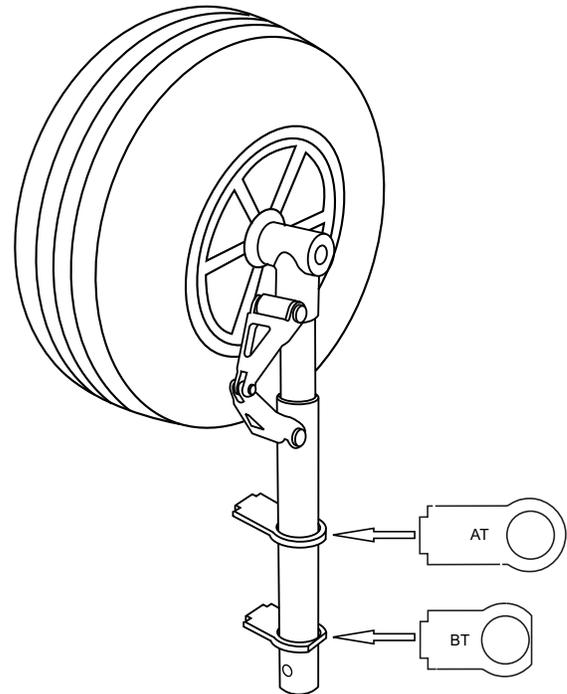
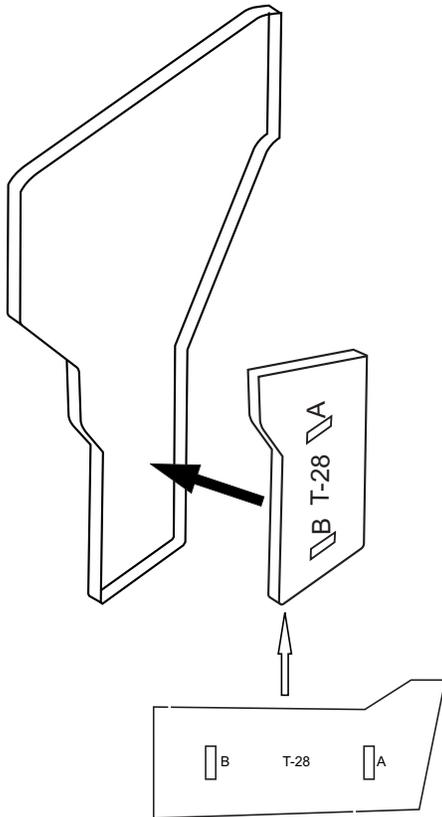
Turn on transmitters and then receiver. Use the gear of other assigned switch to activate that landing gear and check that it operates correctly.

If the switch direction is opposite of that desired, use the reversing function in the transmitter to change the retraction direction.

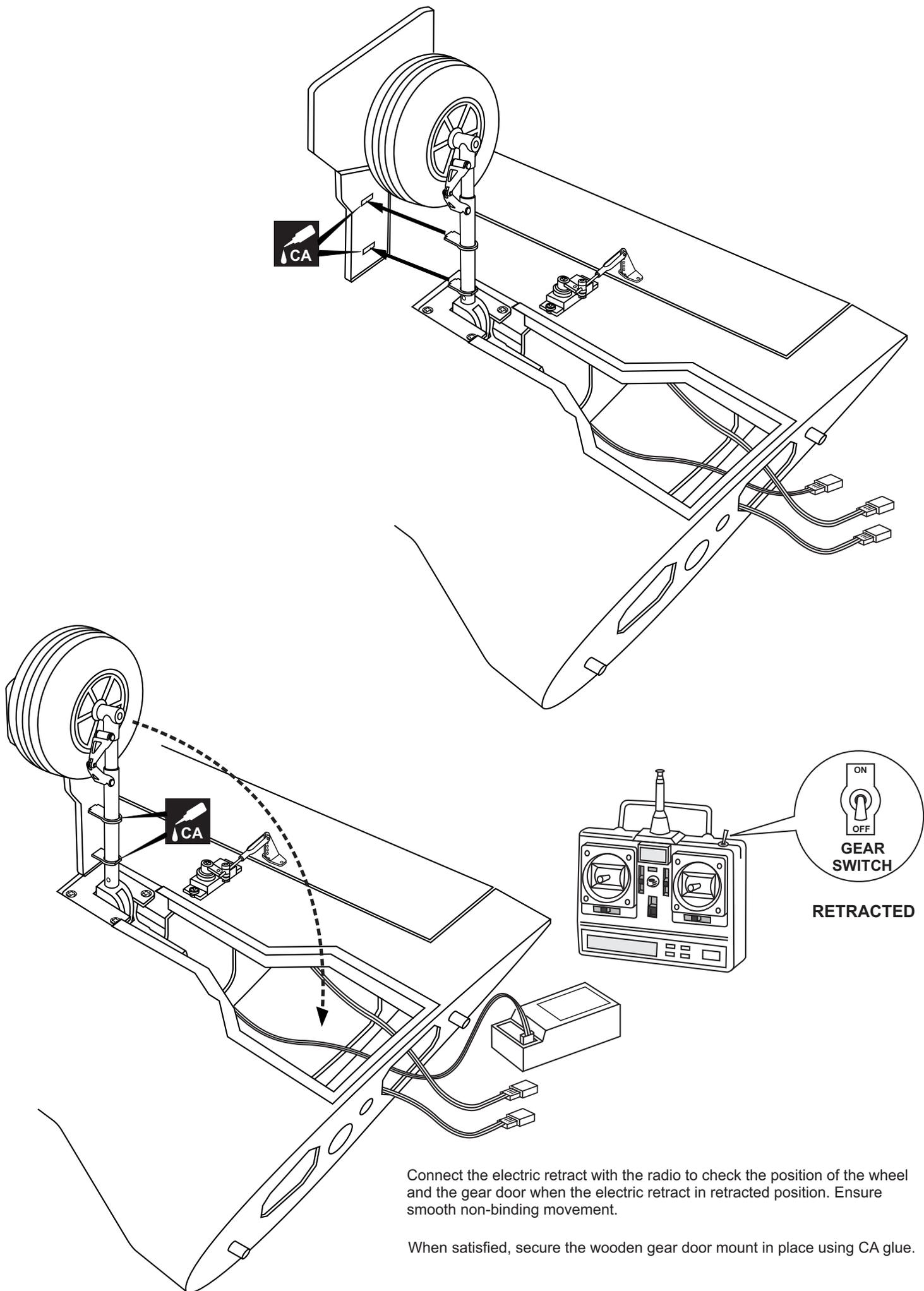
If using a 2.4GHz radio, once you have set the correct servo direction, be sure to rebind the system before flight.



# T-28 TROJAN 18- Gear door

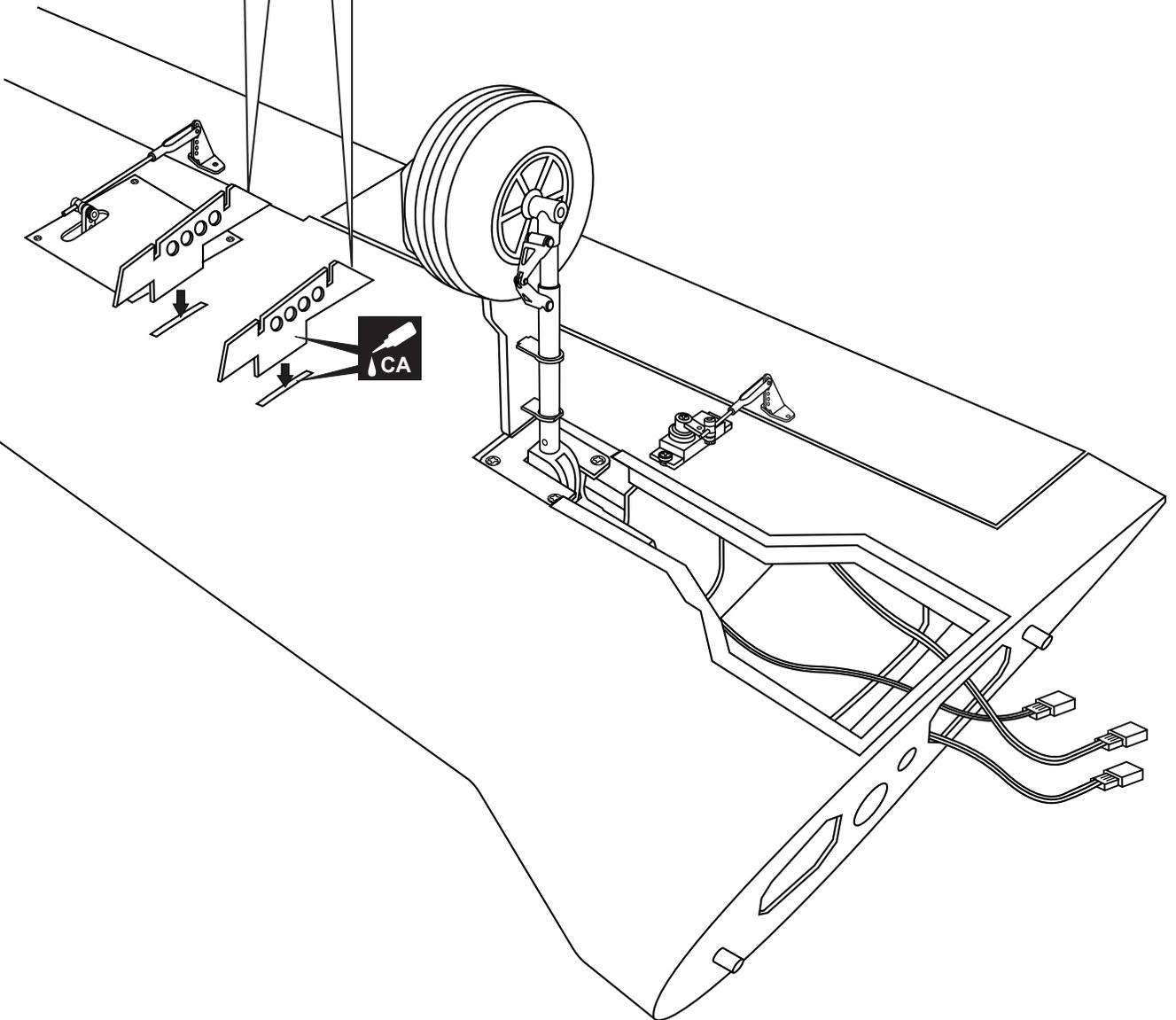
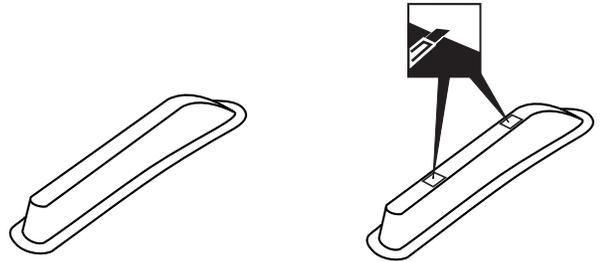
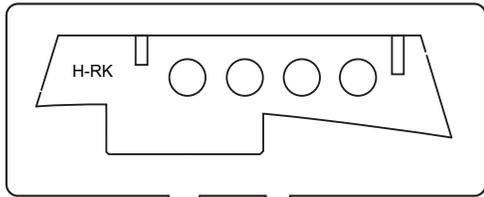
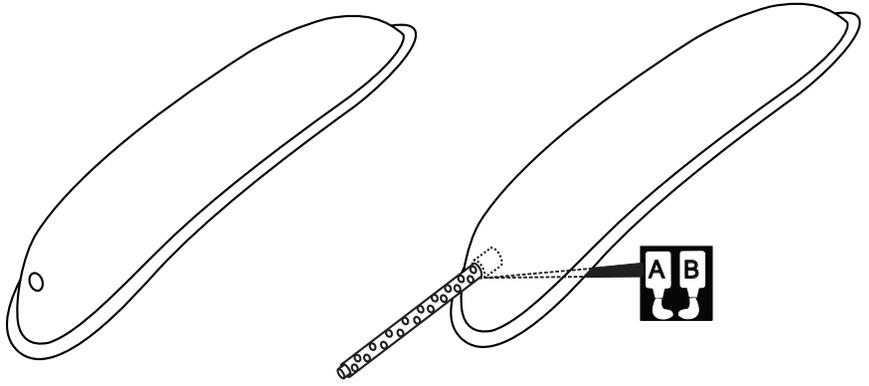
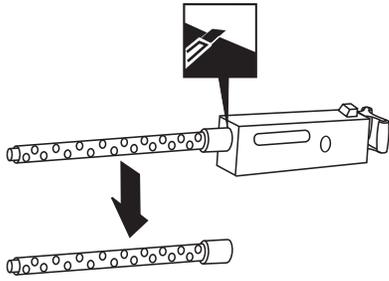


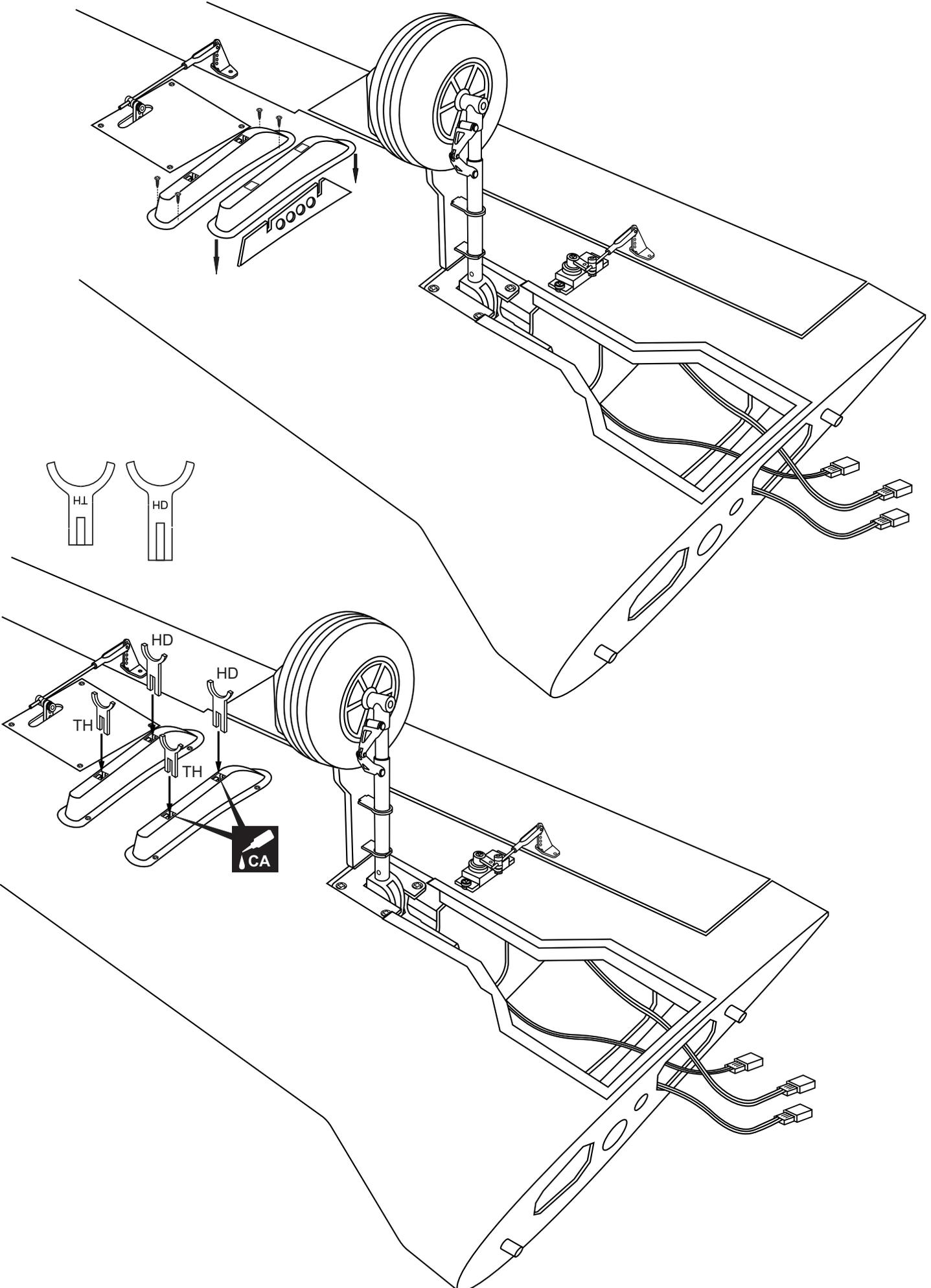
**Note: Do not glue the wooden gear door mounts (AT and BT) to the struts at this time.**



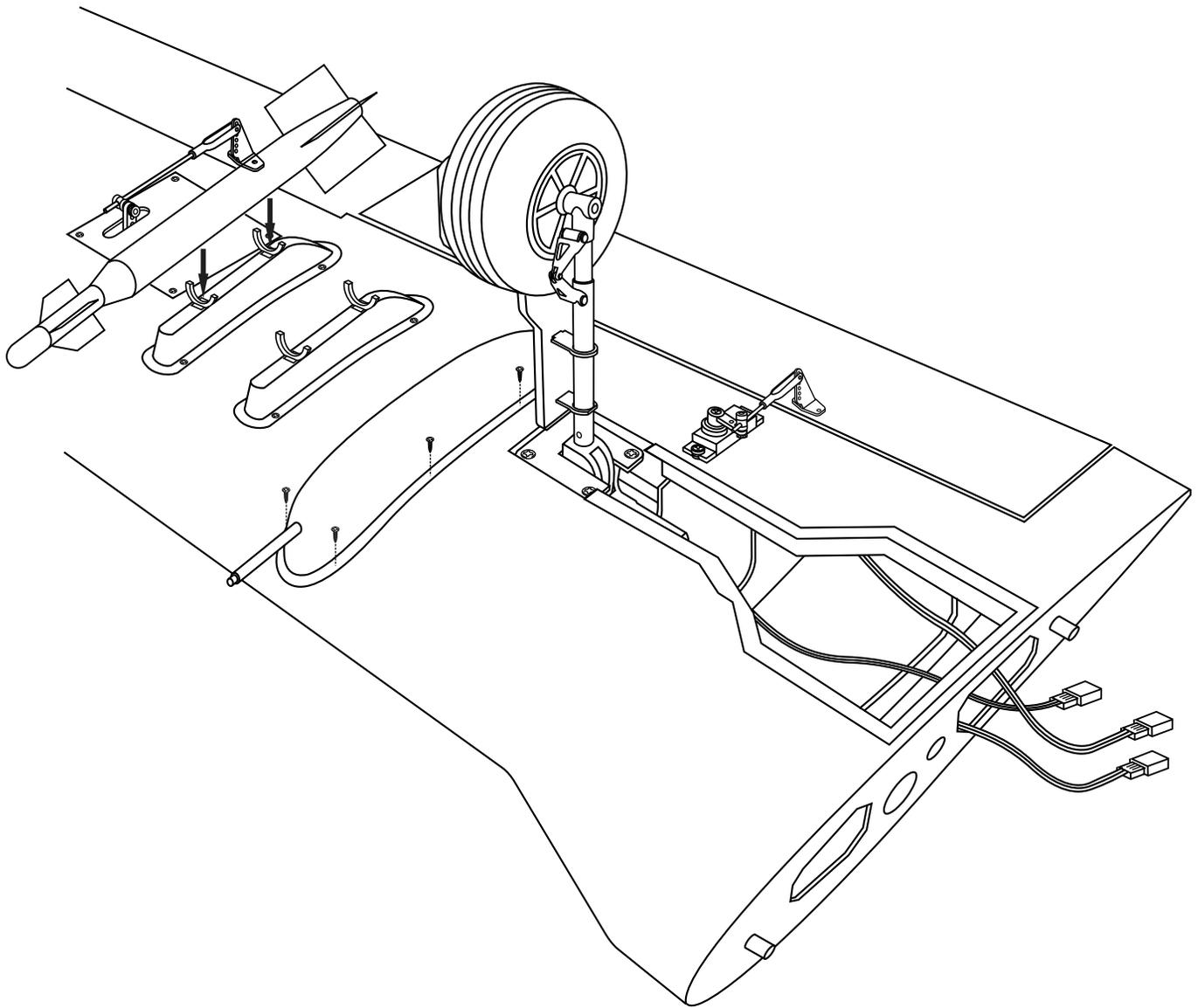
Connect the electric retract with the radio to check the position of the wheel and the gear door when the electric retract in retracted position. Ensure smooth non-binding movement.

When satisfied, secure the wooden gear door mount in place using CA glue.



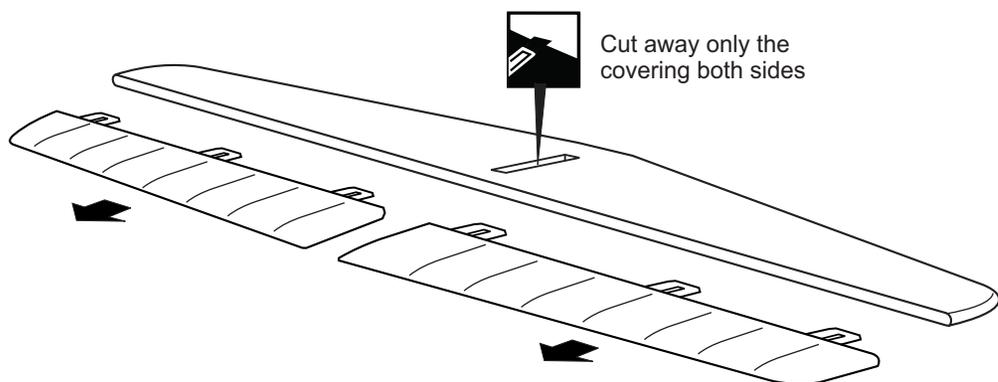


## T-28 TROJAN 22- Canon adaptable & external load support



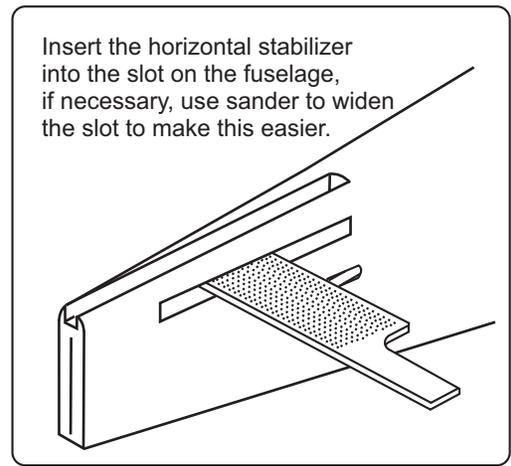
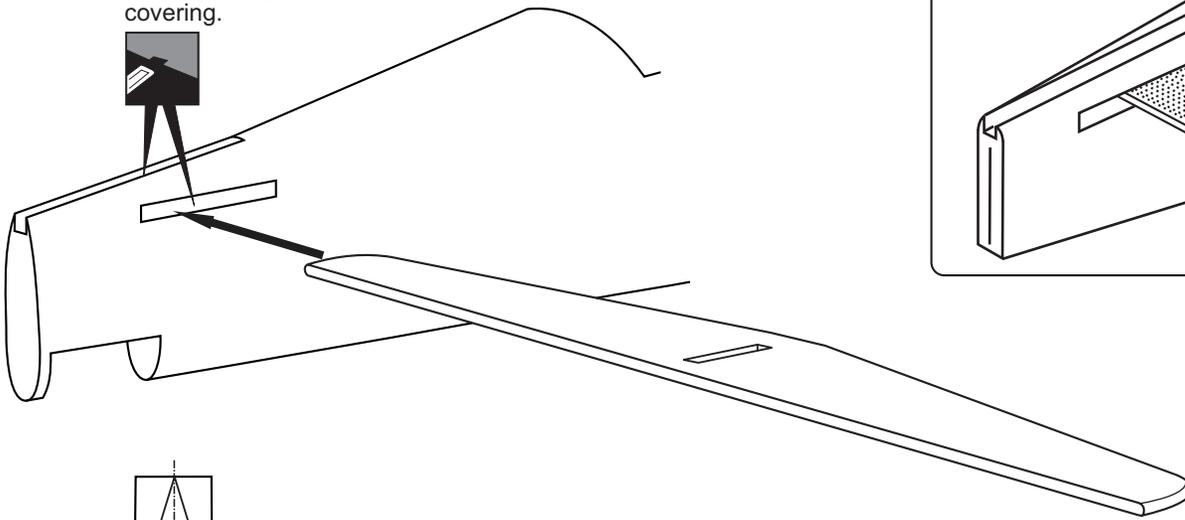
**Note:** Detail such as pilot, pilot's seat, rockets, instrument panels...are printed from a 3D printer with an environmentally friendly plastic (PLA) made from cornstarch, it will decompose after about 3 years from the date of produced.

## T-28 TROJAN 23- Horizontal stabilizer

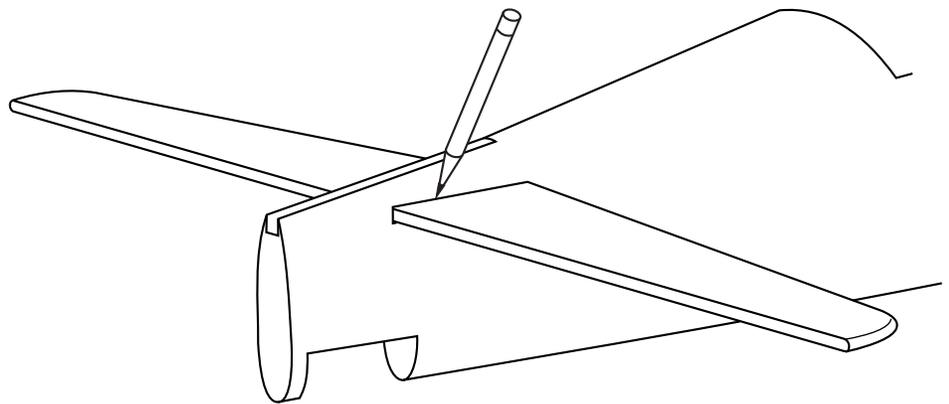
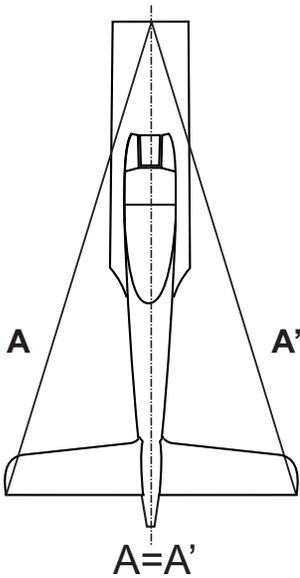


Insert the horizontal stabilizer into the slot on the fuselage, if necessary, use sander to widen the slot to make this easier.

Cut away only the covering.



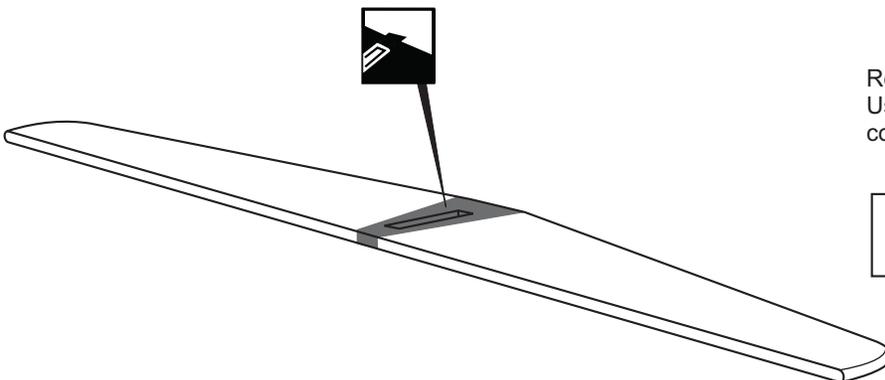
Check the alignment of the horizontal stabilizer by measuring from the fixed point along the center line of the fuselage to the trailing edge of the horizontal stabilizer. The distance must be equal on both sides.



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

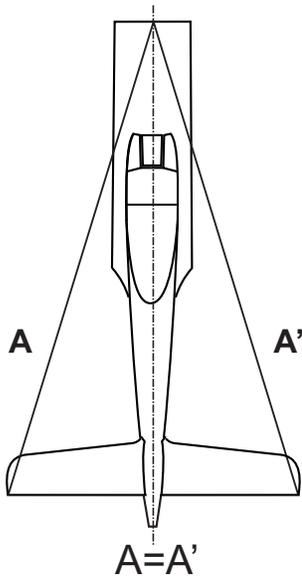
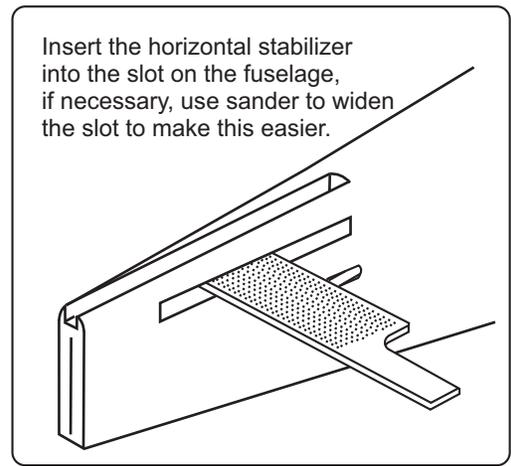
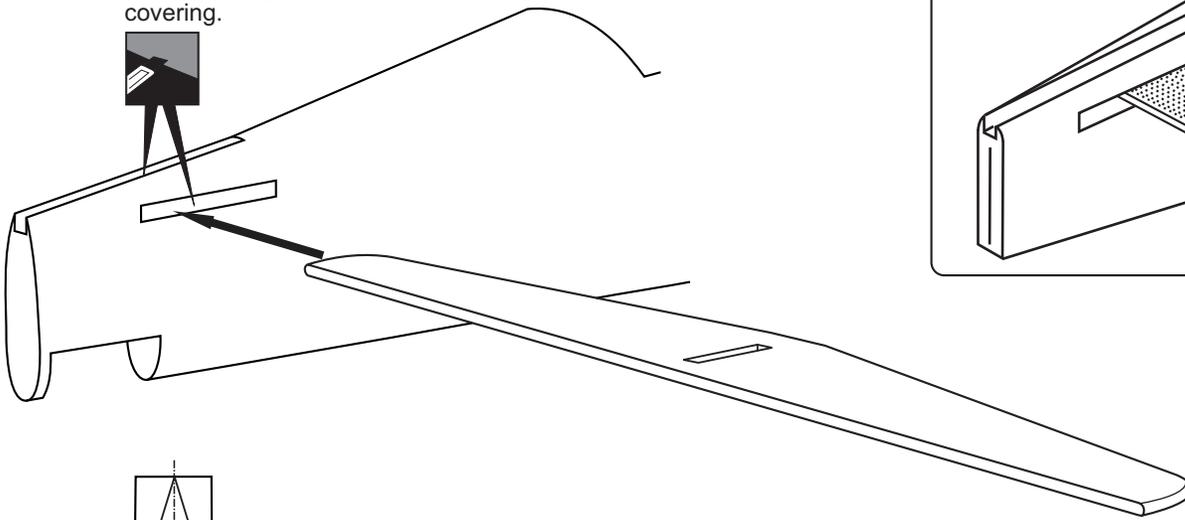
Remove the horizontal stabilizer from the fuselage. Using the sharp hobby knife, carefully cut away the covering **inside the lines** which were marked above.

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

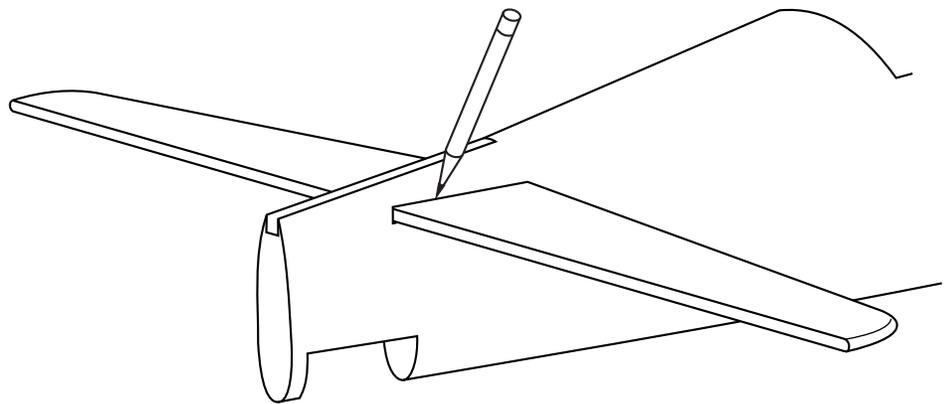


Insert the horizontal stabilizer into the slot on the fuselage, if necessary, use sander to widen the slot to make this easier.

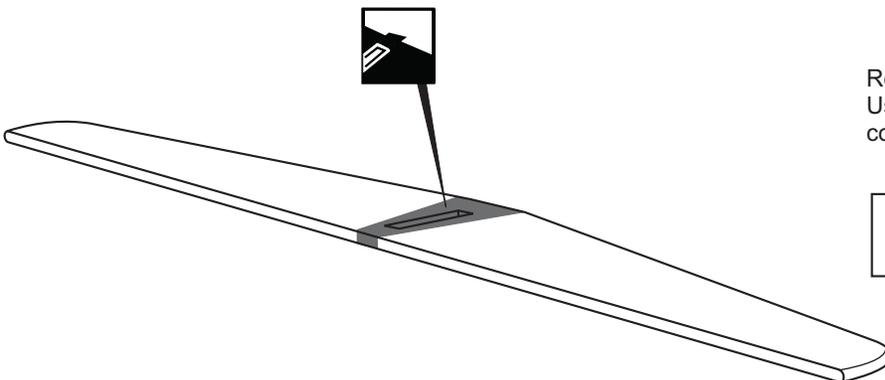
Cut away only the covering.



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



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

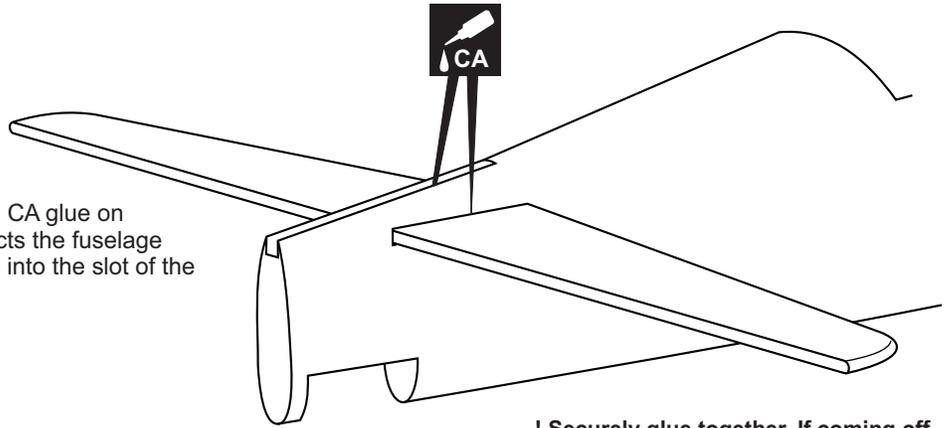


Remove the horizontal stabilizer from the fuselage. Using the sharp hobby knife, carefully cut away the covering **inside the lines** which were marked above.

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

## T-28 TROJAN 25- Horizontal stabilizer

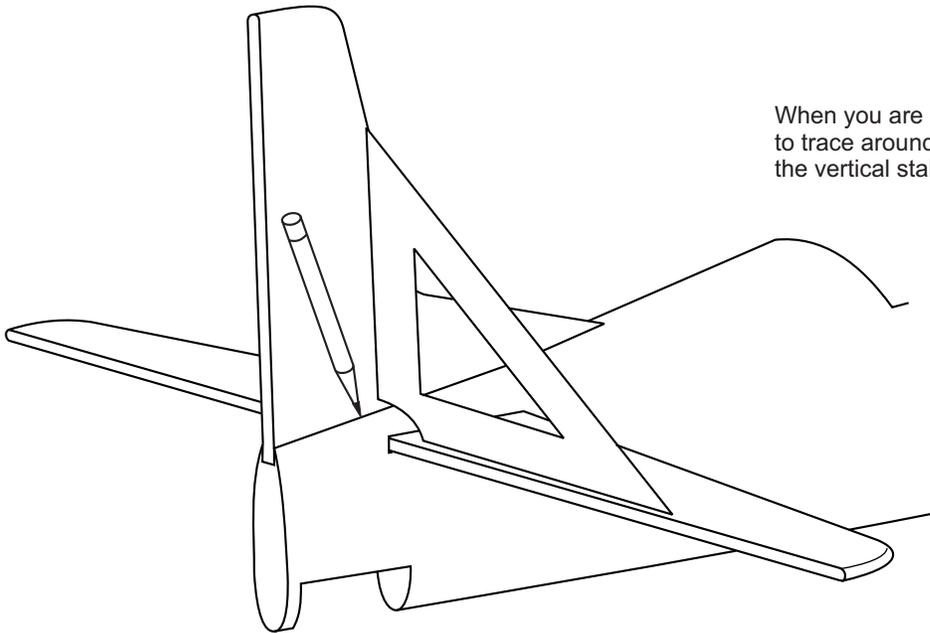
Use a small glue faucet, Apply the thin CA glue on the horizontal stabilizer where it contacts the fuselage (both the top and bottom sides), and into the slot of the fuselage as show.



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

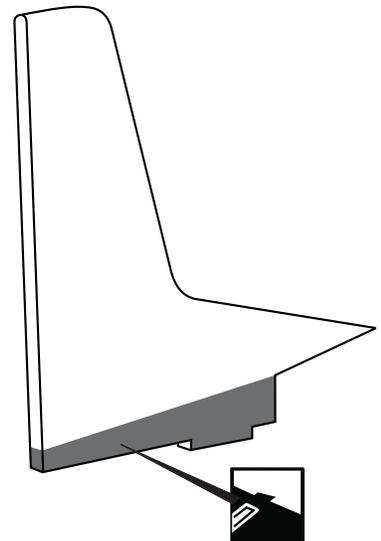
## T-28 TROJAN 26- Vertical stabilizer

When you are satisfied with the alignment, use a pencil to trace around the right and left of the stabilizer where the vertical stabilizer meet the fuselage.

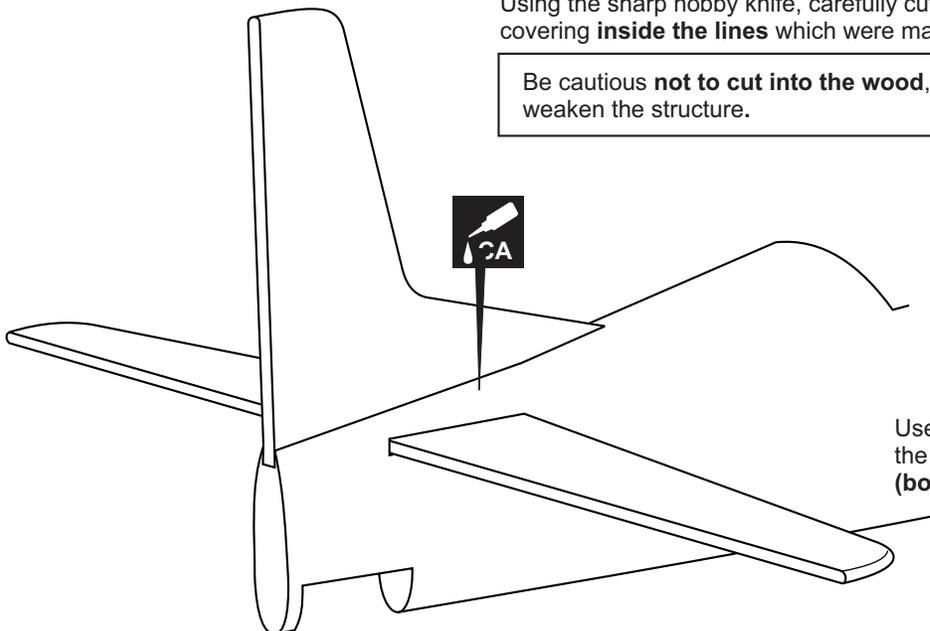


Remove the vertical stabilizer from the fuselage. Using the sharp hobby knife, carefully cut away the covering **inside the lines** which were marked above.

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

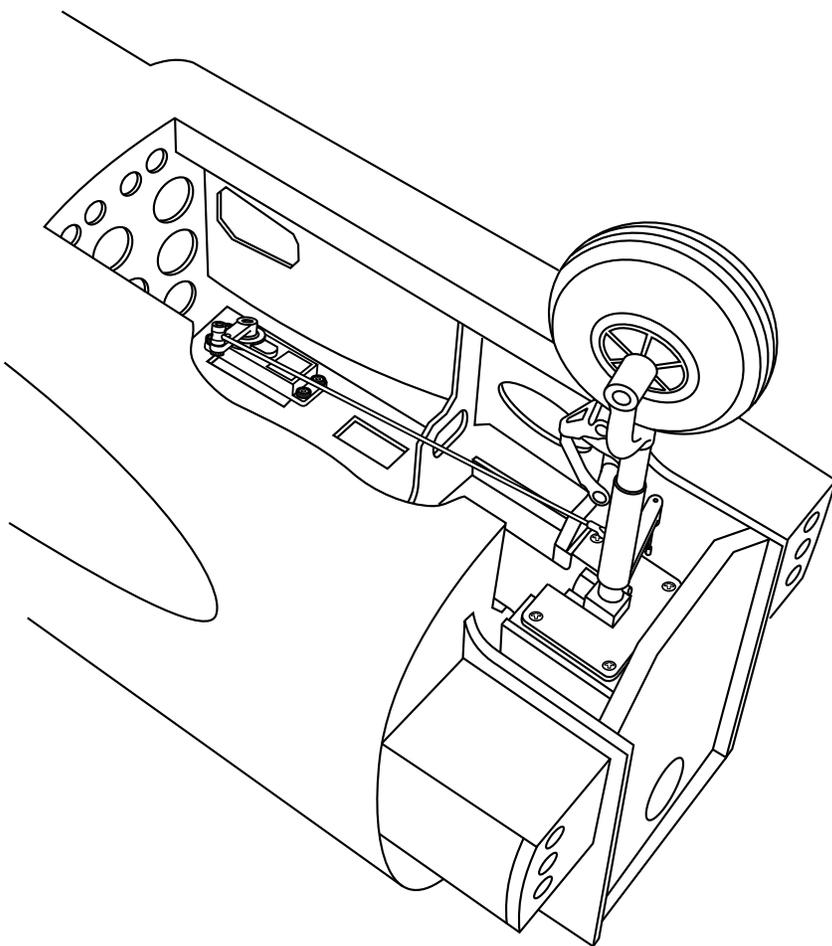
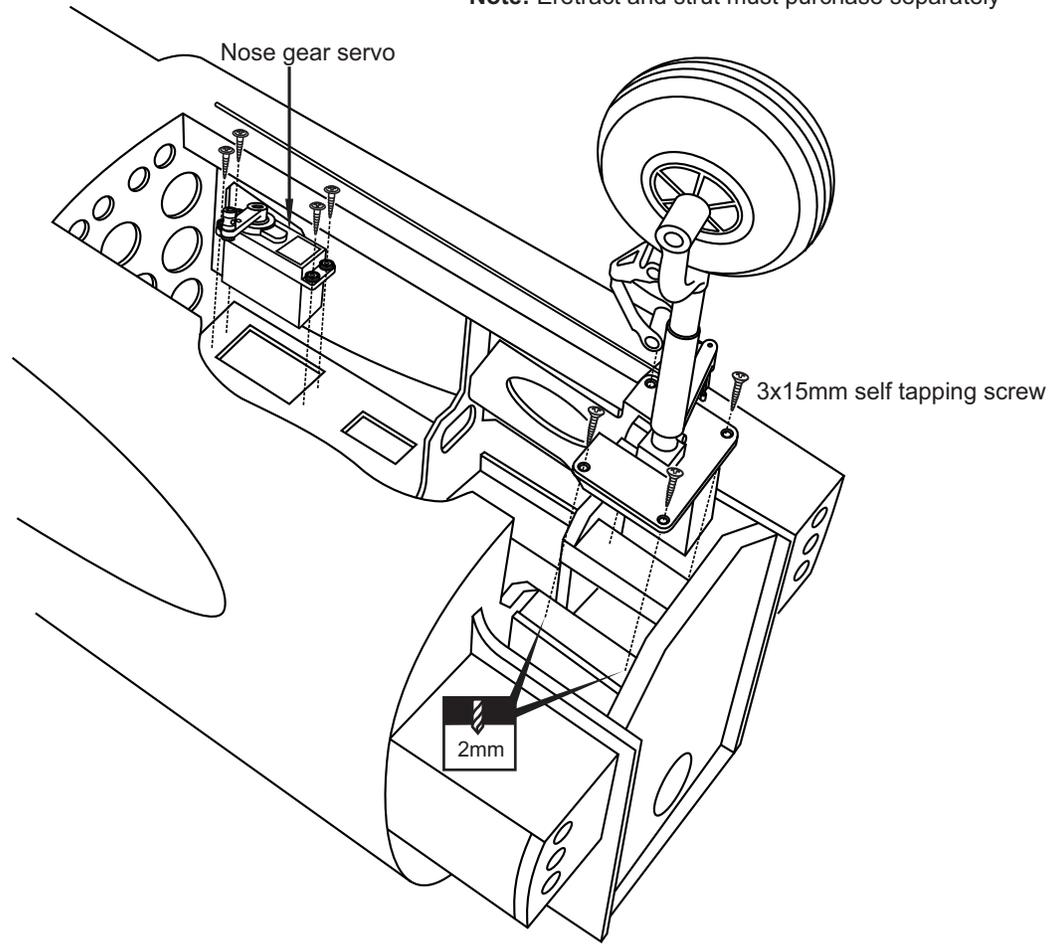


Use a small glue faucet, Apply the thin CA glue on the vertical stabilizer where it contacts the fuselage (both the left and right sides).

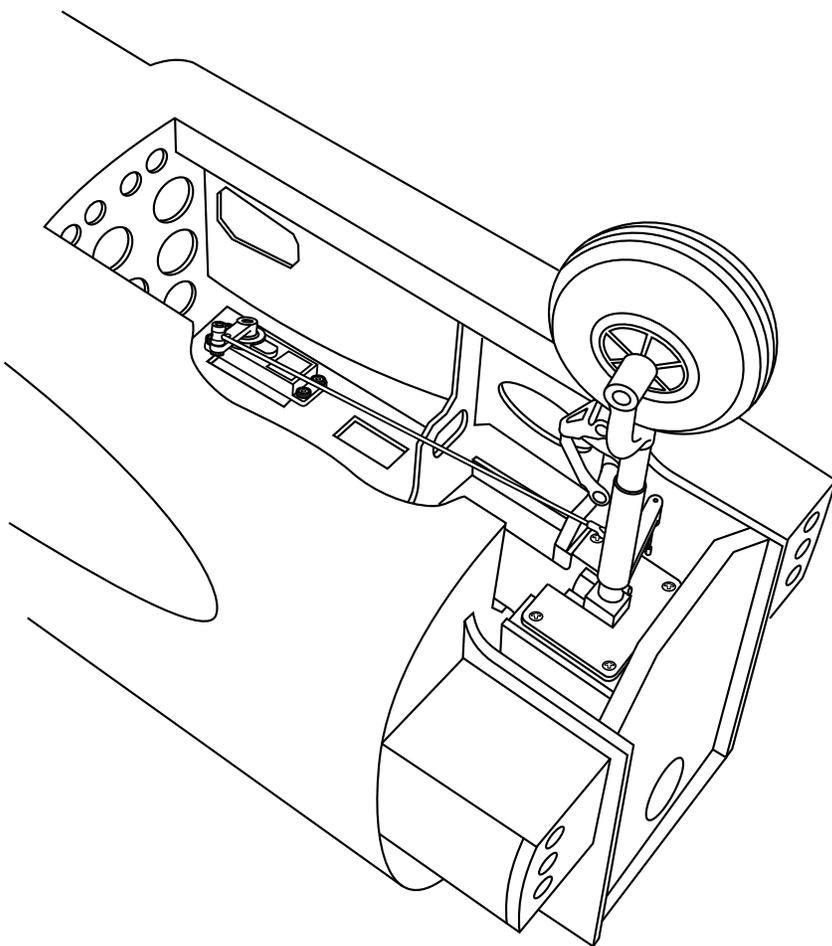
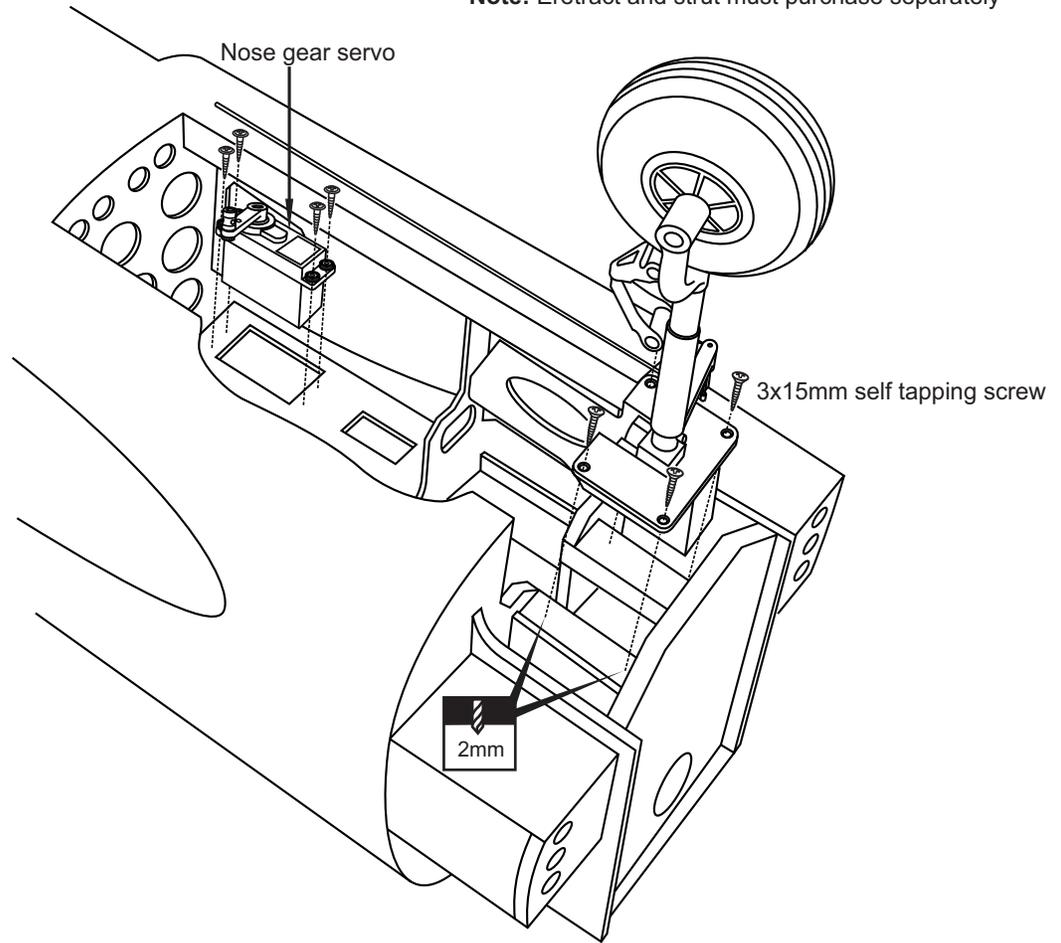


**! Securely glue together. If coming off during fly, you lose control of your air plane.**

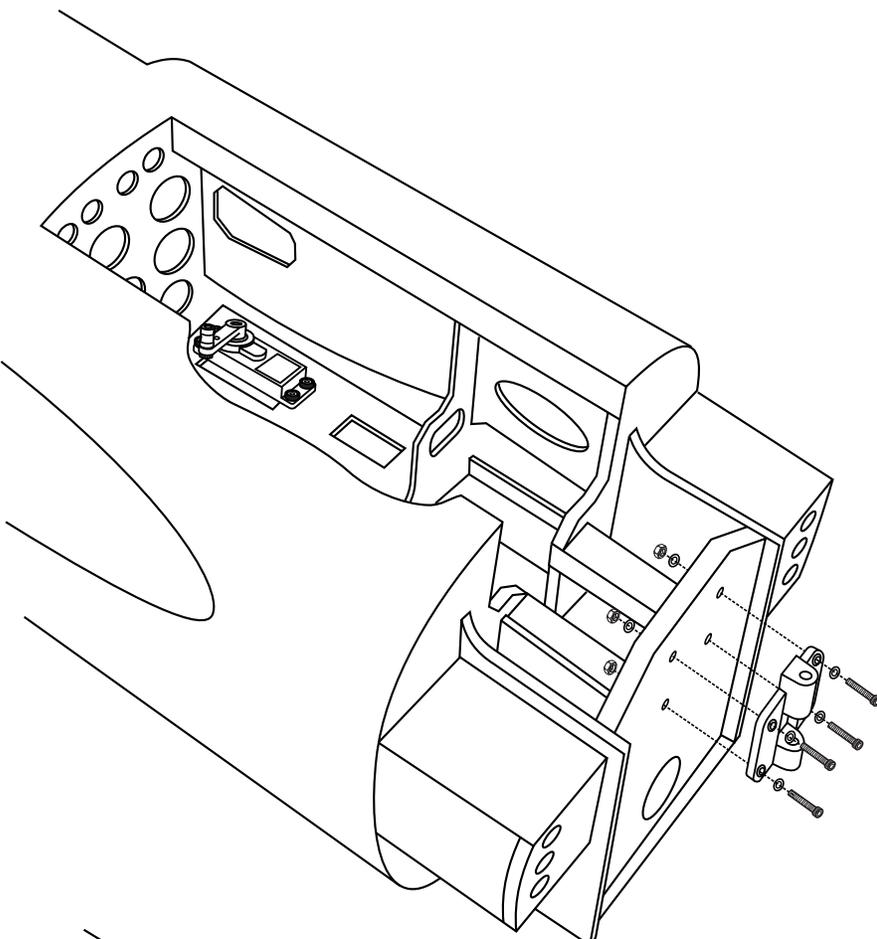
**Note:** Eretract and strut must purchase separately



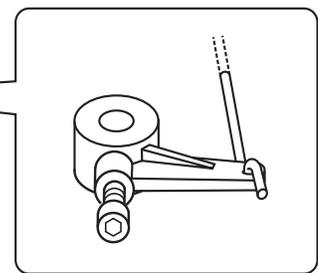
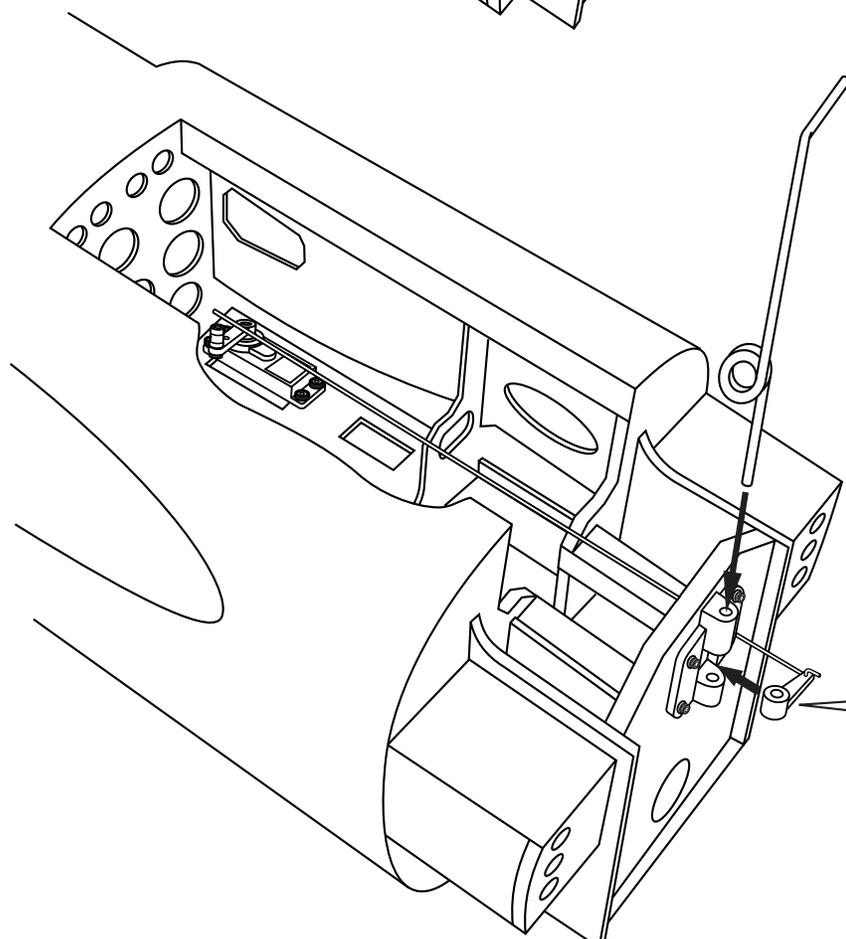
**Note:** Eretract and strut must purchase separately



**T-28 TROJAN** 30- Nose fixed gear



- Nose gear .....1
- Nose gear mount .....1
- Nose gear arm .....1
- 1.2x500mm Nose gear push-rod .....1
- 2.5x500mm Nylon push-rod guide tube
- 3x20mm hex bolt -washer - blind nut .....4
- 2mm connector .....1
- 4.2mm collar .....2

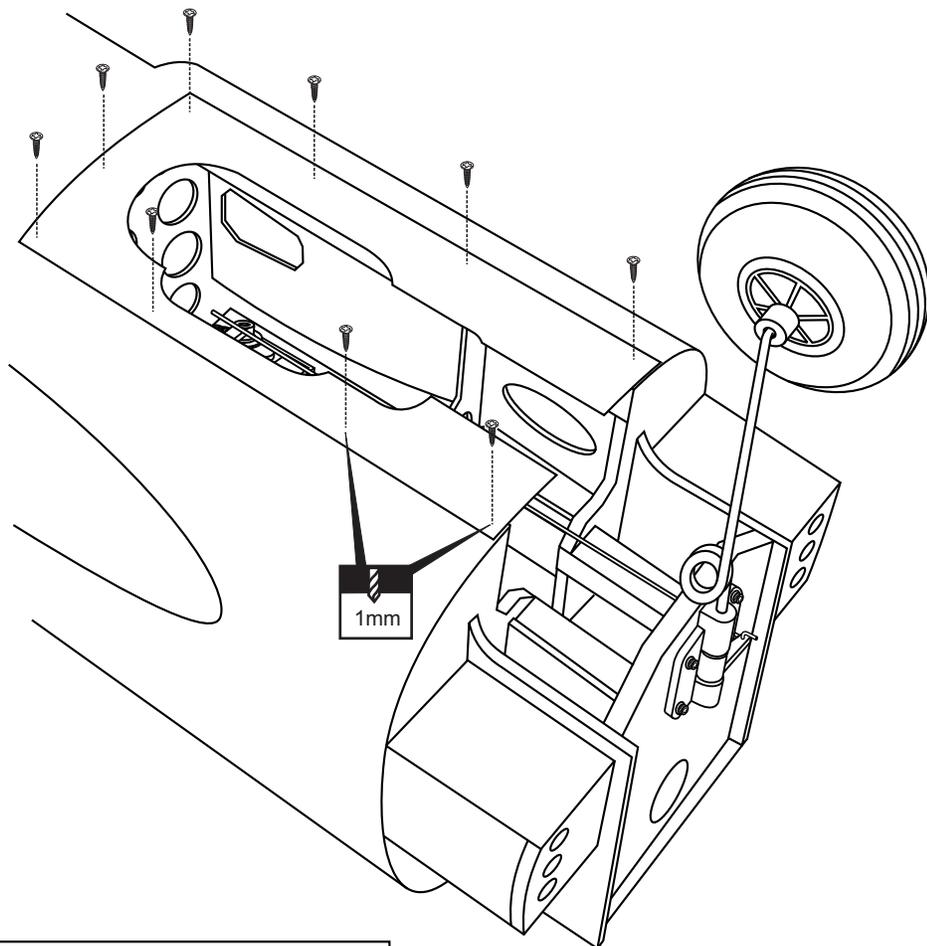


# T-28 TROJAN

## 31- Nose gear housing cover

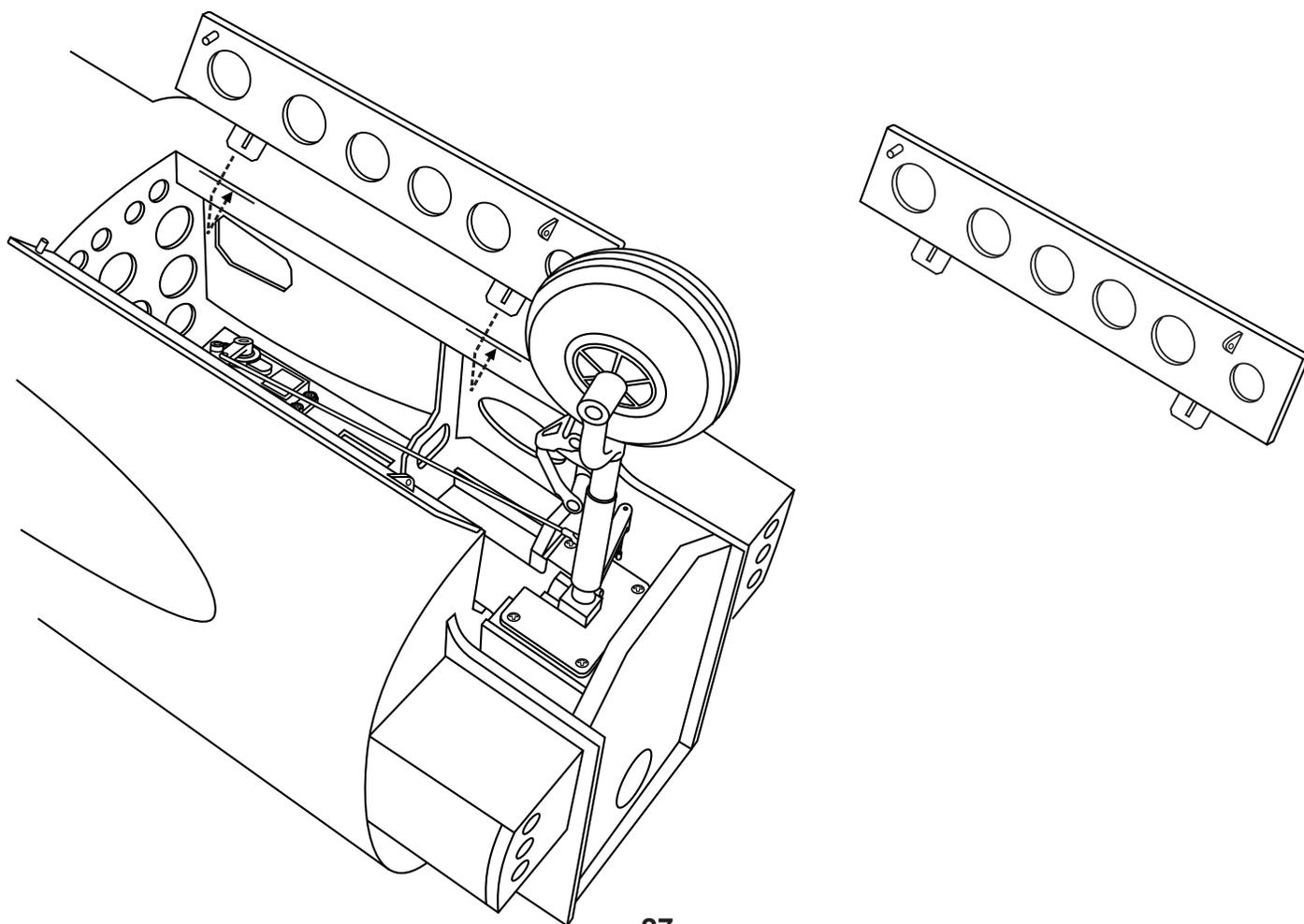
2x8mm self tapping screw

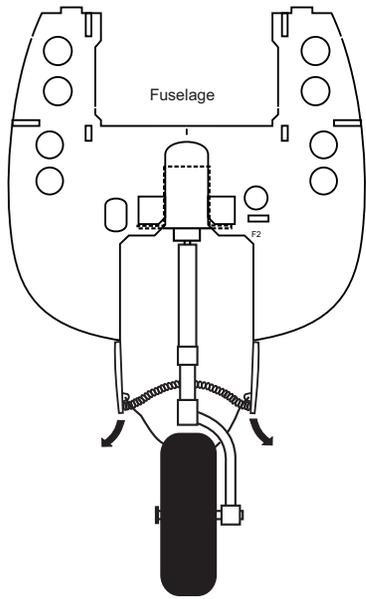
 .....9



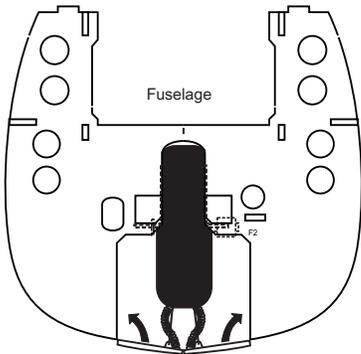
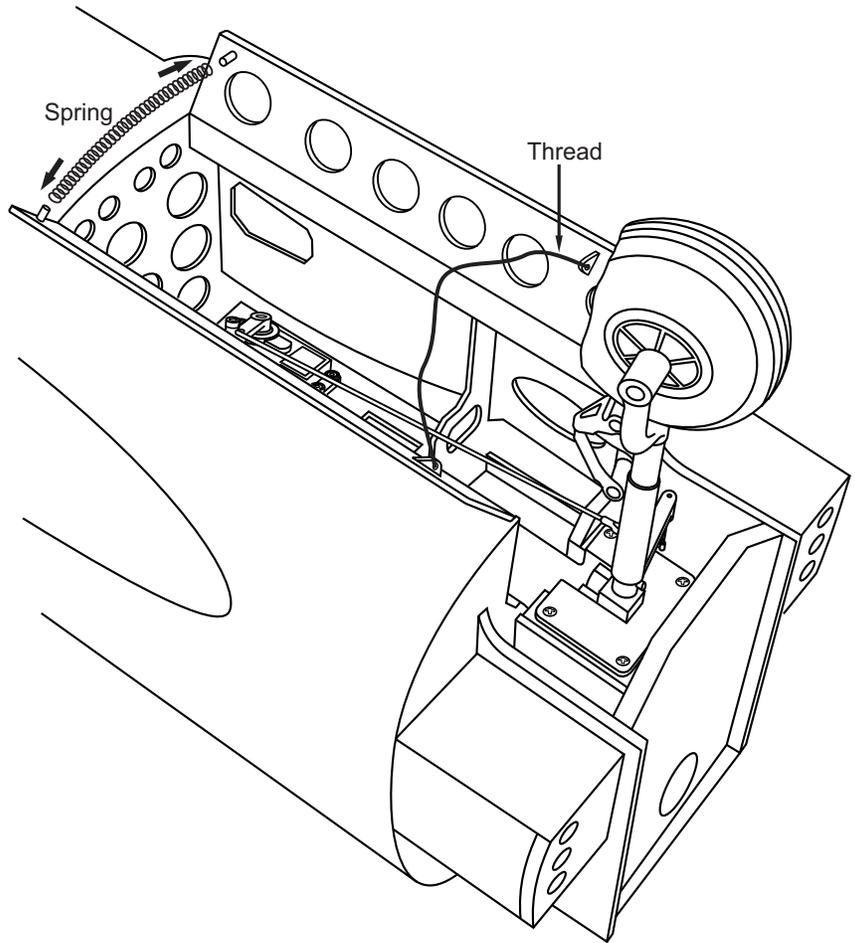
# T-28 TROJAN

## 32- Nose gear housing door

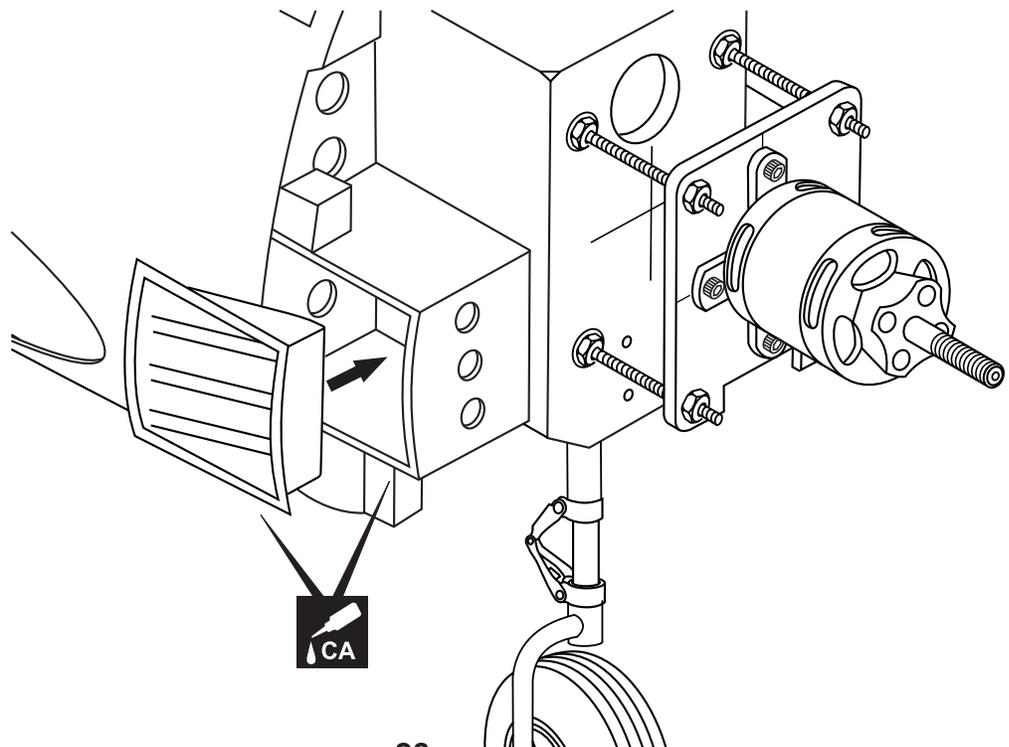




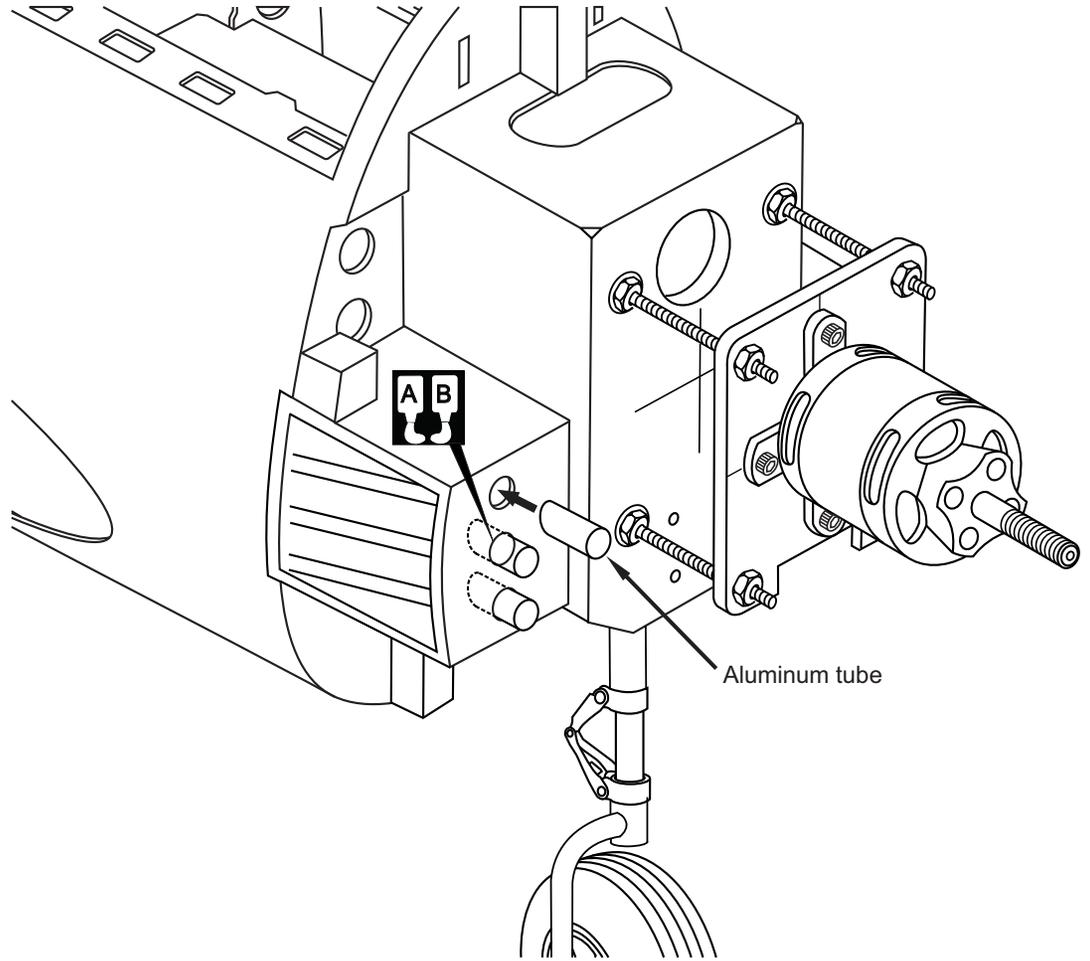
Position of gear doors when retract gear in extended.



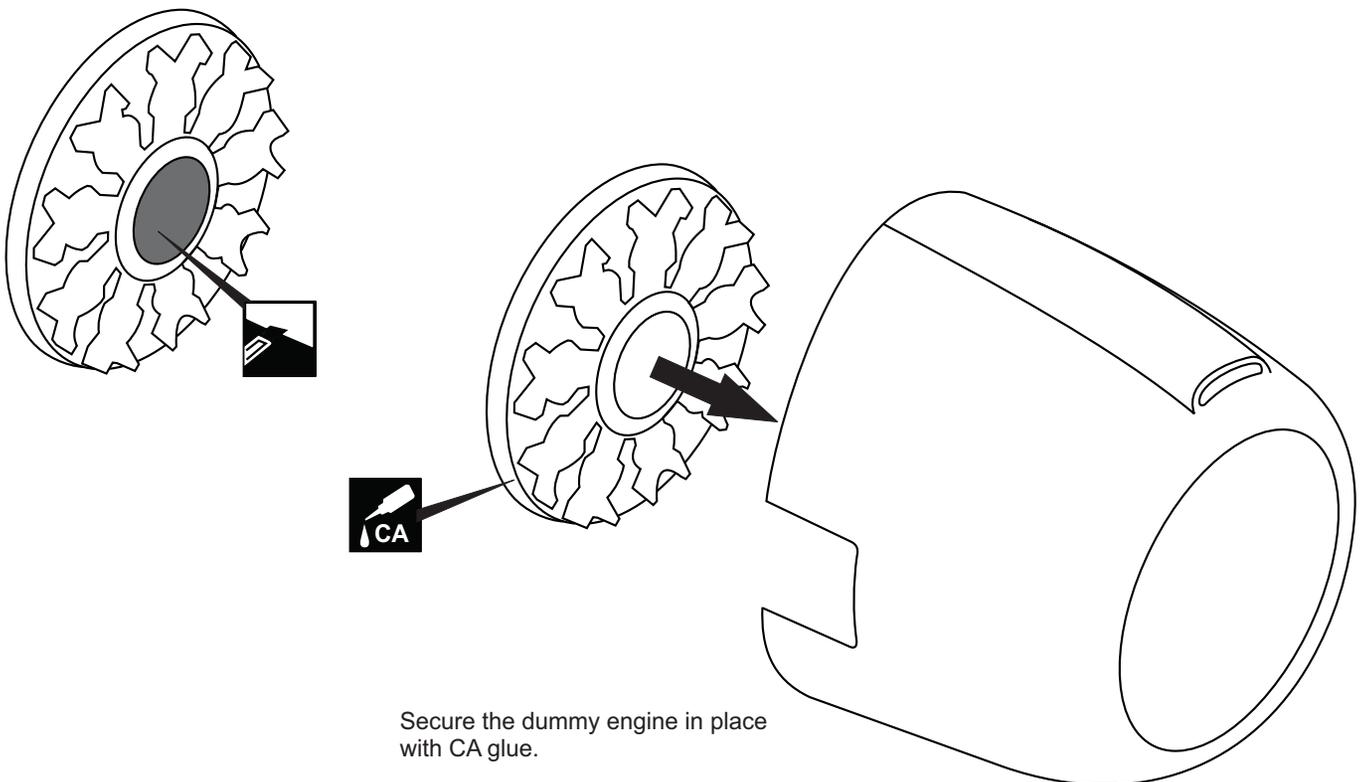
Position of gear doors when retract gear in retracted.



**T-28 TROJAN** 35- Exhaust pipes

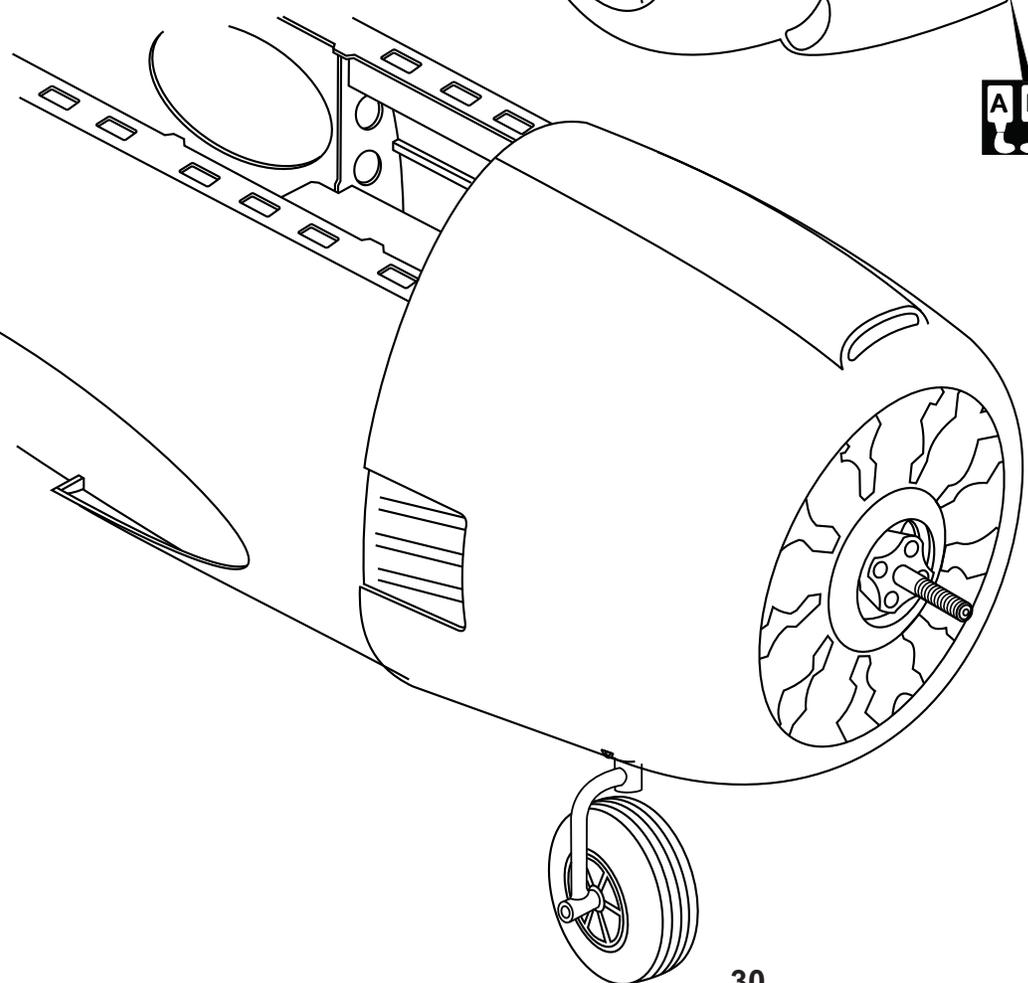
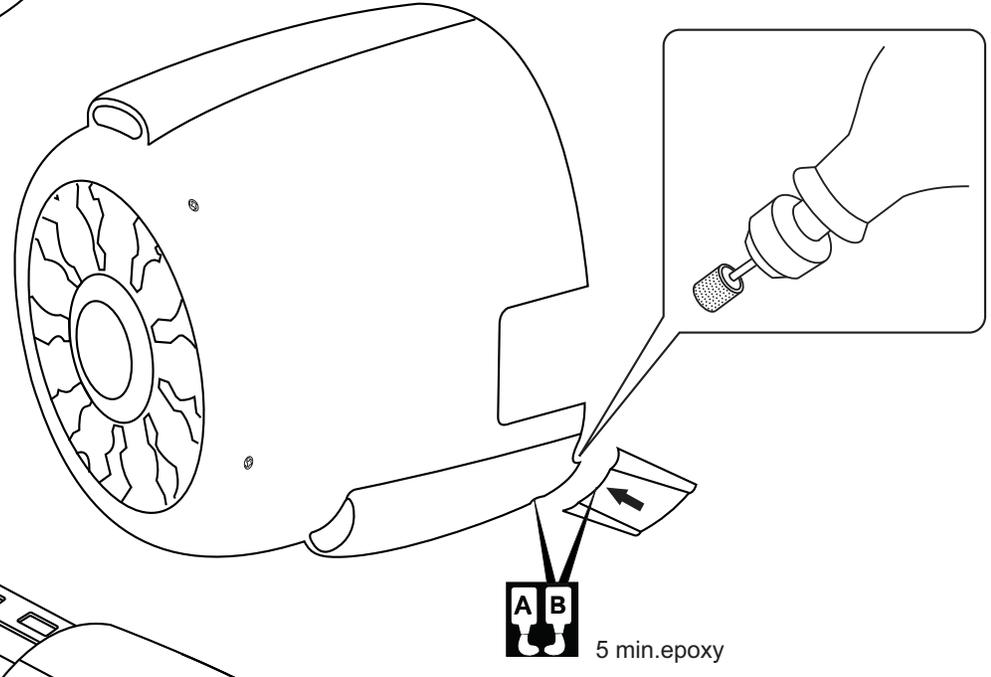
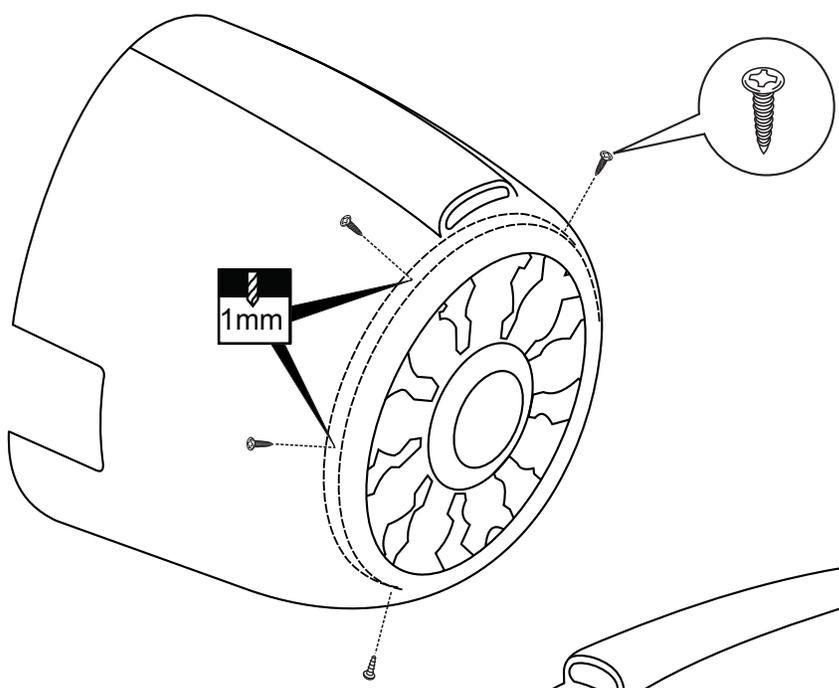


**T-28 TROJAN** 36- Dummy engine

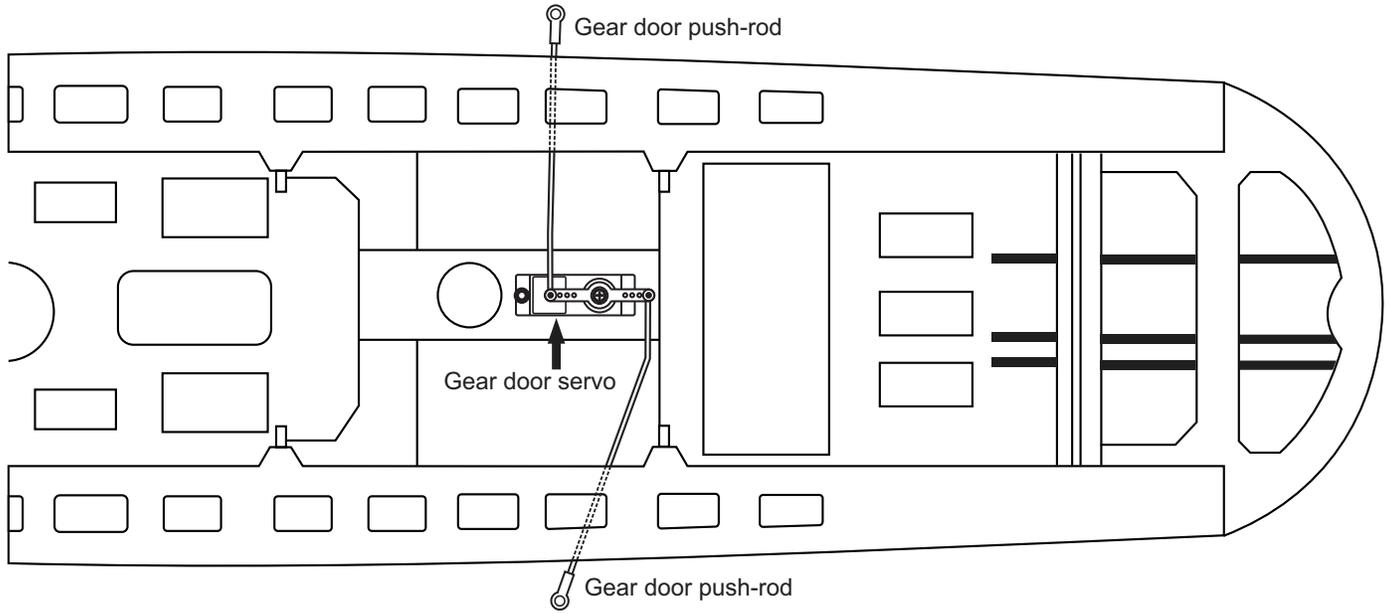


# T-28 TROJAN 37- Cowling

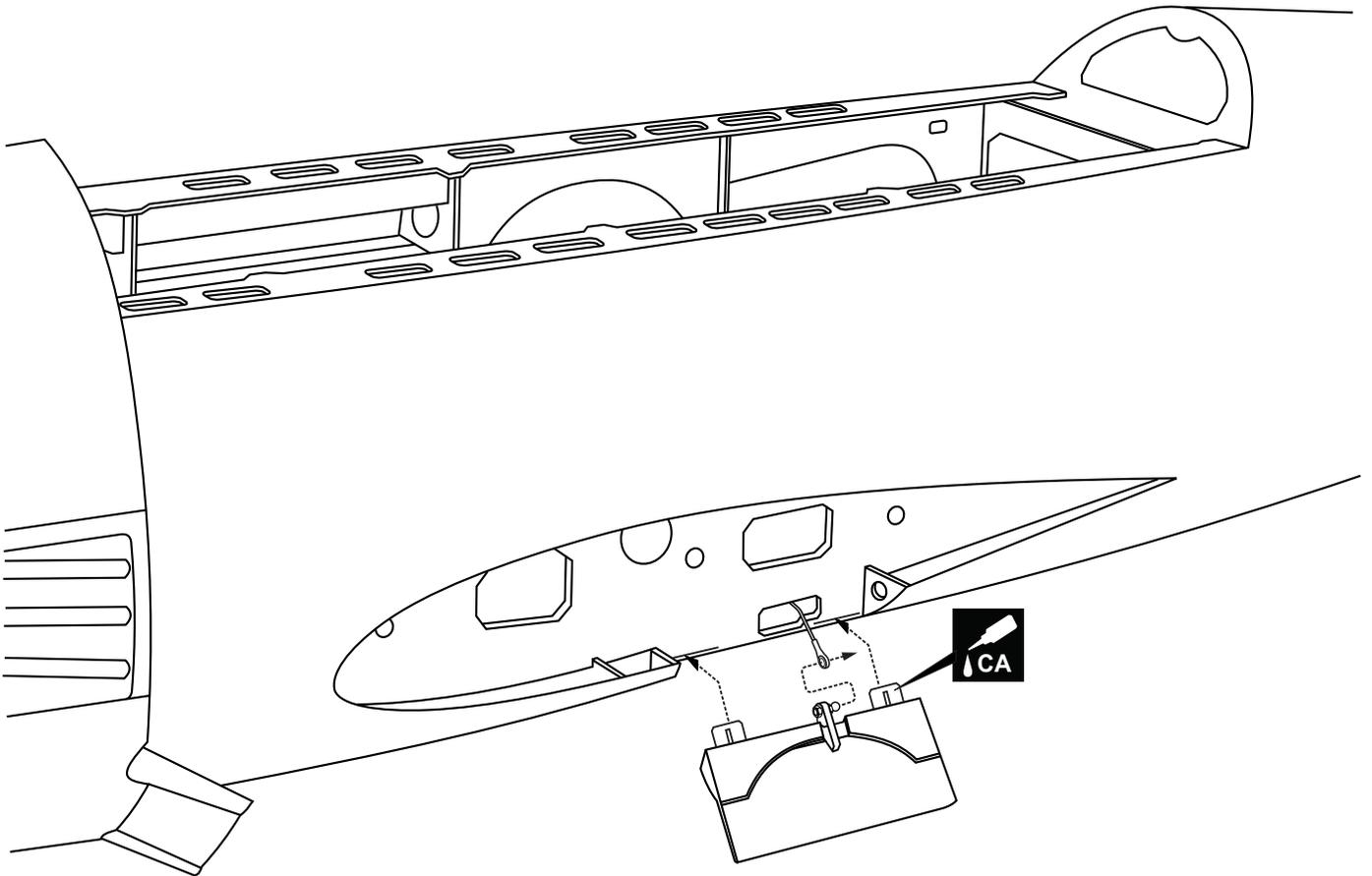
2x8mm self tapping screw  
 .....6

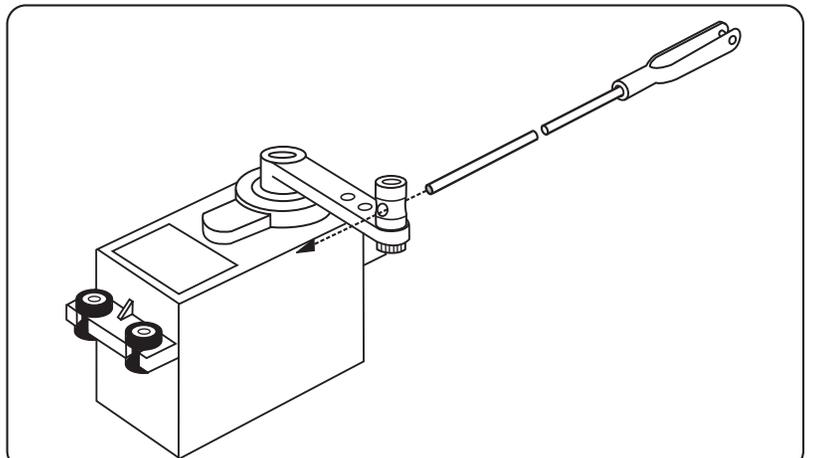
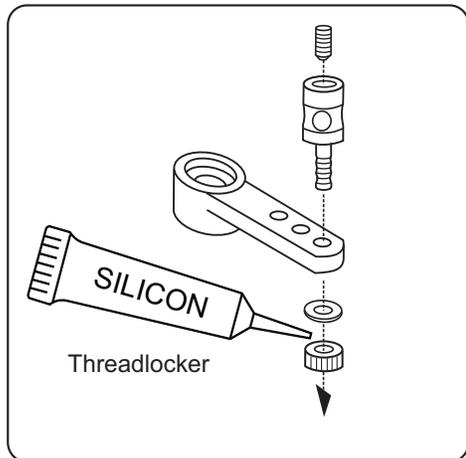
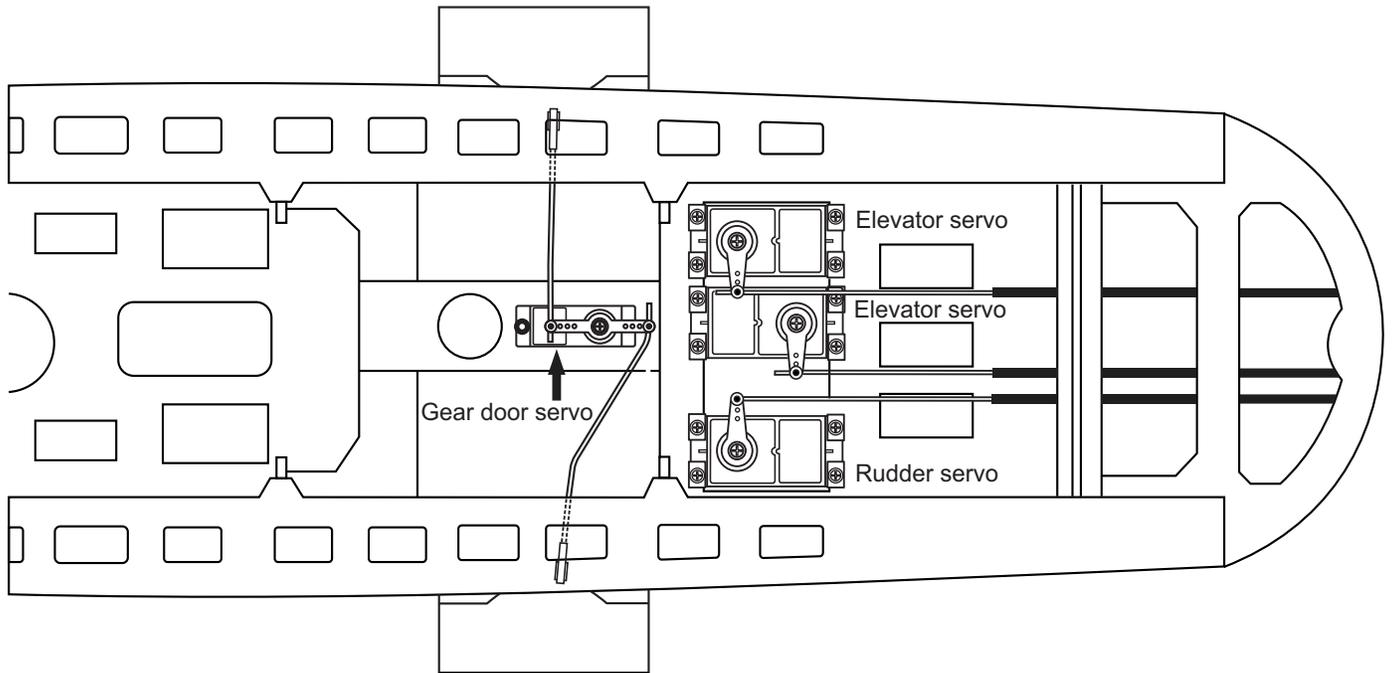
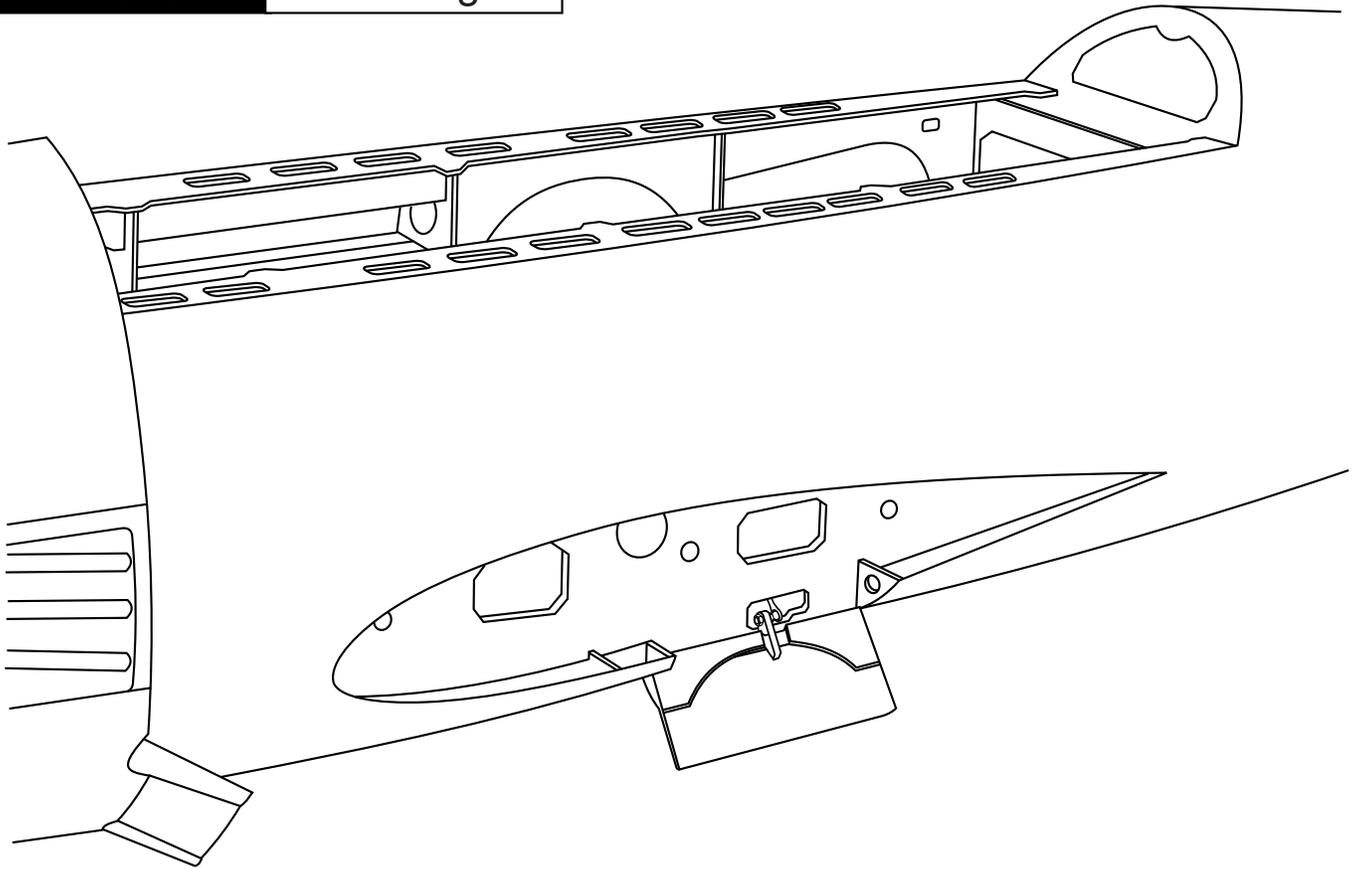


# T-28 TROJAN 38- Main gear door & linkage



Bend the gear door push rod for smooth work.

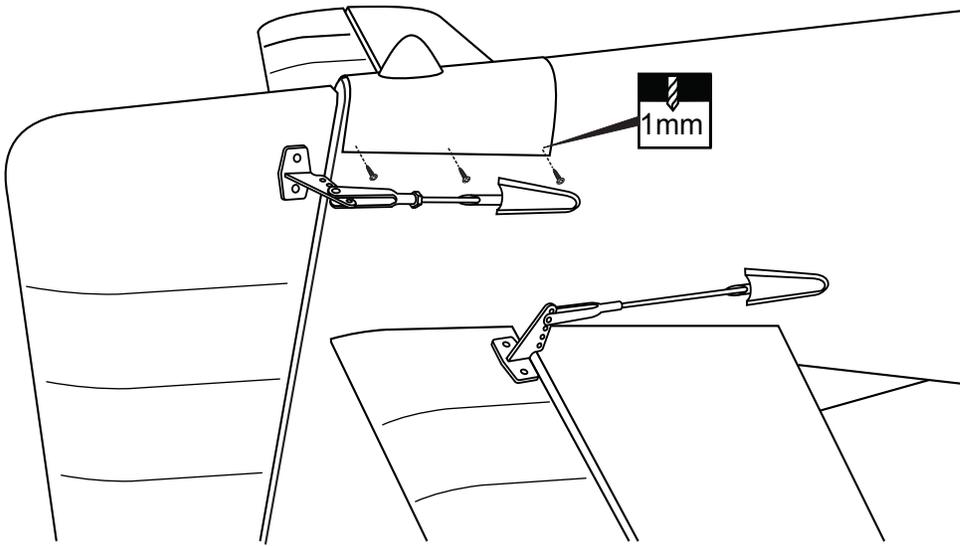
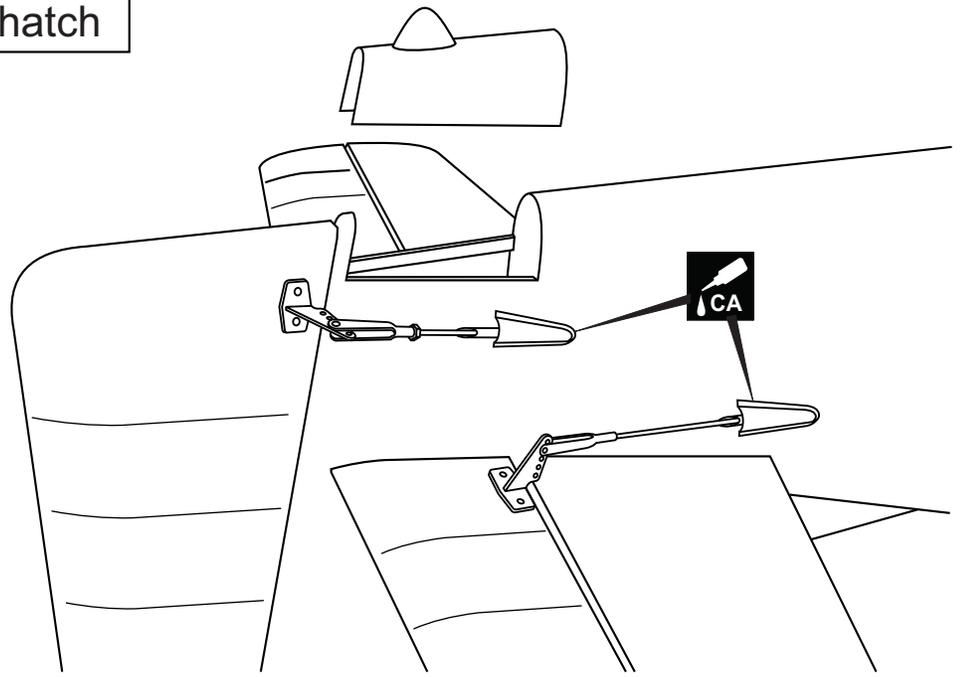




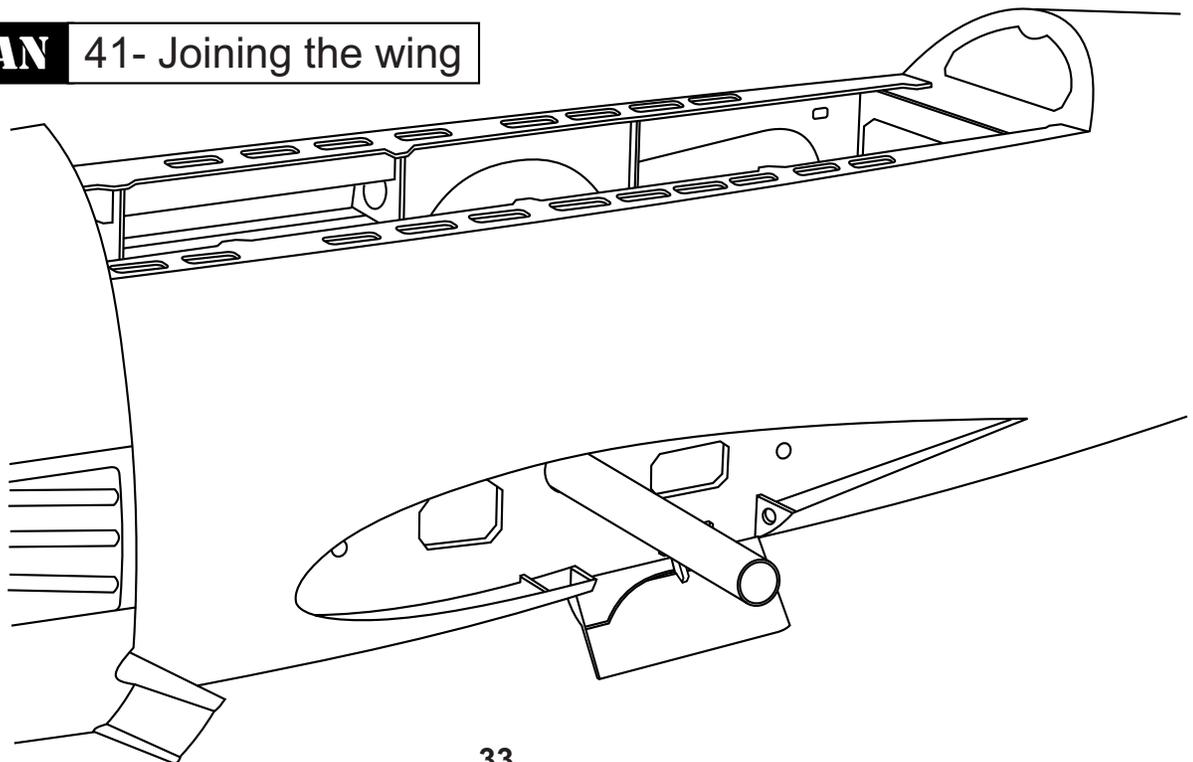
**T-28 TROJAN** 40- Tail hatch

2x8mm self tapping screw

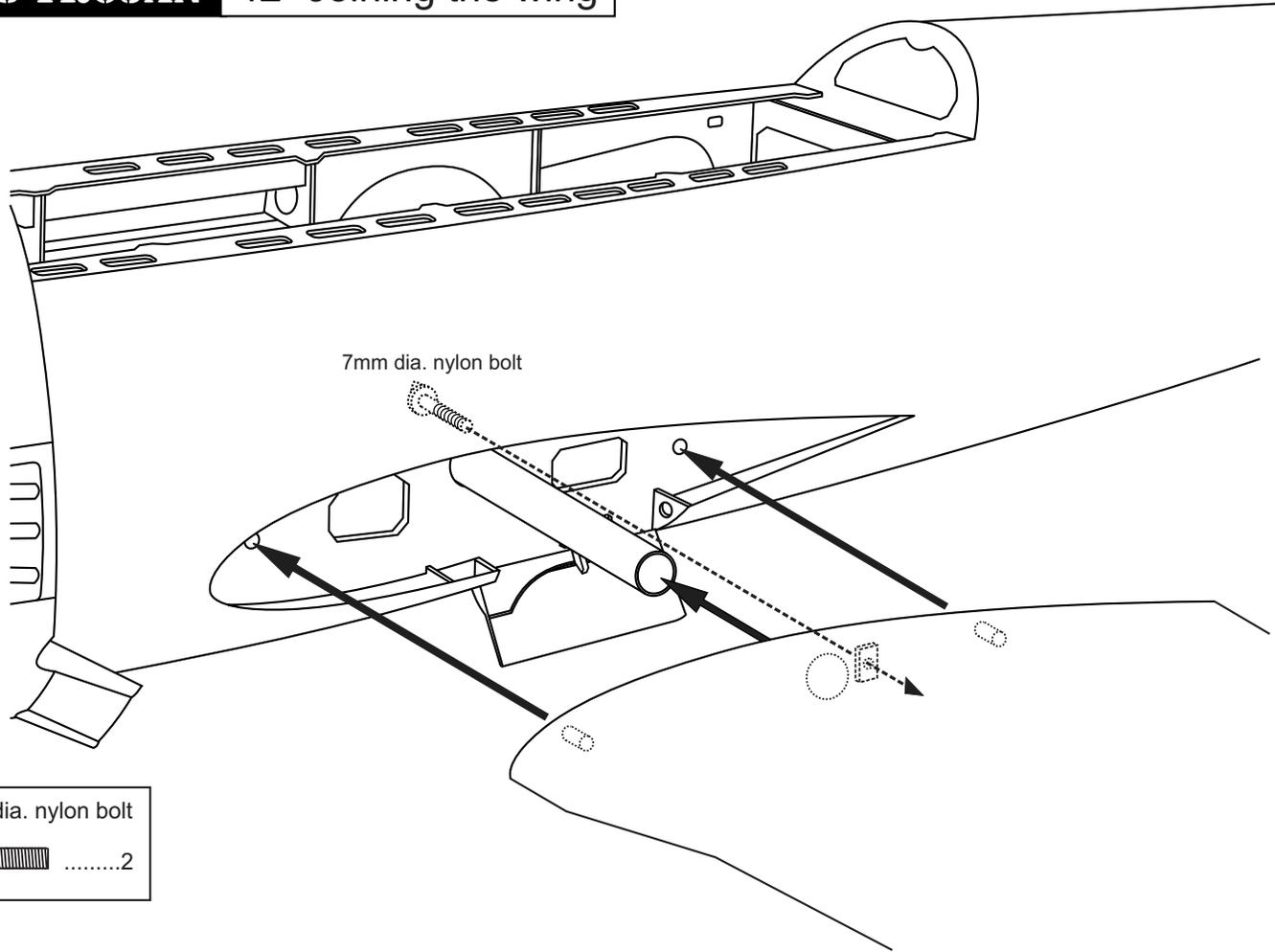
 .....6



**T-28 TROJAN** 41- Joining the wing



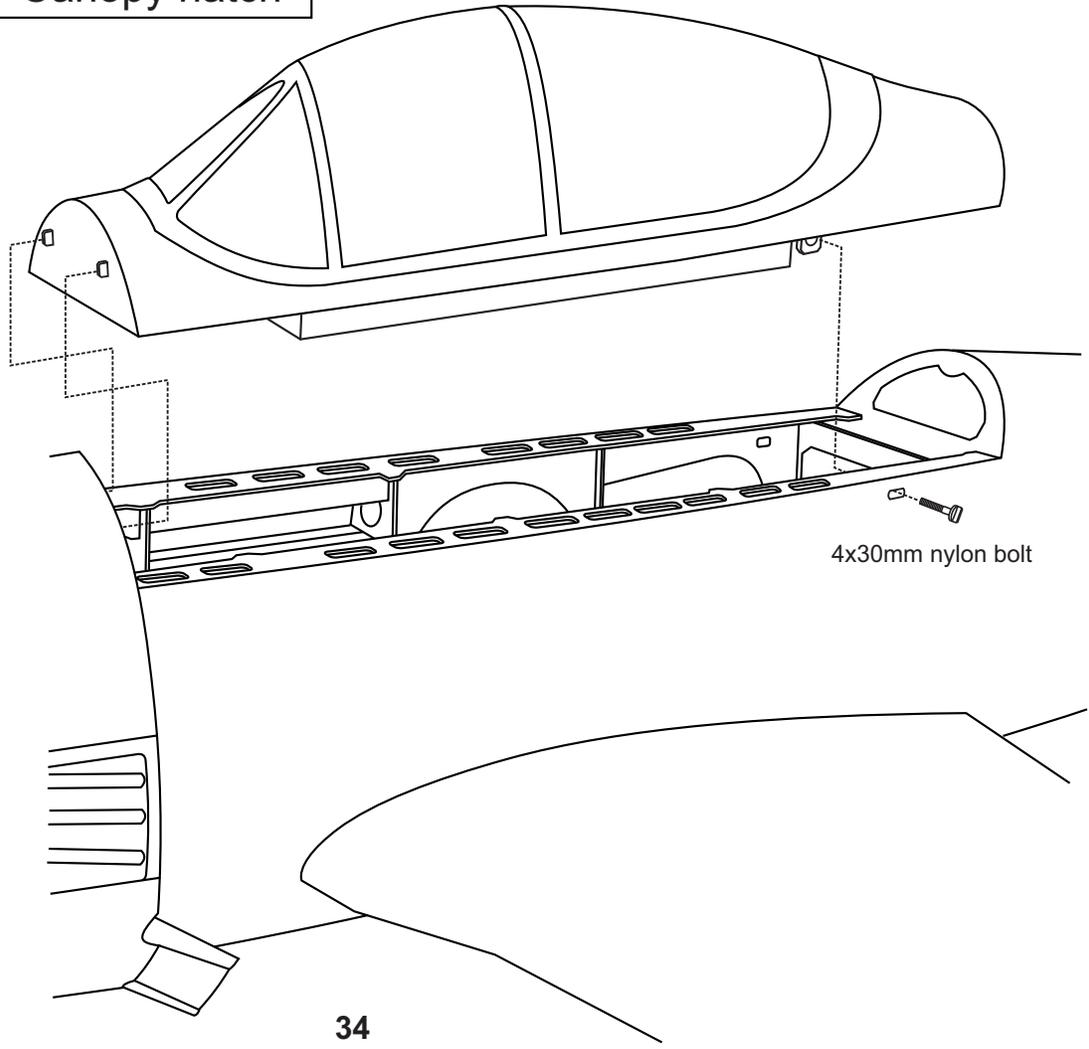
**T-28 TROJAN** 42- Joining the wing



7mm dia. nylon bolt

7mm dia. nylon bolt  
 .....2

**T-28 TROJAN** 43- Canopy hatch

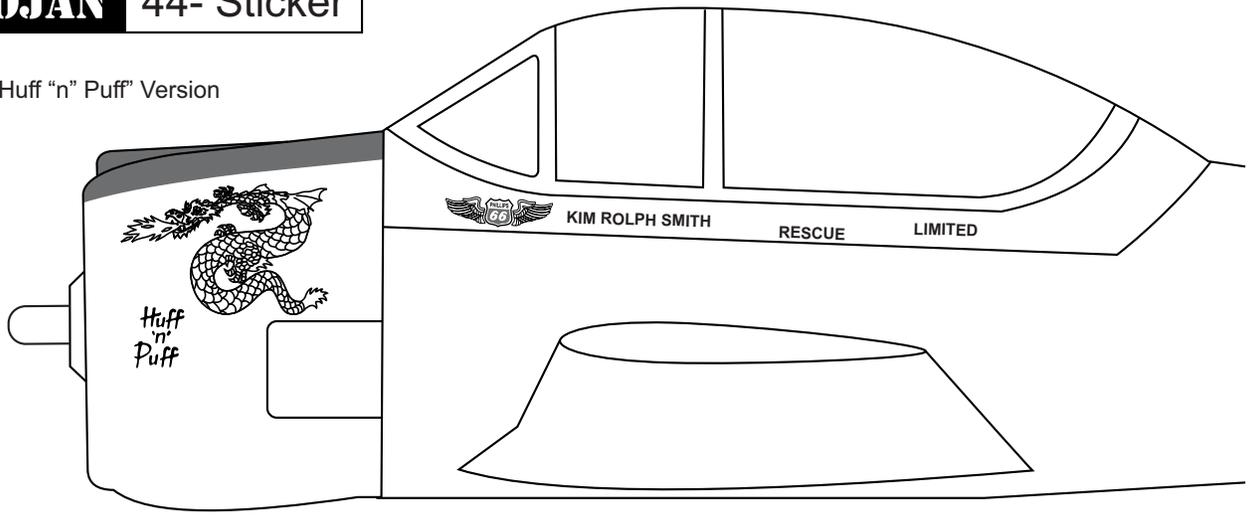


4x30mm nylon bolt

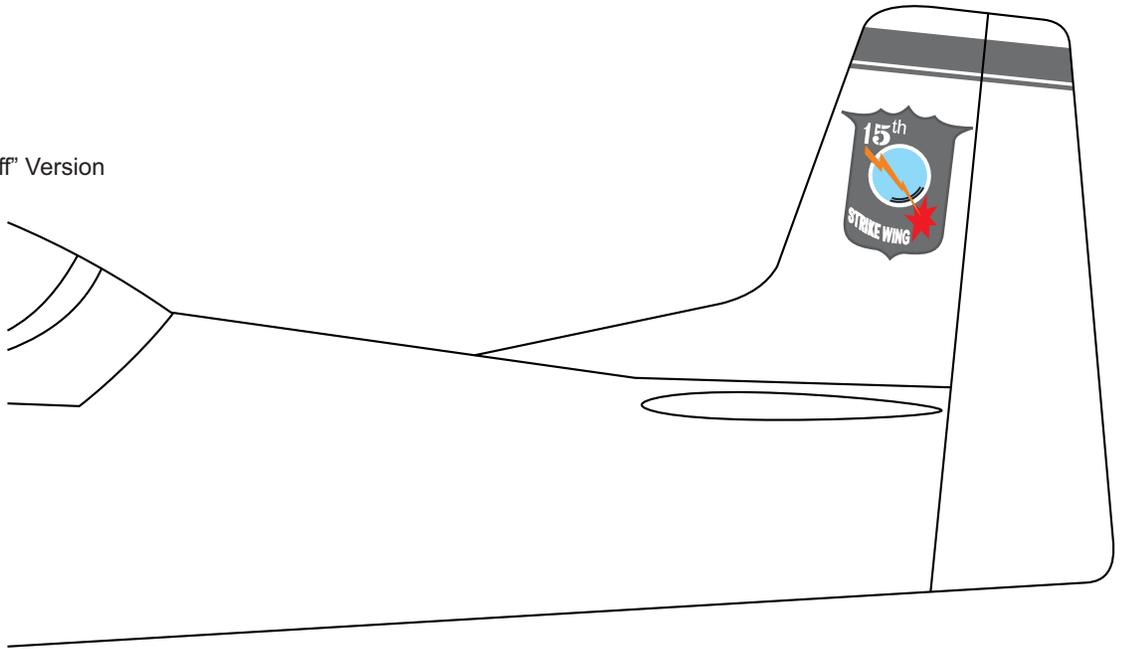
4x30mm nylon bolt  
 .....2

# T-28 TROJAN 44- Sticker

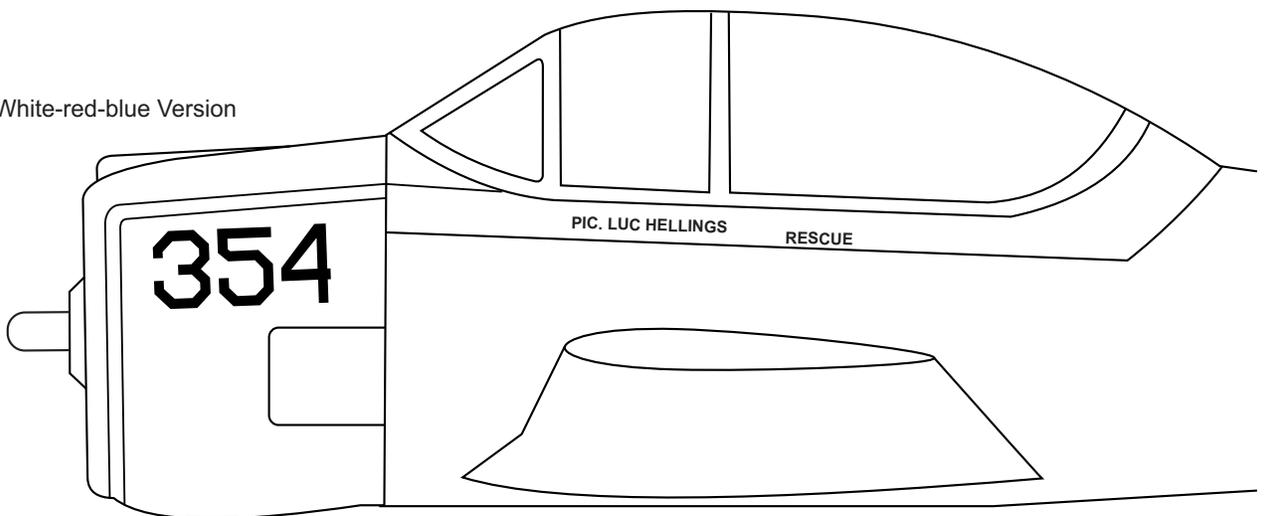
T-28 "Huff 'n' Puff" Version



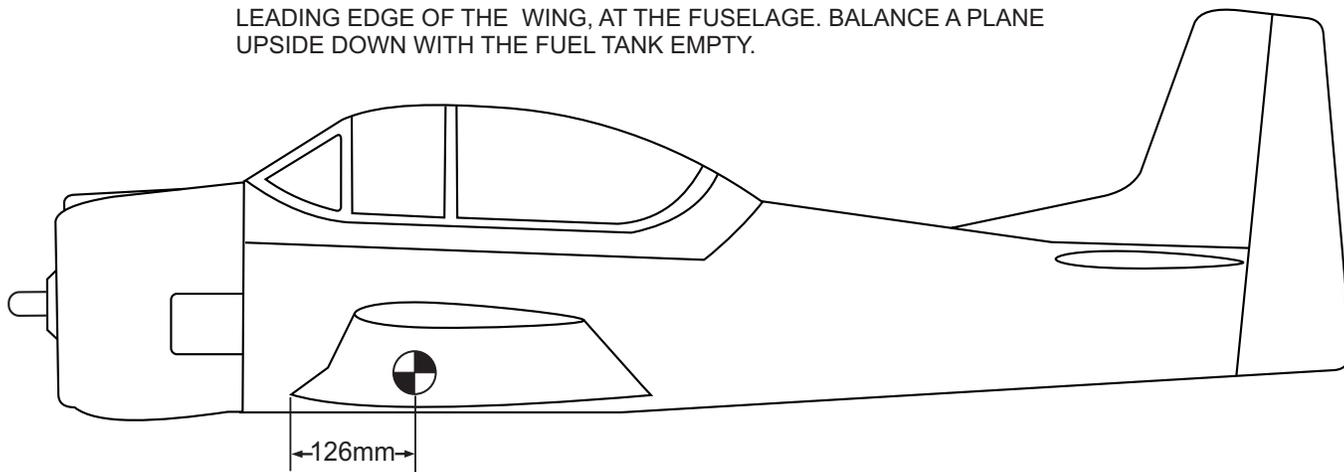
T-28 "Huff 'n' Puff" Version



T-28 U.S.A.F White-red-blue Version



THE CENTER OF GRAVITY IS LOCATED 126mm BACK FROM THE LEADING EDGE OF THE WING, AT THE FUSELAGE. BALANCE A PLANE UPSIDE DOWN WITH THE FUEL TANK EMPTY.



- 1- Mount the wing to the fuselage. Using a couple of pieces of masking tape, place them on the top side of the wing (126mm) 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.

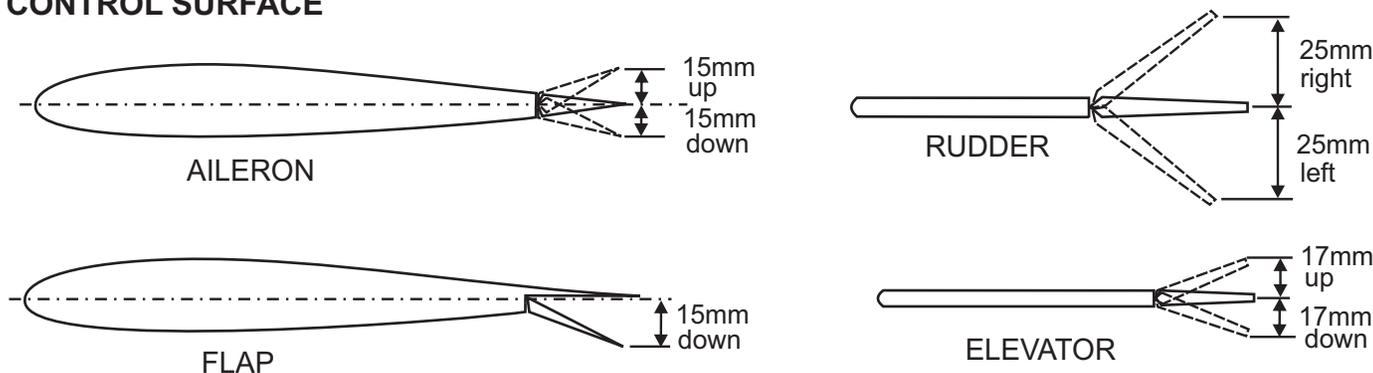
### LATERAL BALANCE:

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 !**

### 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 T-28 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".

#### LOW RATE

Aileron : 15mm up / down  
Elevator : 17mm up / down  
Rudder : 25mm right / left  
Flap : 40mm down

#### HIGH RATE

Aileron : 20mm up / down  
Elevator : 22mm up / down  
Rudder : 30mm right / left  
Flap : 50mm down

**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.