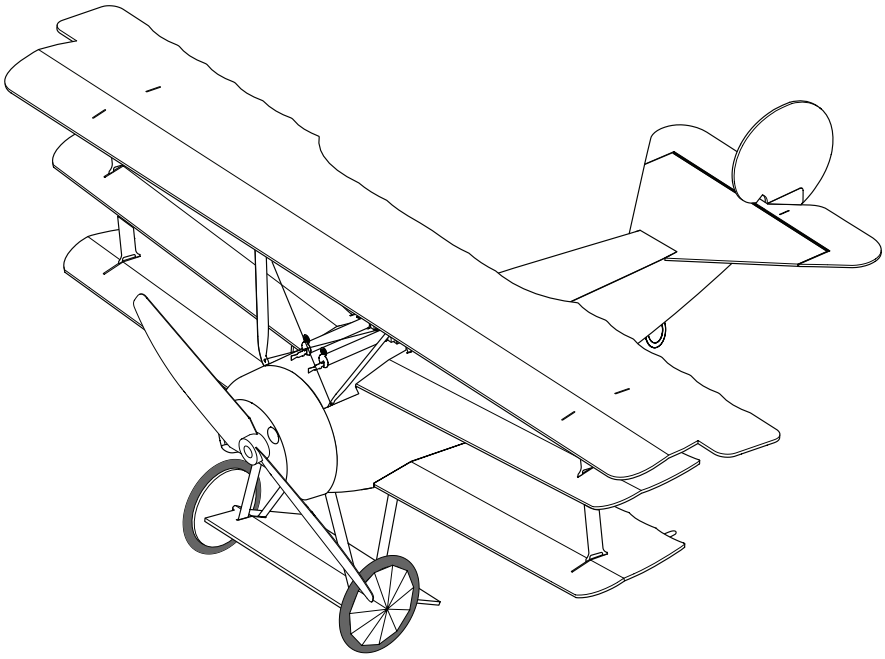
Microaces

MAKING HISTORY

ASSEMBLY GUIDE



Fokker

Dr.I

Dreidecker

Version 2

Introduction

Thank you for purchasing this Microaces Aero Kit. Designed using innovative ideas, advanced materials and detailed aircraft illustrations, this model aircraft will bring you hours of building enjoyment and many more exciting flying hours too. Please take your time to familiarise yourself with these instructions as the aircraft assembles in a very unique way, following a sequence of steps that should be adhered too to ensure a satisfactory and flyable model.

Safety

It is extremely important to us that you and those around you remain safe while building and flying Microaces kits. Please take note of the following notices of safety. Microaces Aero kits contain parts and packaging ***unsuitable*** for handling by small children. Please ensure that children under the age of 6 years are prevented from handling the component parts or packaging of this kit. Although the resulting model is lightweight, we DON'T recommend that you fly it near or over others where there is a danger of striking someone. We DO recommend that the maiden flight is performed over long grass in calm weather away from others.

Assembly

Read all the instructions carefully before starting assembly.
It is important to use the recommended glues or an equivalent with similar properties. Foam parts must be glued with a foam safe cement or permanent damage can result to components. Ensure your knife has a fresh or sharp blade installed to ensure a clean cut.

Warranty

Microaces warranties this kit is supplied with all components present and that those components are free from cosmetic or structural damage to an extent that would impair the assembly of the kit, alter the aesthetics of the built model and/or the flight performance of the resulting model. If any parts are missing or damaged please contact us via email at: support@microaces.com

Key


Note (Information)


Attention

Part Number


Do Not Glue


Contact Adhesive (Foam Safe)


Score before assembly


Alphatic Resin (or Foam Safe CA)


Cut


Paint


Sanding Required


Area of adhesion for glue

KIT PARTS

Sheet Parts

1 x 2mm laser cut FOAM airframe
1 x 1 mm printed & laser cut foam wing & tail parts
1 x 1 mm printed & laser cut de pron fuselage parts
1 x 200 micron printed & laser cut polypropylene parts
1 x polyester sticker sheet
1 x 0.8mm plywood parts

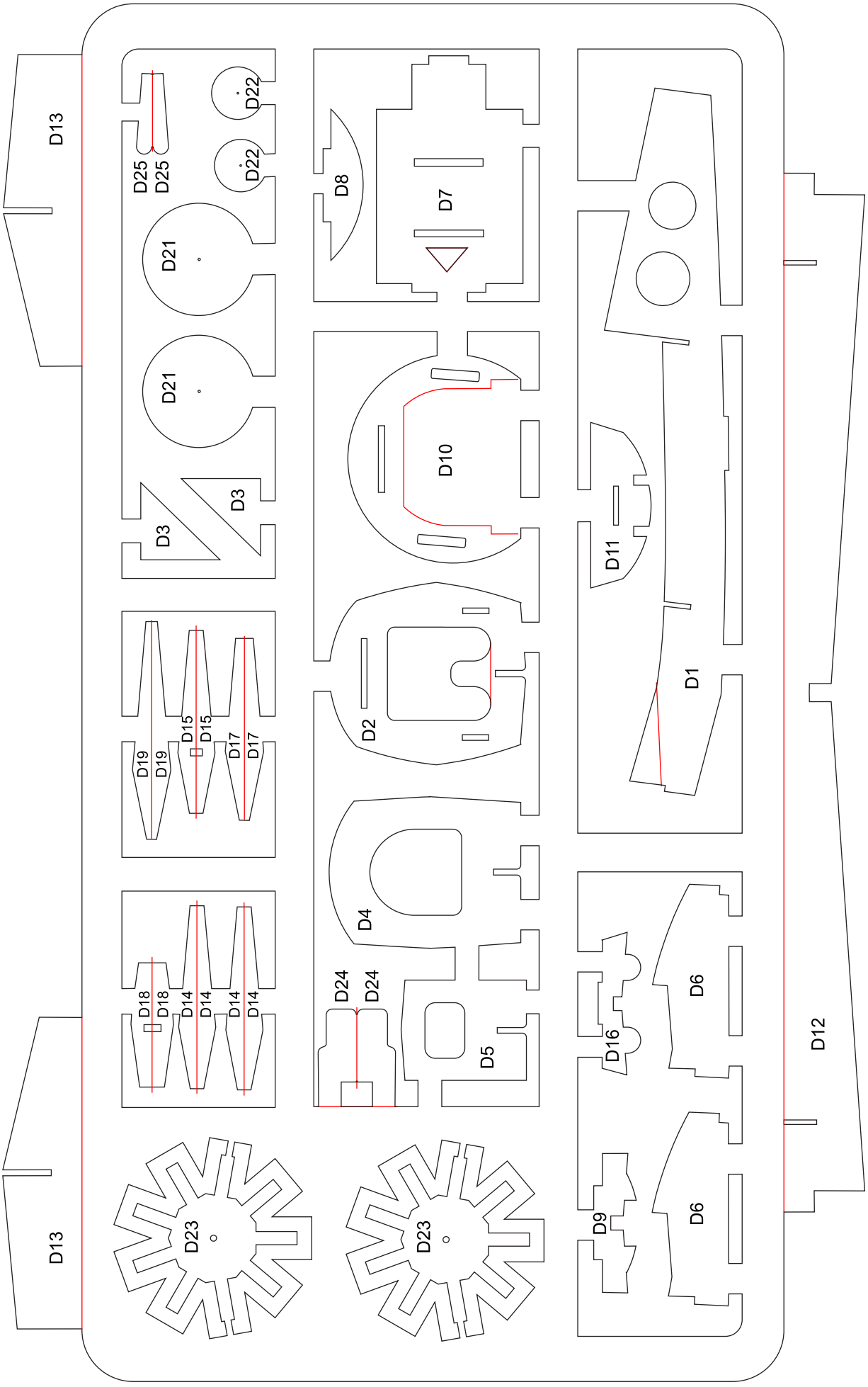
Loose Parts

2 x neoprene tyres
1 x vacuum formed ABS plastic cowl
2 x 50mm x 4mm Ø black plastic tube
1 x 200mm x 4mm Ø black plastic tube
1 x 1.7mm Ø x 12mm brass tube
1 x 250mm x 0.4mm x 1mm carbon fibre strip
1 x 92mm x 0.4mm x 1mm carbon fibre strip
1 x 80mm x 1 mm Ø carbon fibre rod
1 x profile pilot figure
1 x 300mm rigging wire
2 x Elevator & rudder control rod
1 x Self adhesive ballast strip
2 x 4mm Ø x 1mm neodymium magnet

RECOMMENDED TOOLS/GLUES

Knife or Scalpel with fresh blade
Steel Rule or straight edge
Sanding Stick or sand paper (180 grit recommended)
Tweezers
Needle threader or Microaces Rigging Tool
Needle nose pliers & wire cutters
Deluxe Materials Foam 2 Foam adhesive
Aliphatic Resin or Foam safe cyano glue (for rigging & re-inforcement)

2mm FOAM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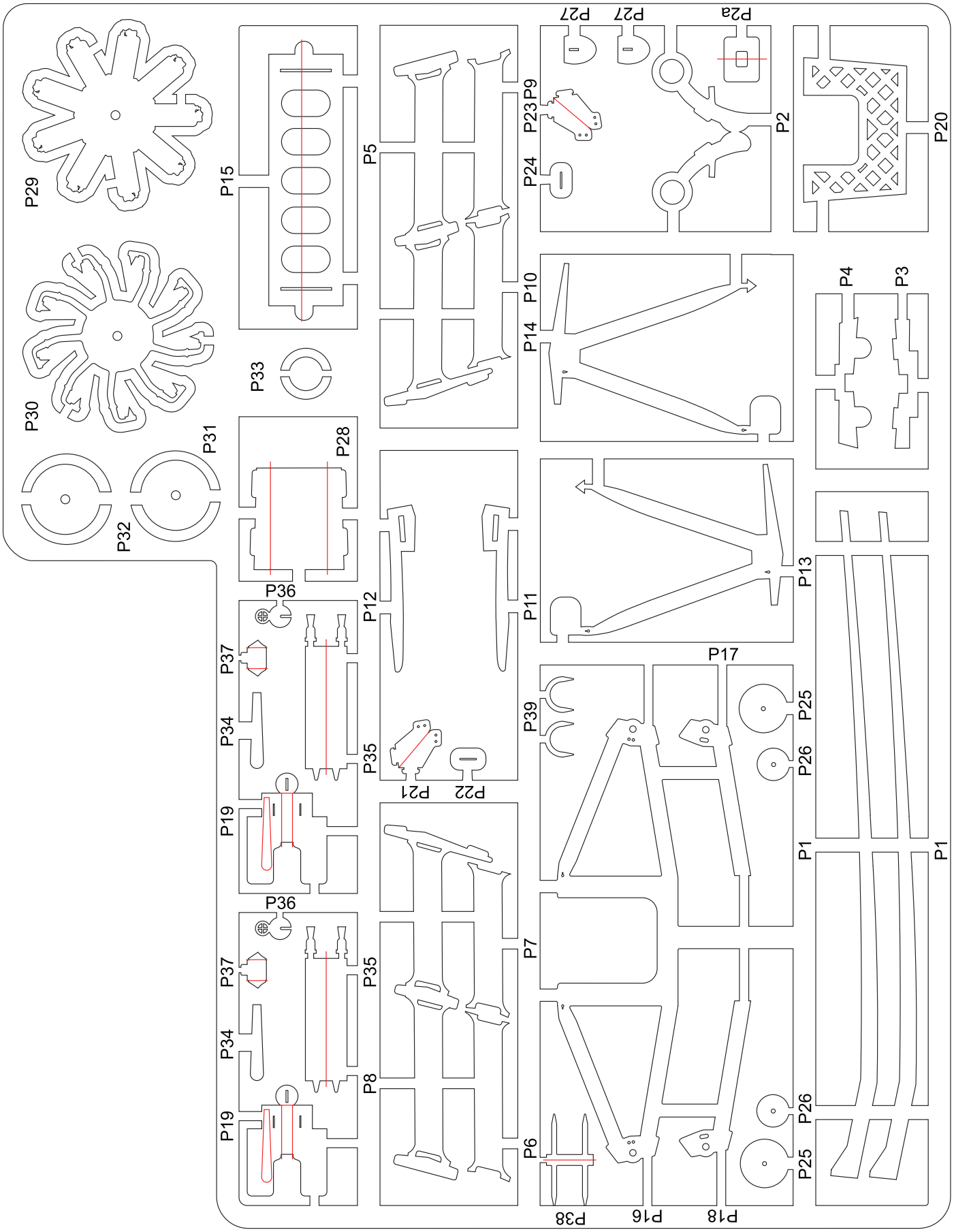
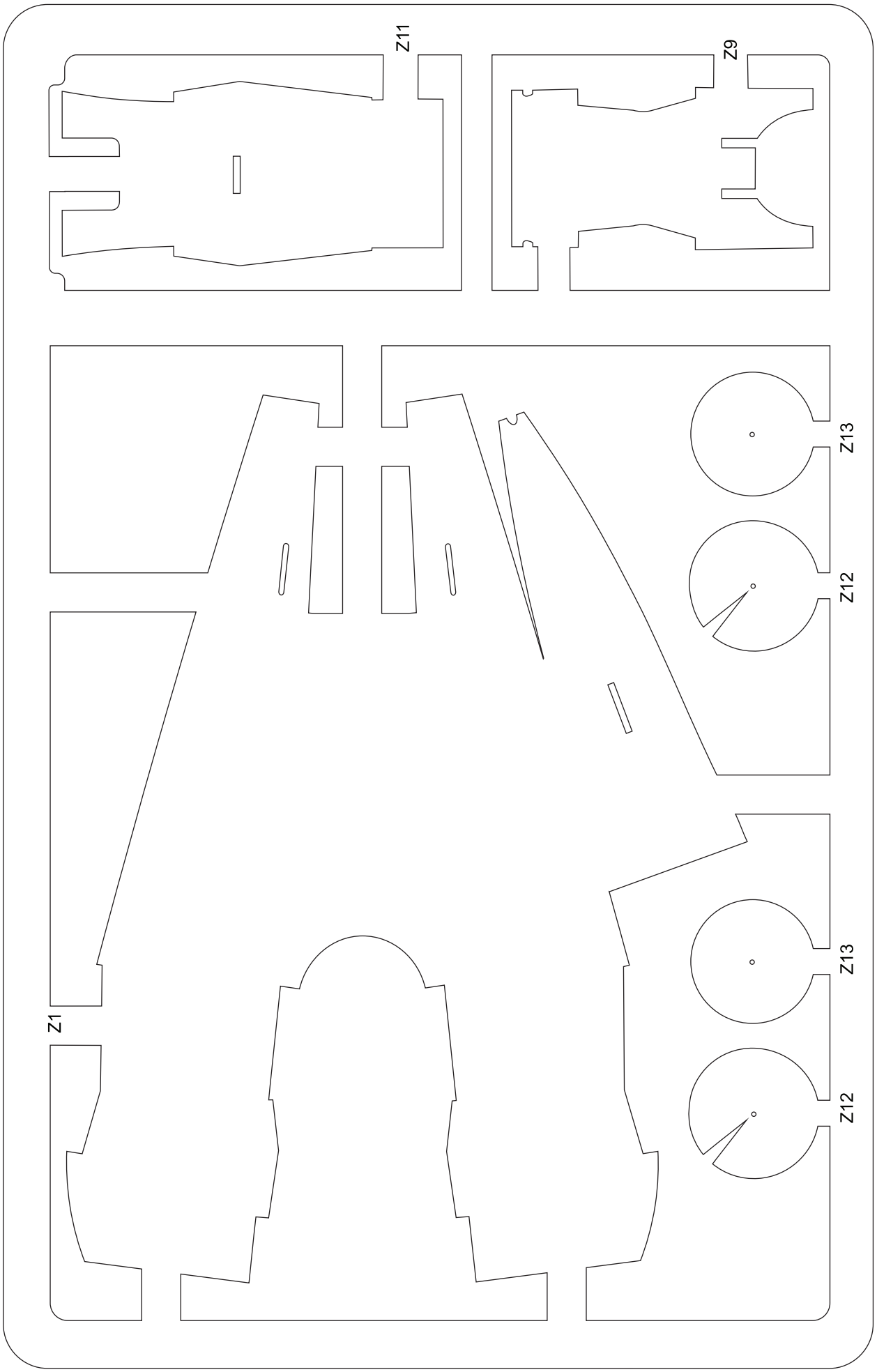
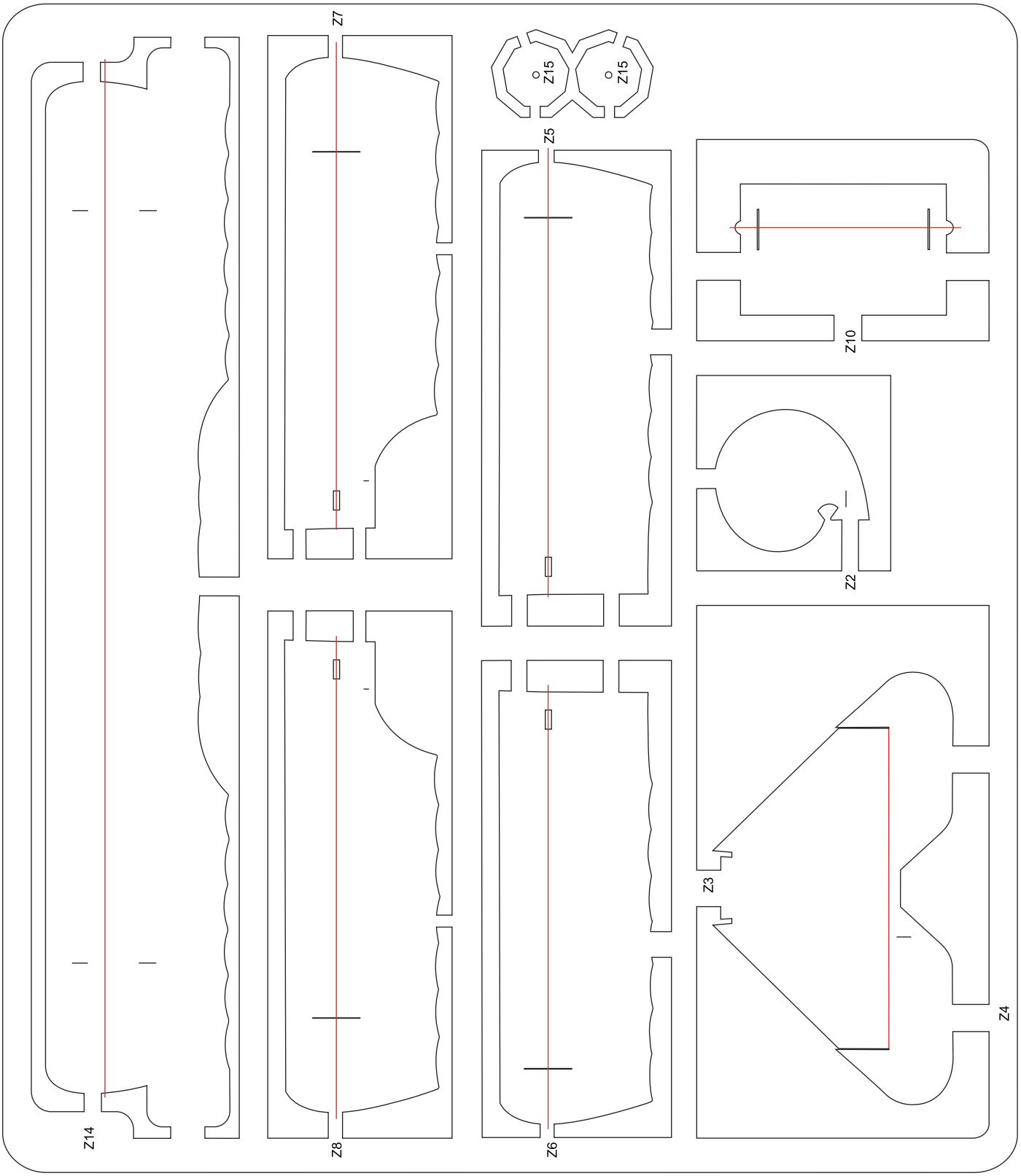
PLASTIC PARTS



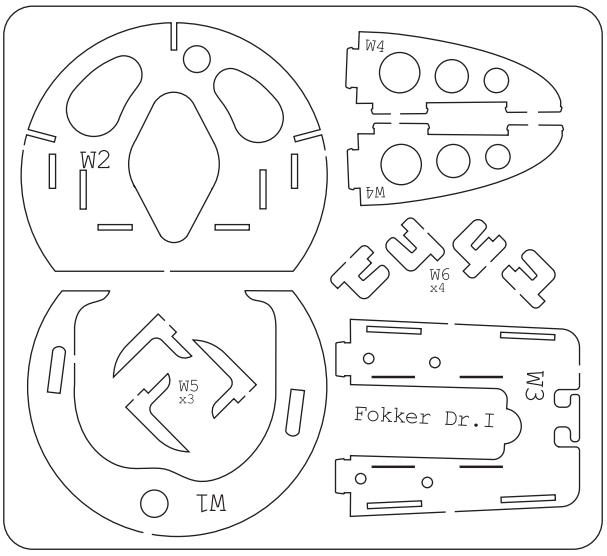
1mm PARTS



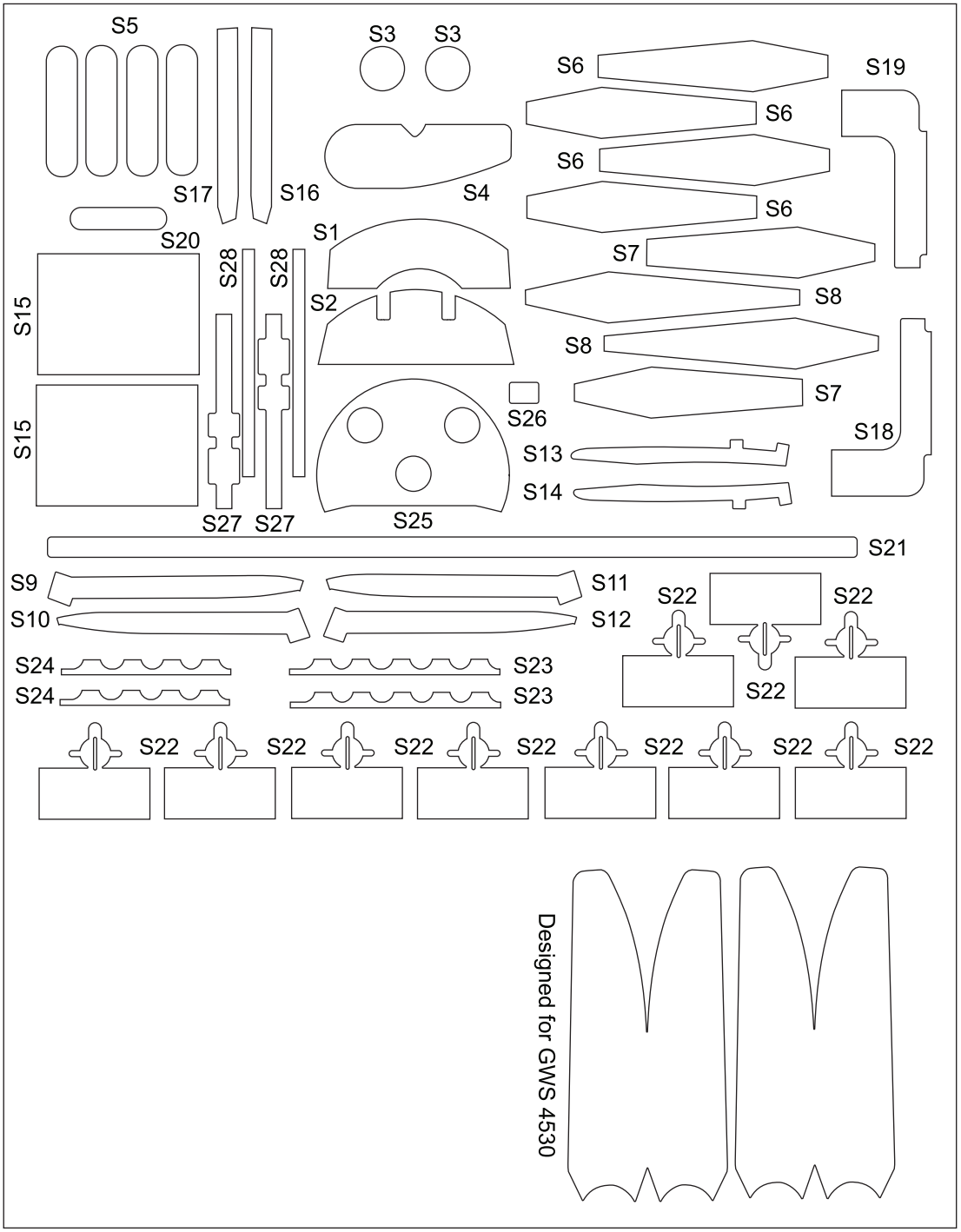
1mm PARTS



0.8mm PLYWOOD



STICKERS

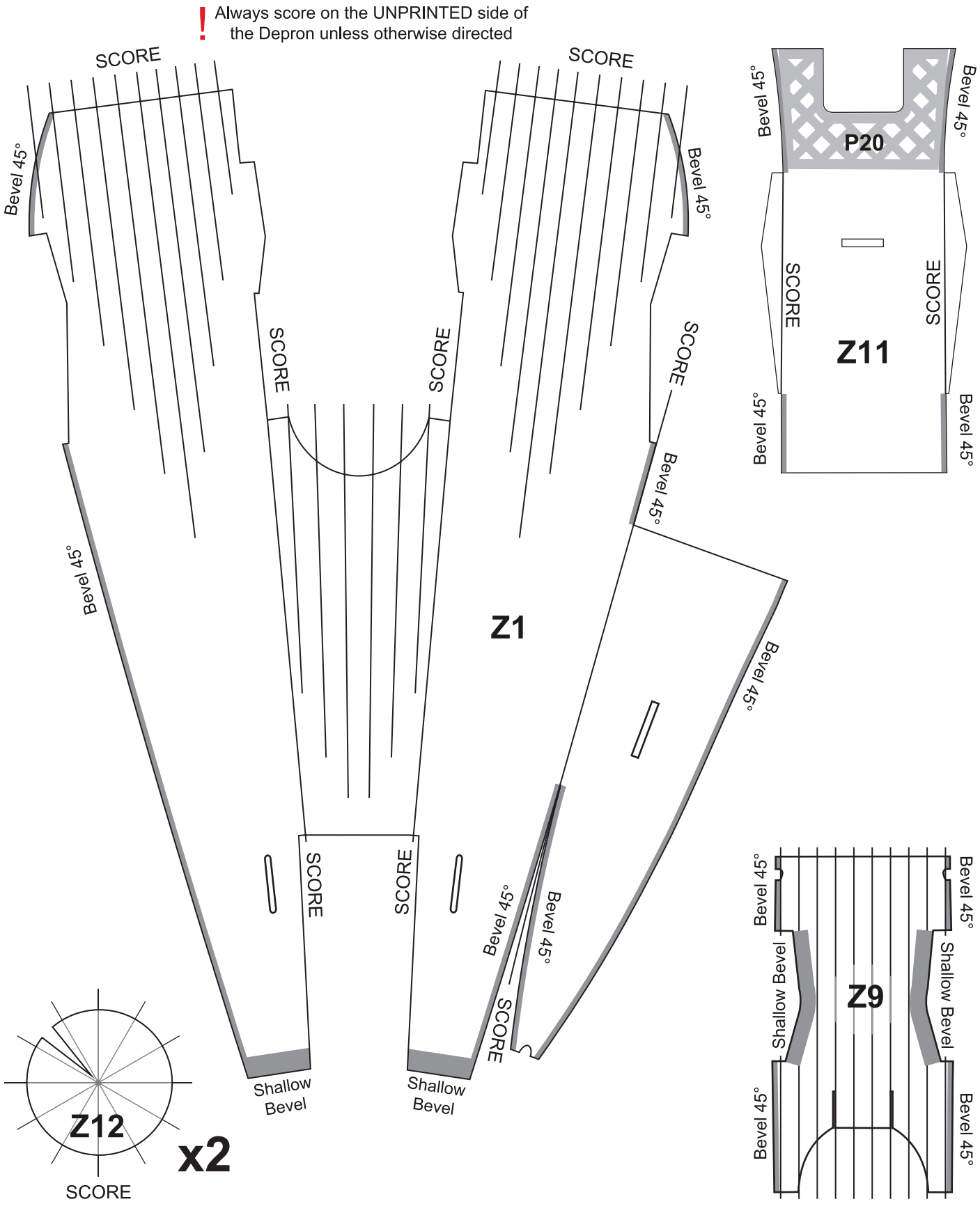


SCORING & BEVELING GUIDE #1

Method for scoring 1mm Foam

Using a straight edge as a guide, score the Foam with the ***reverse*** side of a craft knife or a ball point pen.

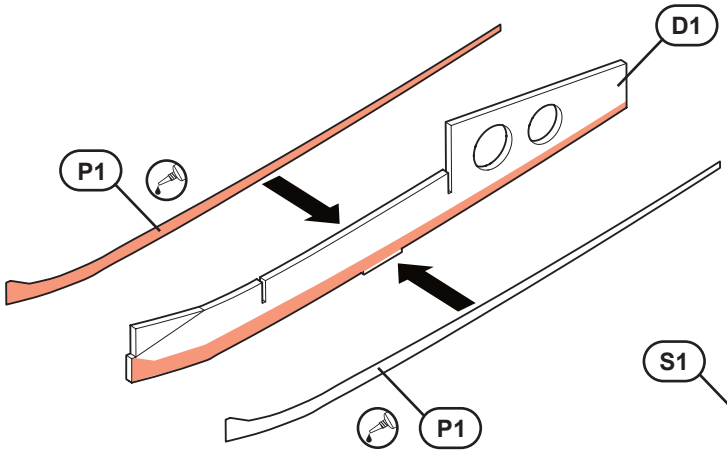
If you haven't used this technique before it is essential that you practice using a scrap or spare piece of 1mm Foam prior to processing any kit components.

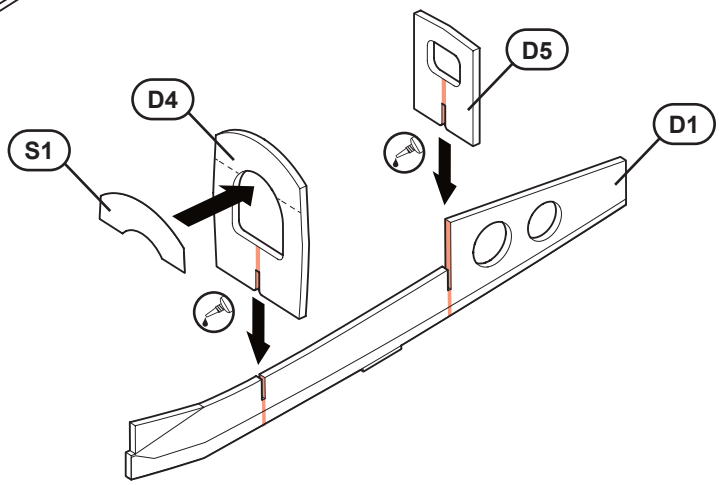


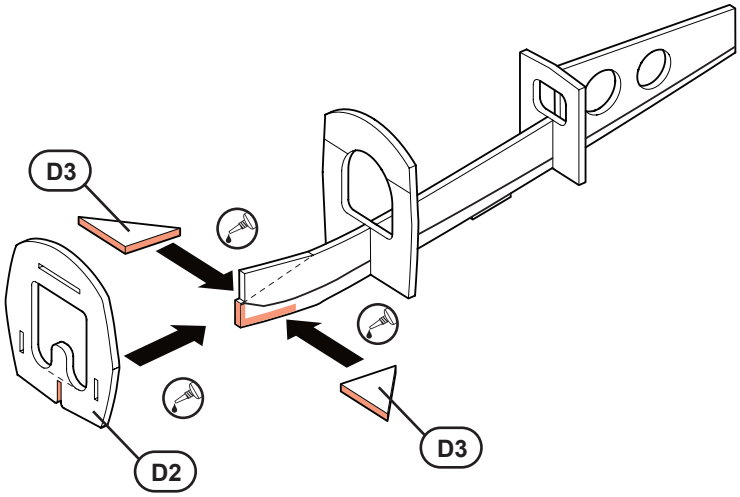
STAGE 1 AIRFRAME

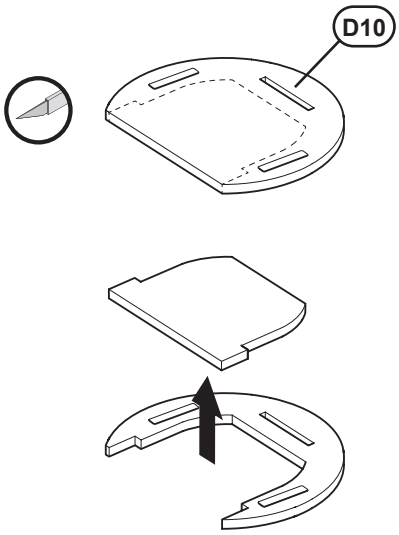
The plastic parts used in the airframe are there to increase the strength of the structure in vital areas whilst still providing some flexibility.

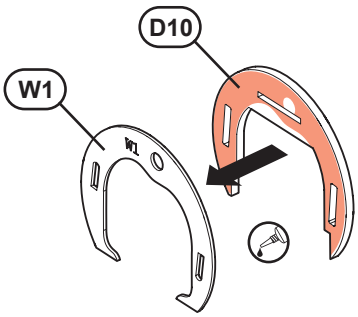
Apply a thin layer of adhesive to the plastic part and attach immediately to allow some wiggle time to get the parts lined up. Set aside to cure.

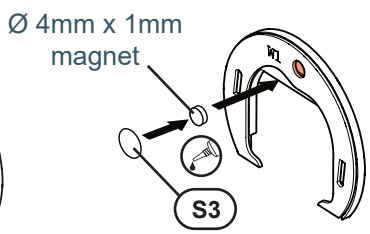


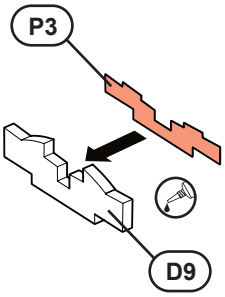


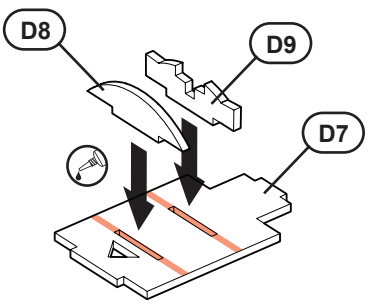




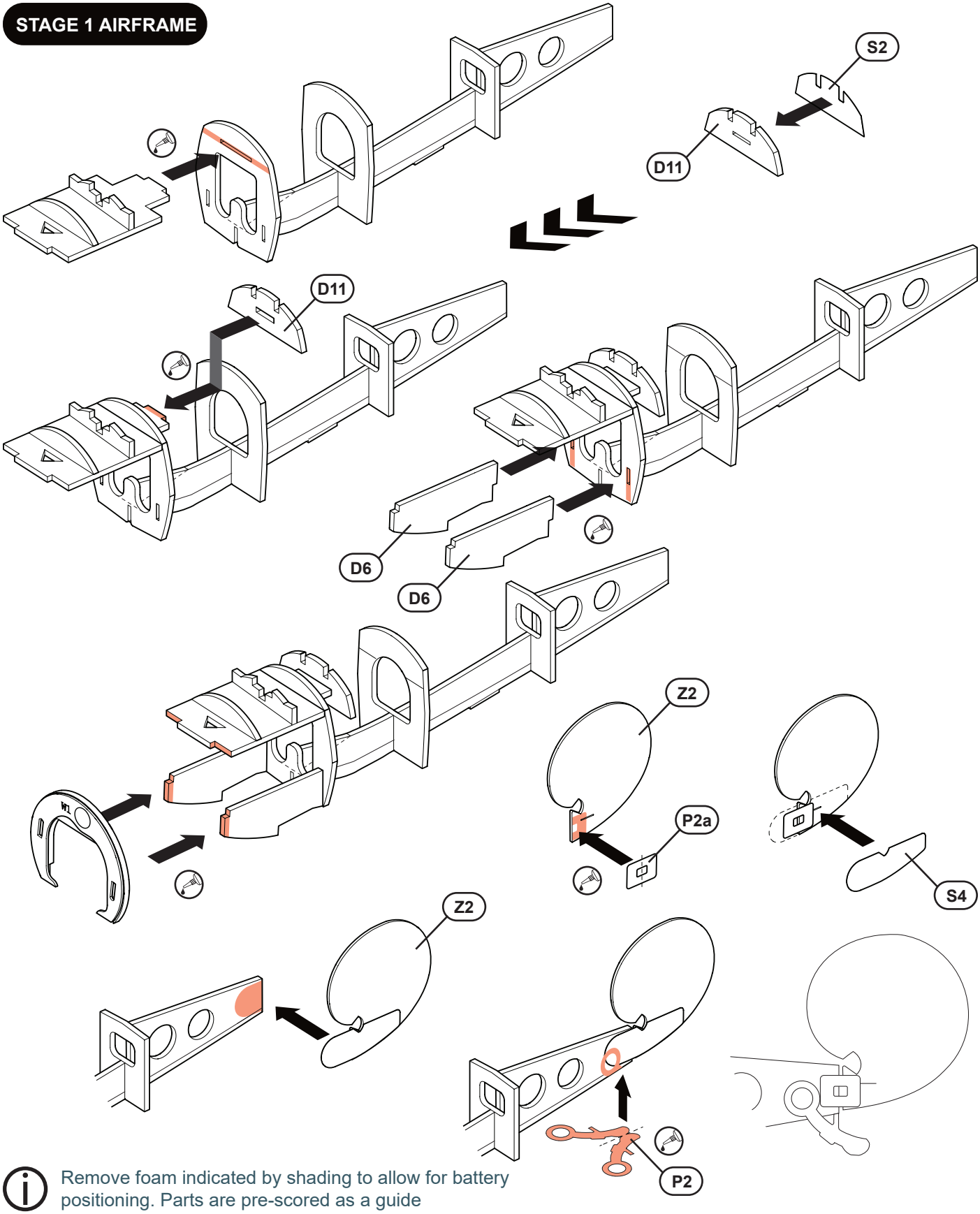




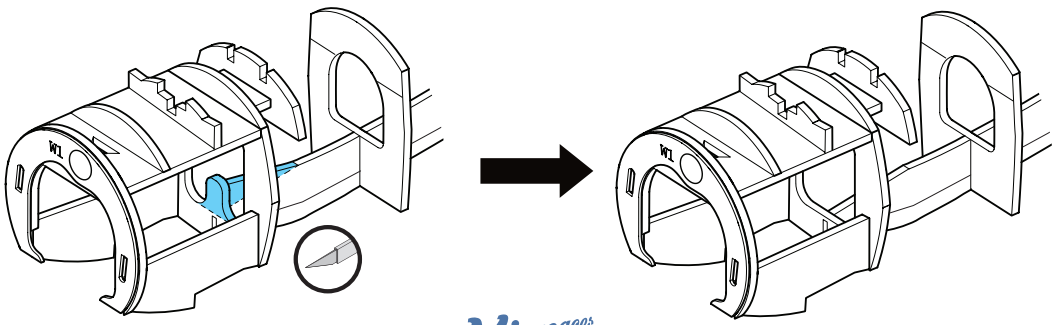




STAGE 1 AIRFRAME



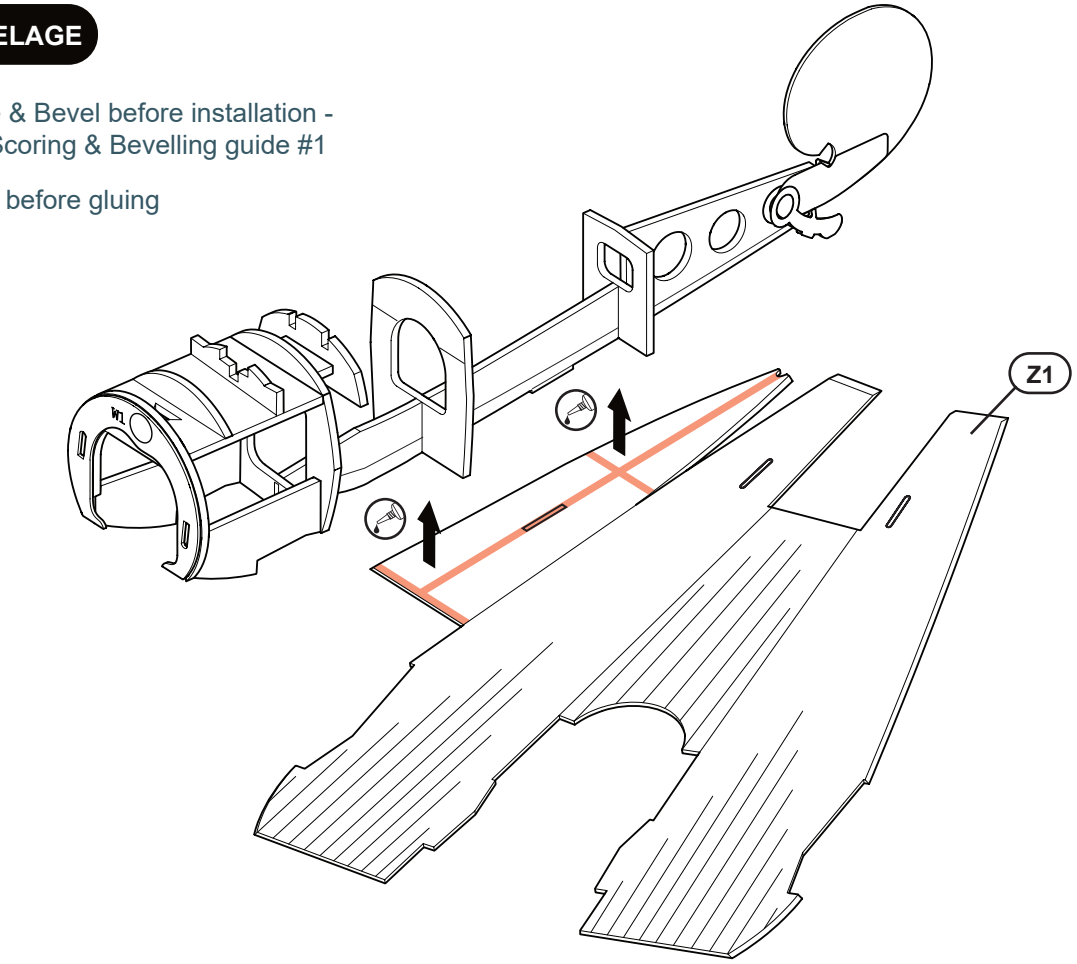
Remove foam indicated by shading to allow for battery positioning. Parts are pre-scored as a guide

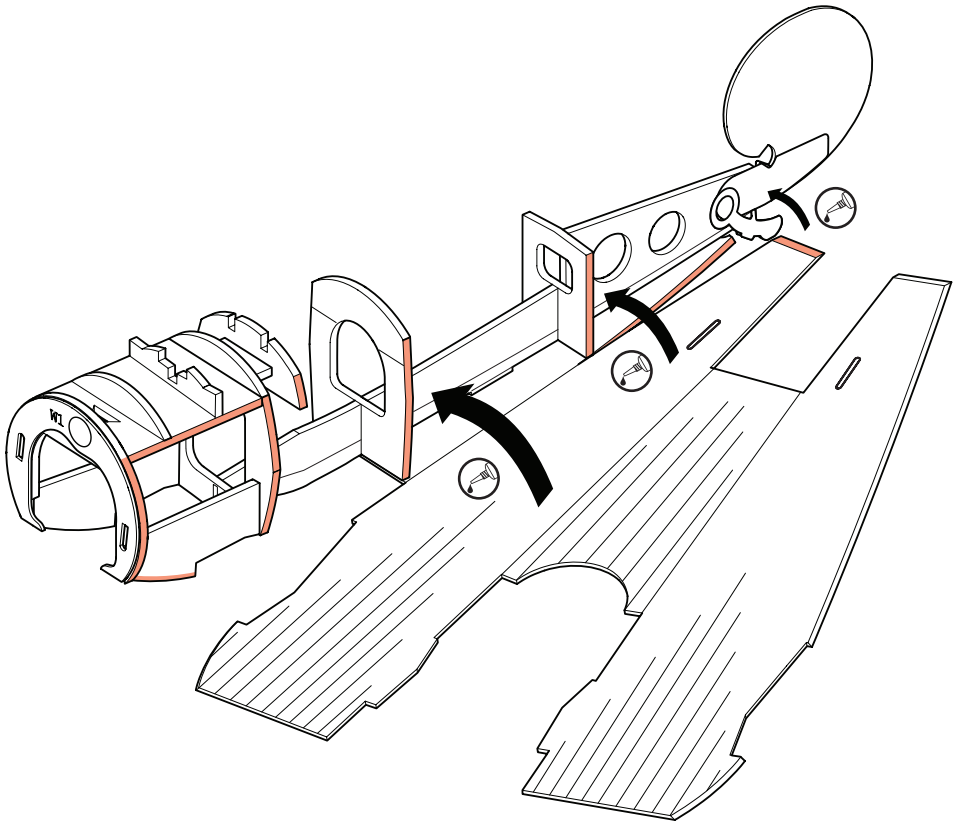


STAGE 2 FUSELAGE

Score & Bevel before installation -
See Scoring & Bevelling guide #1

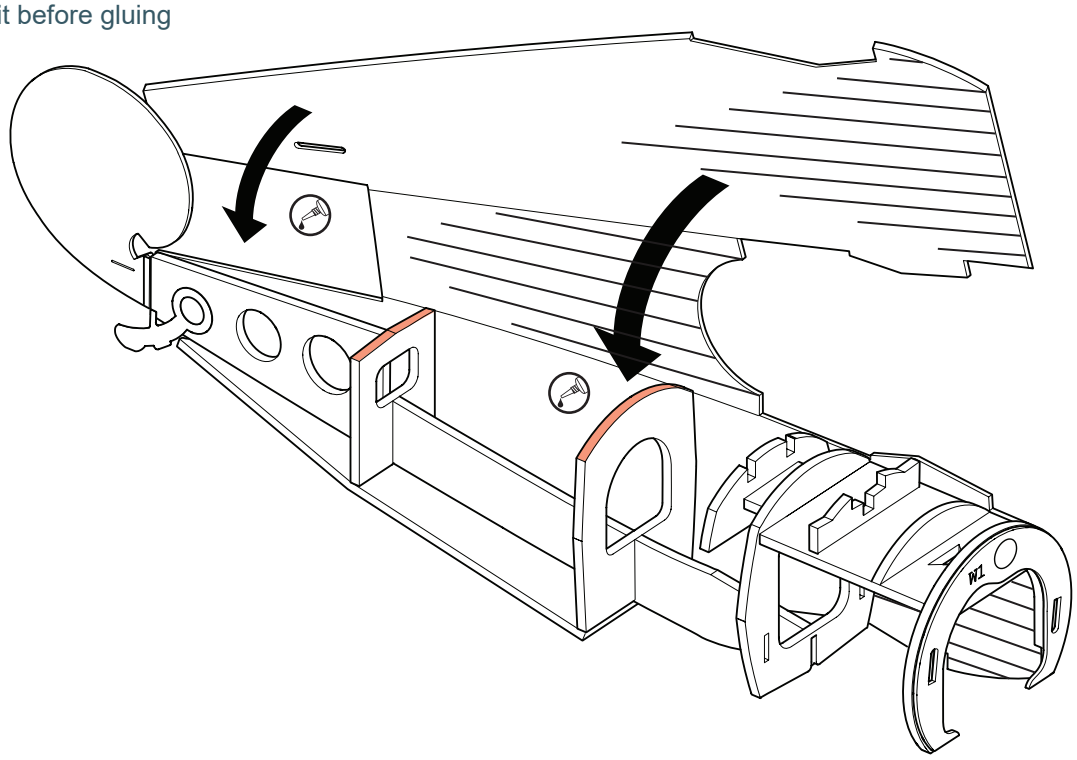
Dry fit before gluing

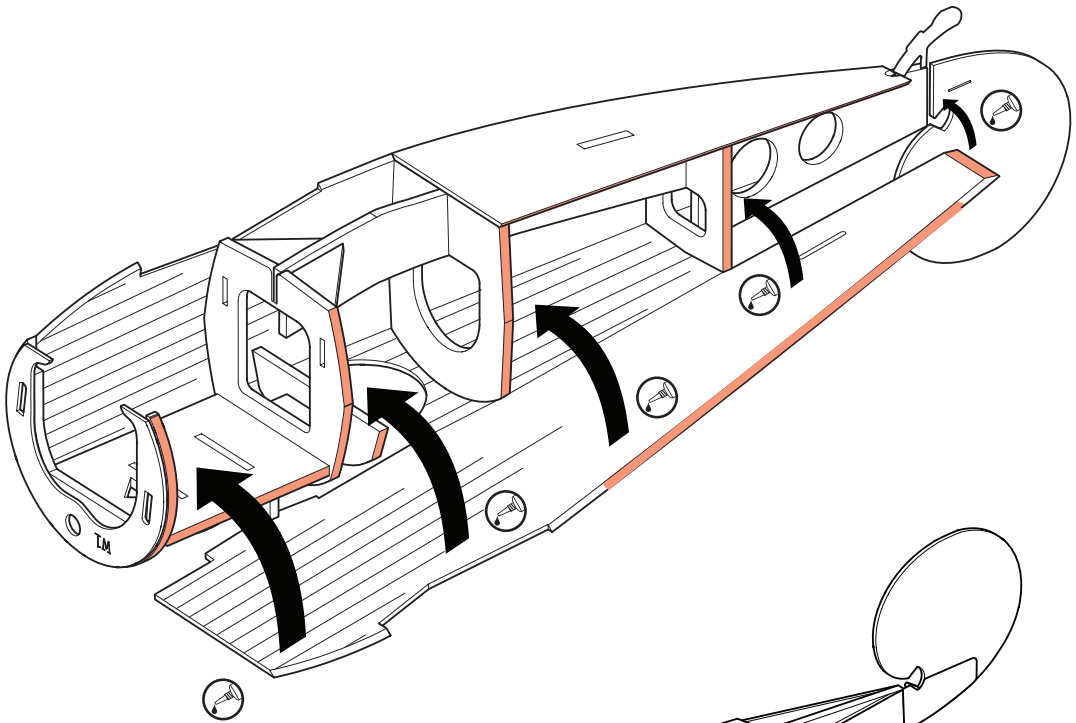


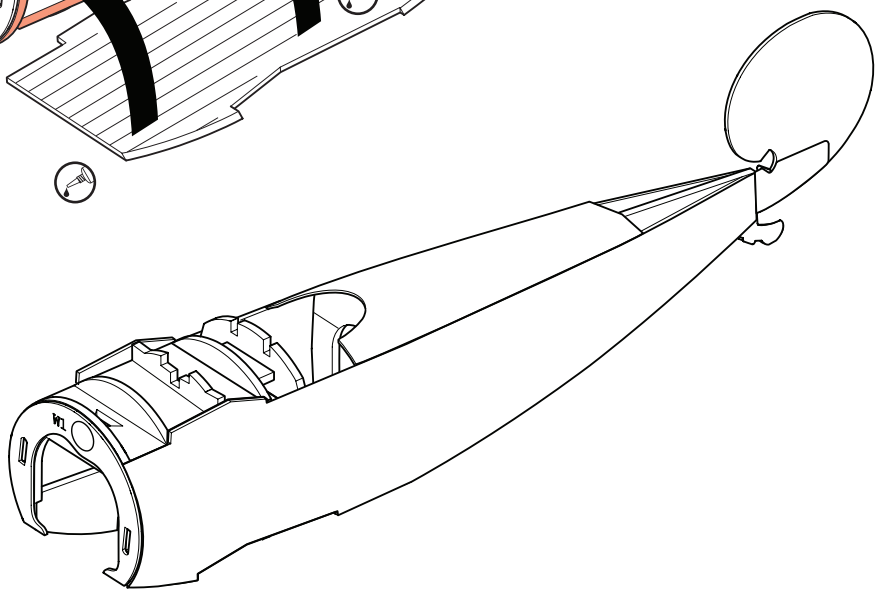


STAGE 2 FUSELAGE

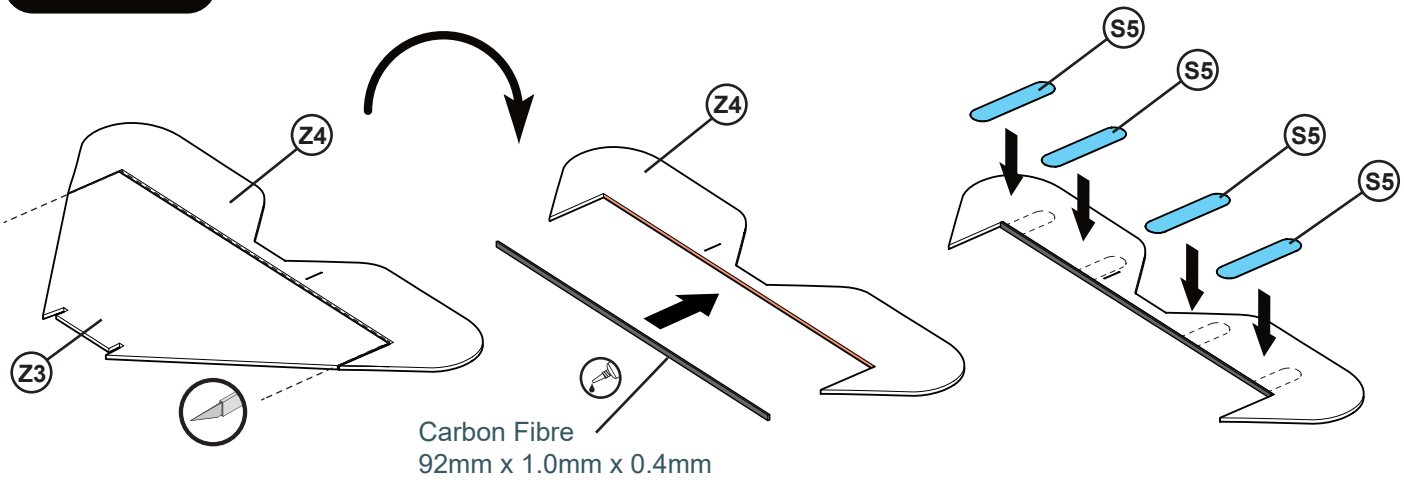
⚠ Dry fit before gluing



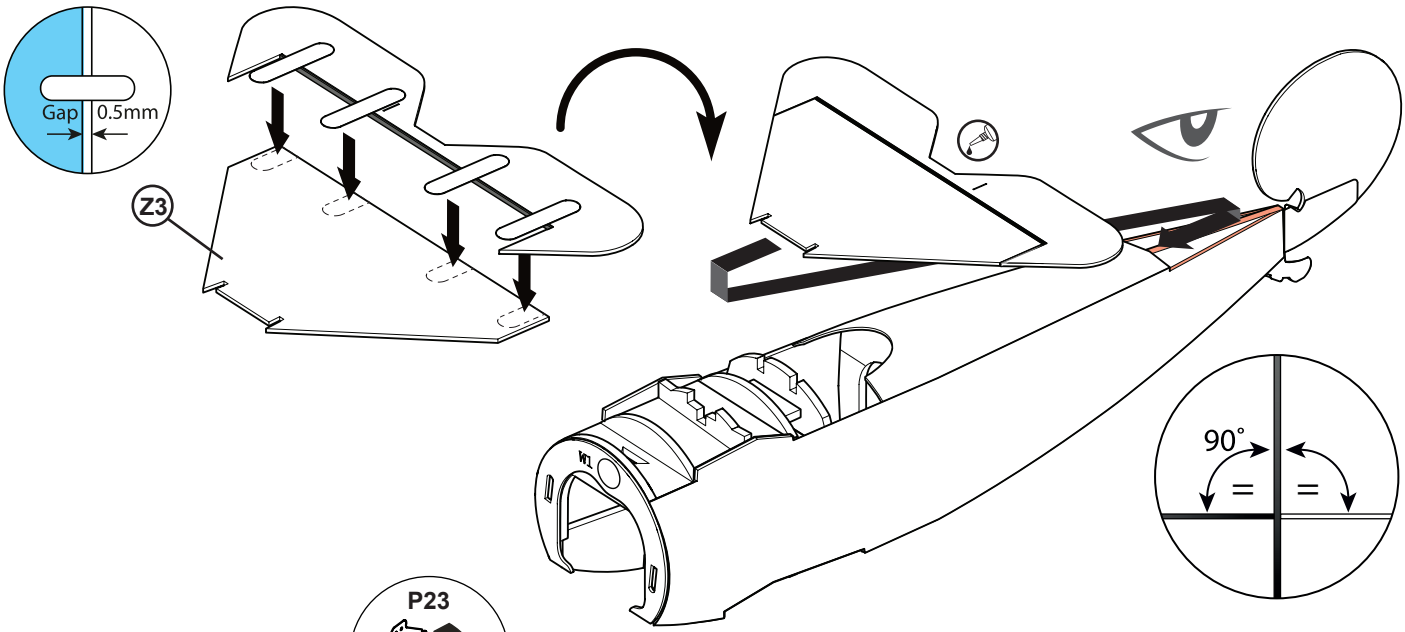


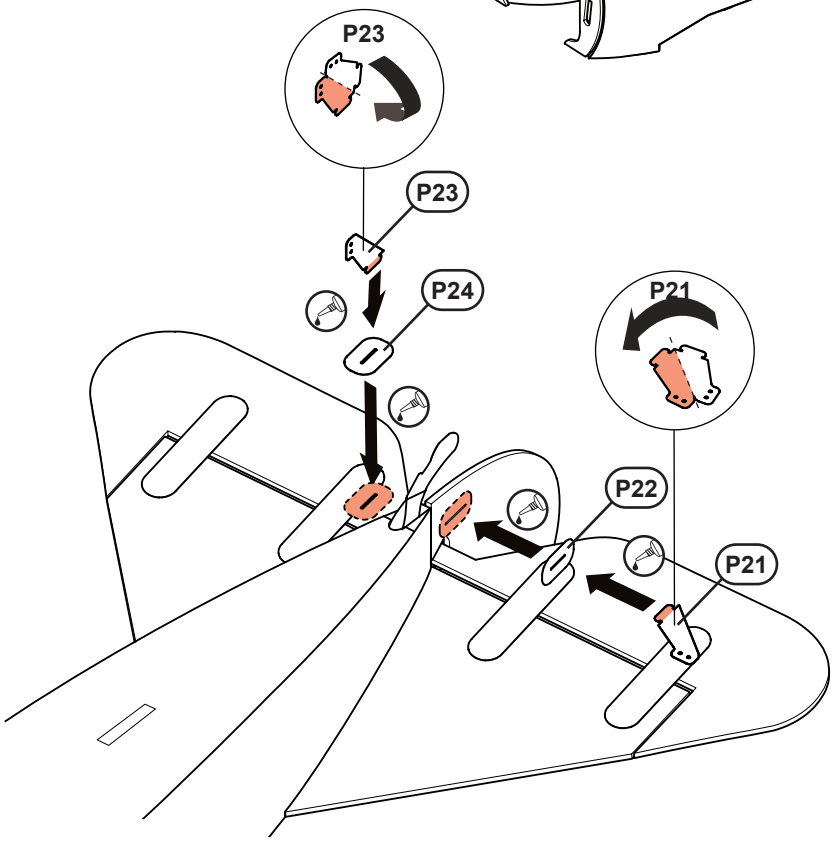


STAGE 3 TAIL

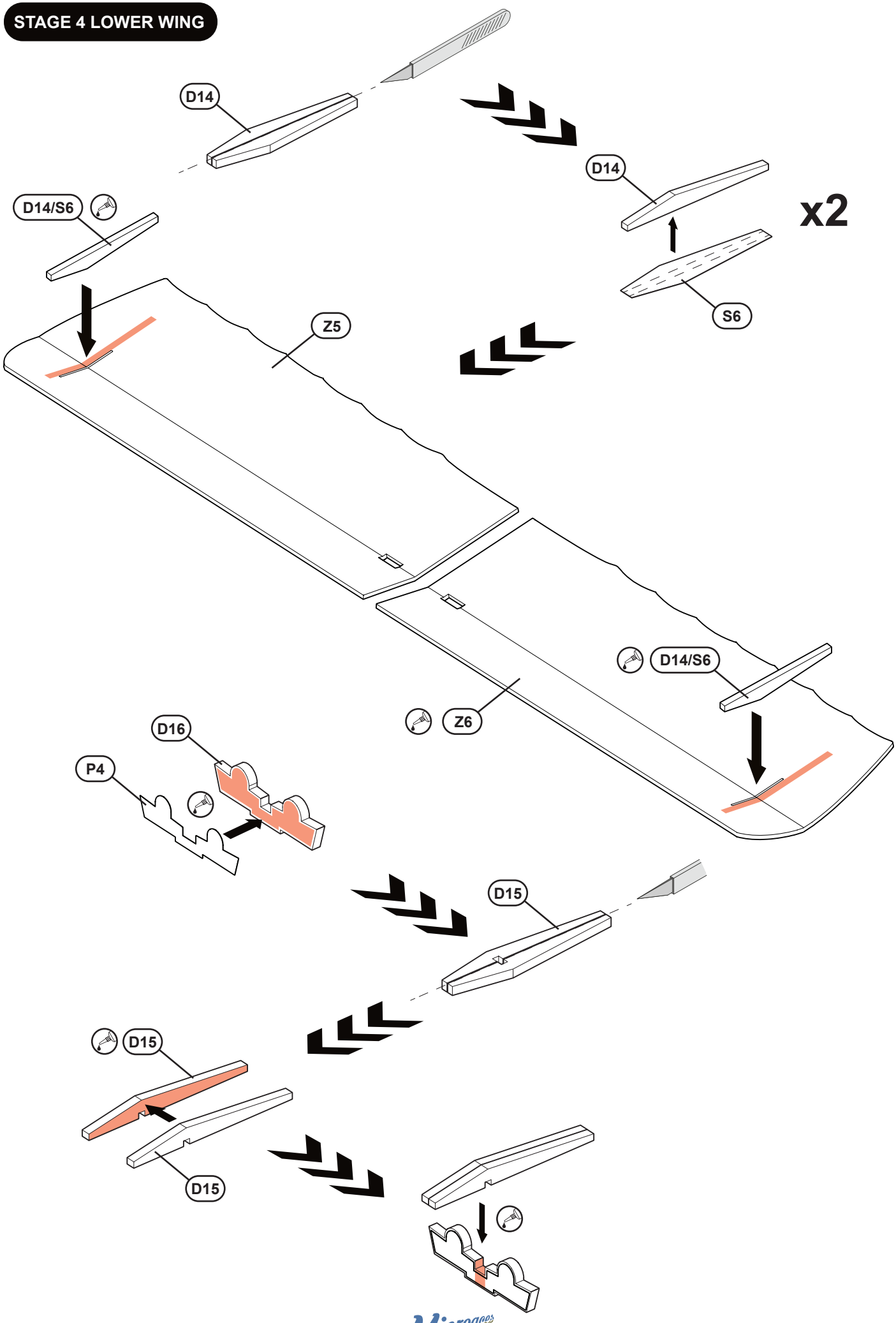


Carbon Fibre
92mm x 1.0mm x 0.4mm

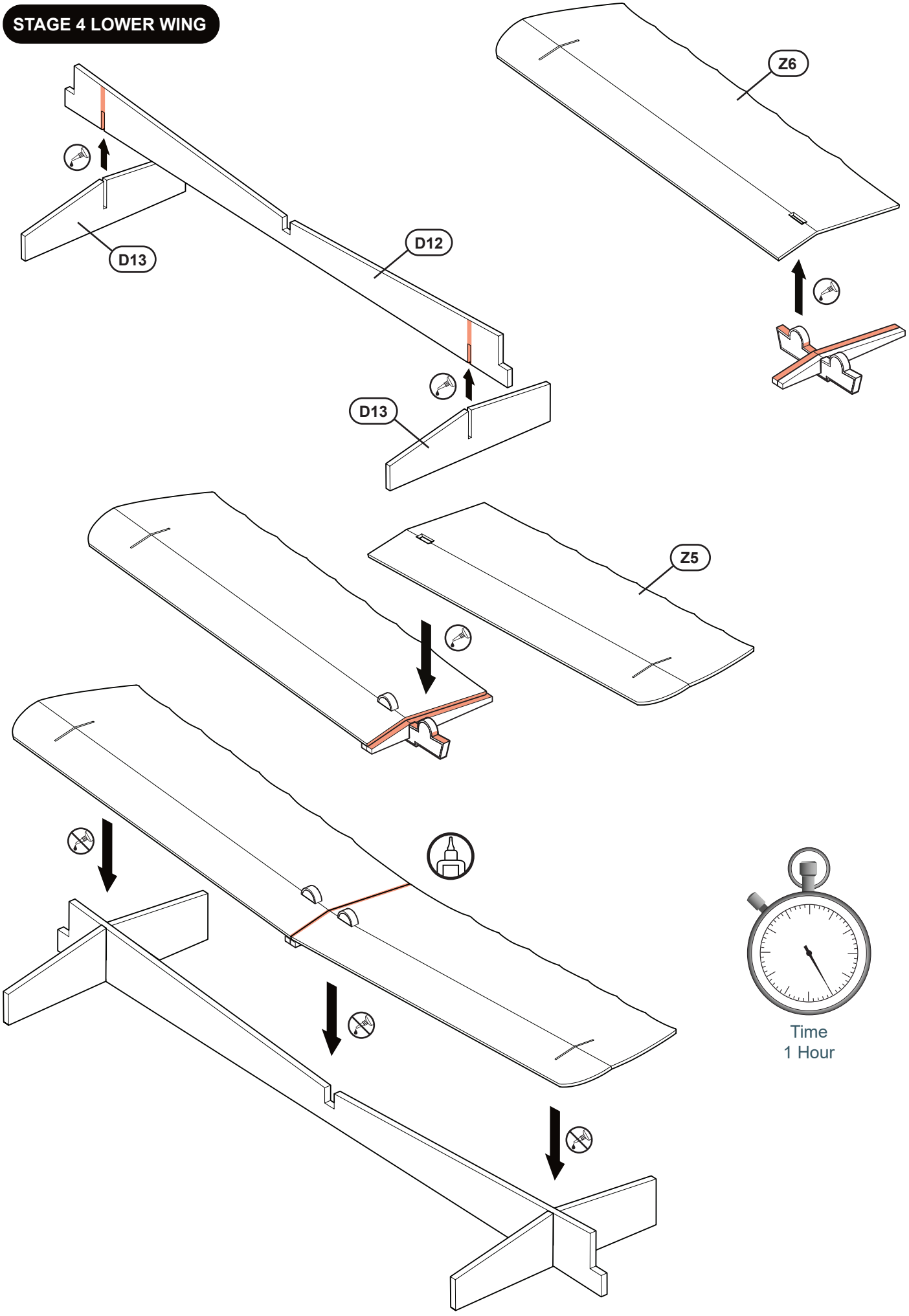




STAGE 4 LOWER WING

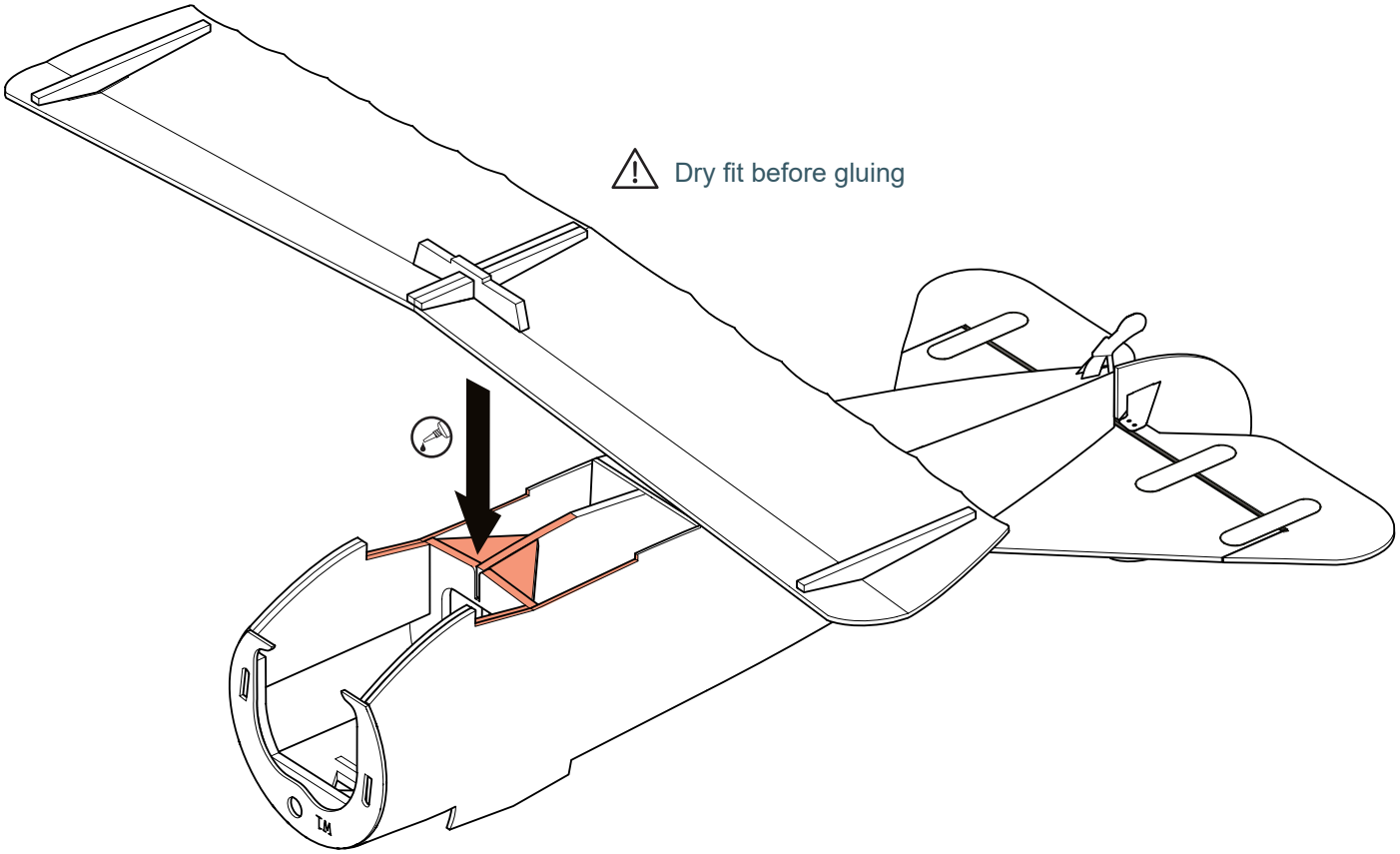


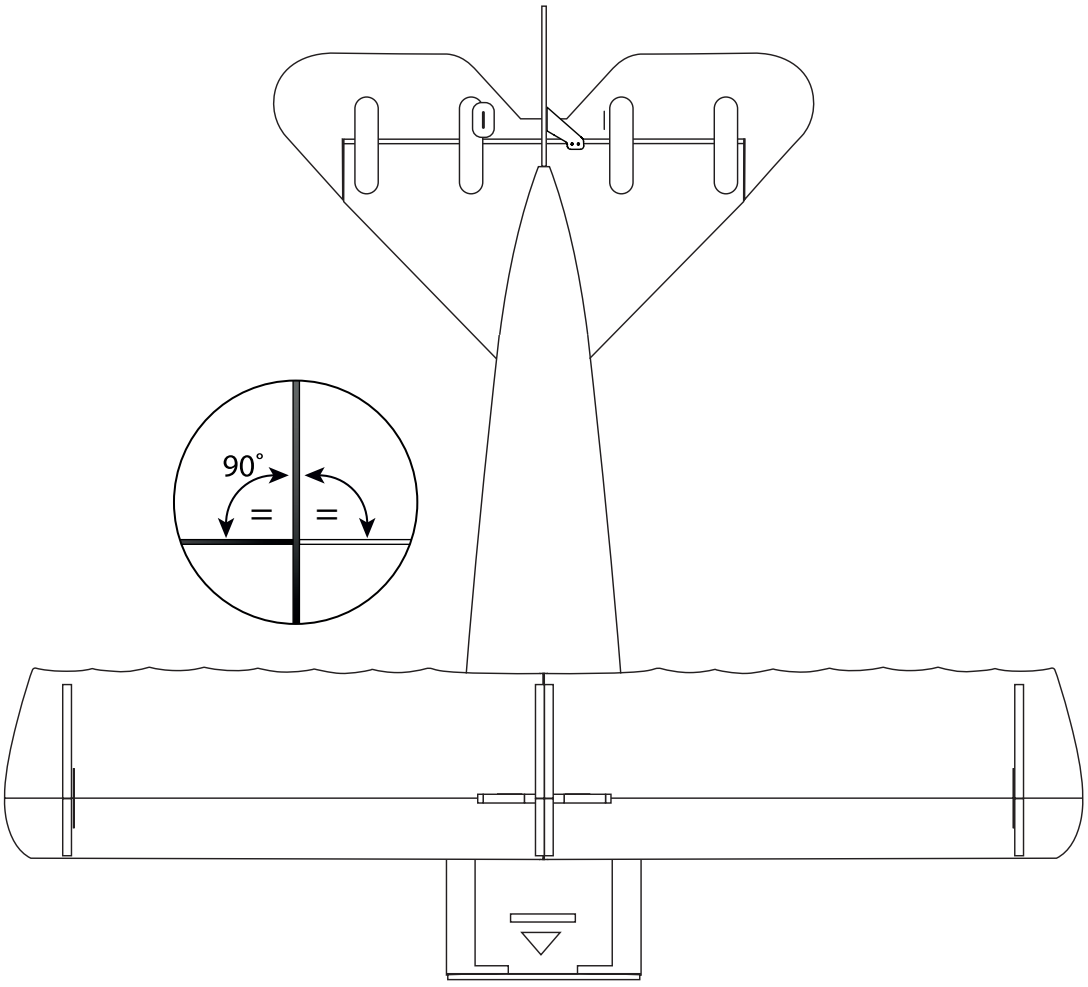
STAGE 4 LOWER WING



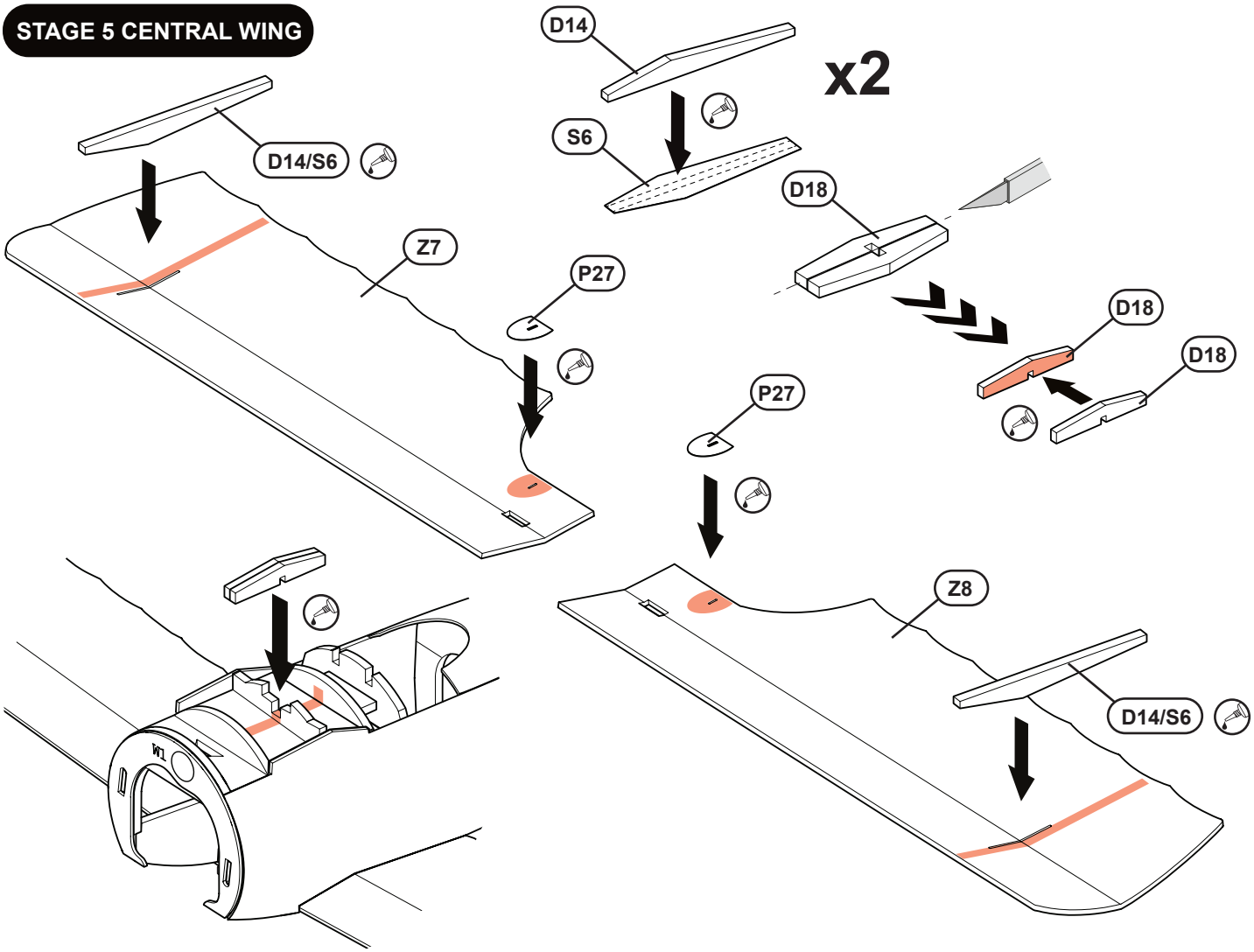
Time
1 Hour

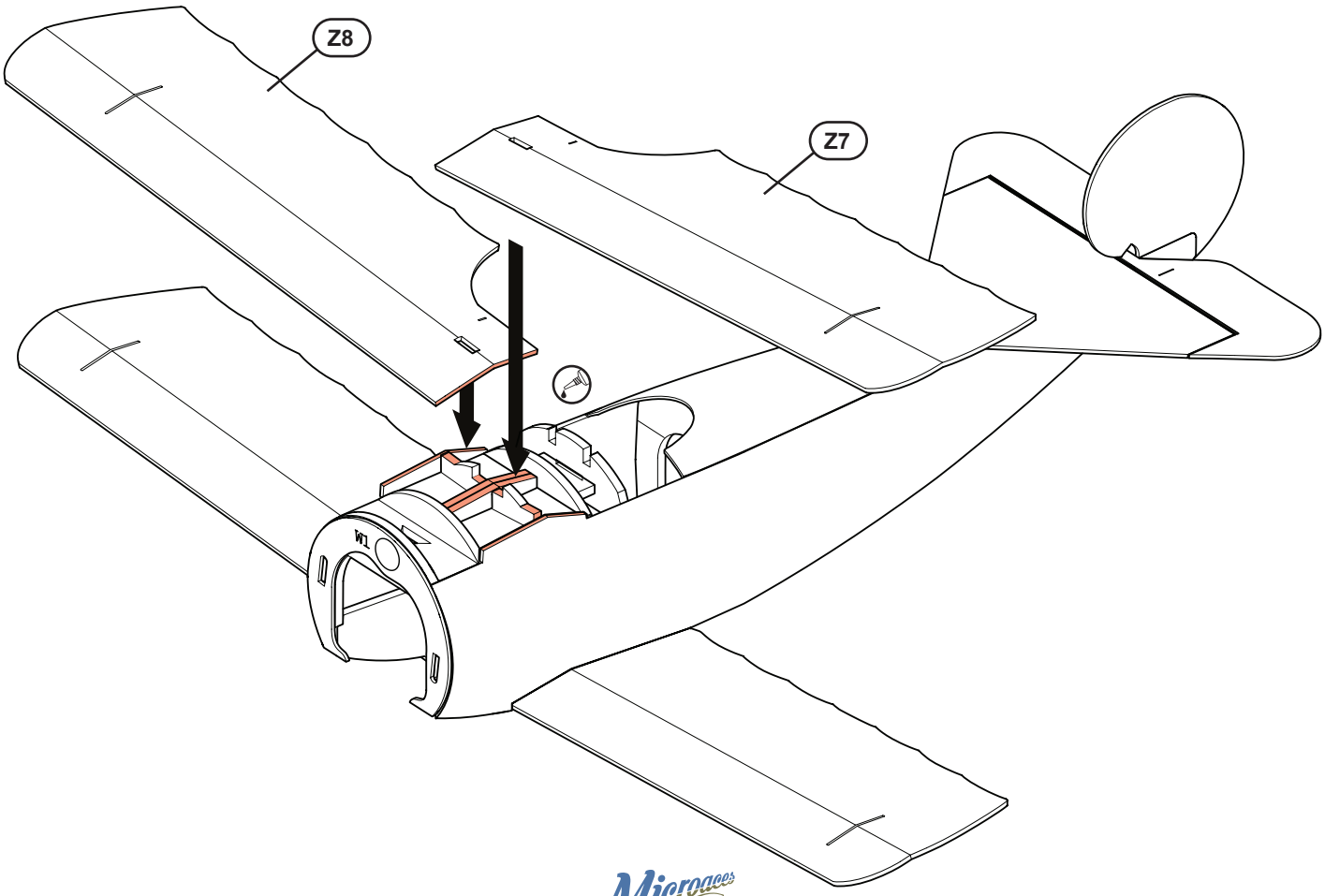
STAGE 4 LOWER WING



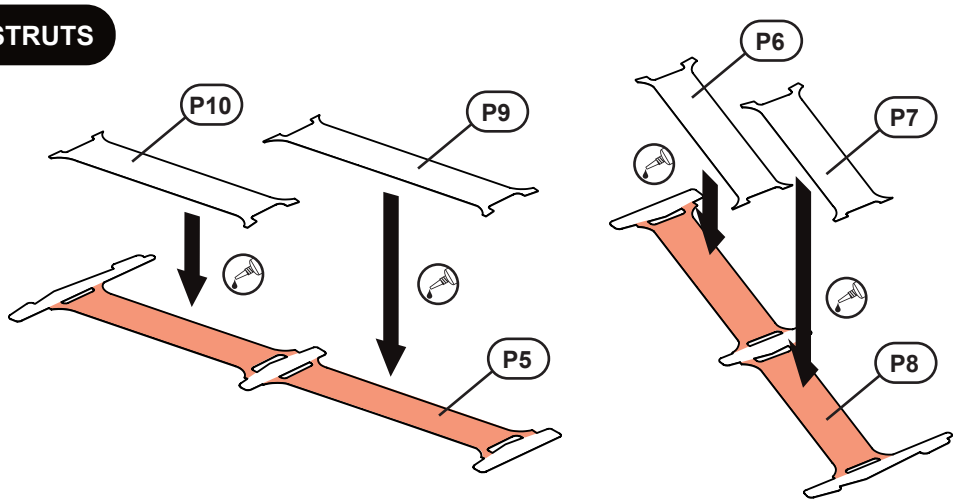


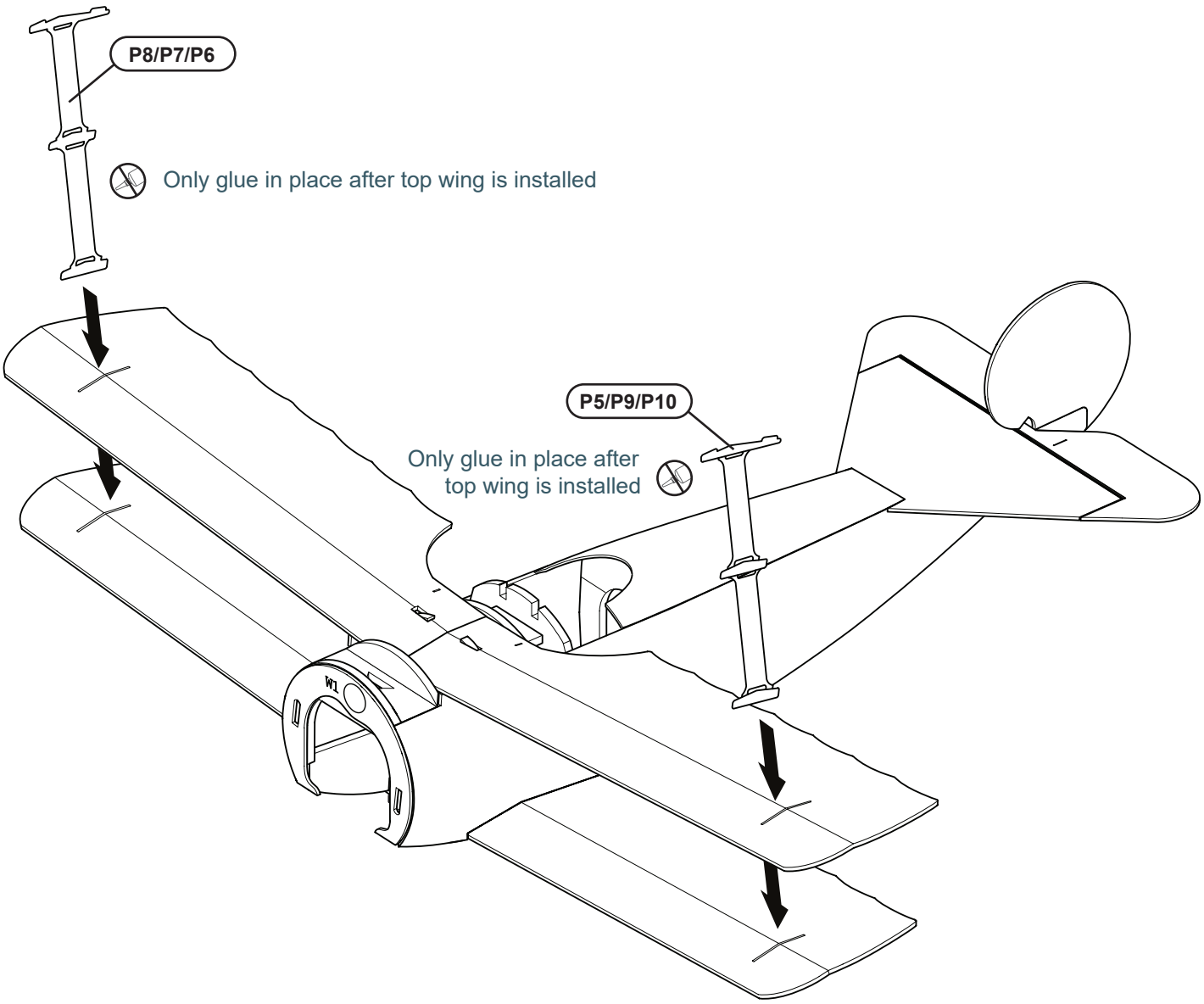
STAGE 5 CENTRAL WING



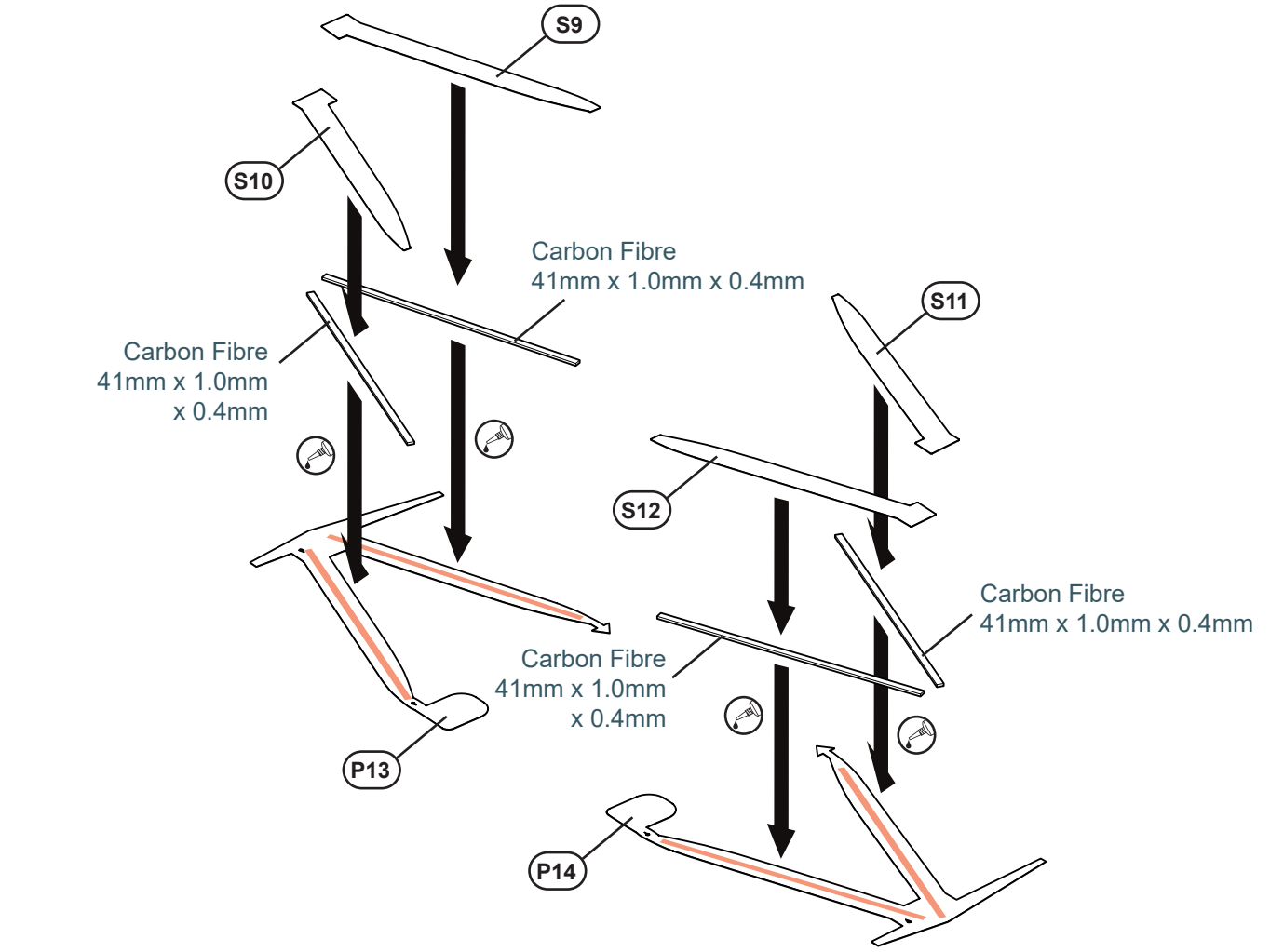


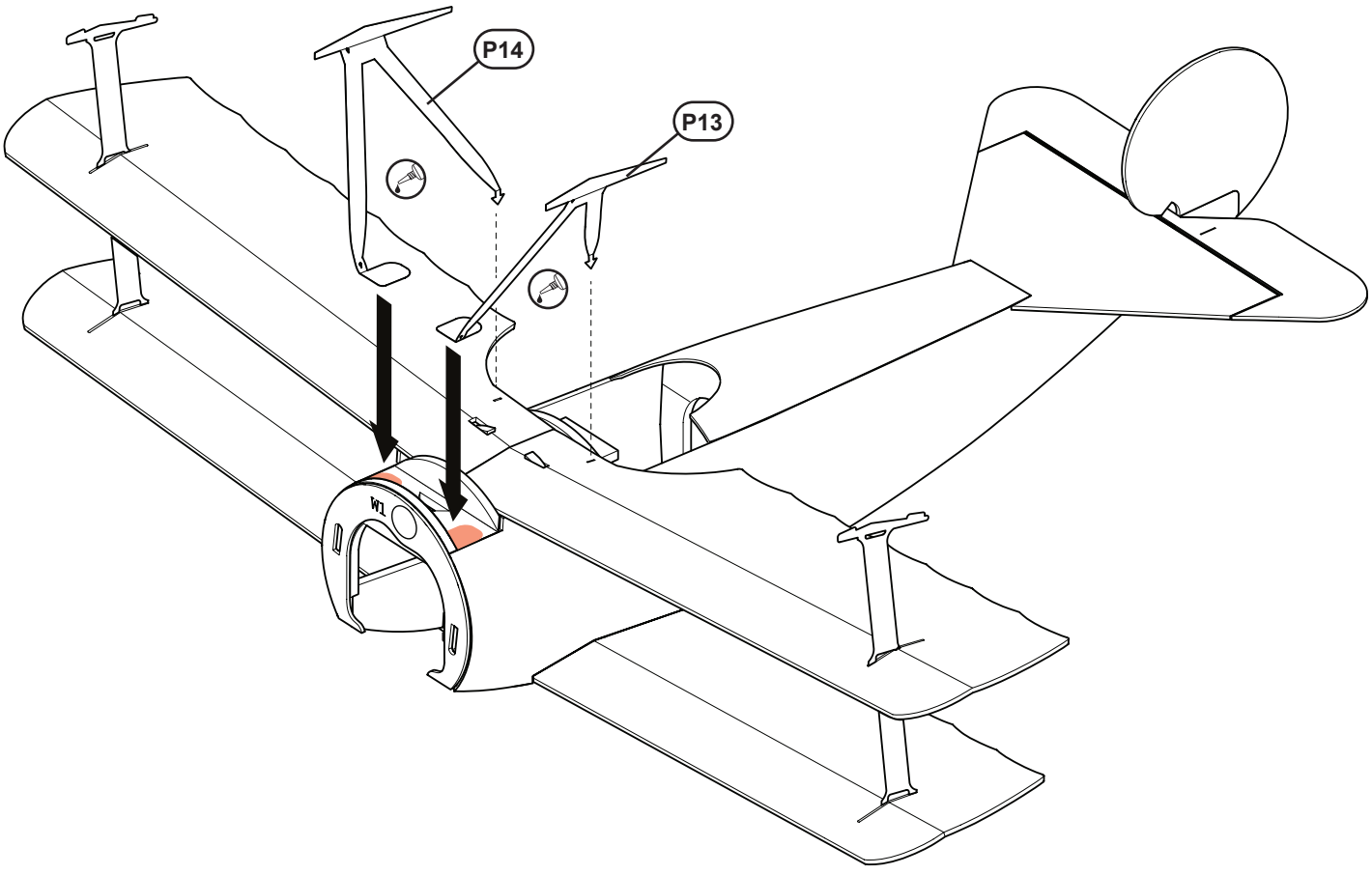
STAGE 6 STRUTS



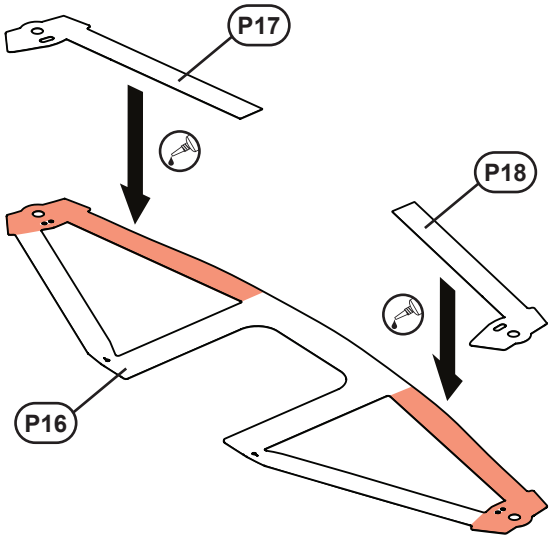


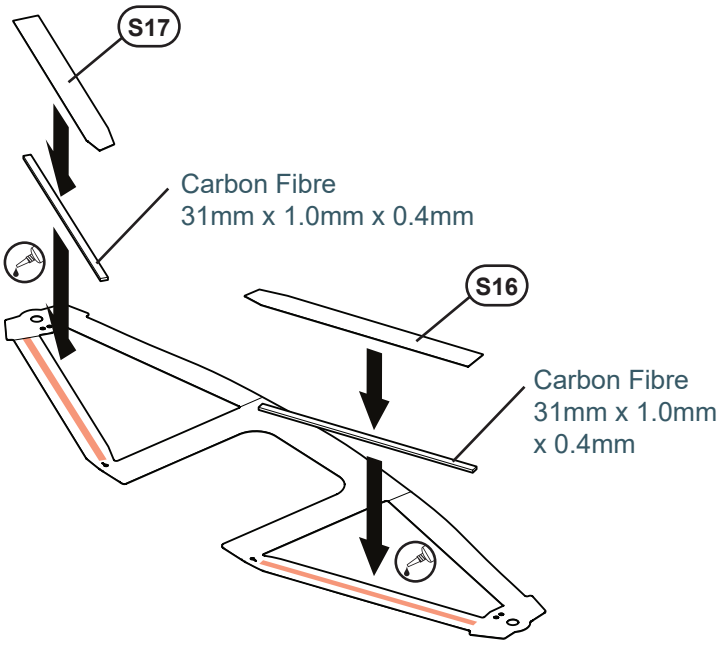
STAGE 6 STRUTS

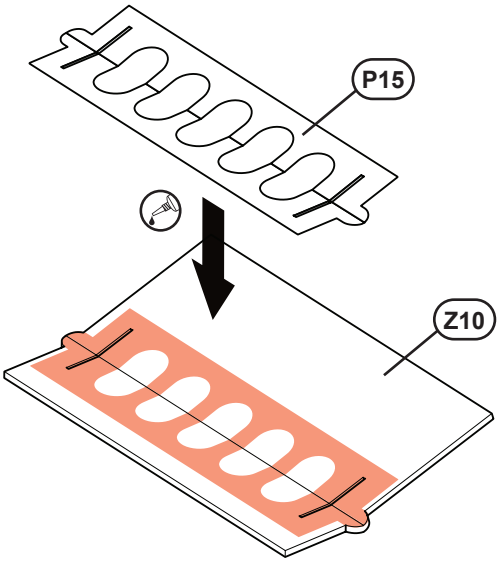


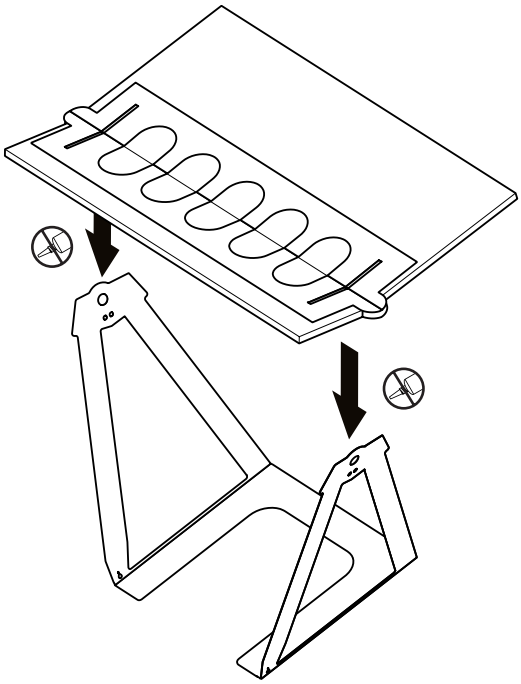


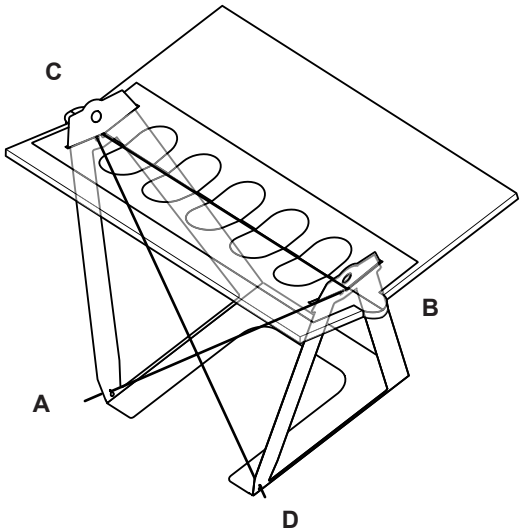
STAGE 7 UNDERCARRIAGE

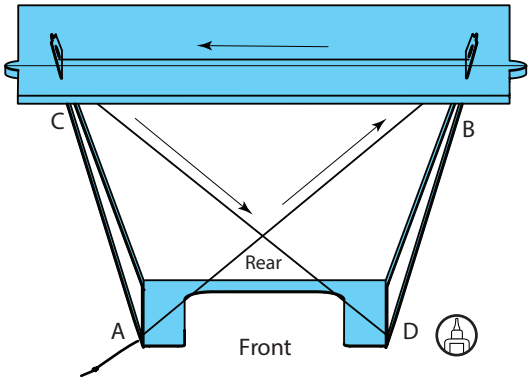








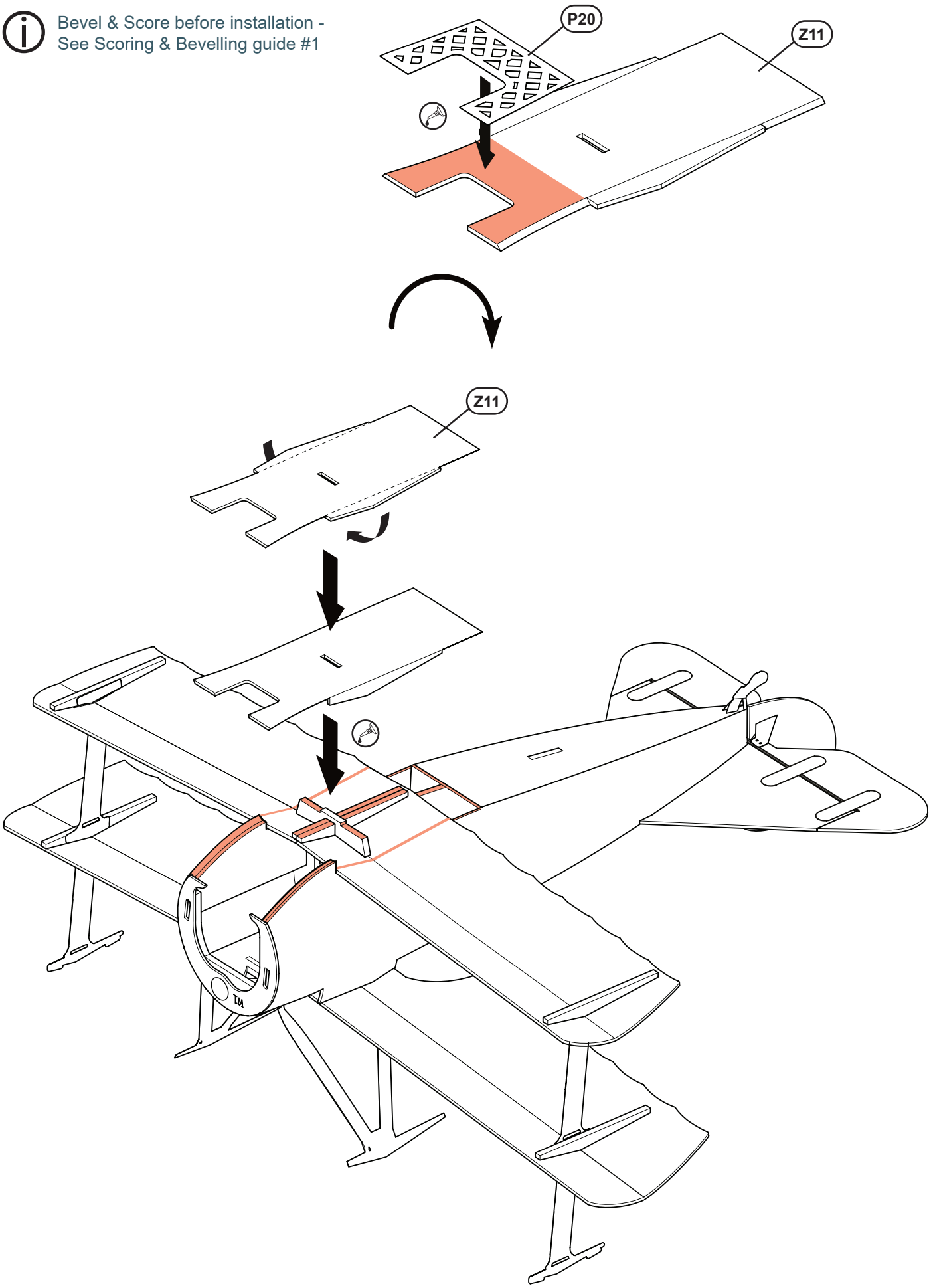




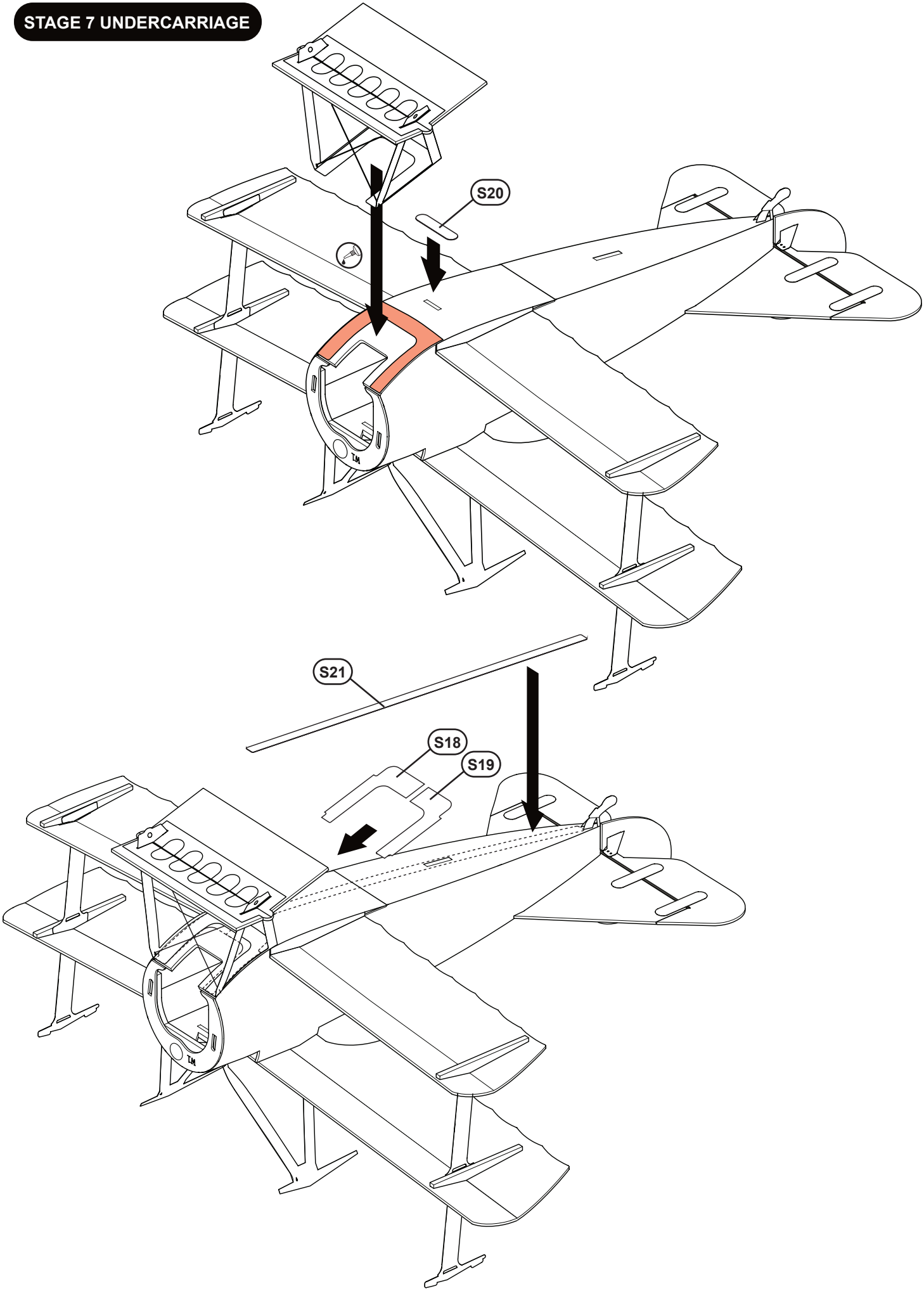
Tighten rigging and secure at position D.
Remove excess with sharp knife.

STAGE 7 UNDERCARRIAGE

Bevel & Score before installation -
See Scoring & Bevelling guide #1

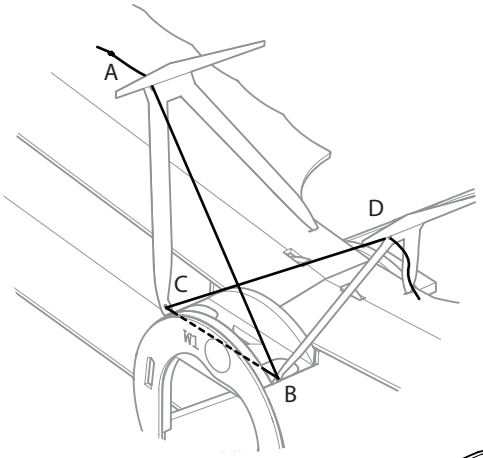


STAGE 7 UNDERCARRIAGE

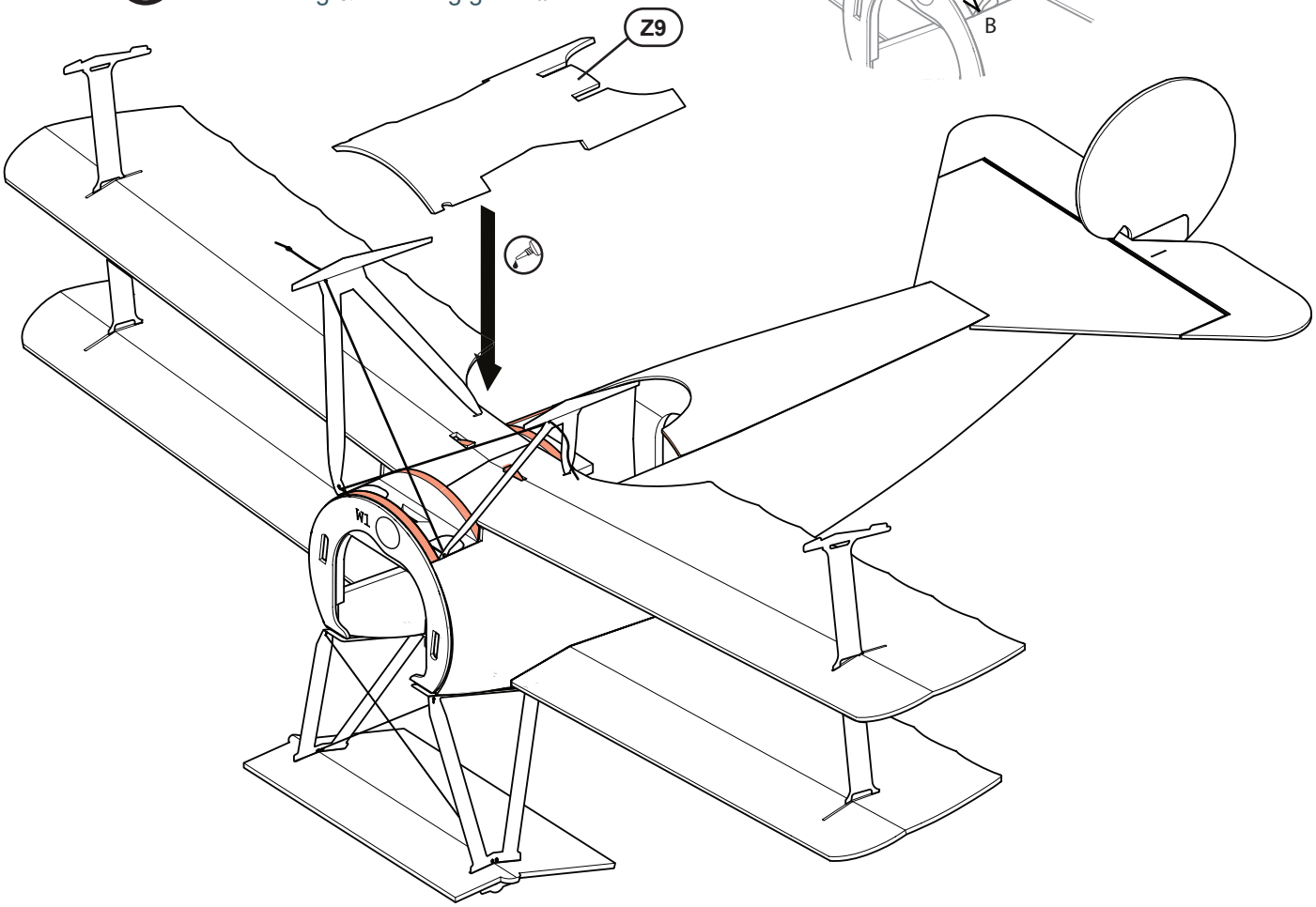


STAGE 8 TOP DECK

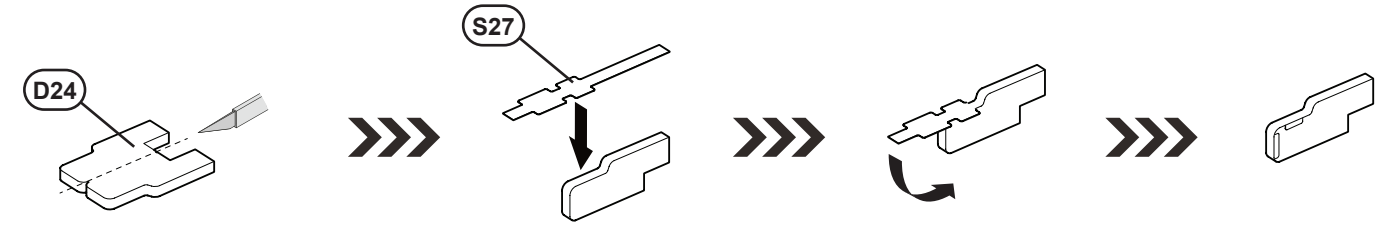
Only secure rigging once top wing is installed

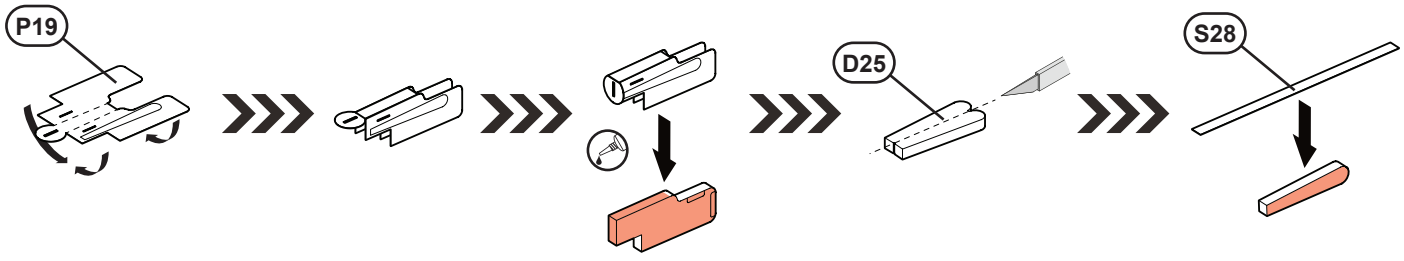


Bevel & Score before installation - See Scoring & Bevelling guide #1

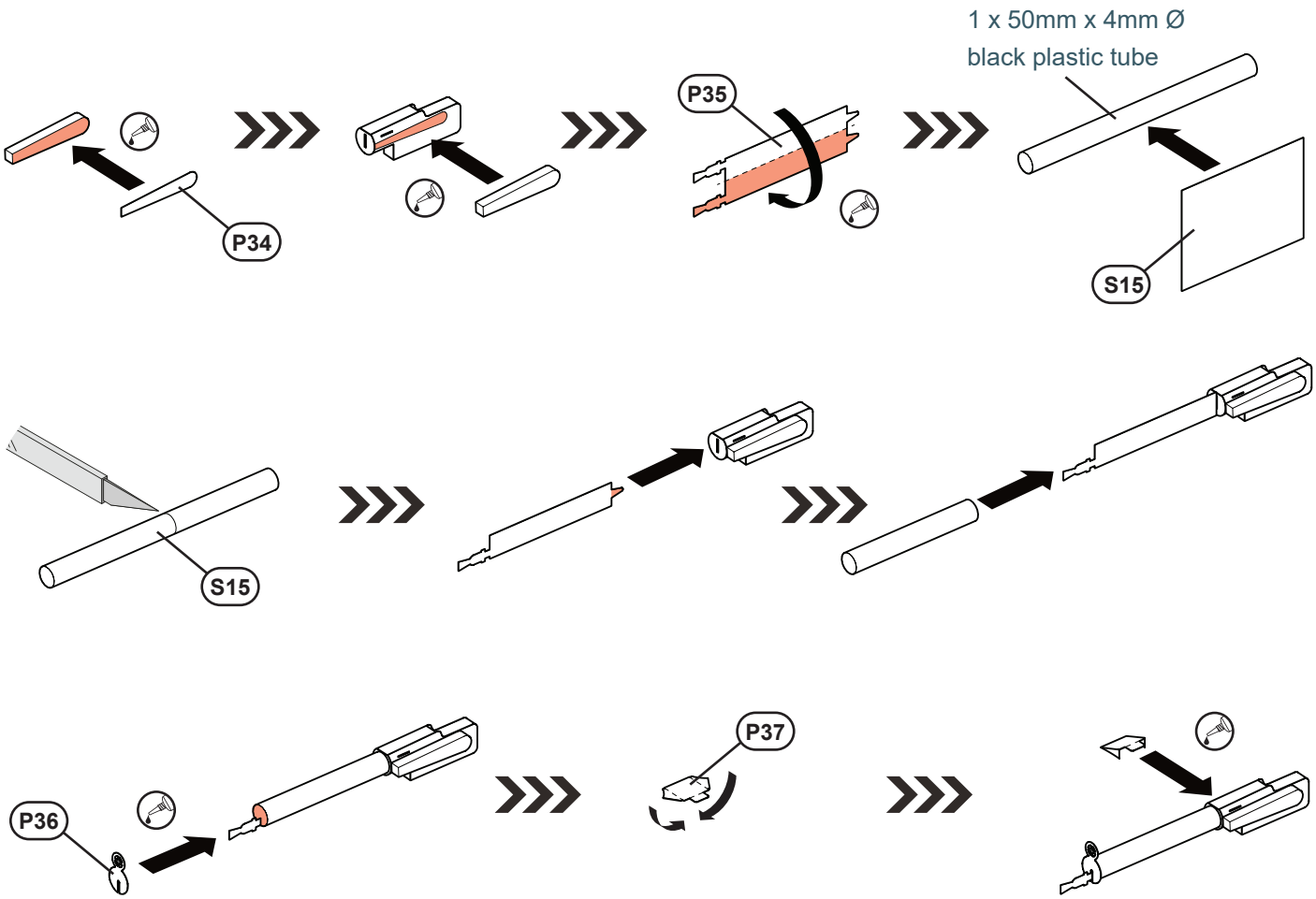


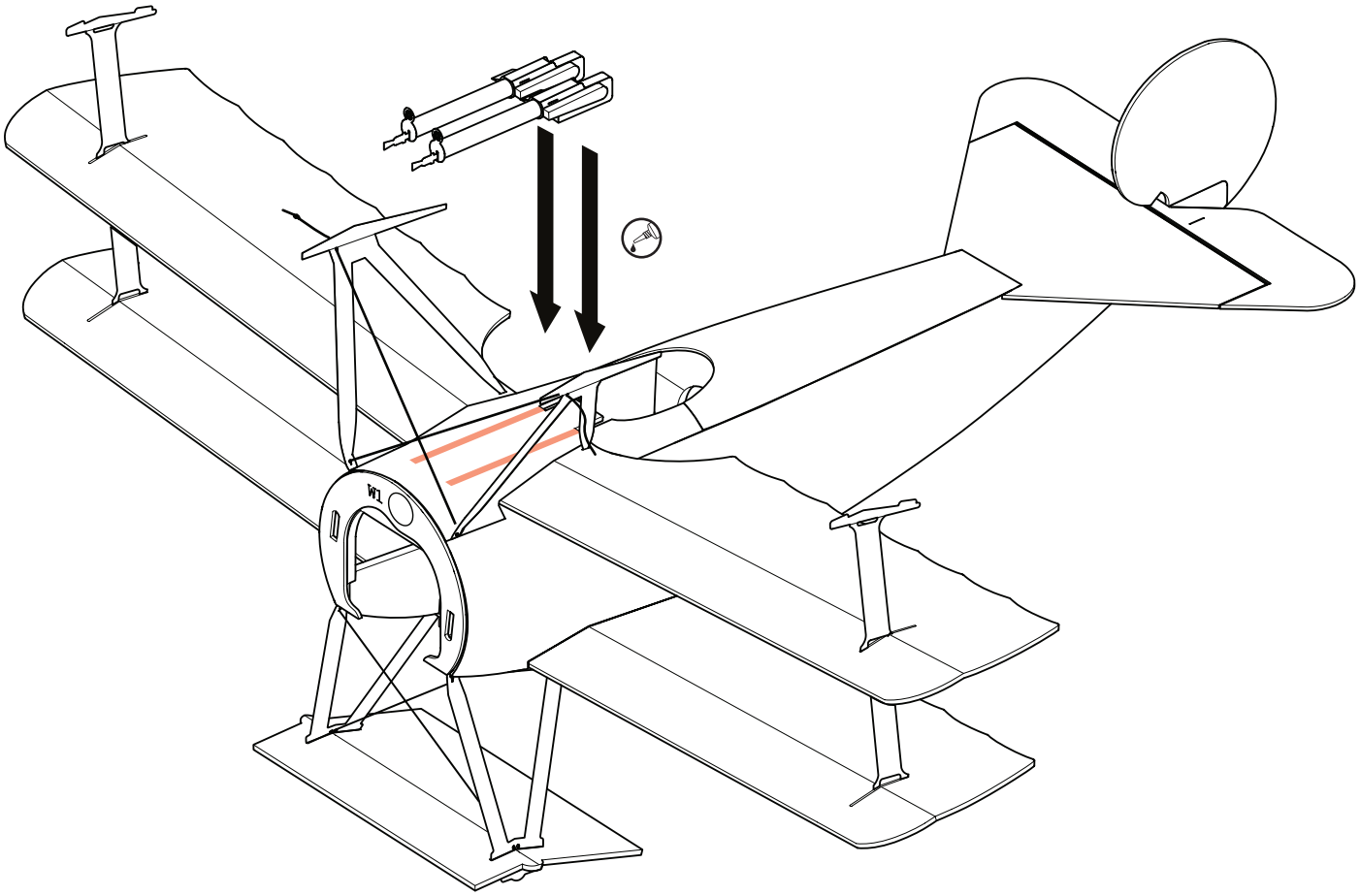
STAGE 9 GUNS X2



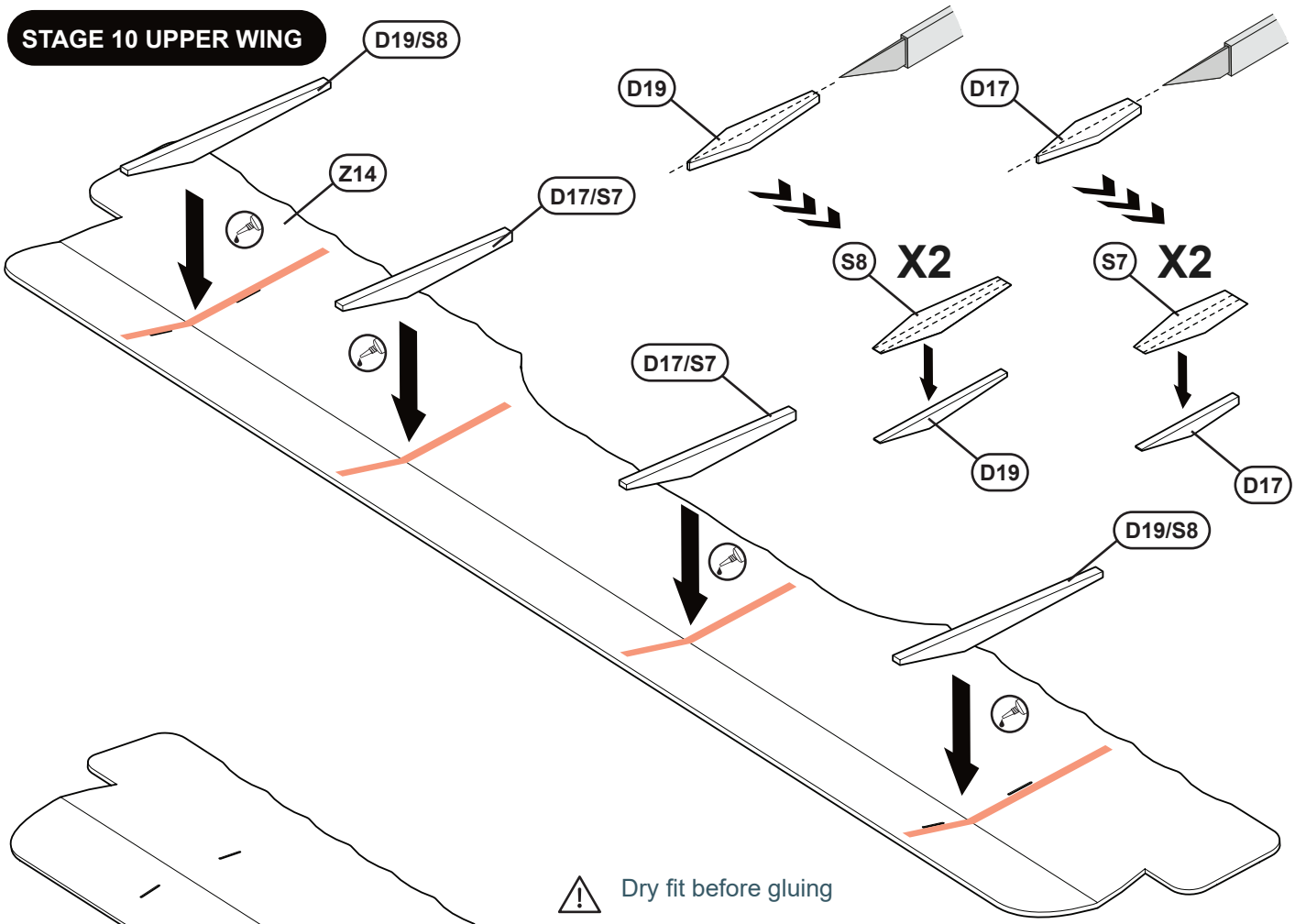


STAGE 9 GUNS



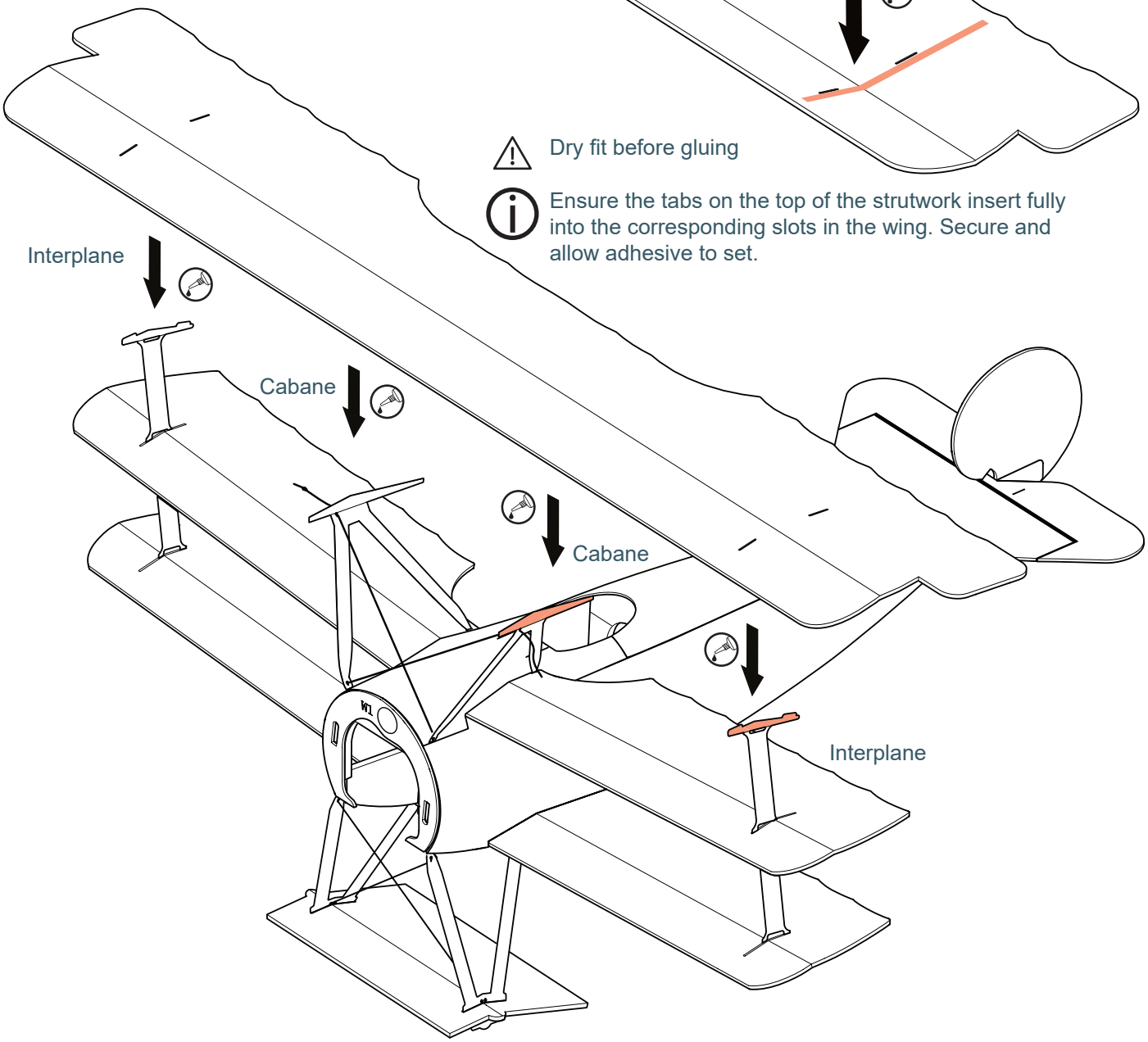


STAGE 10 UPPER WING

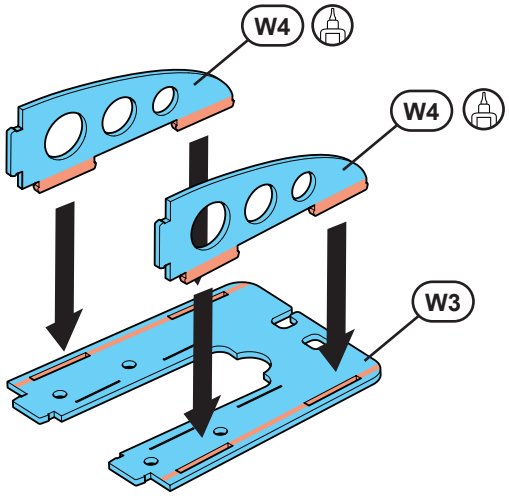


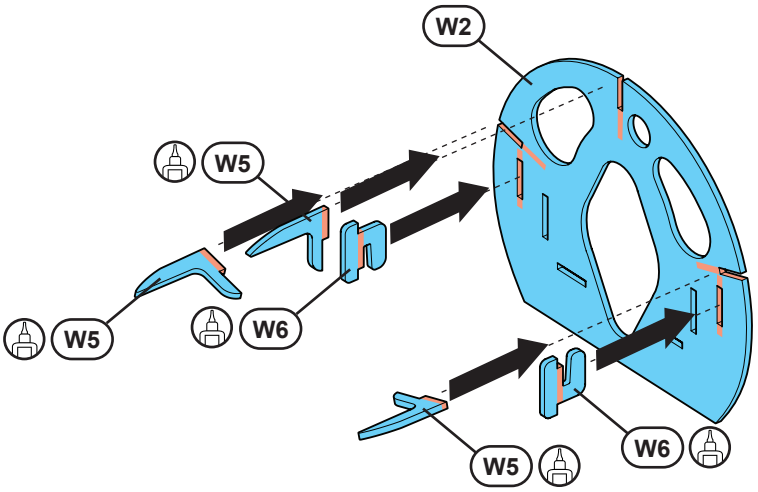
⚠ Dry fit before gluing

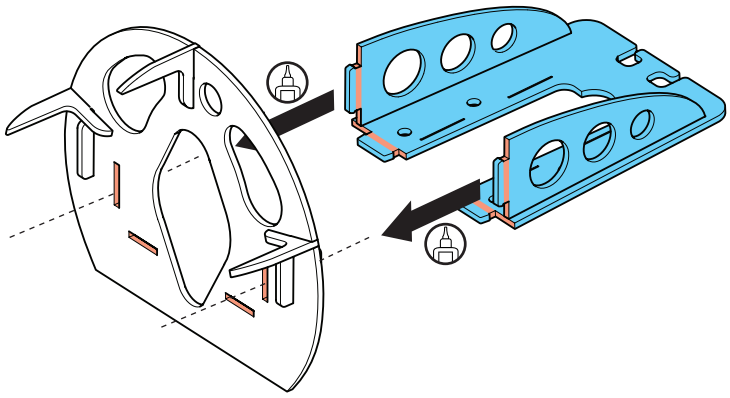
ⓘ Ensure the tabs on the top of the strutwork insert fully into the corresponding slots in the wing. Secure and allow adhesive to set.



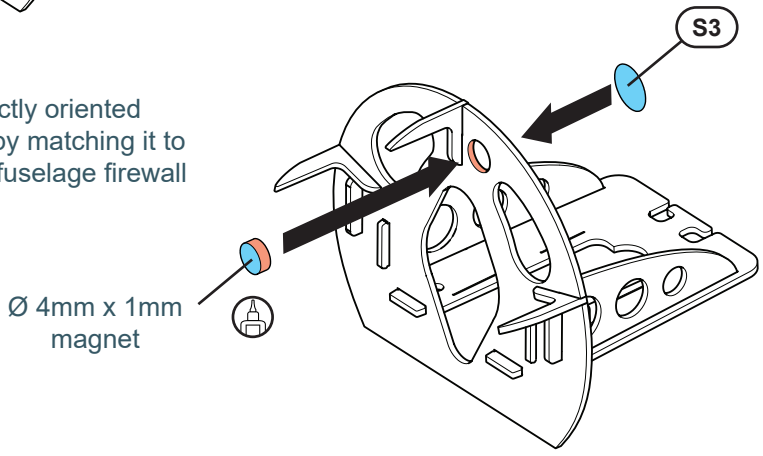
STAGE 11 MOTOR MOUNT



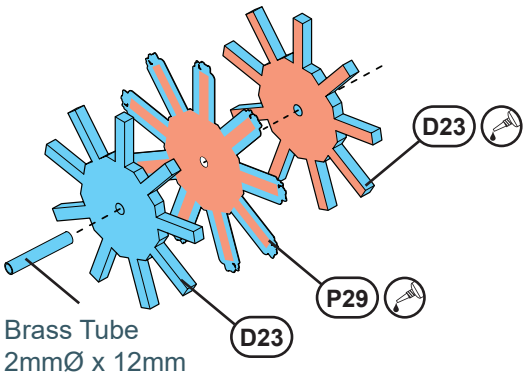


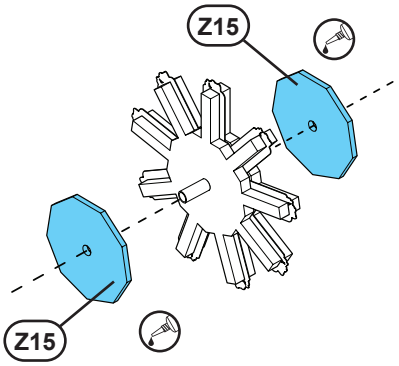


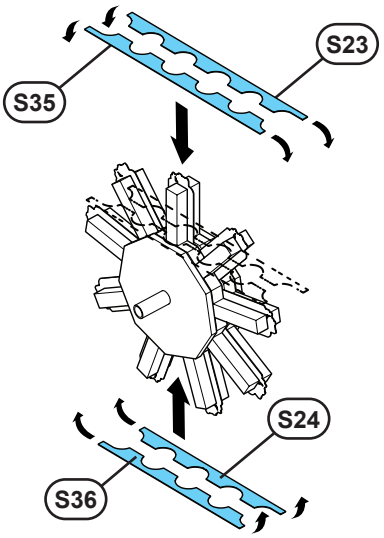
Ensure the magnet is correctly oriented before installation. Do this by matching it to the magnet installed in the fuselage firewall before installing it here.

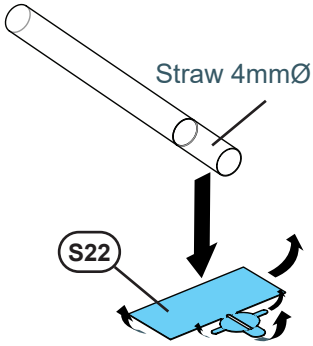


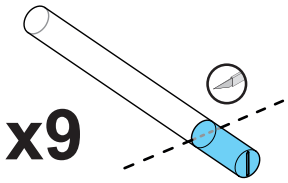
STAGE 12 ROTARY ENGINE

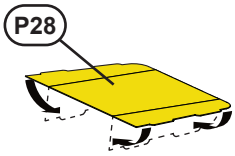


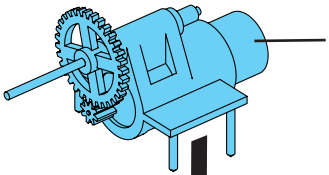


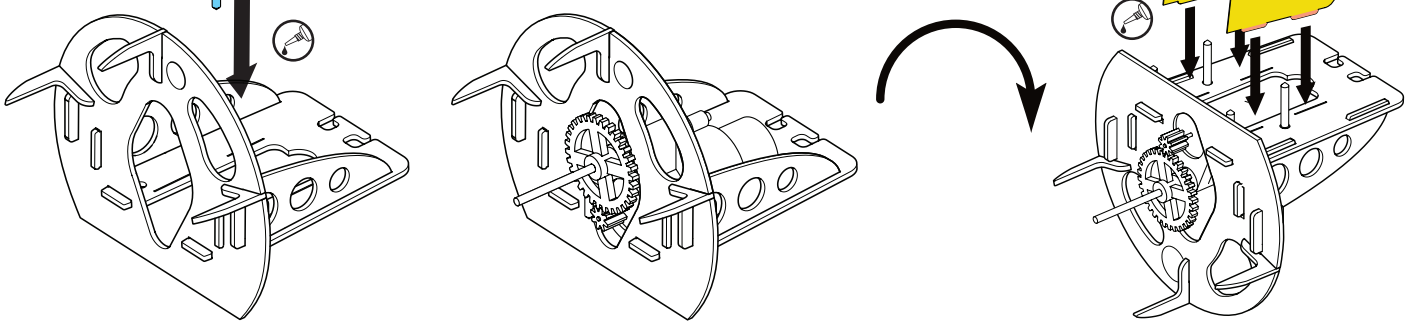




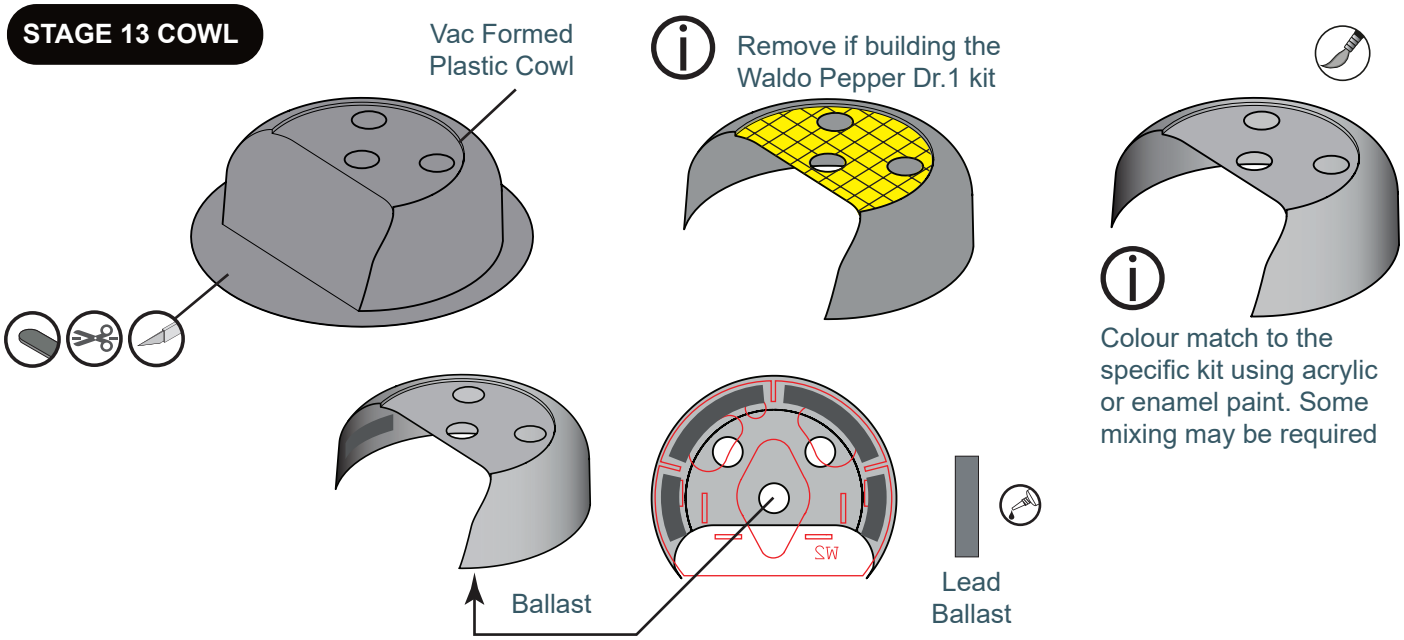


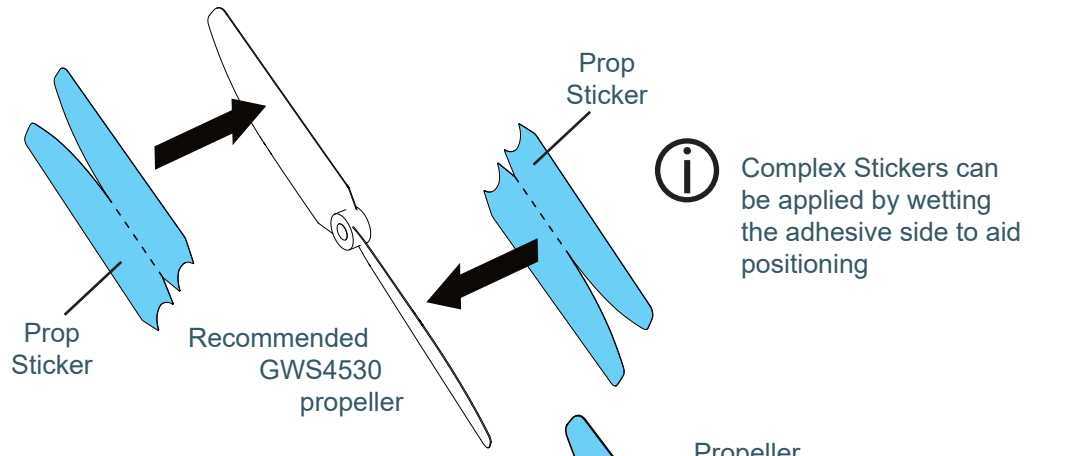


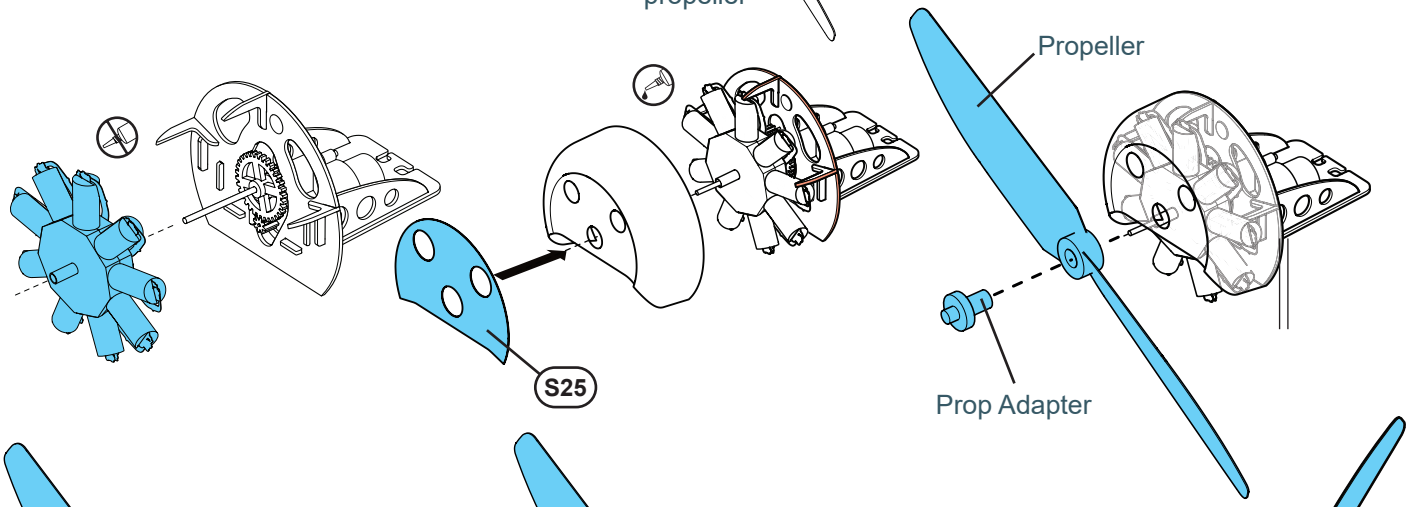


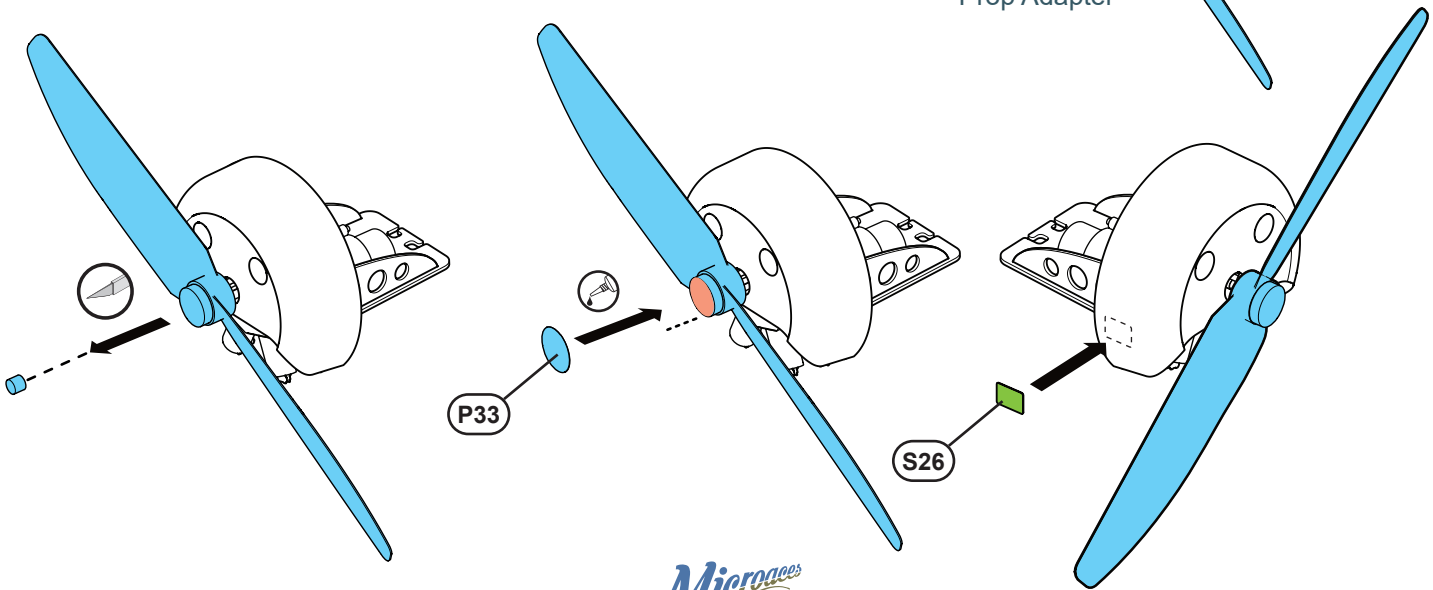


STAGE 13 COWL





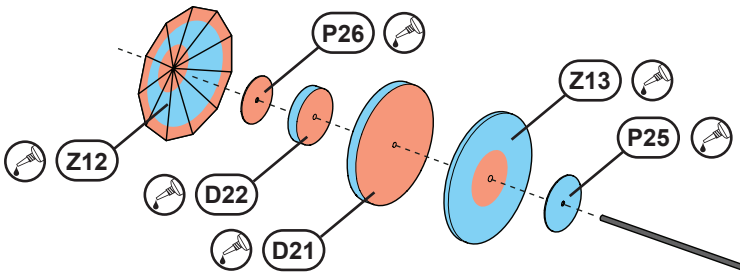




STAGE 14 WHEEL ASSEMBLY

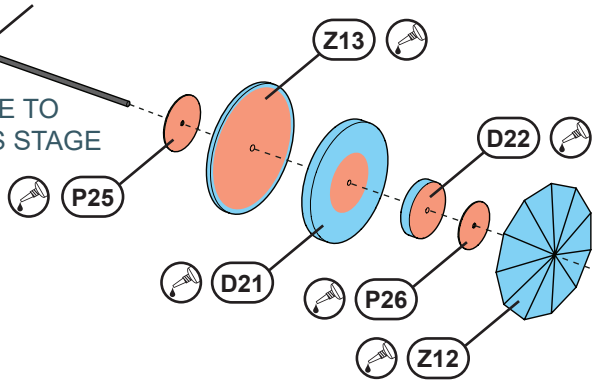
Bevel & Score Z12 before installation - See Scoring & Bevelling guide #1

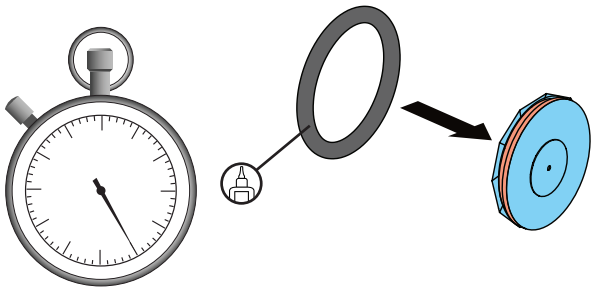
Assemble each wheel onto the axle temporarily to ensure good alignment.



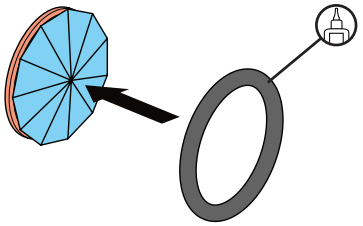
Carbon Fibre
1mmØ x 80mm

DO NOT GLUE TO AXLE AT THIS STAGE

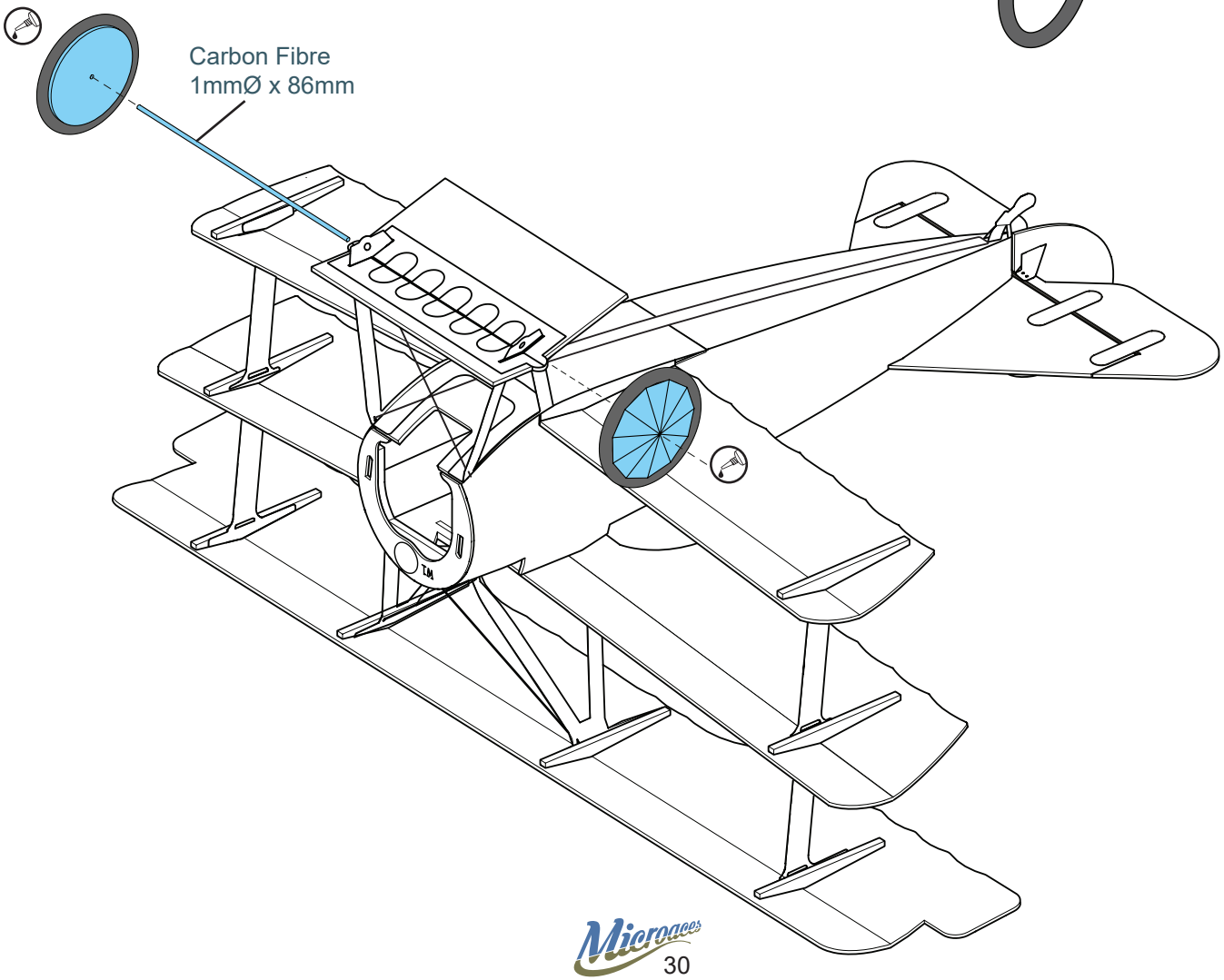




Time
2 Hour

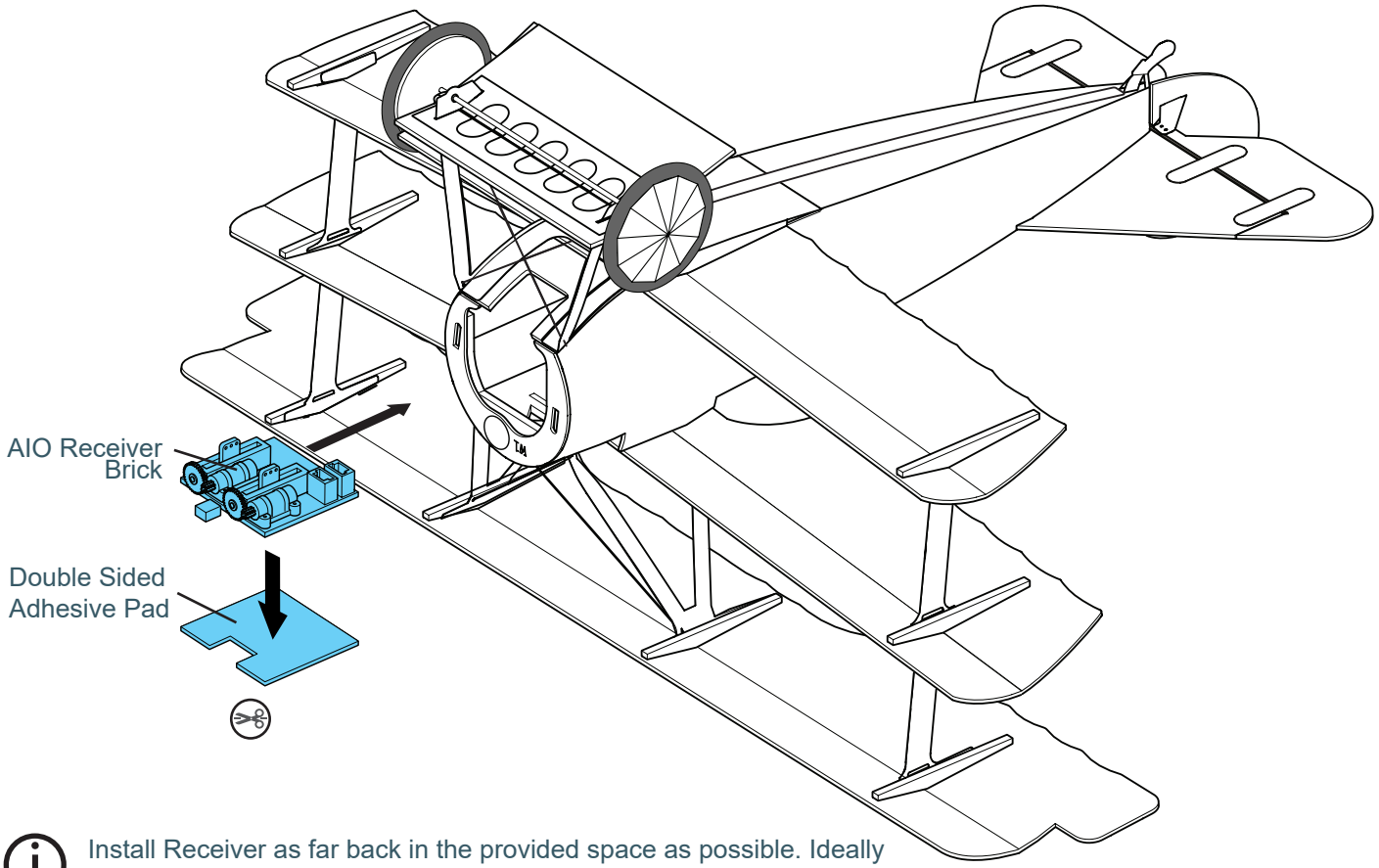


Carbon Fibre
1mmØ x 86mm

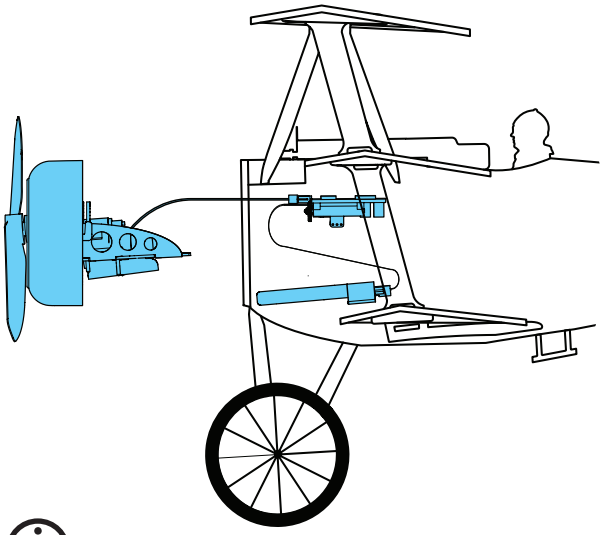


STAGE 15 ELECTRONICS

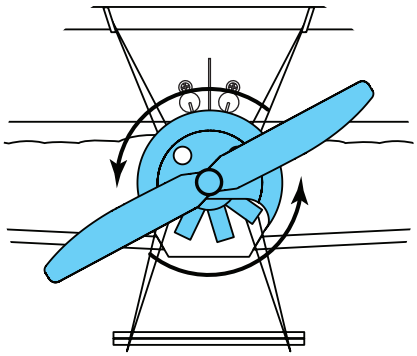
Ensure receiver servos are centered before installing. To do this, bind to transmitter and center trims on Elevator, Ailerons & Rudder (on transmitter).



Install Receiver as far back in the provided space as possible. Ideally the back edge of the PCB should be touching the D2 bulkhead.



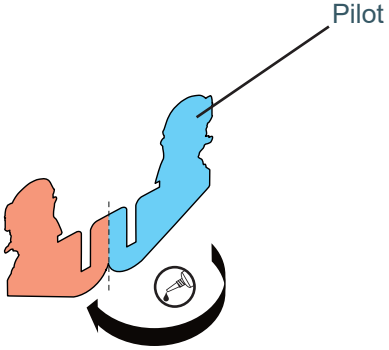
Correct position of battery

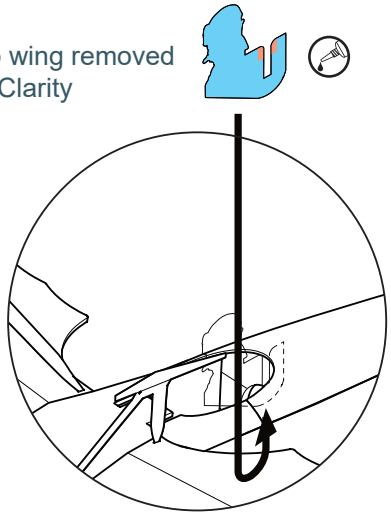


Attach motor assembly by inserting lugs into slots and rotating until magnets align

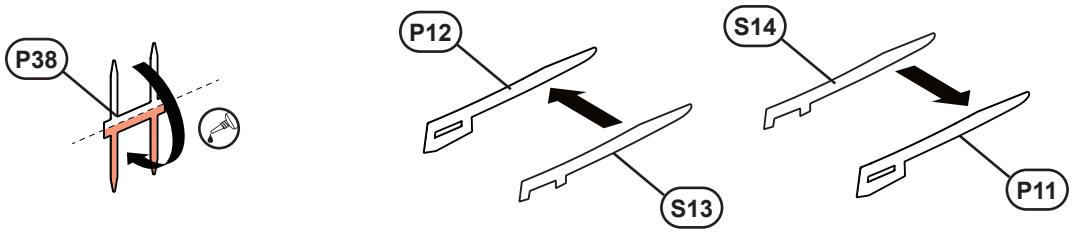
STAGE 16 PILOT

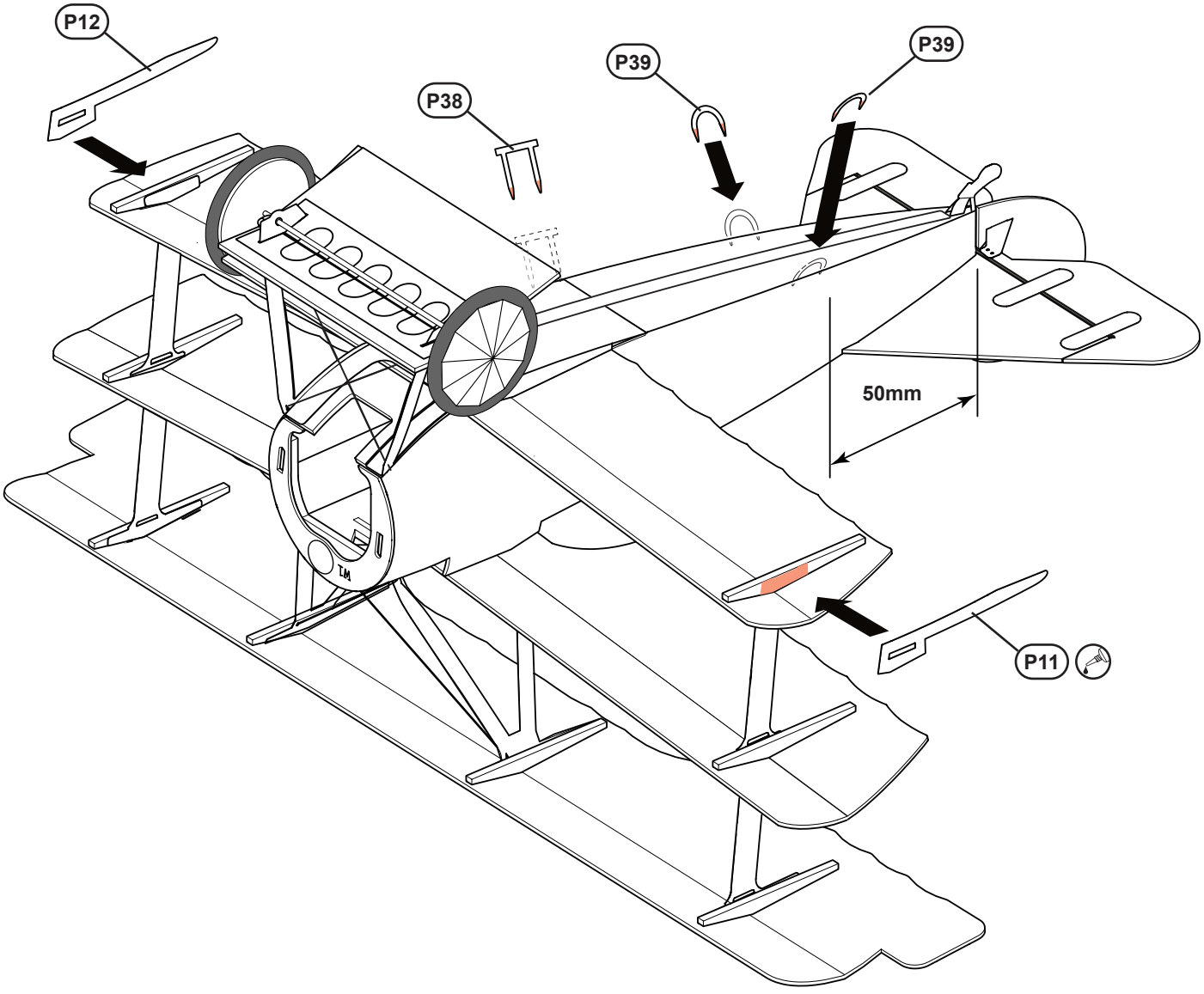
Top wing removed for Clarity





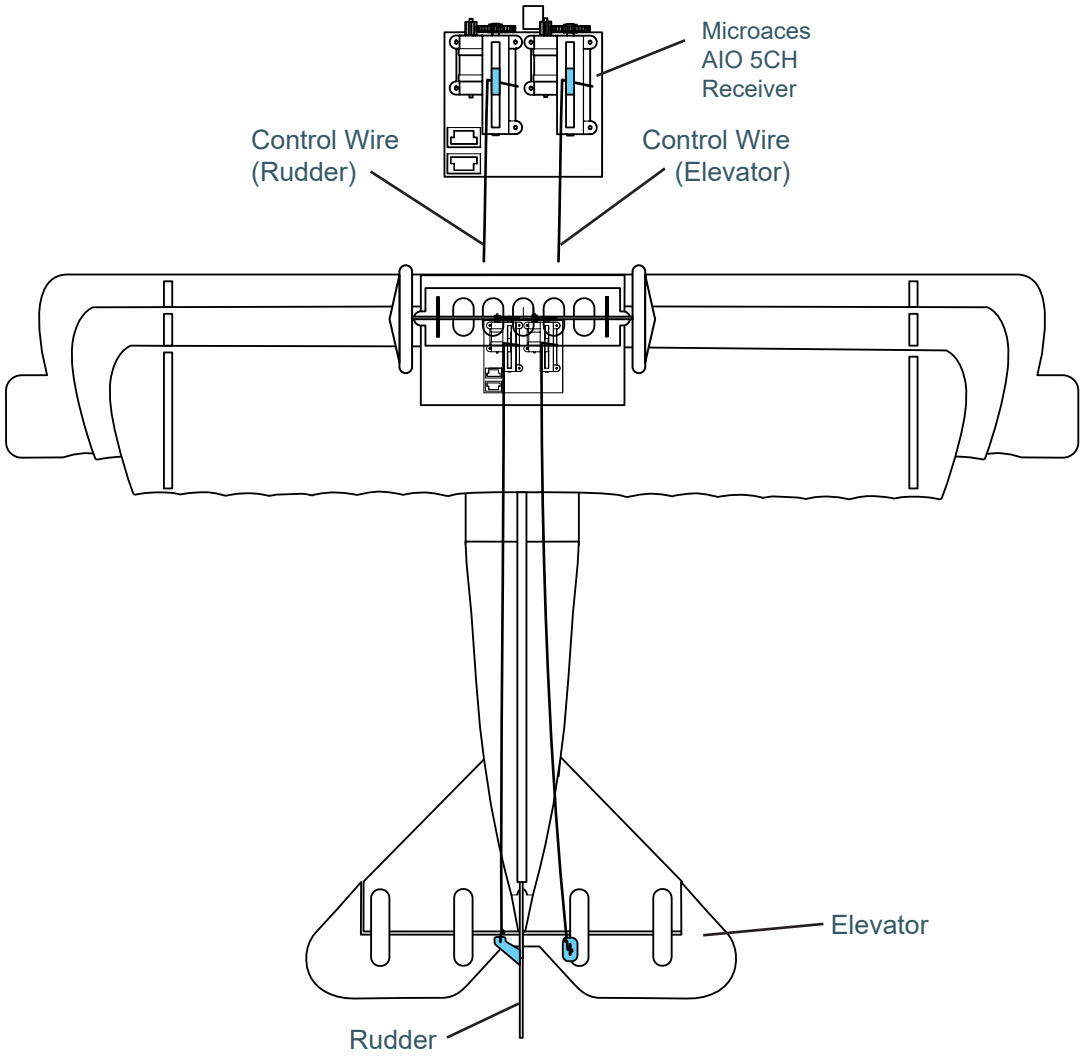
STAGE 17 FINISHING TOUCHES



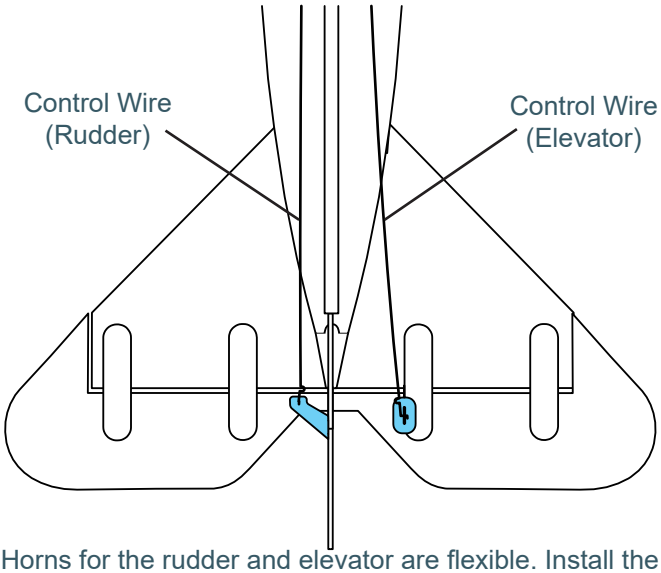


STAGE 18 CONTROL RODS

Insert individual control wire from the rear and attach to appropriate control horn. Set control surface to neutral then, using slim or needle nose pliers, bend the end of the control wire at the piont it will need to attach to the servo arm. Un-hook the control wire from the control horn, pull out of the fuselage and complete the hook bend for the servo arm. Trim hook to approx 4mm in length.



View from Below



The Control Horns for the rudder and elevator are flexible. Install the control wires for each and use tweezers to bend the horns to insert the 'Z' bend into the hole.

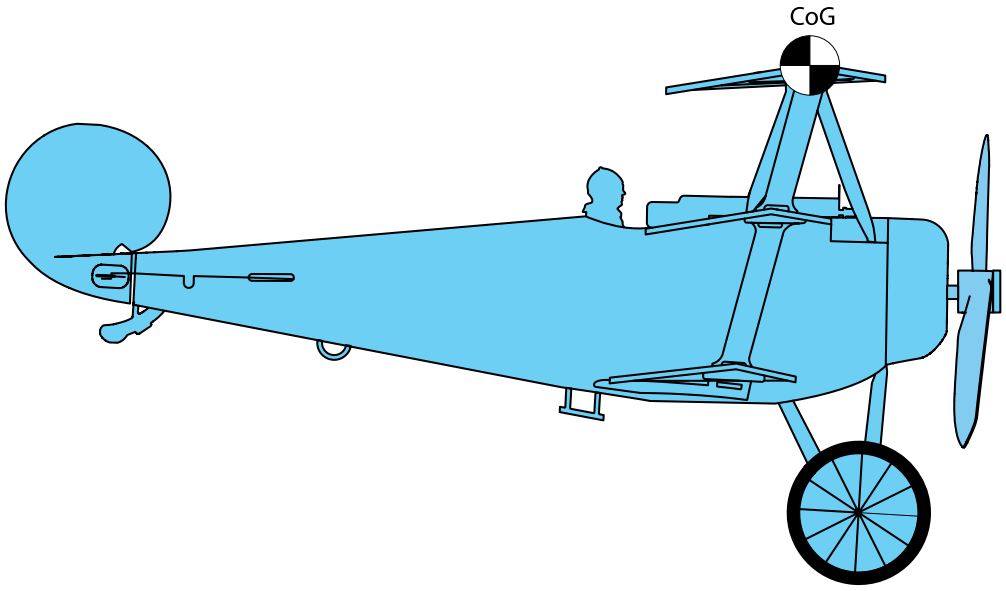
Use the outer hole of the control horns for more gentle control of your aircraft!

STAGE 19 PREPARATION FOR FLIGHT

Centre of Gravity (CoG)

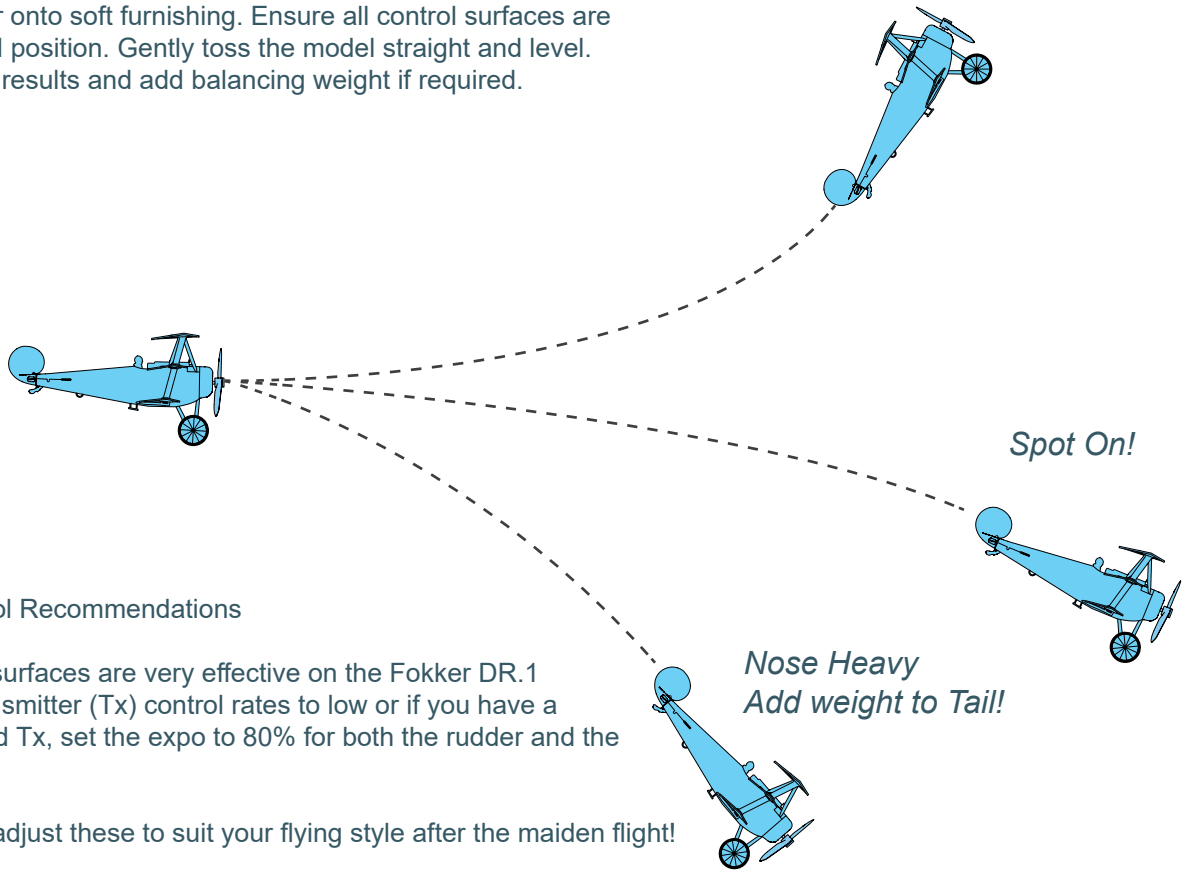
With all the electronics installed including the battery, the CoG should be around the apex of the top wing as shown on the diagram below.

Balance on finger tips to see if the aircraft balances at this point. Before adding any weight it is advisable to perform a glide test. Add weight accordingly to obtain a smooth glide.



Glide Test - How to!

Find a suitable test space with a forgiving landing area, e.g. over long grass or onto soft furnishing. Ensure all control surfaces are in the neutral position. Gently toss the model straight and level. Observe the results and add balancing weight if required.



Radio Control Recommendations

The control surfaces are very effective on the Fokker DR.1
Set your transmitter (Tx) control rates to low or if you have a computerised Tx, set the expo to 80% for both the rudder and the elevator.

Feel free to adjust these to suit your flying style after the maiden flight!