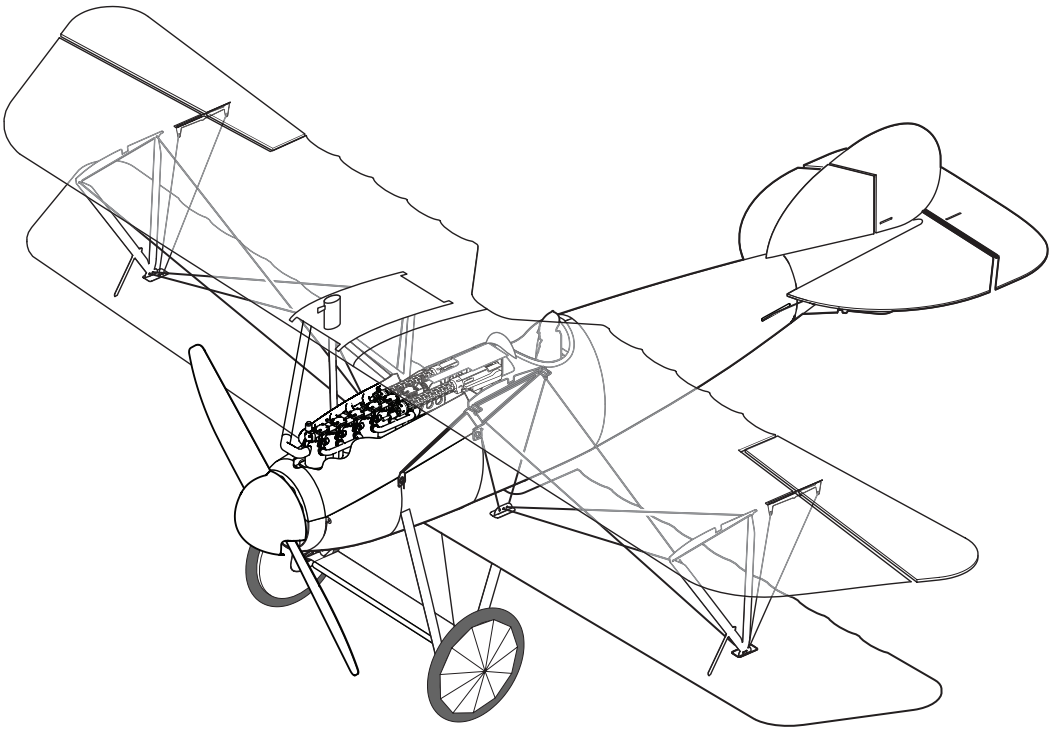
Microaces
MAKING HISTORY

ASSEMBLY GUIDE



Albatros D.V

Master Series

Introduction

Thank you for purchasing this Microaces Master Series 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 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

INTRODUCTION

Click here to view build video

At the beginning of each STAGE within this guide there is a QR code. If you scan using a smart device (printed copy) or click (digital copy) this code, you will be able to view the build video that relates to the stage of the assembly. The videos contain important information, hints and tips that are designed to assist with the building process.

Try scanning or clicking on the QR code here to view the Video Introduction.

KIT PARTS

Sheet Parts

2 x 2mm laser cut foam airframe
3 x printed & laser cut Tyvek fuselage parts
3 x printed & laser cut wing & tail parts
1 x 200 micron printed & laser cut polypropylene parts
1 x printed & cut polyester sticker parts
1 x 0.8mm laser cut plywood parts

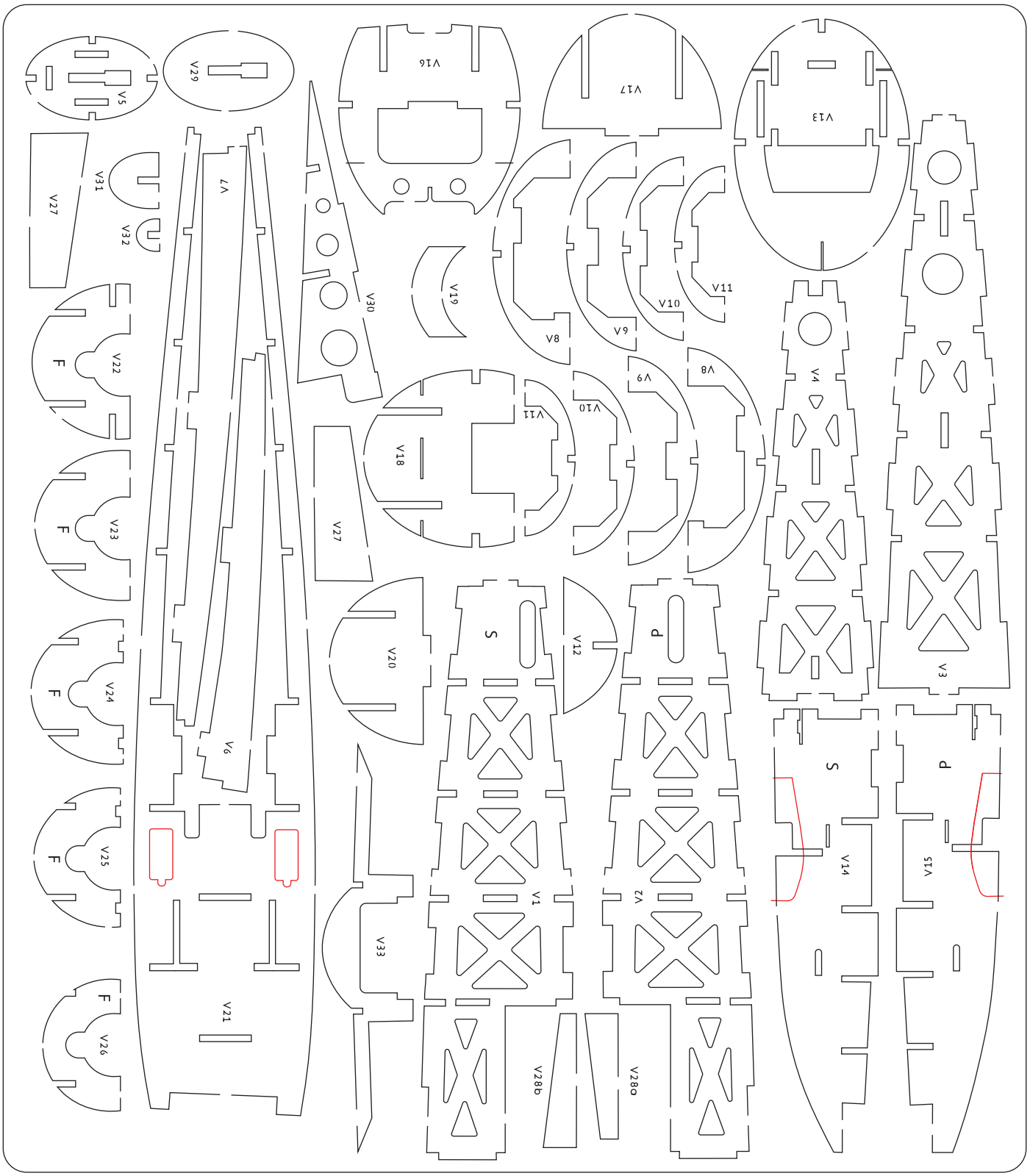
Loose Parts

2 x rubber tyres
1 x vacuum formed ABS spinner
1 x profile pilot figure
1 x ~4m rigging wire
10 x rigging crimps
2 x piano wire control rods
2 x 150mm carbon fibre tube
1 x 100mm x 1.5mm carbon fibre rod
2 x 500mm x 1.0mm x 0.4mm carbon fibre strip
10 x 4mm x 1mm neodymium magnets
1 x 5mm x 5mm magnetic sheet
2 x 140mm x 4mm clear plastic tube
1 x 20mm x 4mm clear plastic tube
1 x 100mm x 3mm clear plastic tube
2 x 3D printed engine parts
1 x 3mm 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)
Paintbrush handle or dowel (for shaping Tyvek)

2mm FOAM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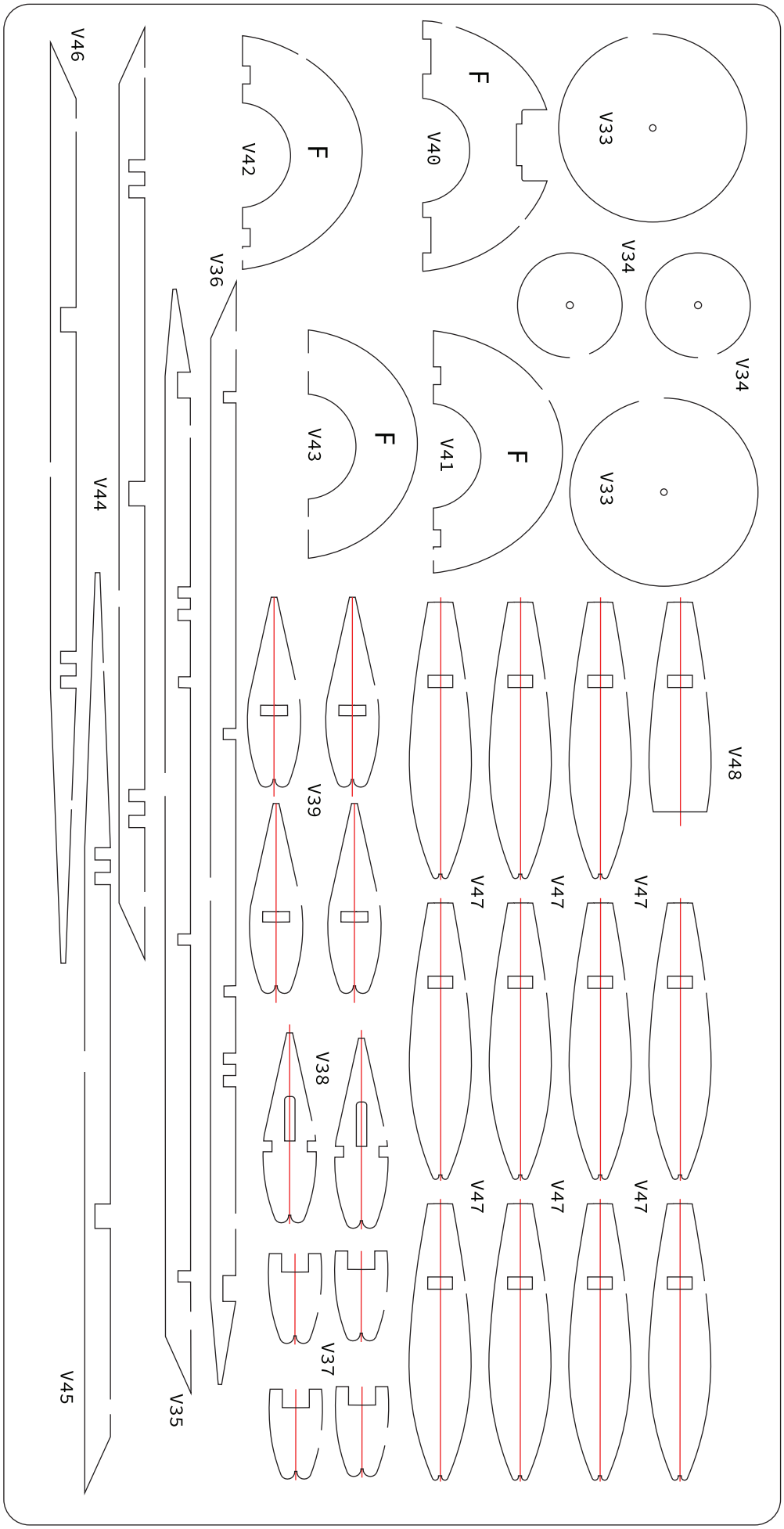
2mm FOAM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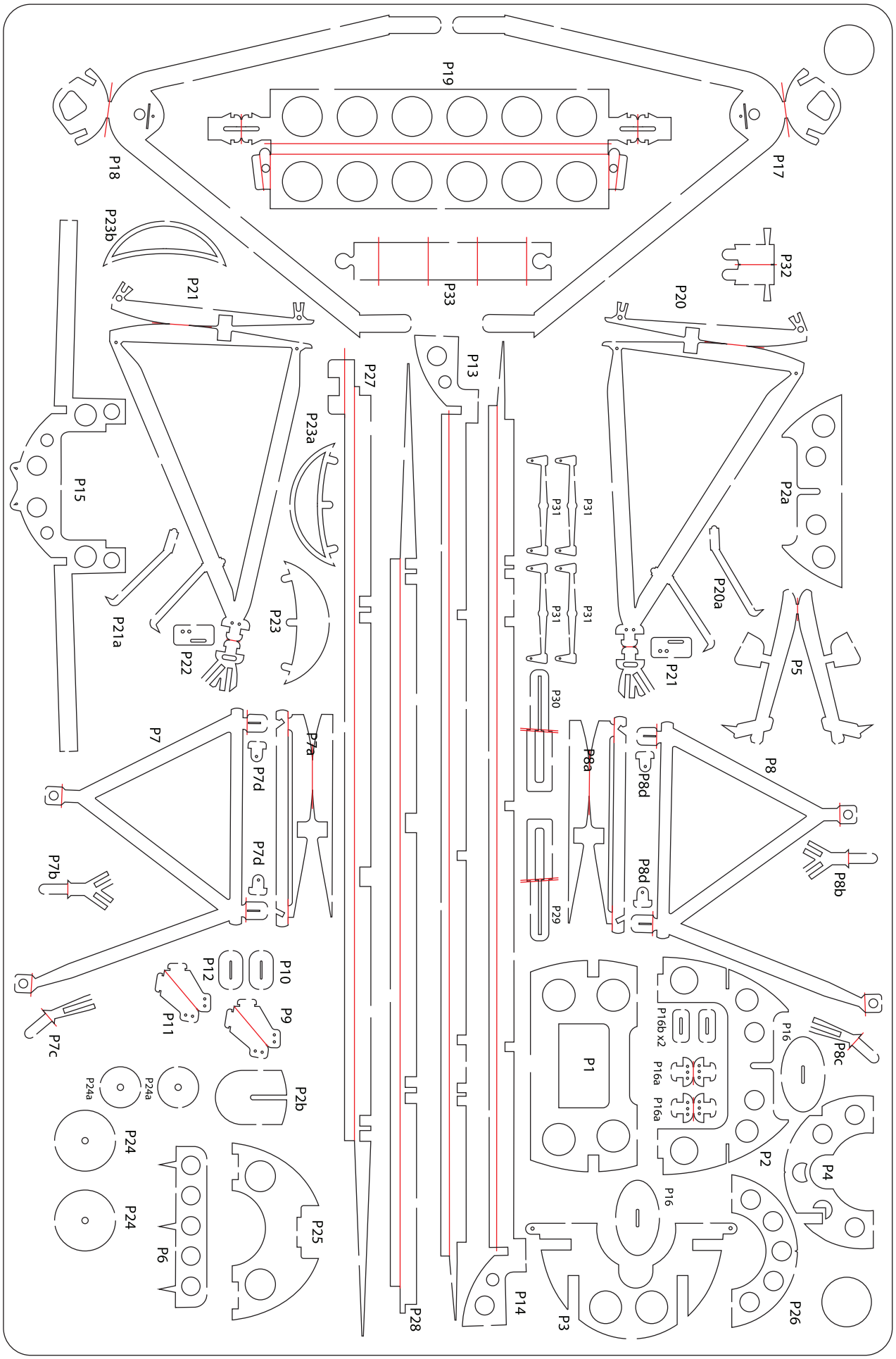
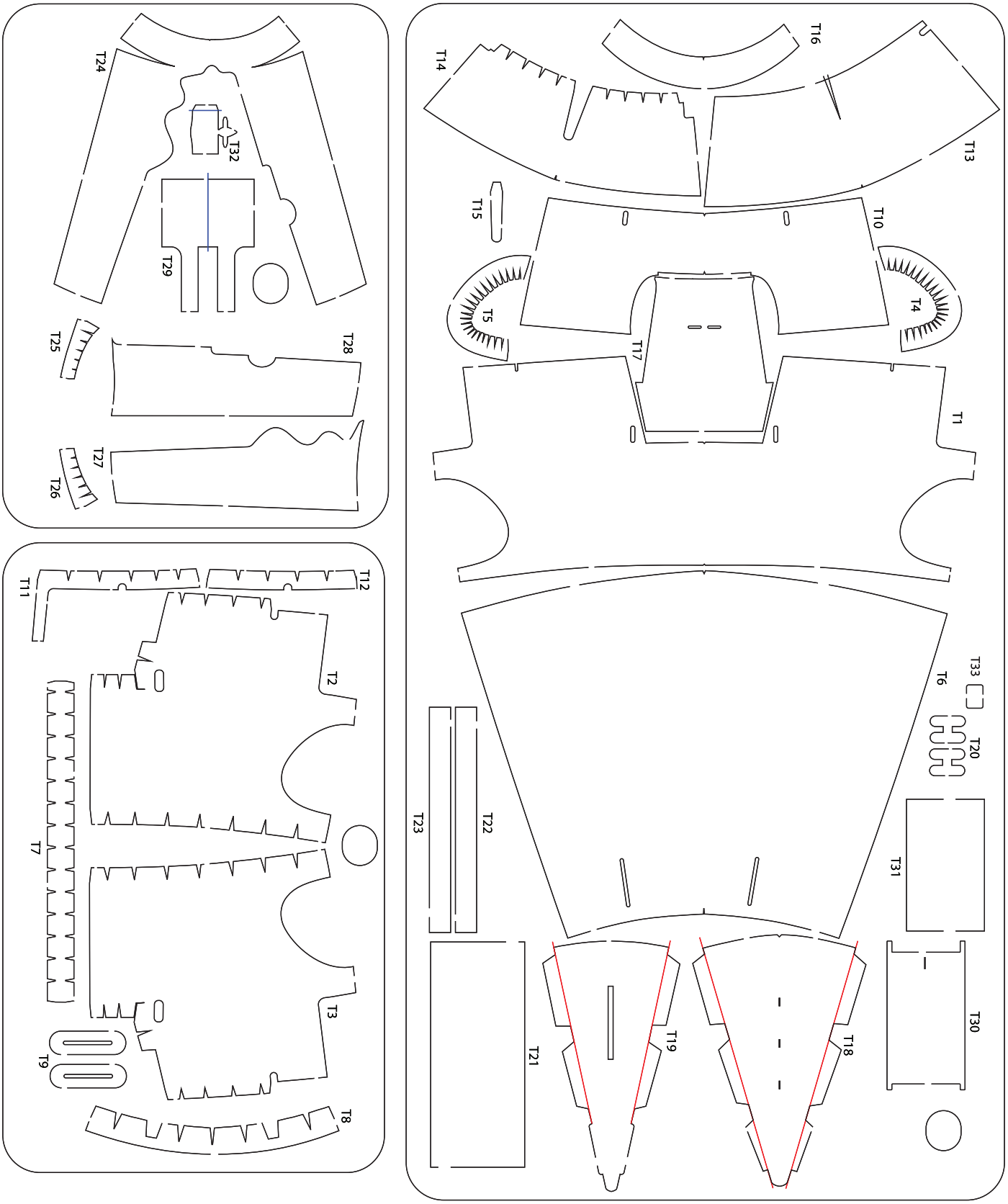
PLASTIC PARTS



TYVEK PARTS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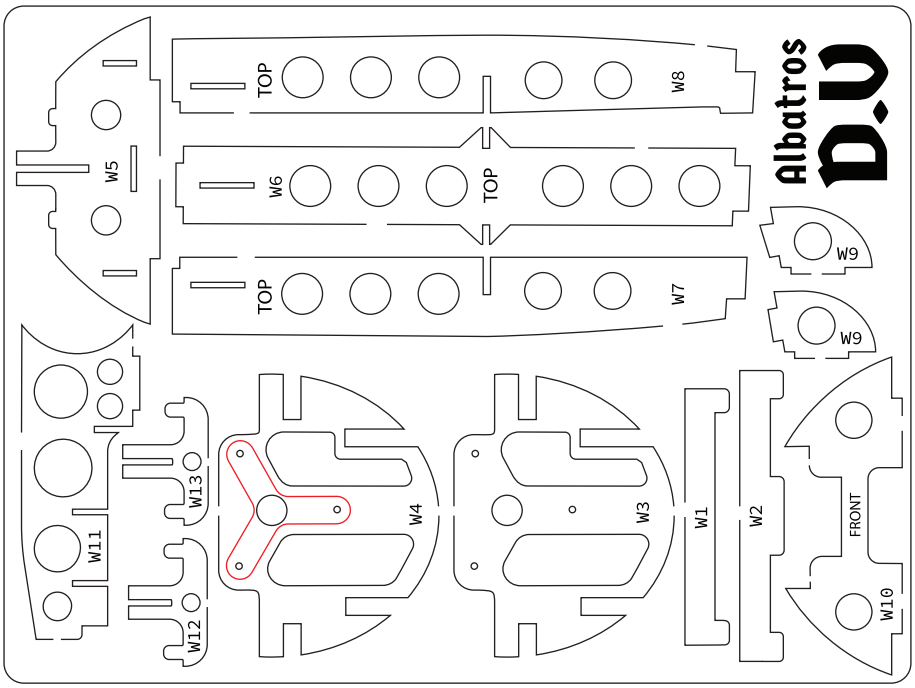
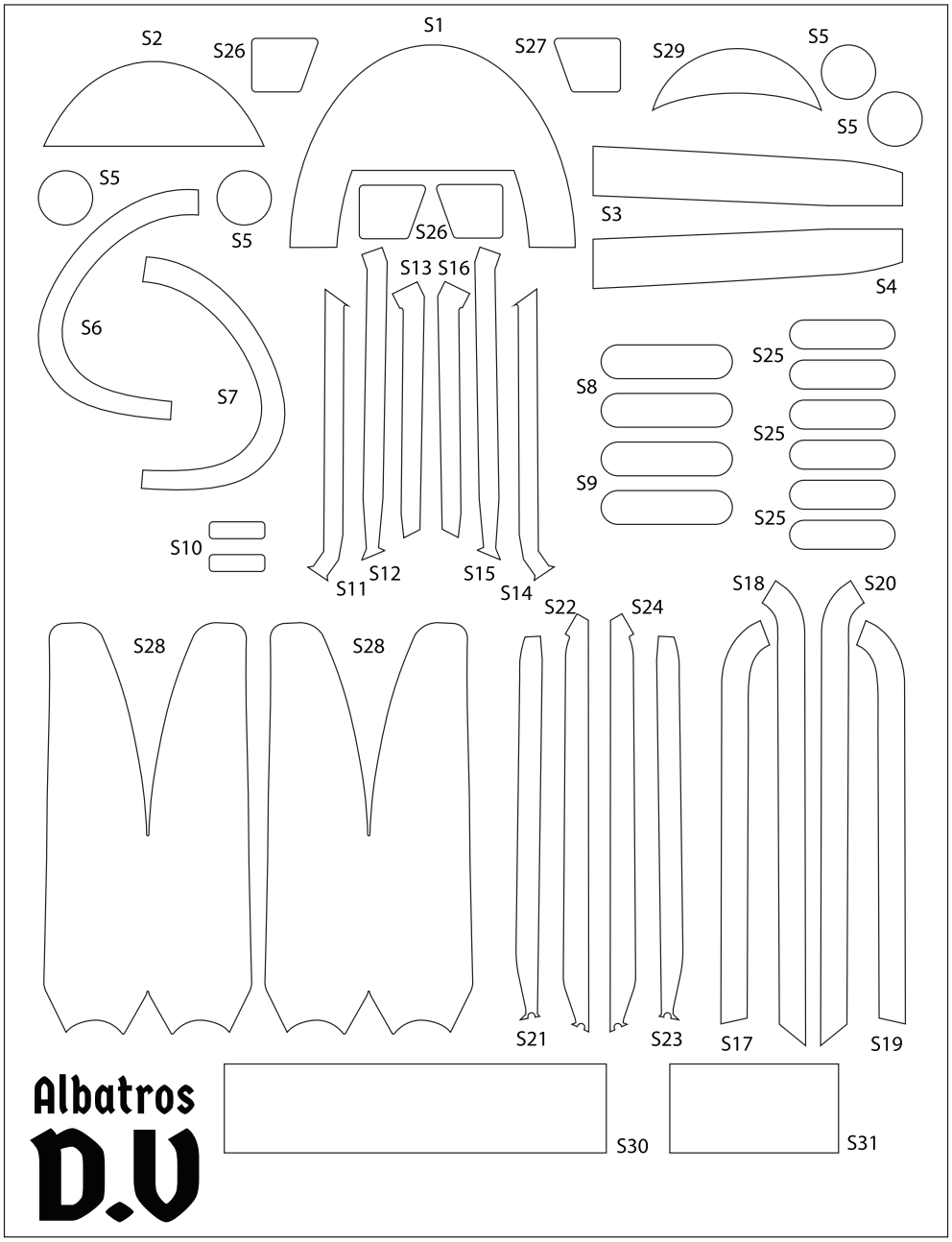
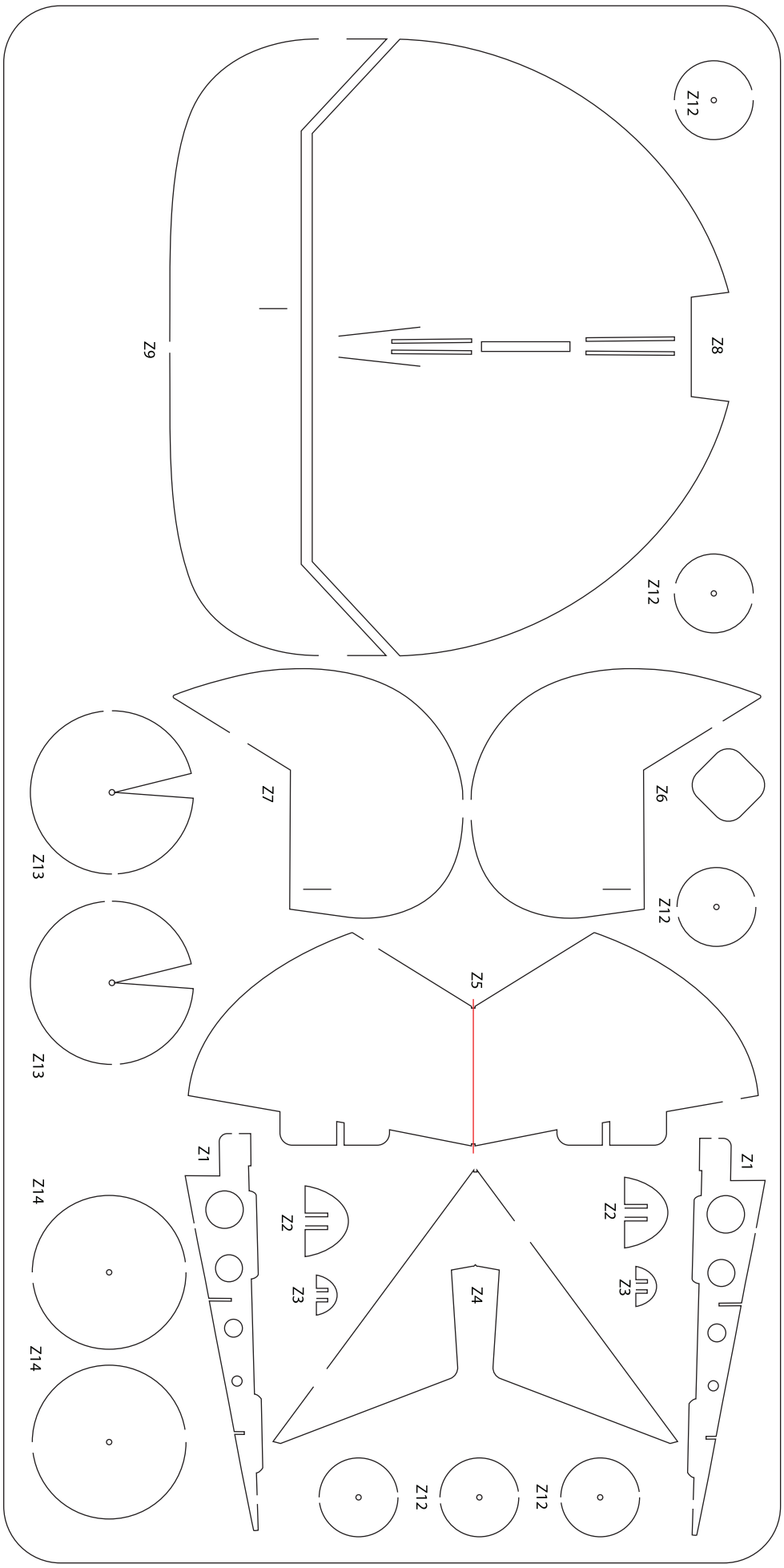
0.8mm PLYWOOD



STICKERS



1mm PARTS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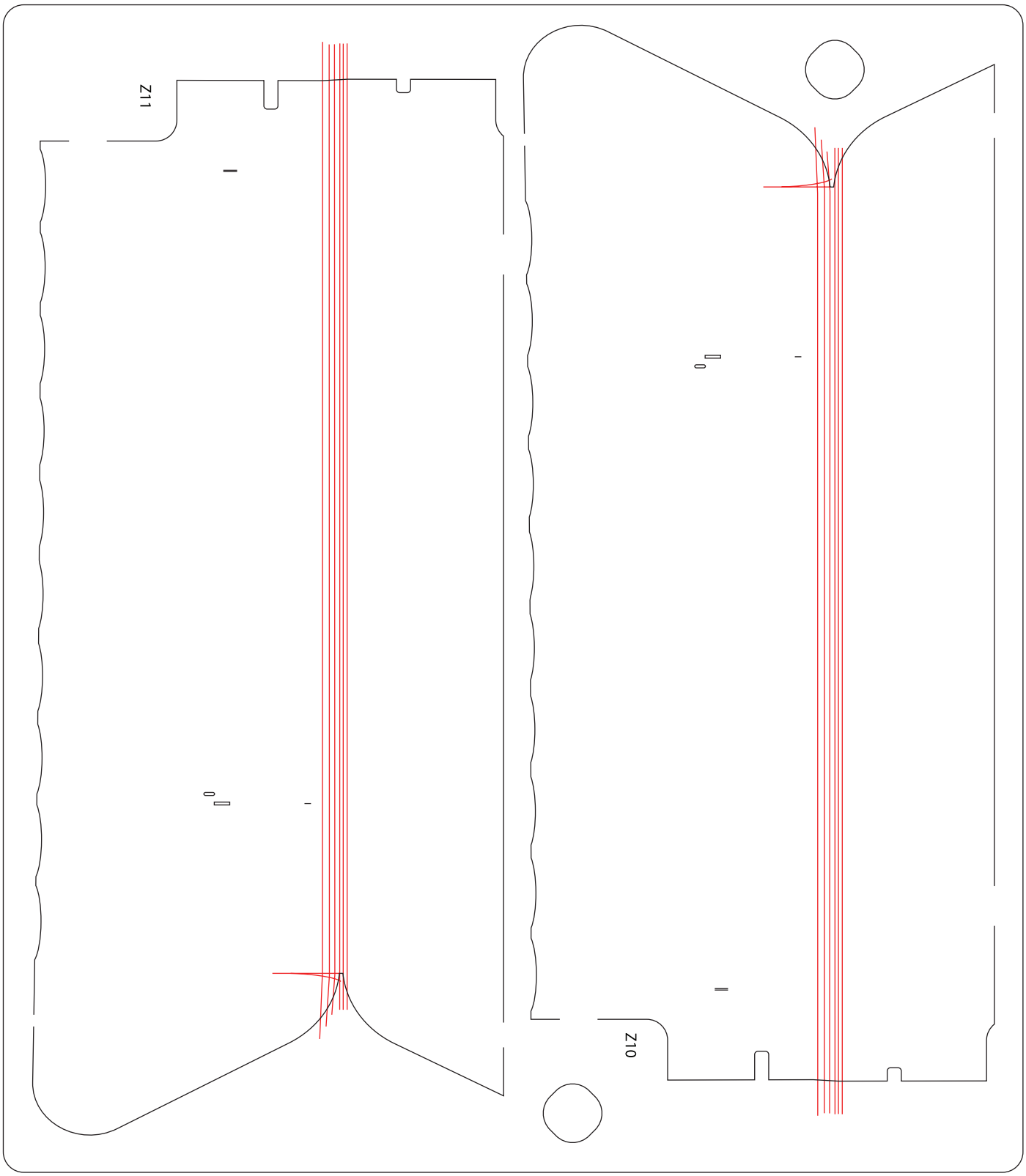
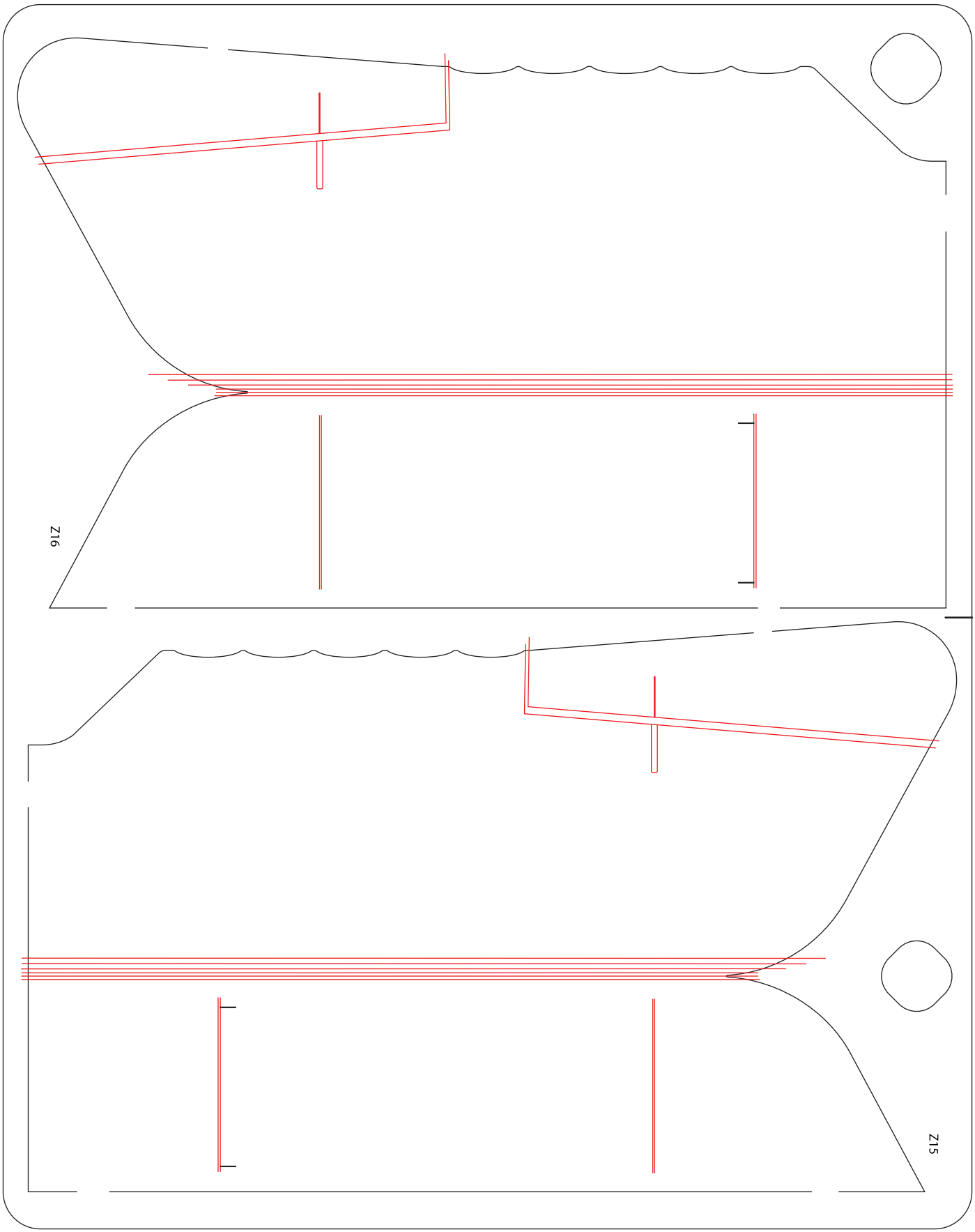
1mm Parts



1mm Parts

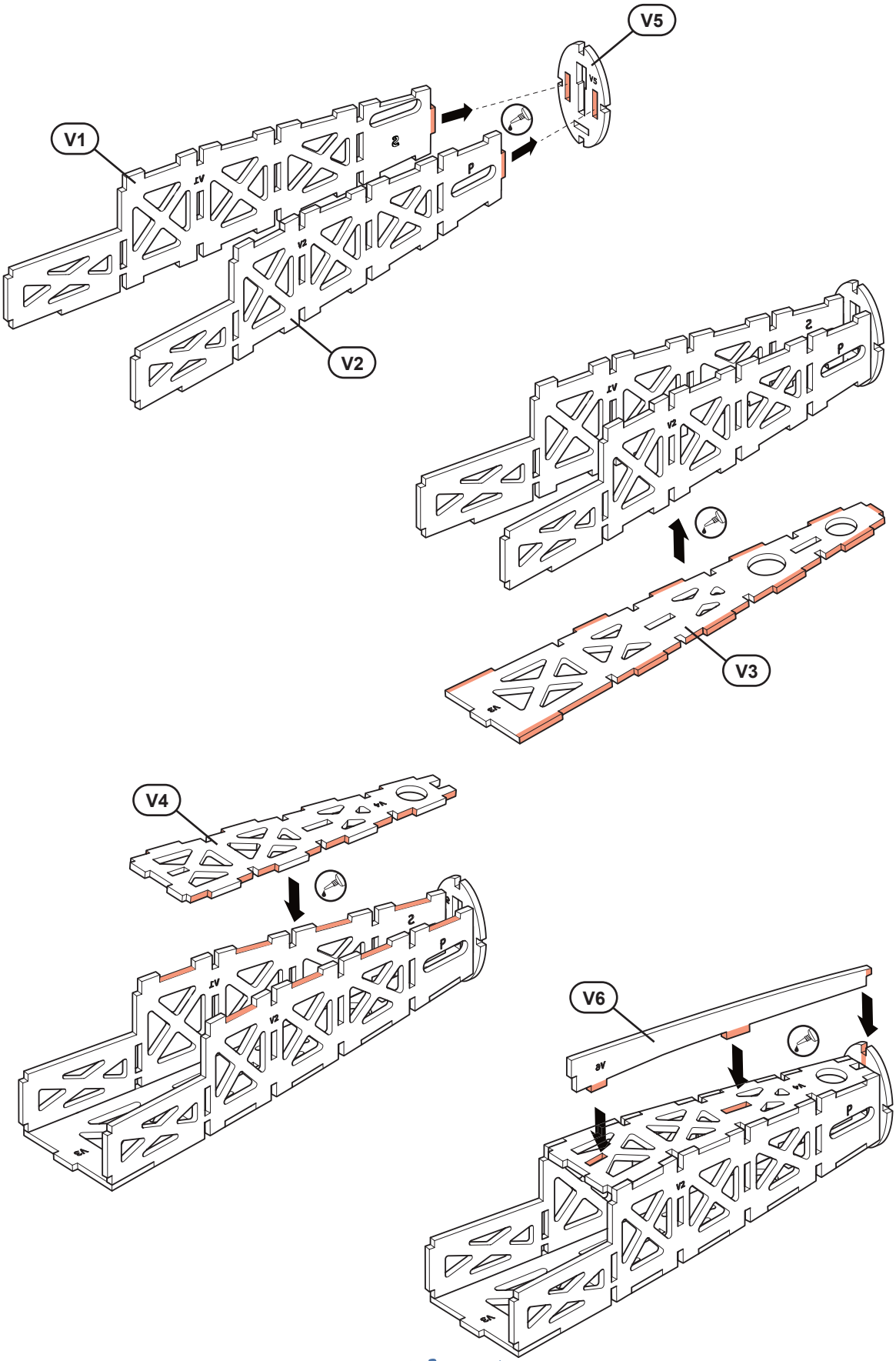


STAGE 1 AIRFRAME

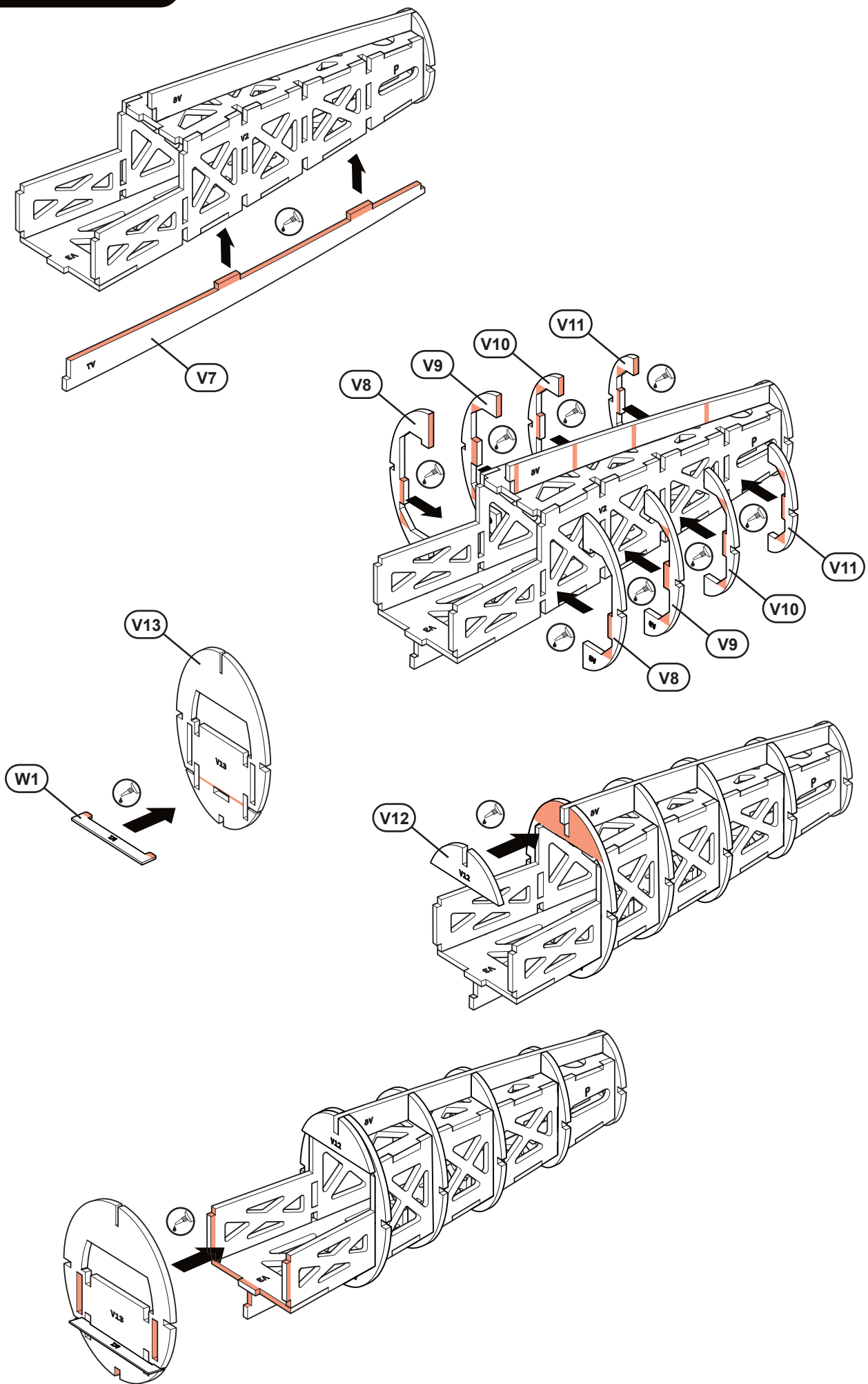
The plastic parts used in the airframe are there to increase the strength of the structure in vital areas whilst still providing some flexibility.

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.

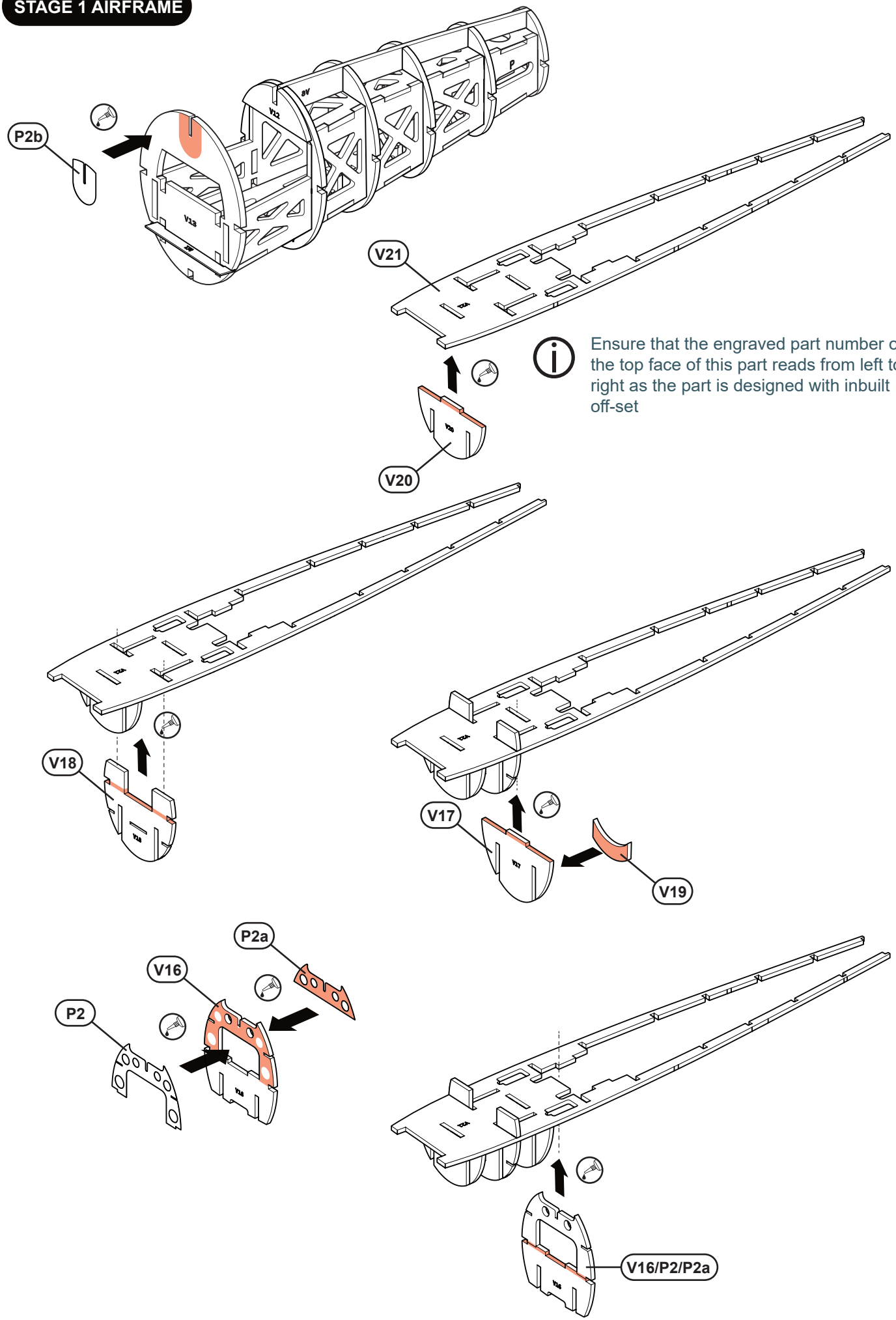
Click here to view build video



STAGE 1 AIRFRAME

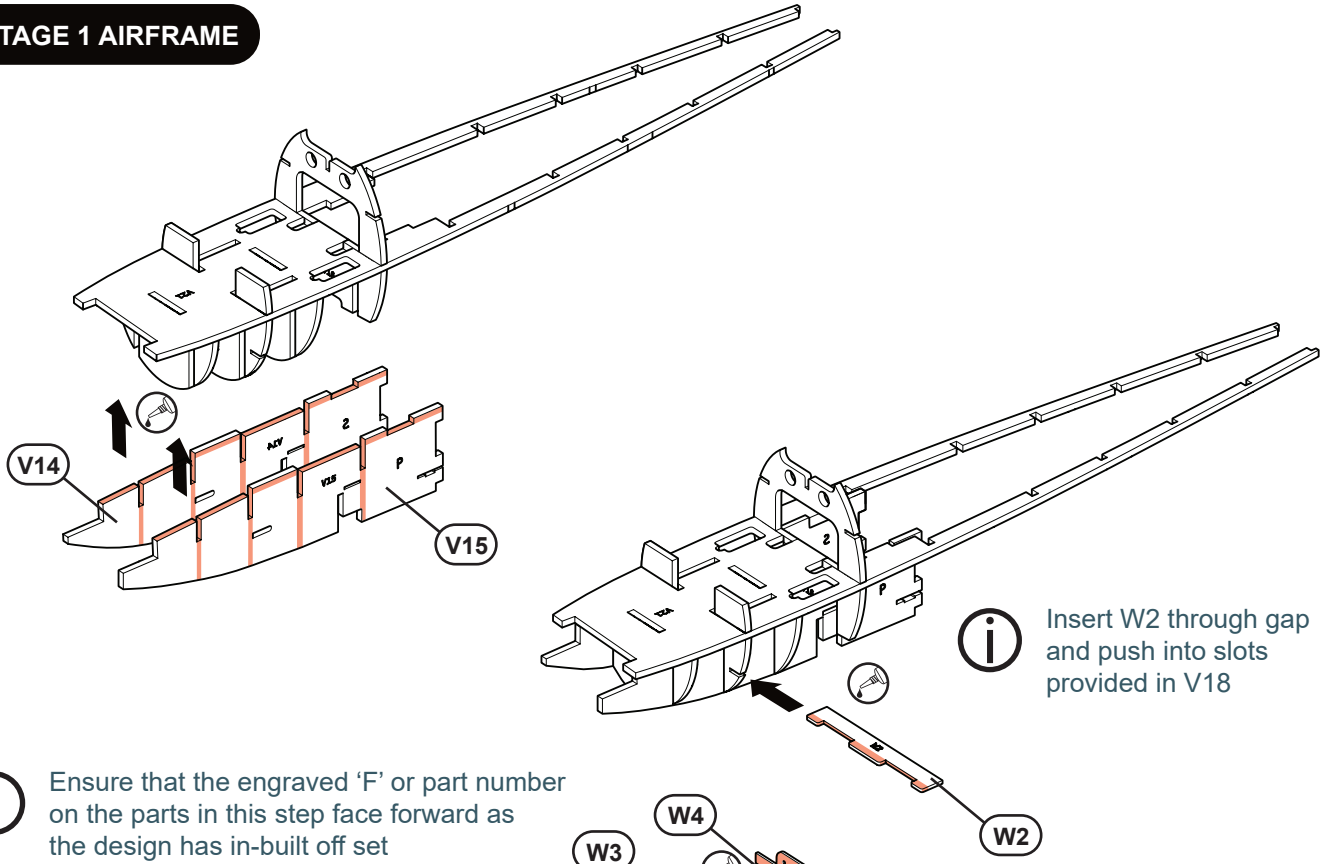


STAGE 1 AIRFRAME



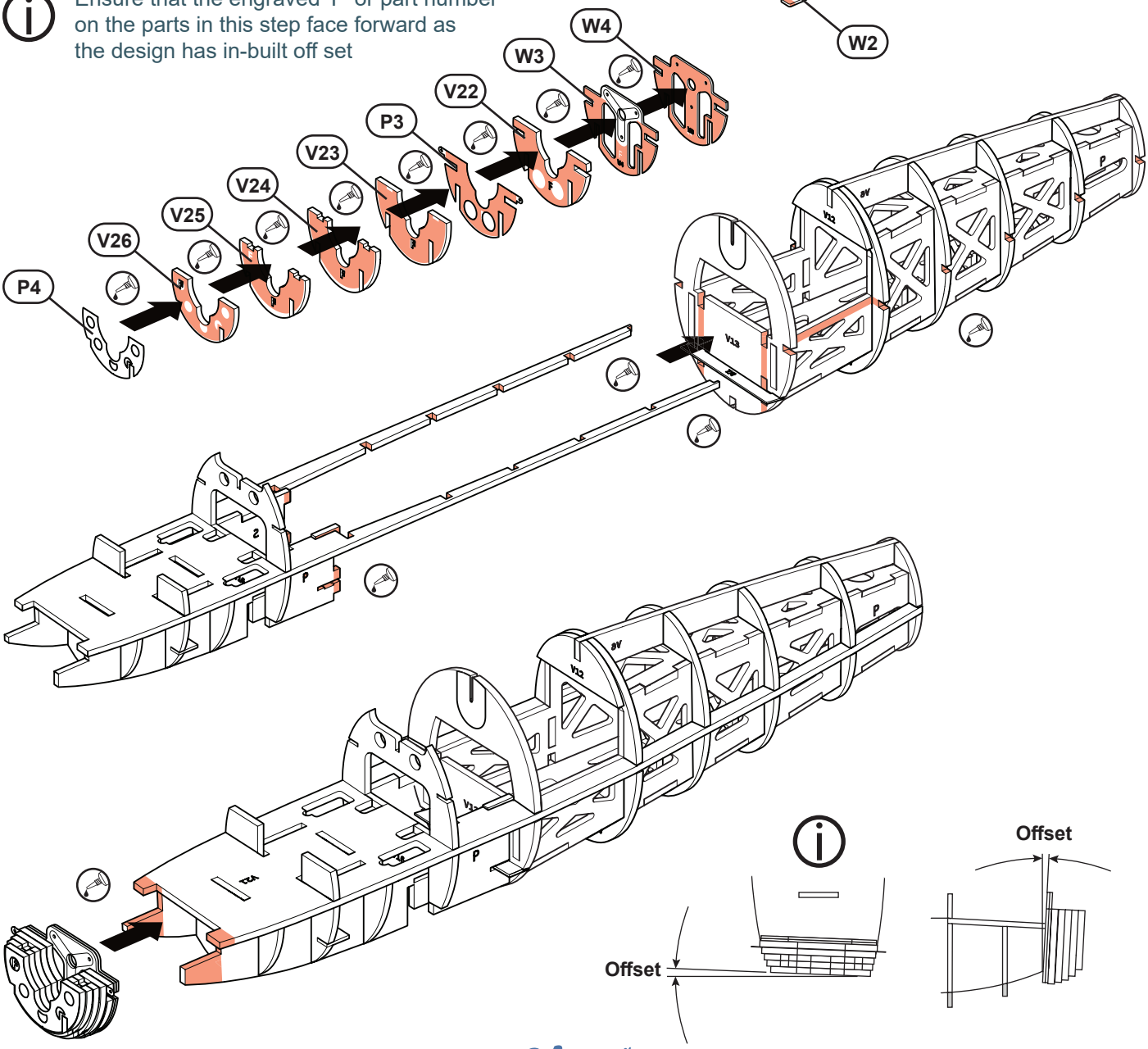
Ensure that the engraved part number on the top face of this part reads from left to right as the part is designed with inbuilt off-set

STAGE 1 AIRFRAME

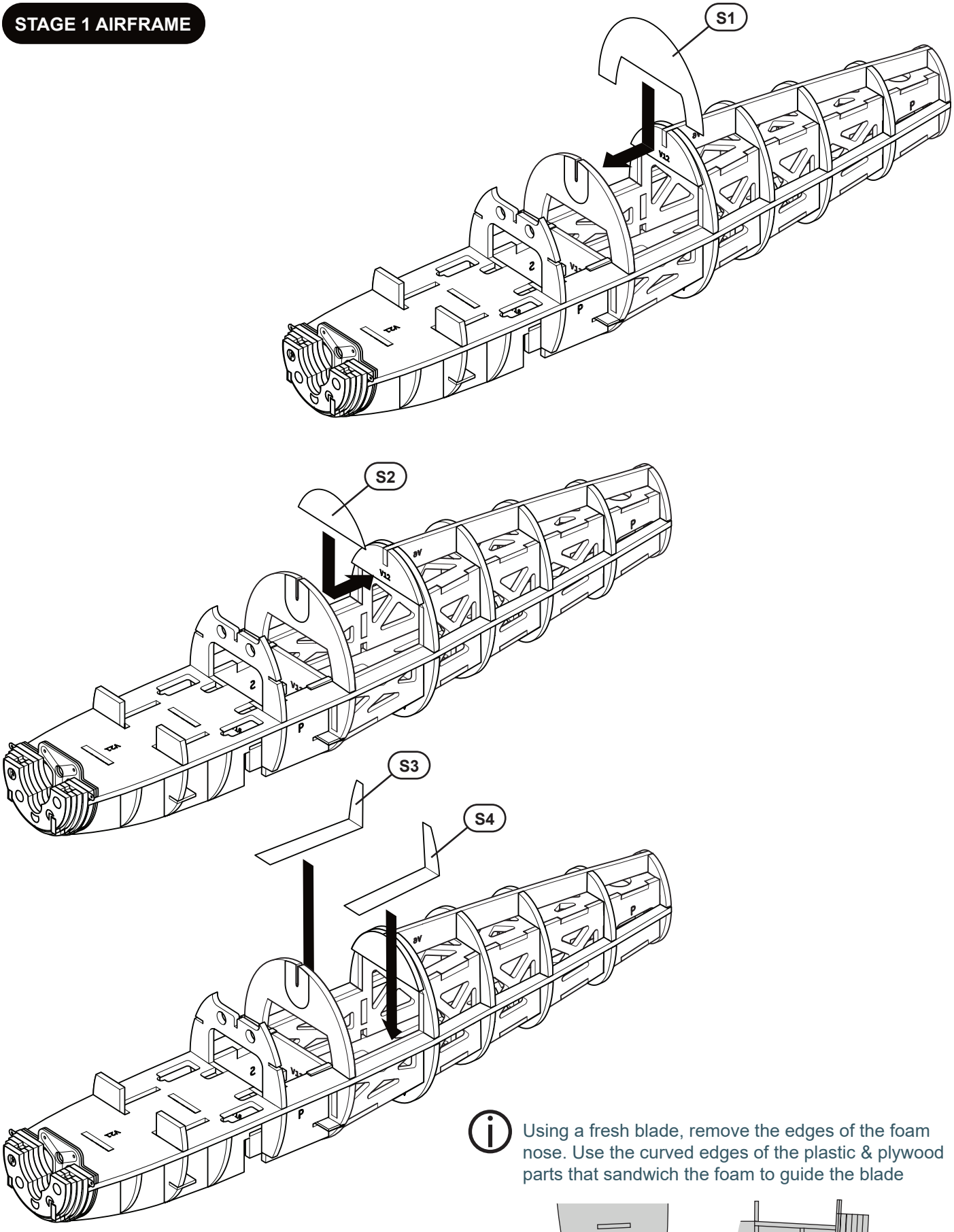


Insert W2 through gap and push into slots provided in V18

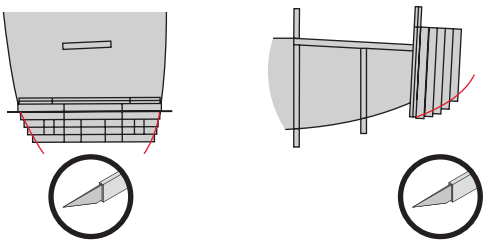
Ensure that the engraved ‘F’ or part number on the parts in this step face forward as the design has in-built off set



STAGE 1 AIRFRAME



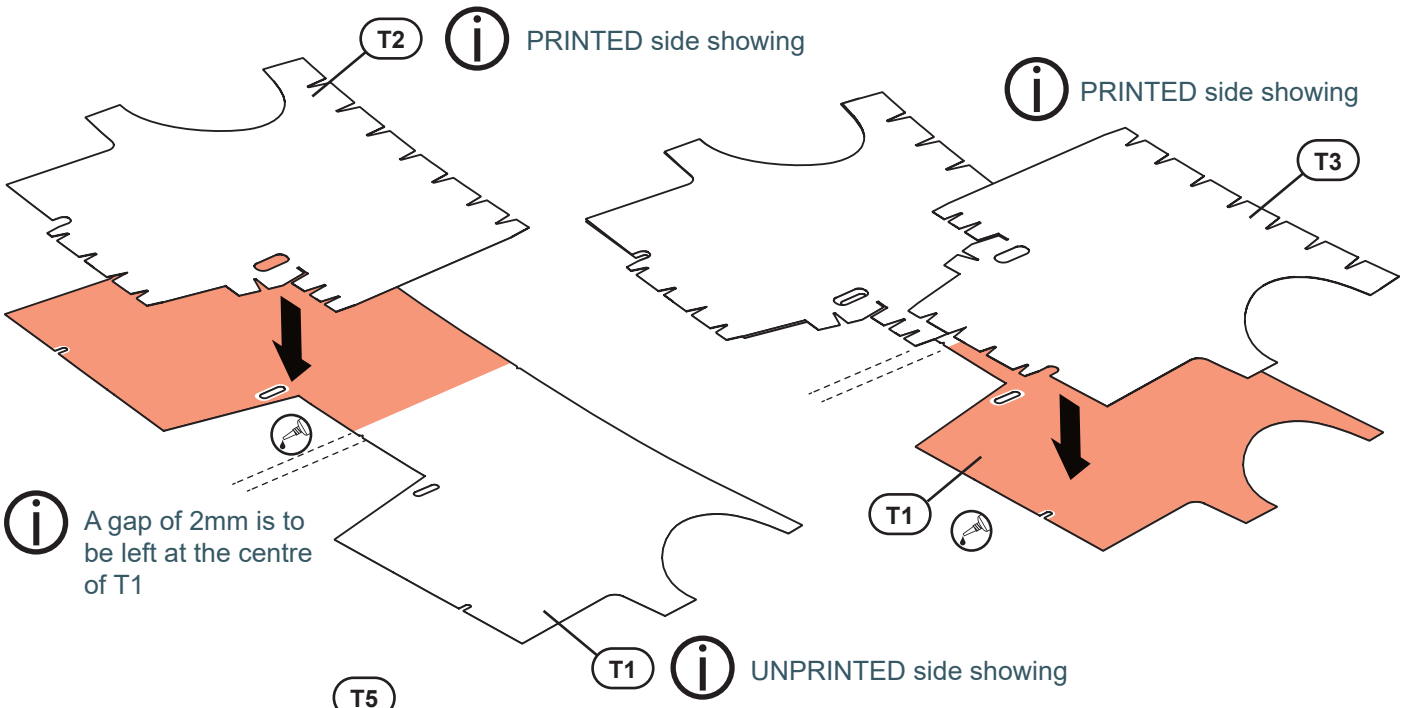
Using a fresh blade, remove the edges of the foam nose. Use the curved edges of the plastic & plywood parts that sandwich the foam to guide the blade

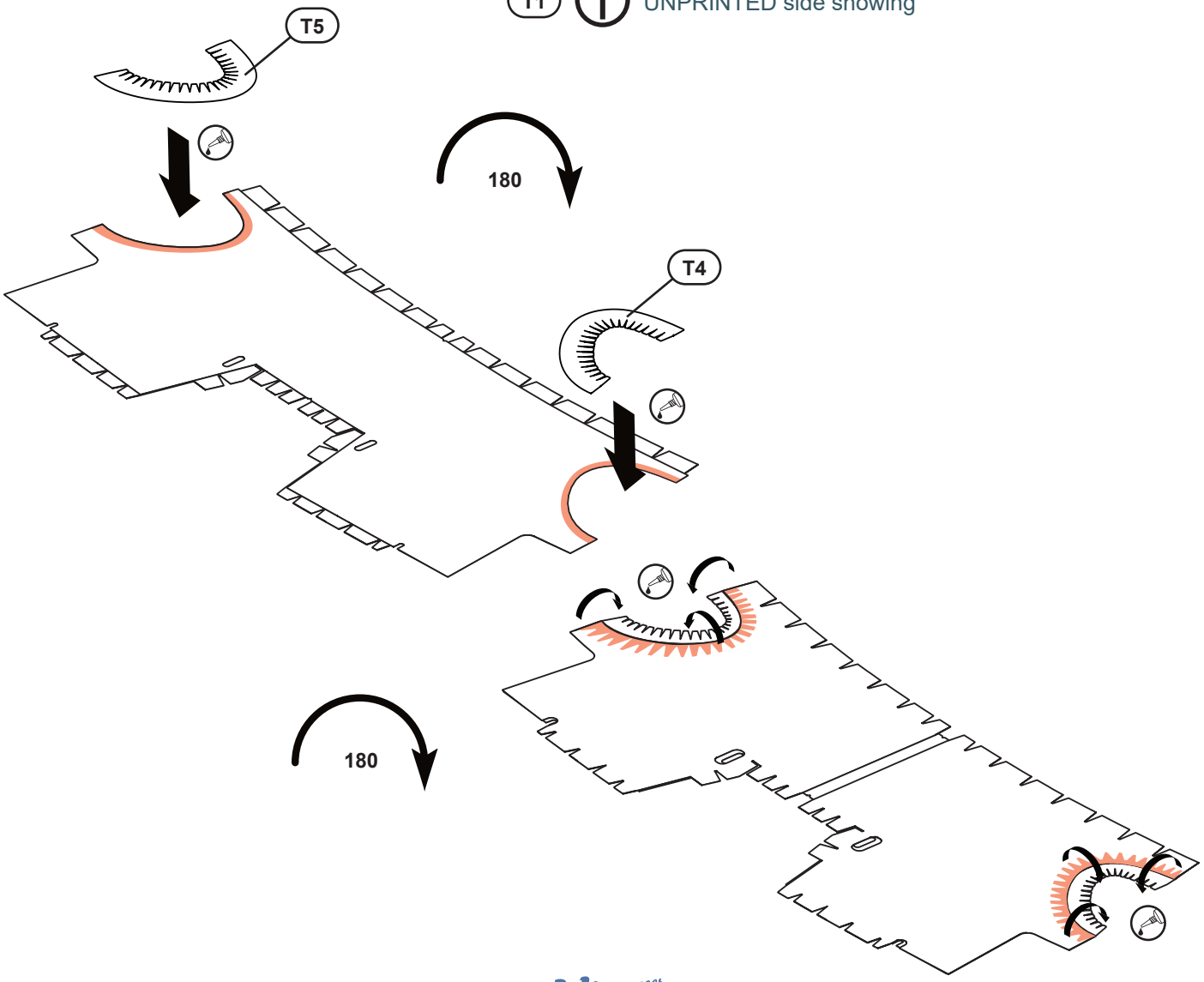


STAGE 2 FUSELAGE

Use Deluxe Material Foam2Foam to glue Tyvek. Dry fit before final assembly

Click here to view build video





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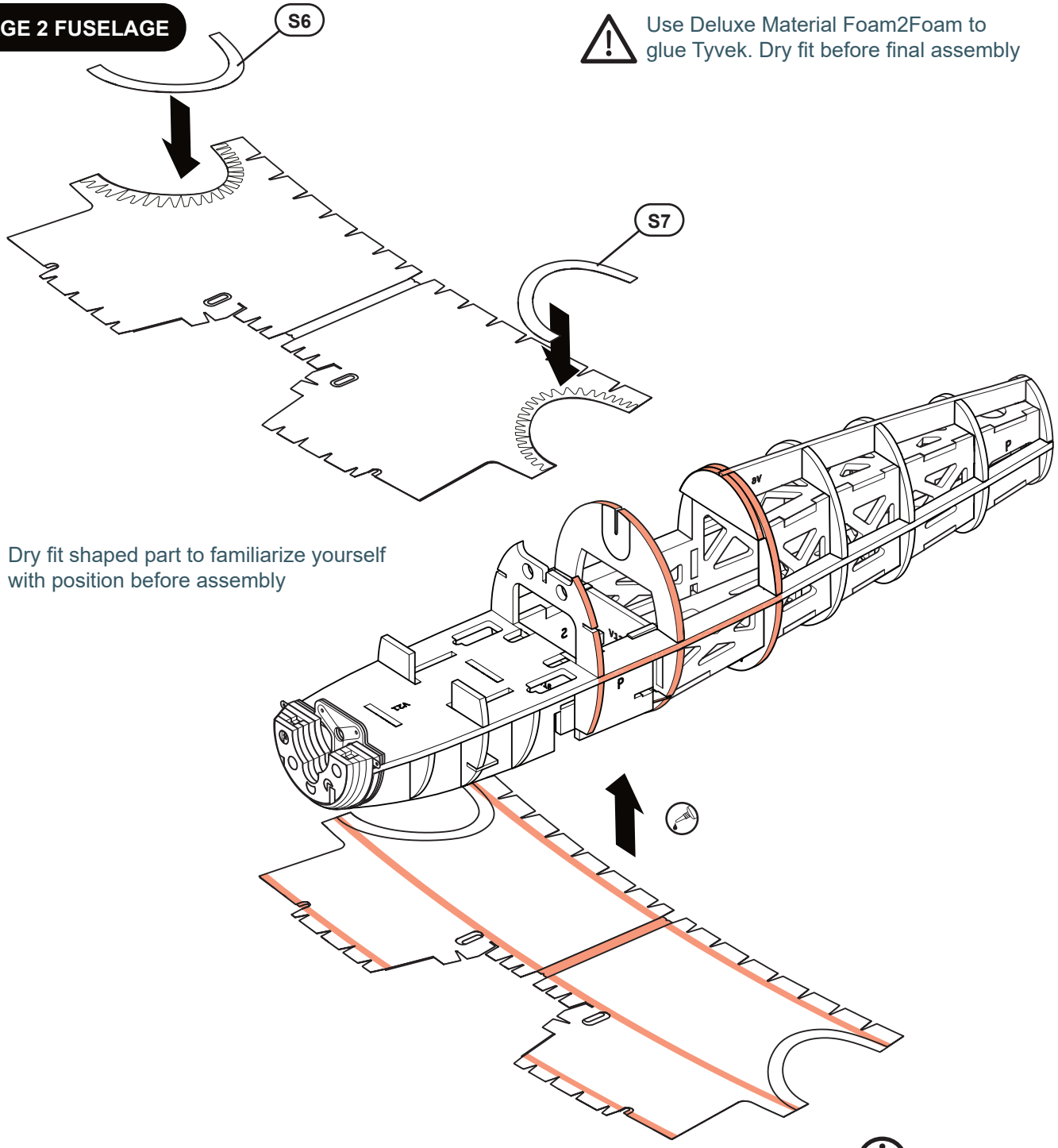
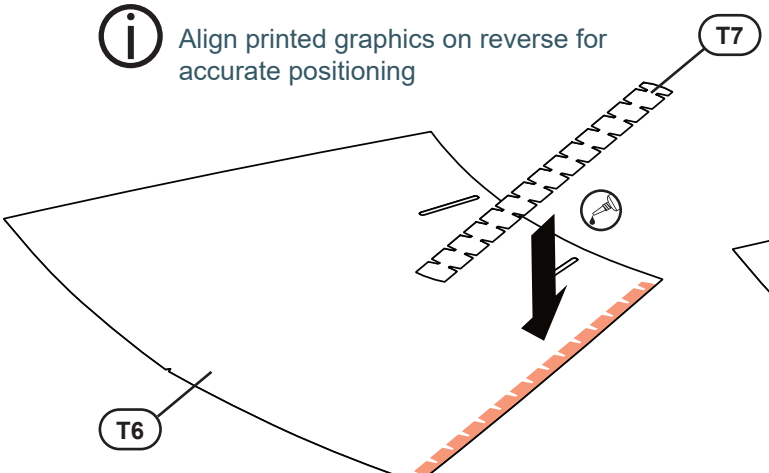


Use Deluxe Material Foam2Foam to glue Tyvek. Dry fit before final assembly

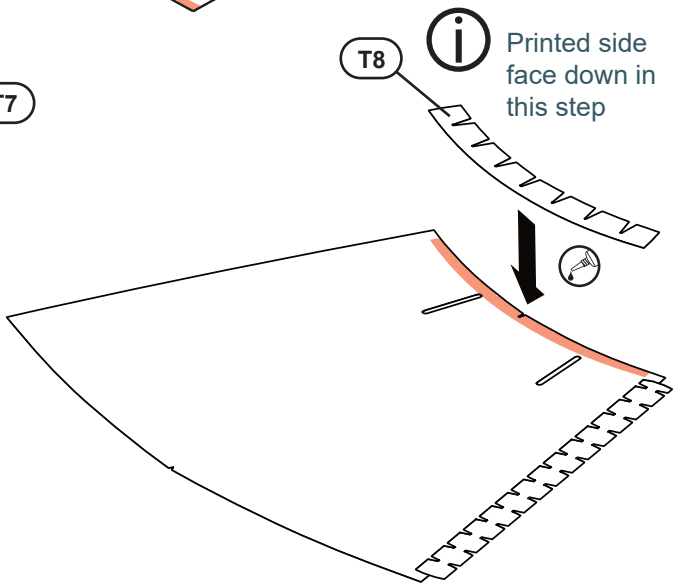
Dry fit shaped part to familiarize yourself with position before assembly

Align printed graphics on reverse for accurate positioning

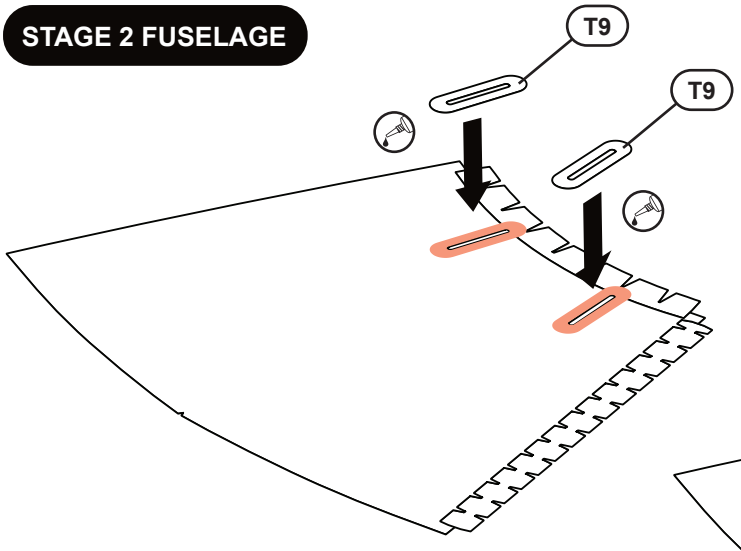


UNPRINTED side showing

Printed side face down in this step

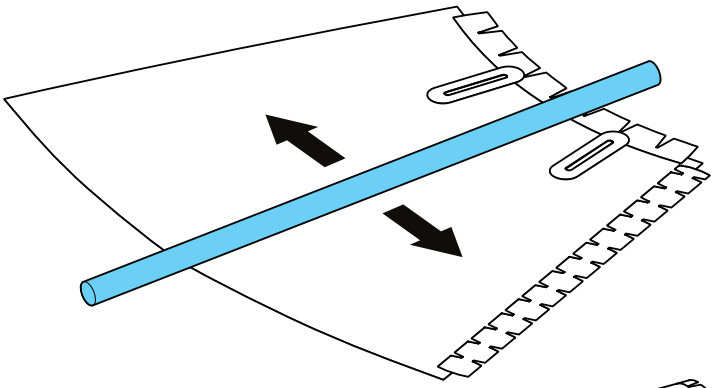


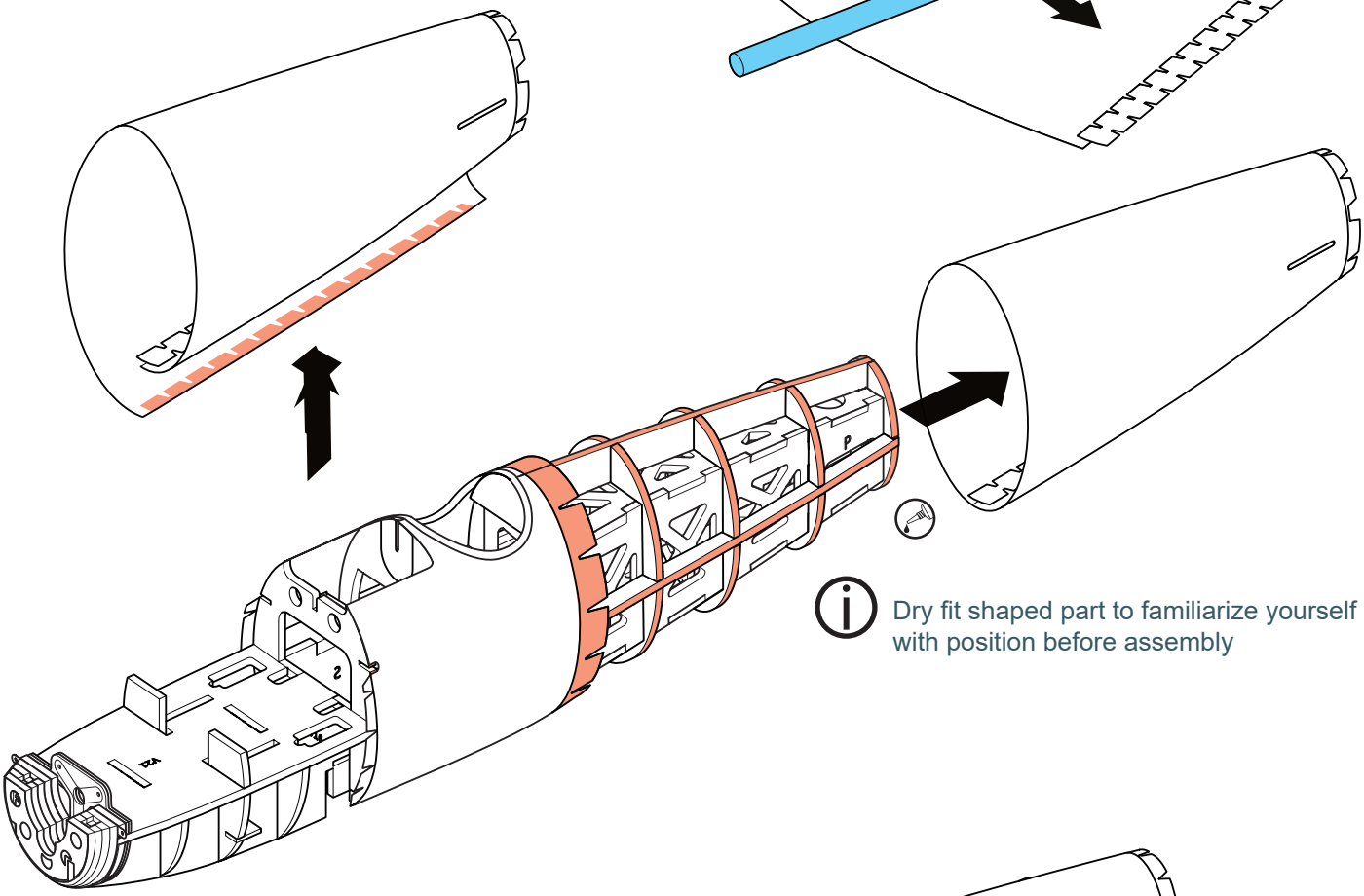
STAGE 2 FUSELAGE



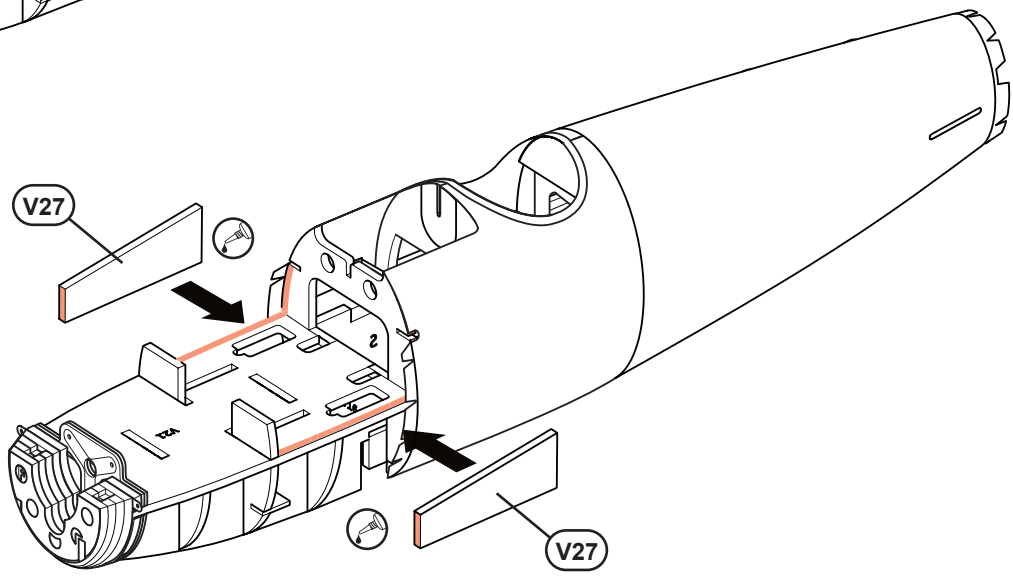
Use Deluxe Material Foam2Foam to glue Tyvek. Dry fit before final assembly

Shape the Tyvek using a dowel, paint brush handle or something similar.





Dry fit shaped part to familiarize yourself with position before assembly



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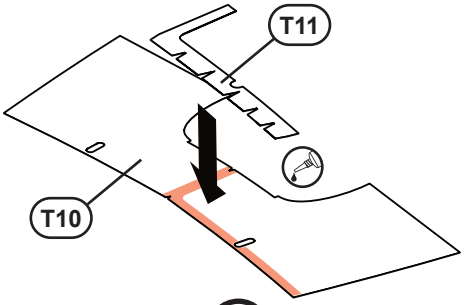
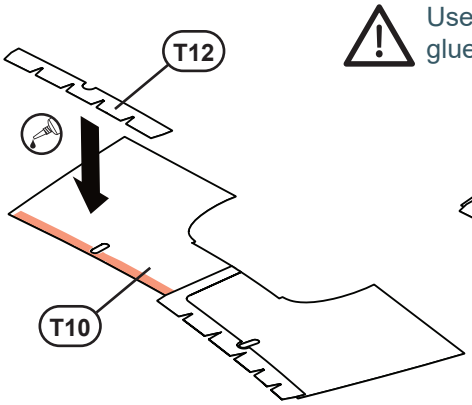
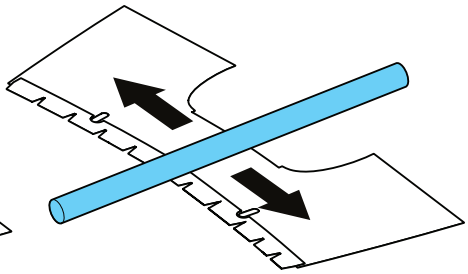
Use Deluxe Material Foam2Foam to glue Tyvek. Dry fit before final assembly

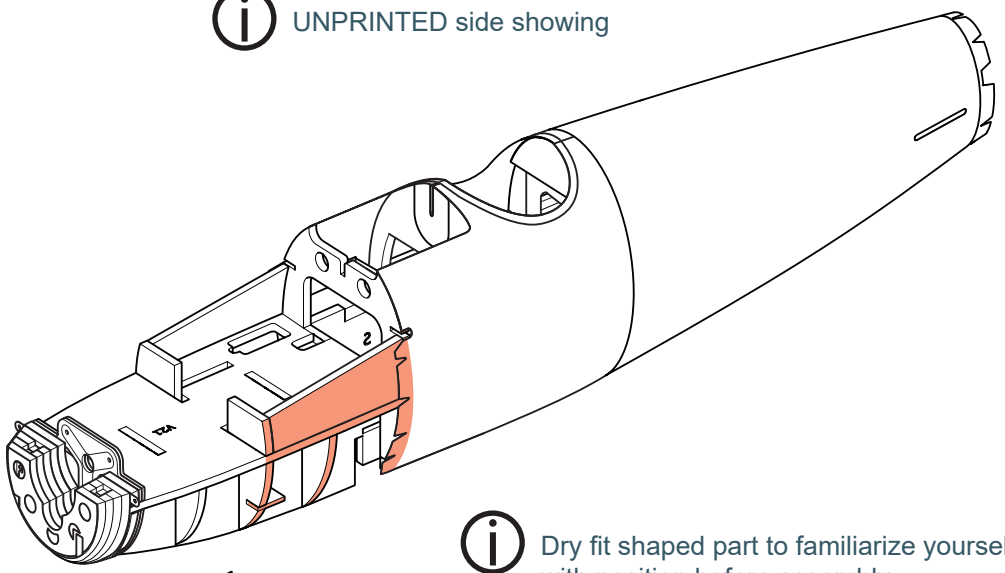




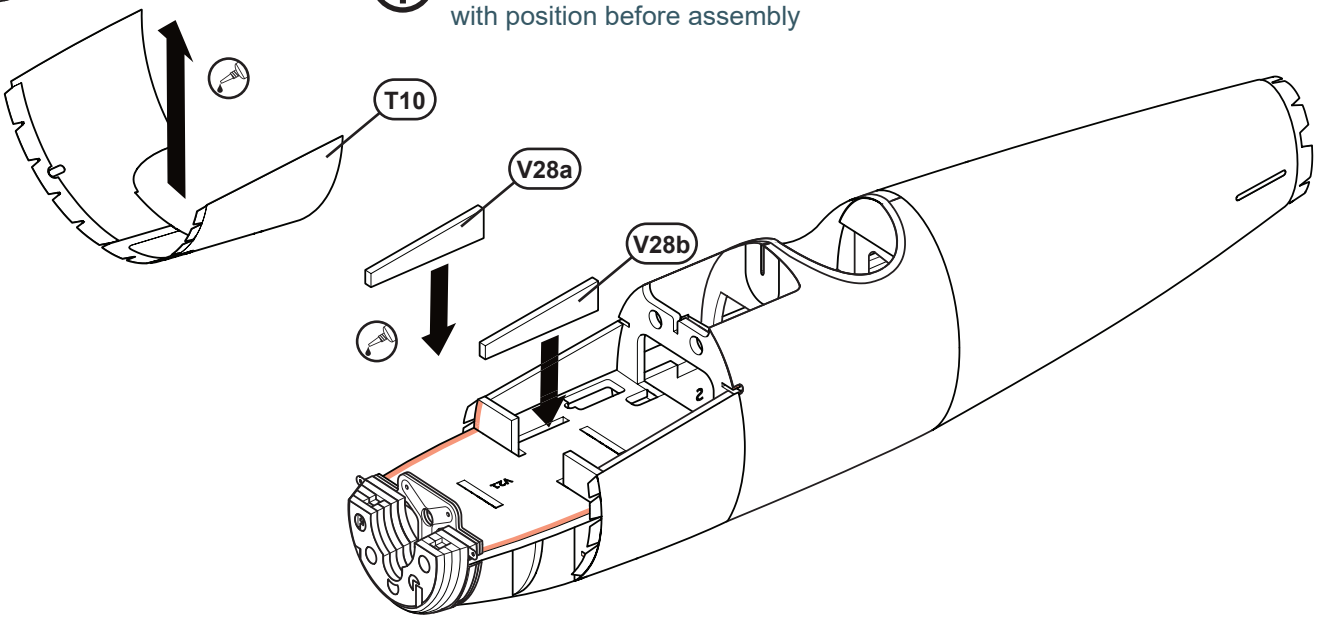


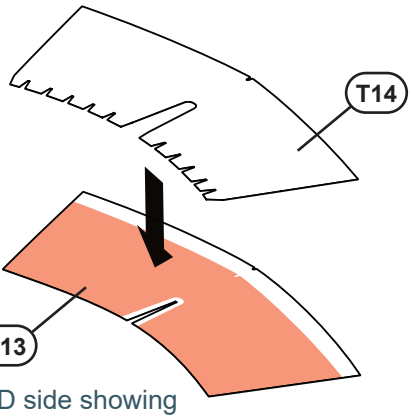
UNPRINTED side showing

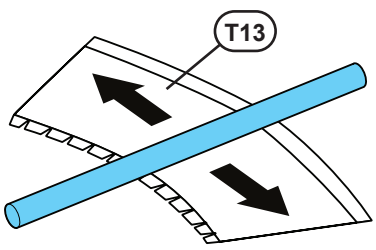
Shape the Tyvek using a dowel, paint brush handle or something similar.



Dry fit shaped part to familiarize yourself with position before assembly



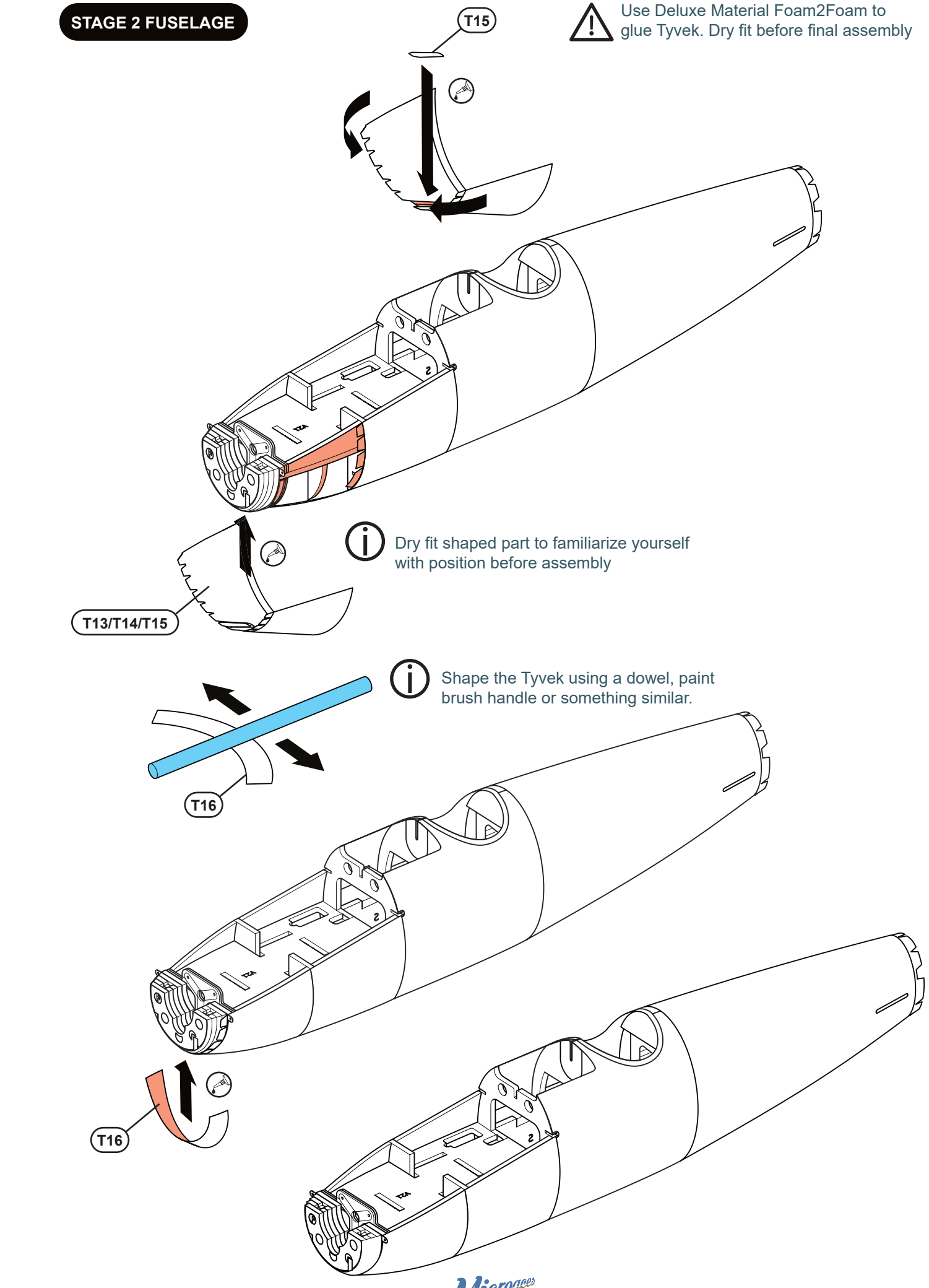




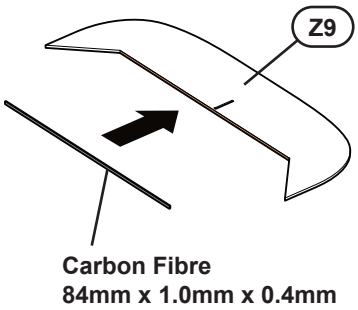
UNPRINTED side showing

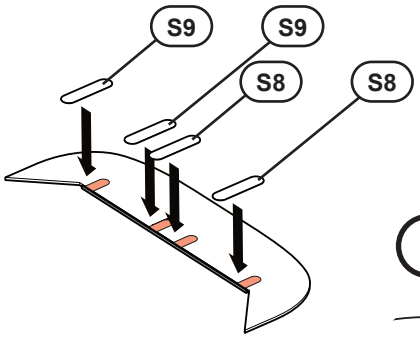
Shape the Tyvek using a dowel, paint brush handle or something similar.

STAGE 2 FUSELAGE

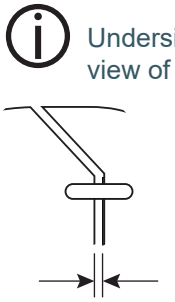


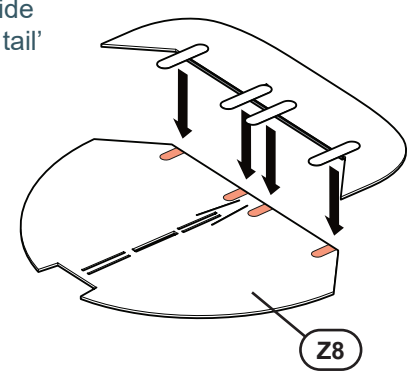
STAGE 3 TAIL

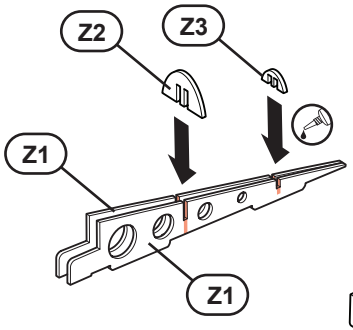


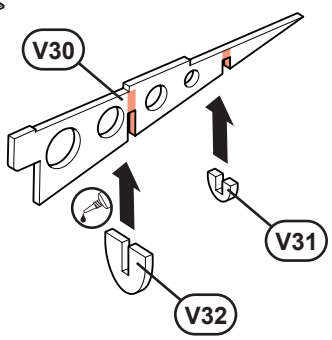


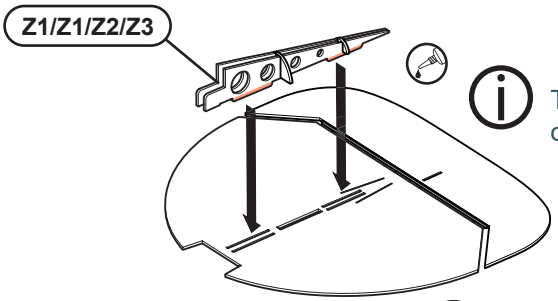
Click here to view build video

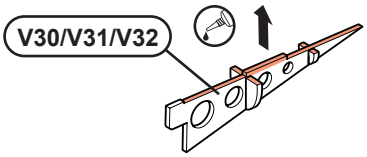


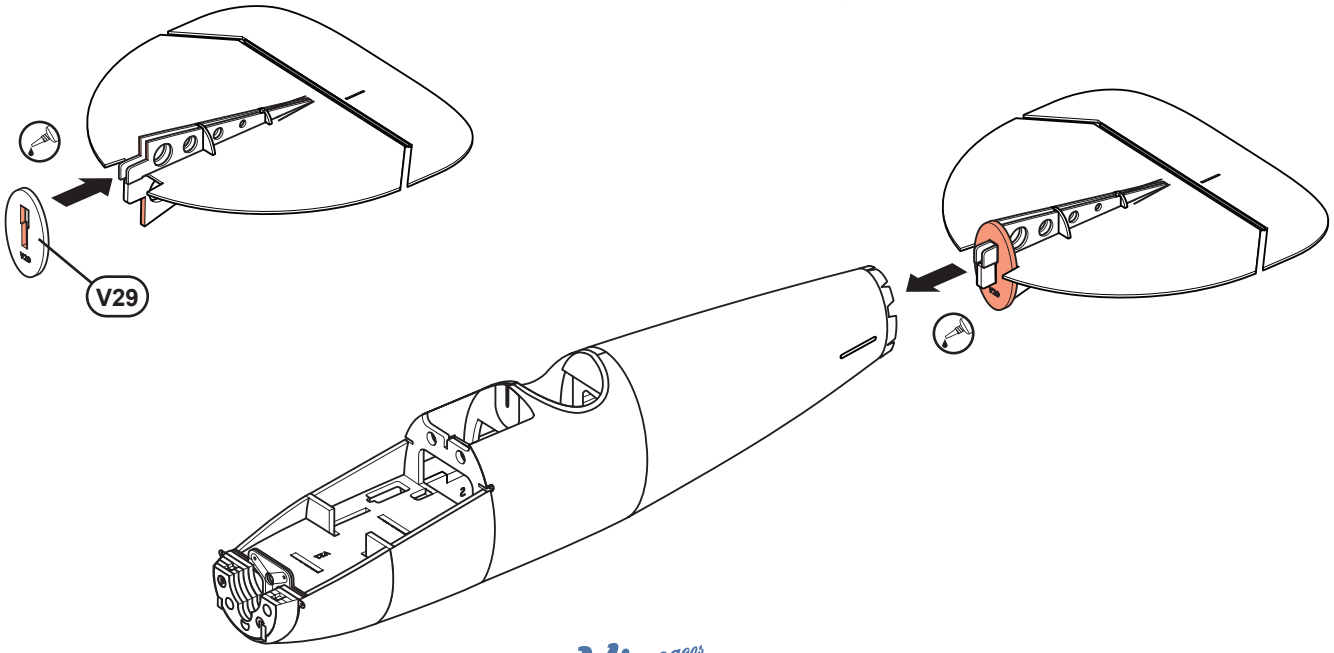










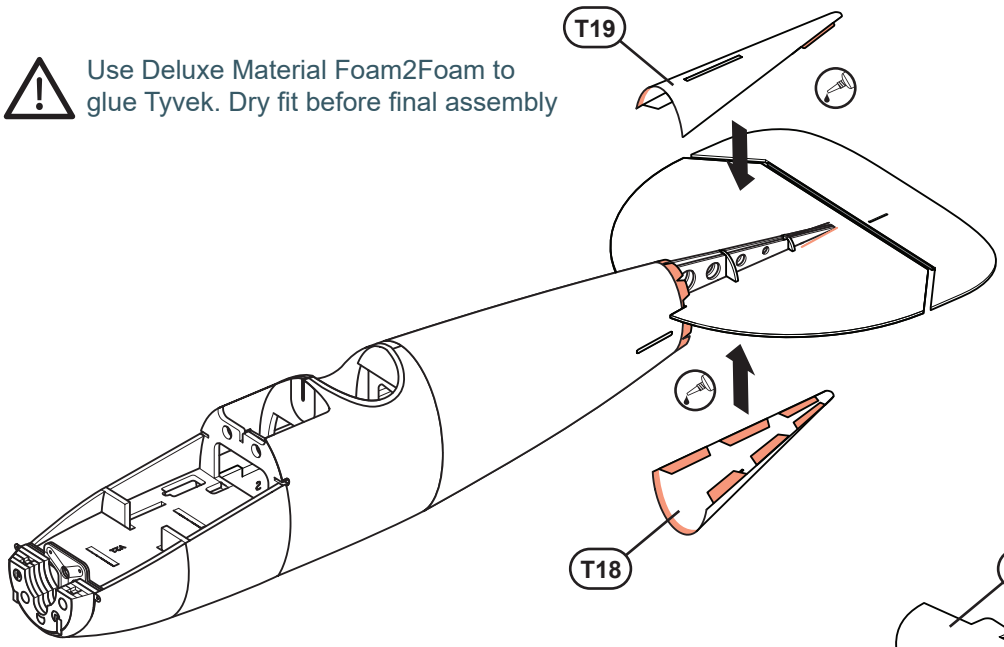


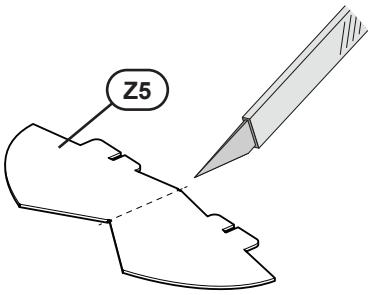
STAGE 3 TAIL

UNPRINTED side showing

Shape the Tyvek using a dowel, paint brush handle or something similar.

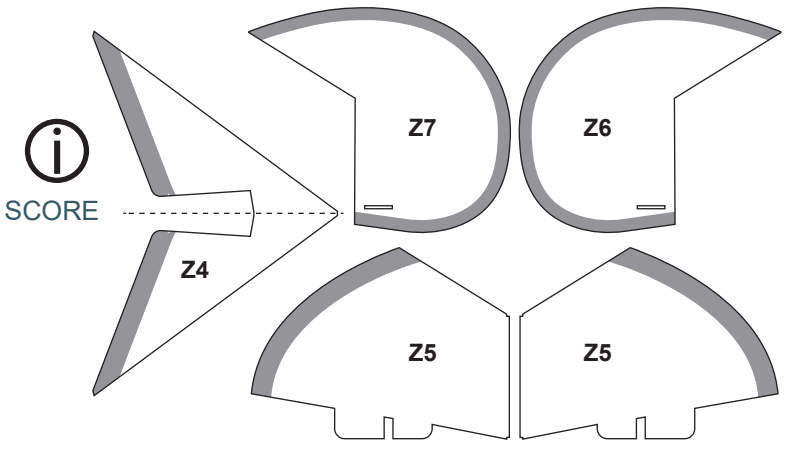
Use Deluxe Material Foam2Foam to glue Tyvek. Dry fit before final assembly





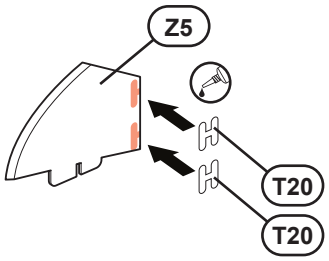
Watch Albatros Assembly Video for detail on best practice and techniques in this part of the build'

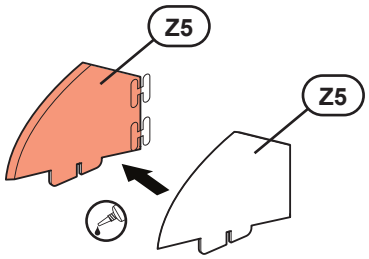
BEVEL GUIDE

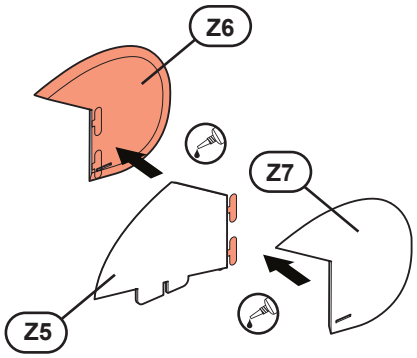


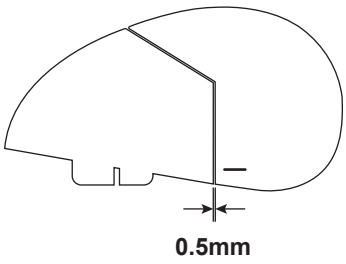
Always bevel the UNPRINTED side of the part unless otherwise stated

STAGE 3 TAIL

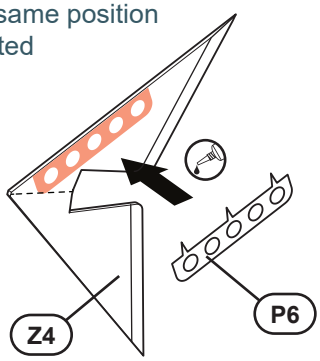


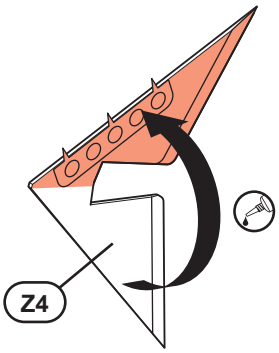


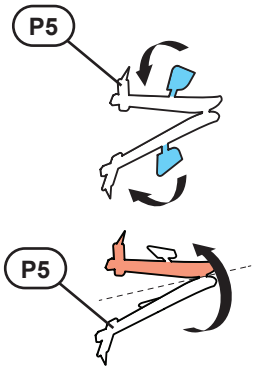


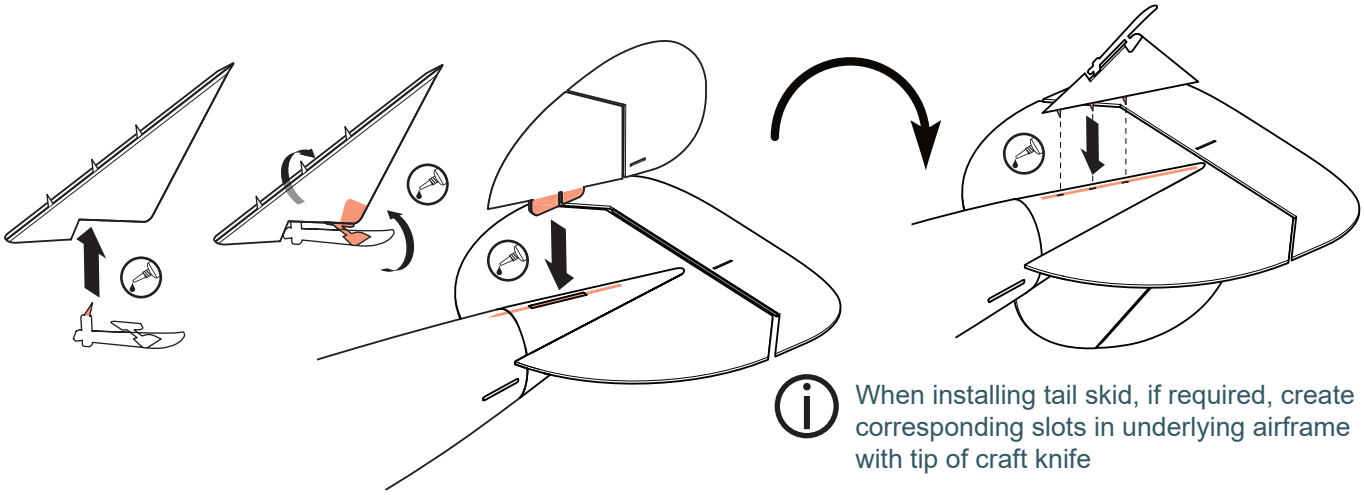


Note position of P6 on Z4. Place in same position as indicated

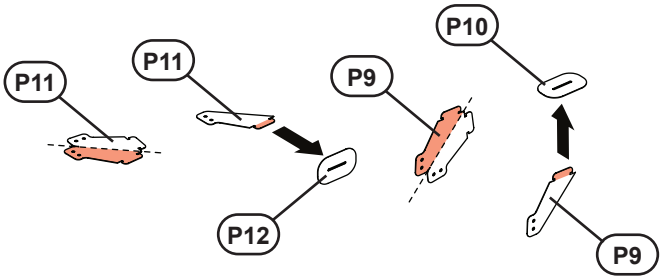


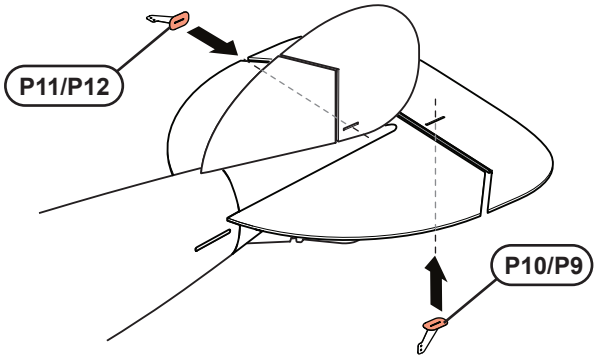






When installing tail skid, if required, create corresponding slots in underlying airframe with tip of craft knife

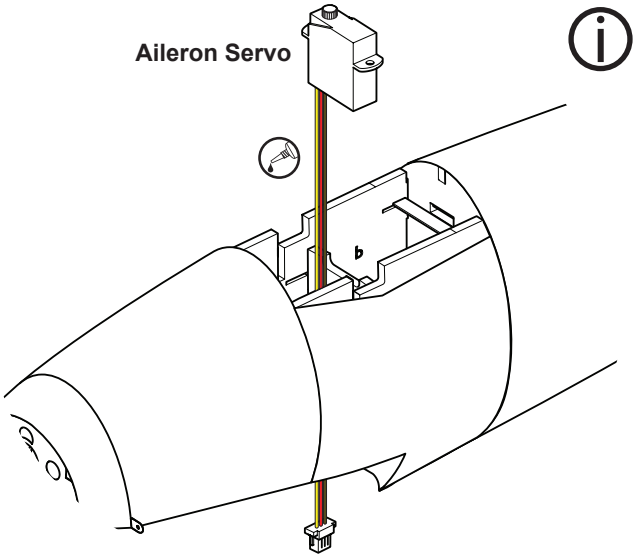




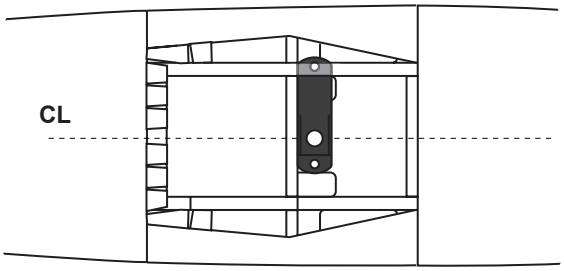
STAGE 4 LOWER WING

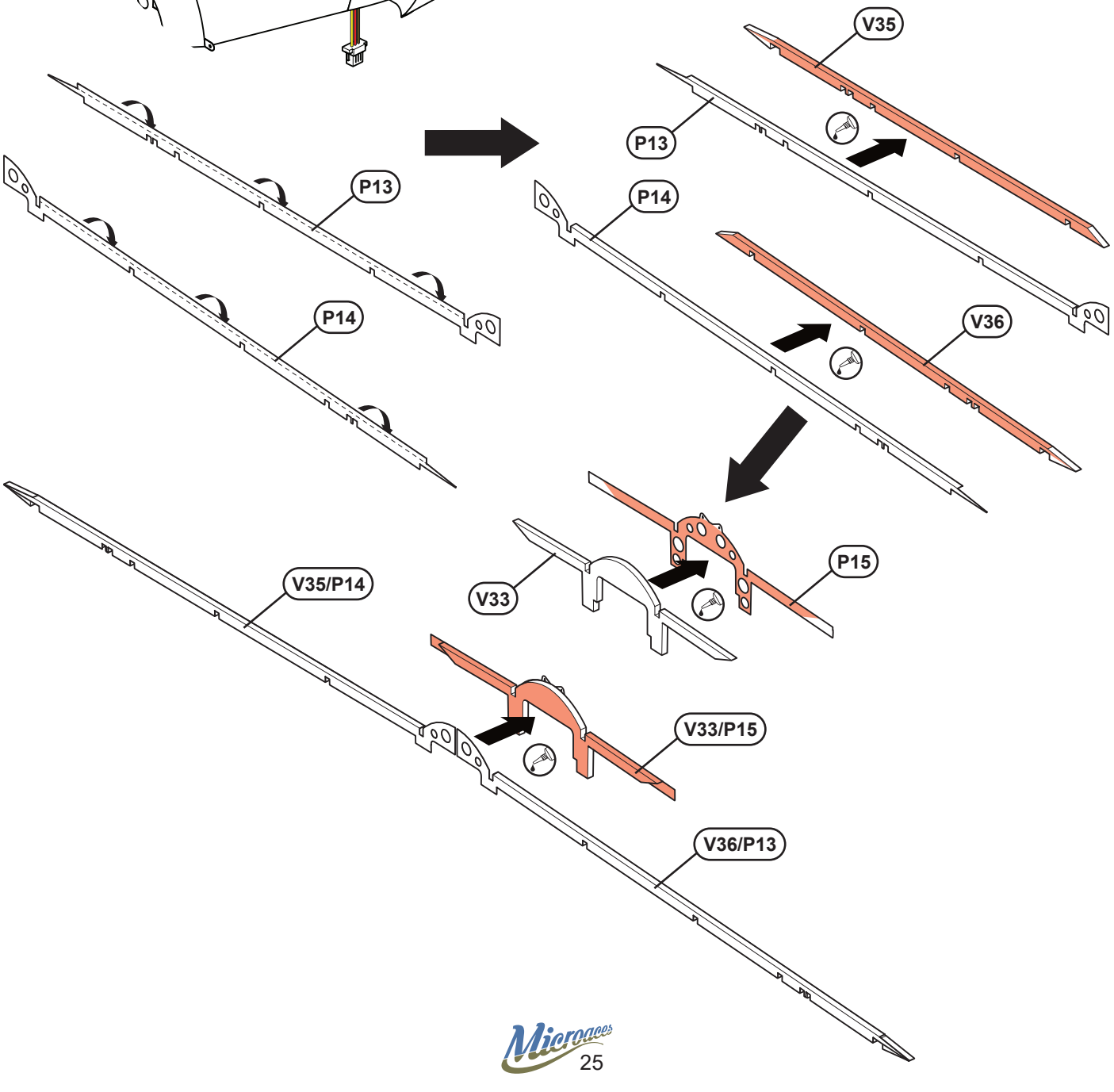
Before installing the servo, ensure it operates correctly by plugging into the aileron port on the receiver and testing control with your transmitter. Centre any trim setting you may have on your transmitter to ensure the servo is centred

Click here to view build video

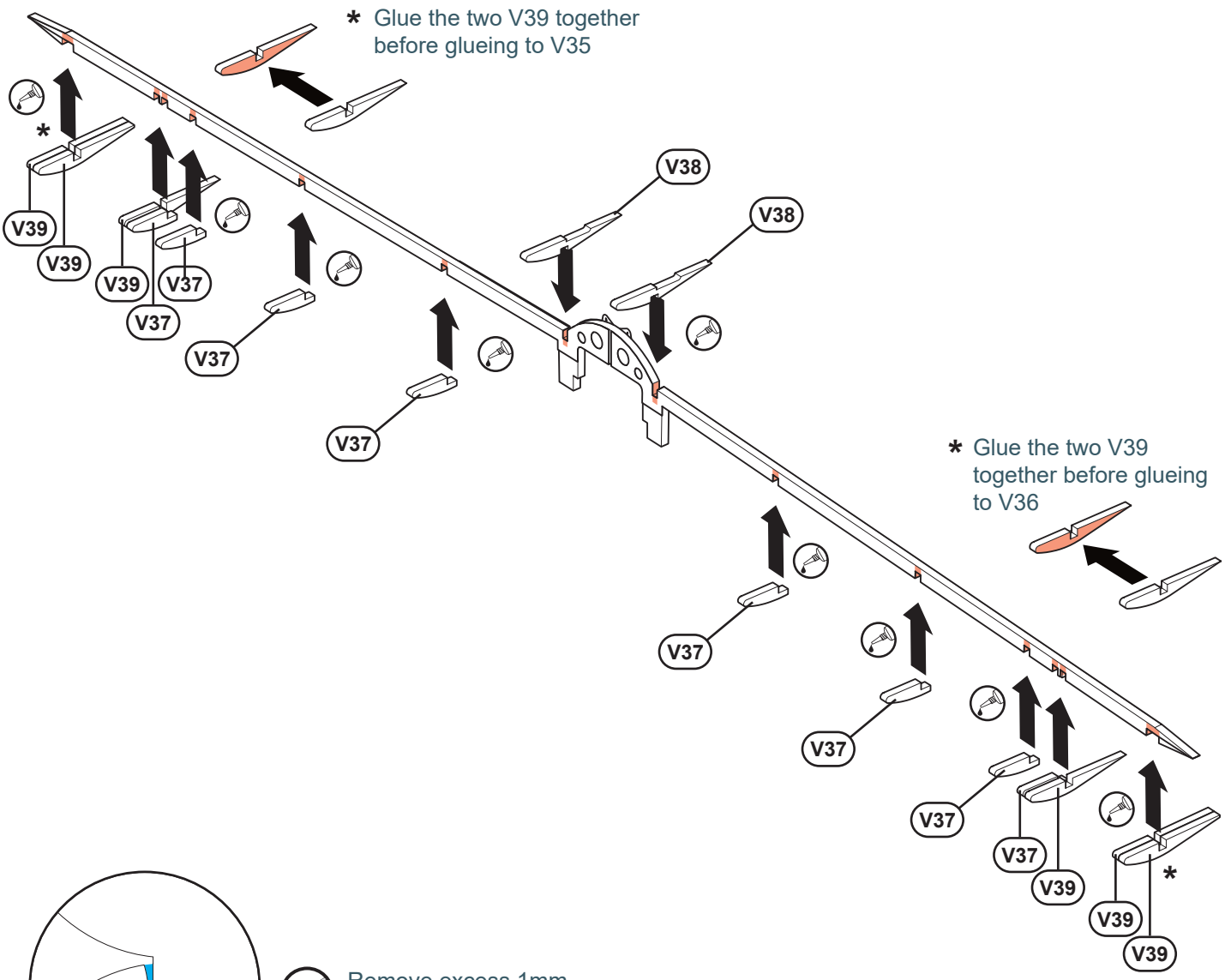


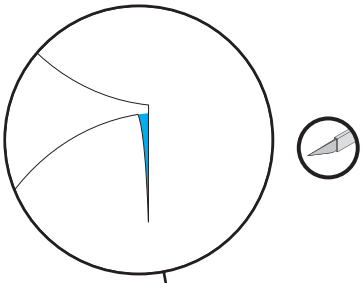
Feed the servo wire and connector through one of the two holes provided and into the electronics compartment. Use slot in airframe to insert servo tab to enable centre line (CL) position





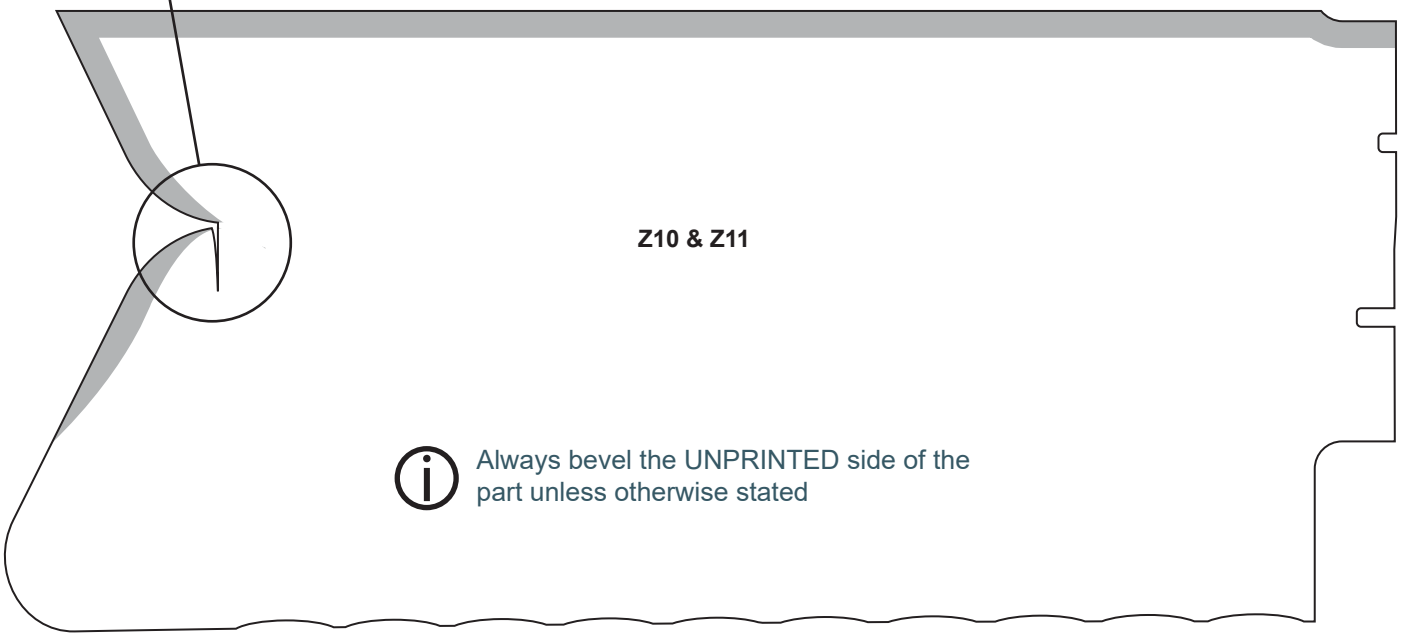
STAGE 4 LOWER WING





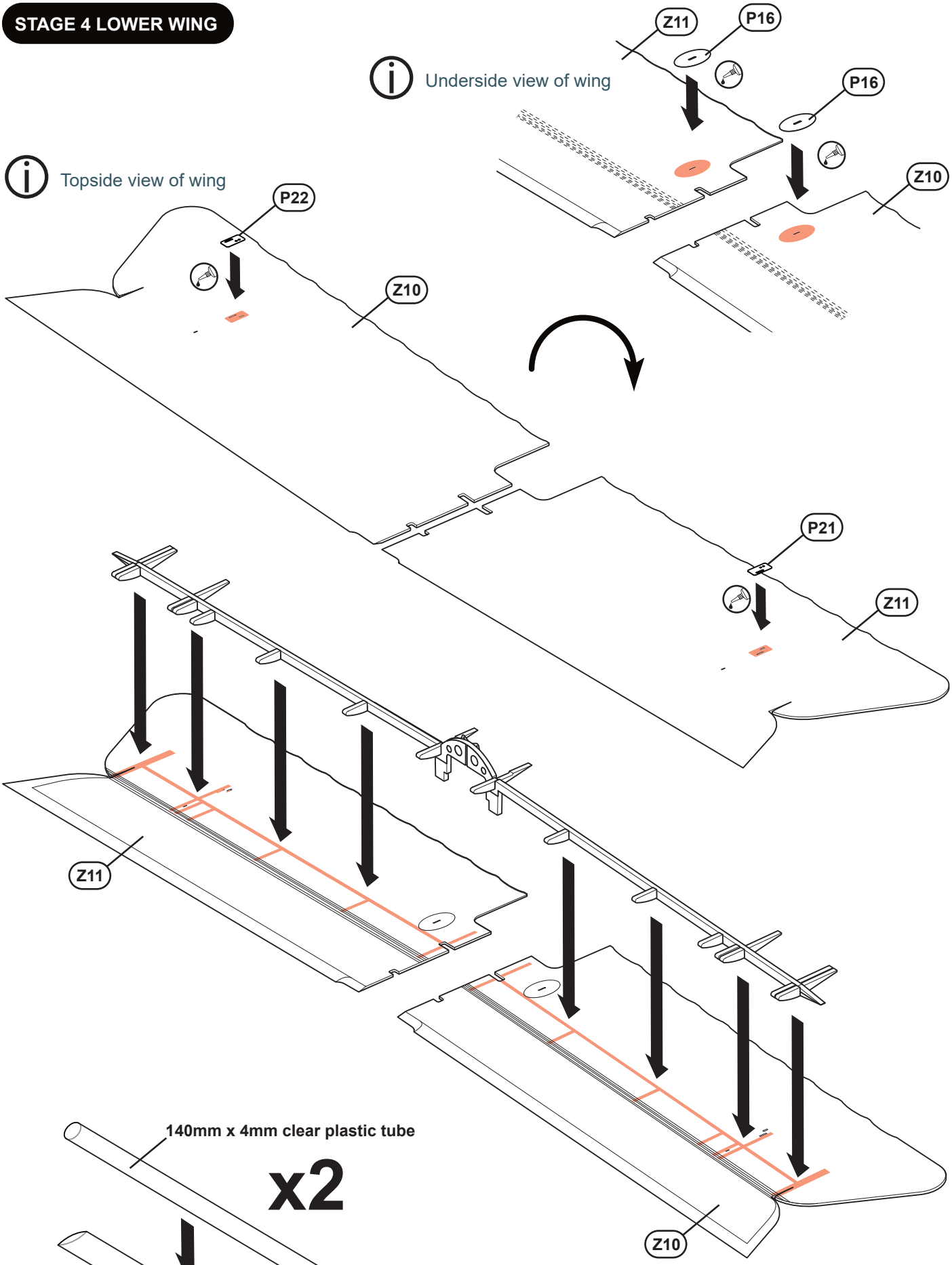
Remove excess 1mm foam as shown

BEVEL GUIDE

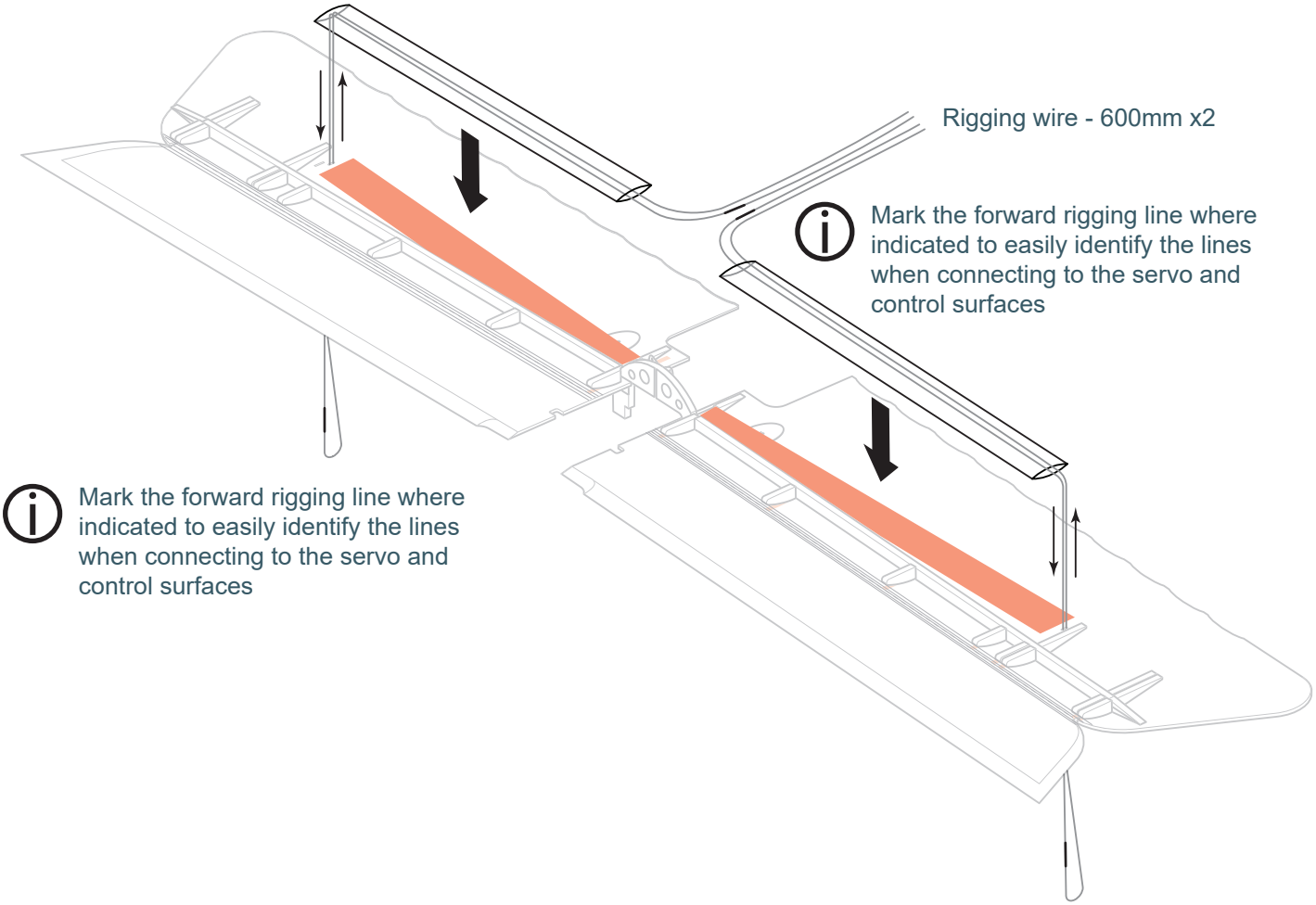


Always bevel the UNPRINTED side of the part unless otherwise stated

STAGE 4 LOWER WING



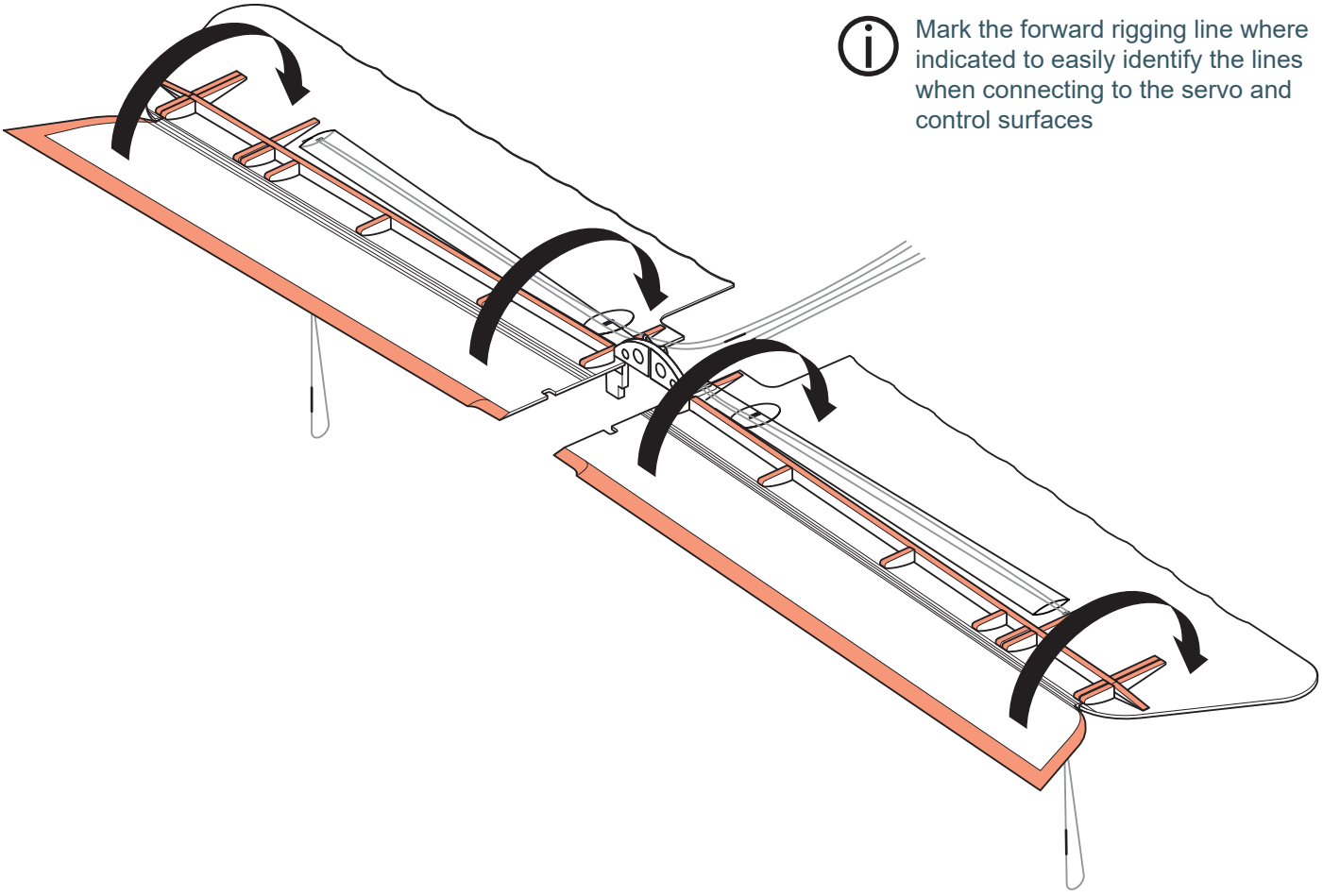
STAGE 4 LOWER WING



Rigging wire - 600mm x2

Mark the forward rigging line where indicated to easily identify the lines when connecting to the servo and control surfaces

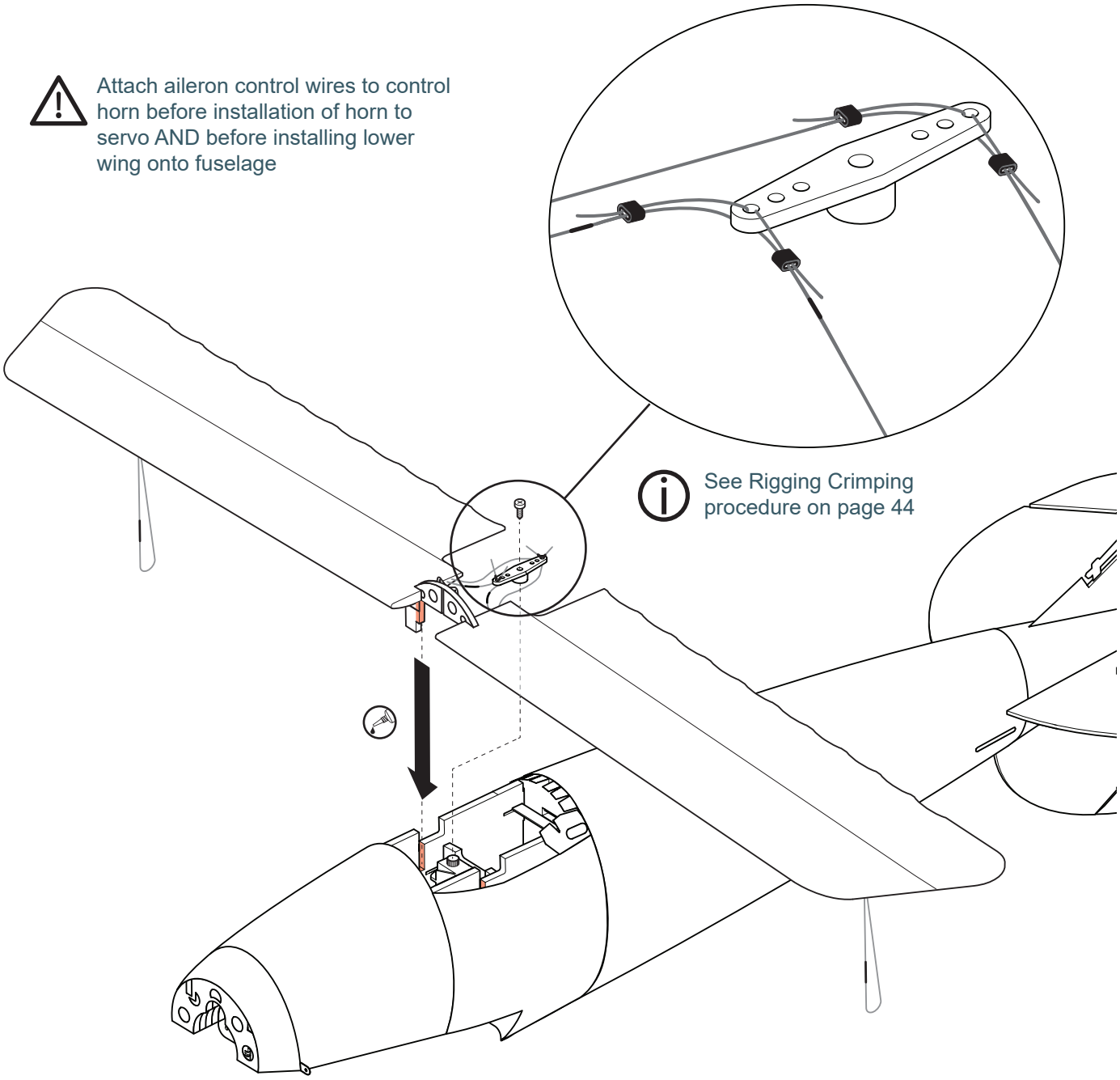
Mark the forward rigging line where indicated to easily identify the lines when connecting to the servo and control surfaces



Mark the forward rigging line where indicated to easily identify the lines when connecting to the servo and control surfaces

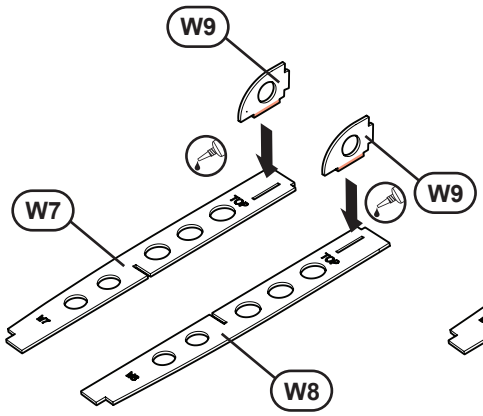
STAGE 4 LOWER WING

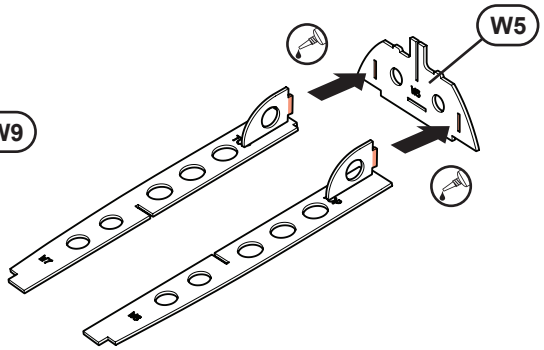
Attach aileron control wires to control horn before installation of horn to servo AND before installing lower wing onto fuselage



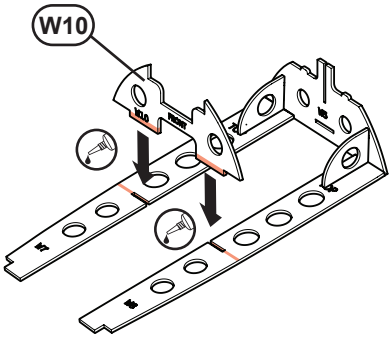
See Rigging Crimping procedure on page 44

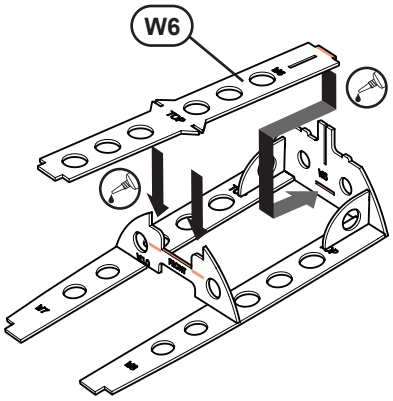
STAGE 5 ACCESS HATCH

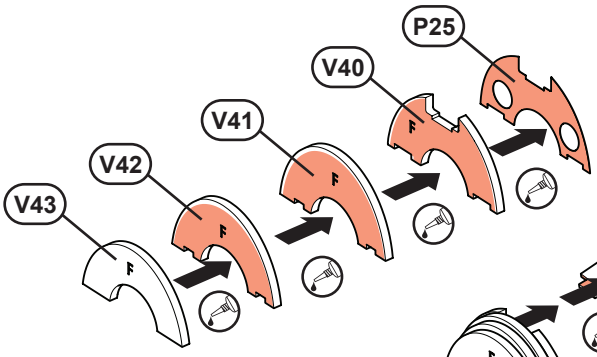


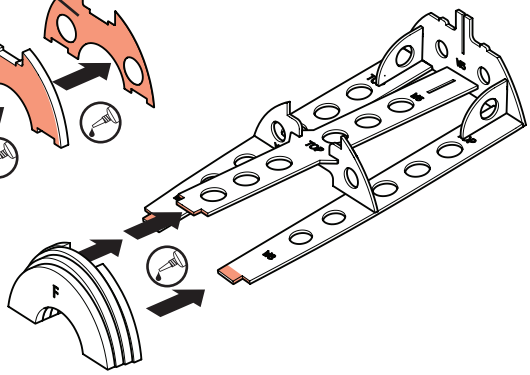


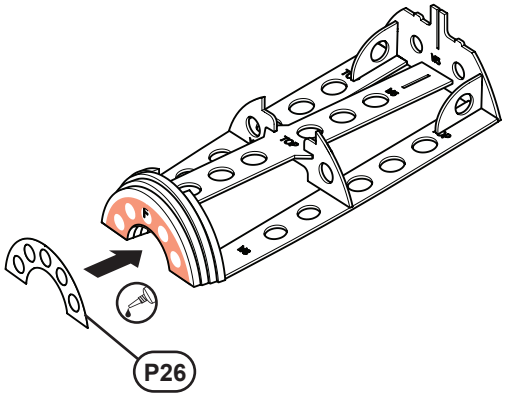
Click here to view build video

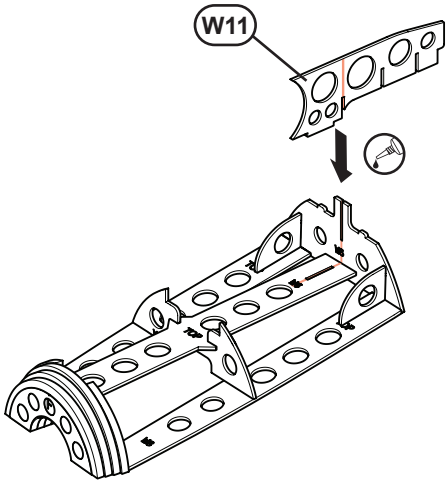


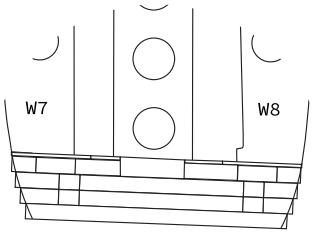


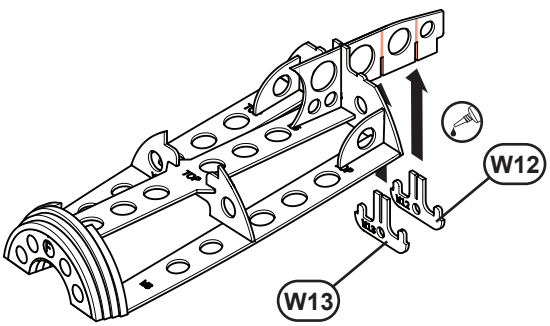






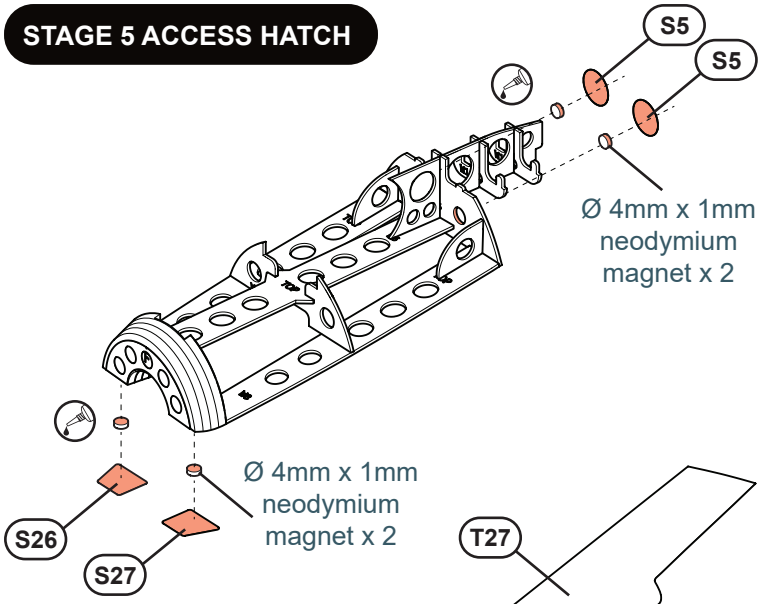


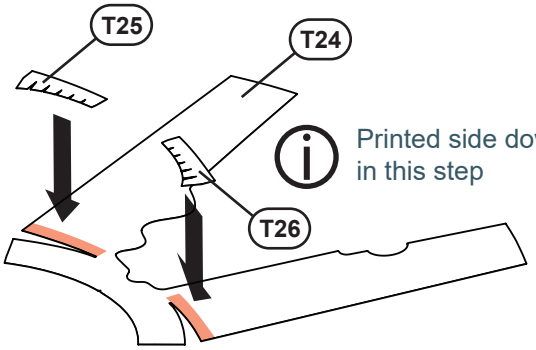




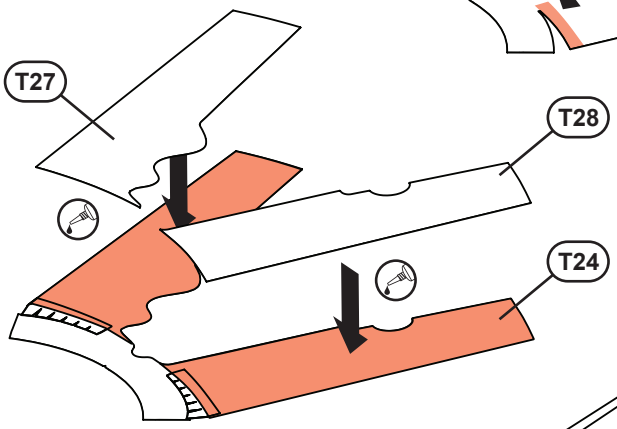
using a fresh blade, remove the edges of the foam nose. Use the curved edges of the plastic parts that sandwich the foam to guide the blade

STAGE 5 ACCESS HATCH

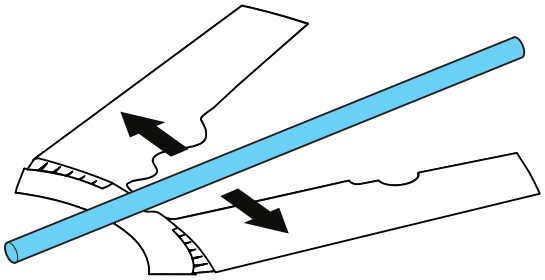


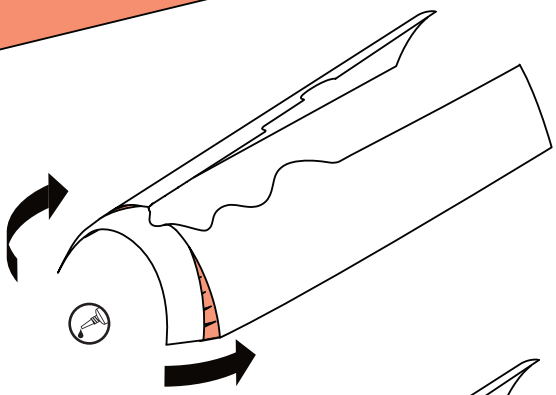


Printed side down in this step

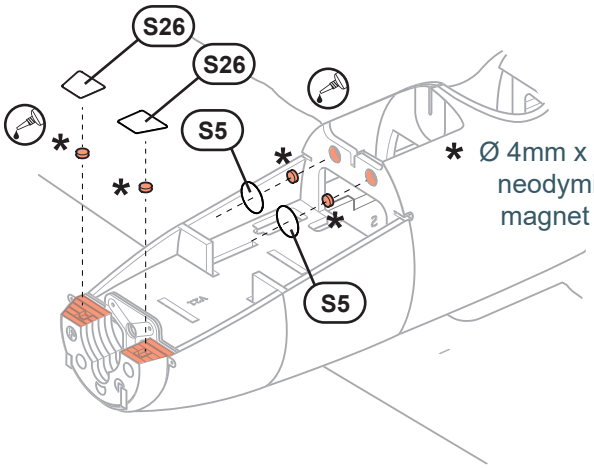


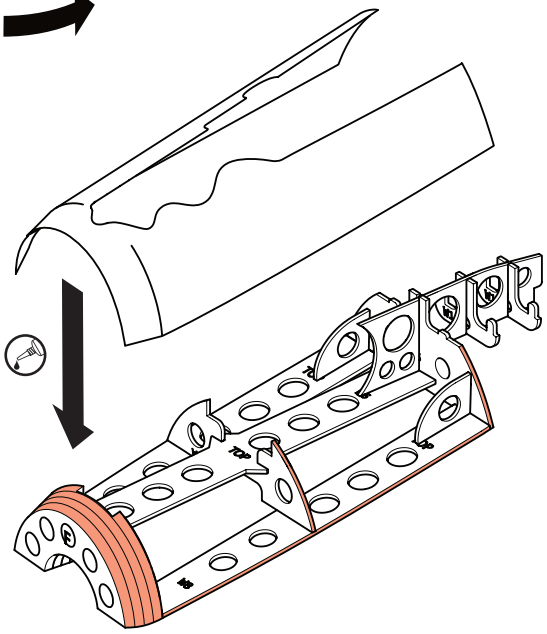
Shape the Tyvek using a dowel, paint brush handle or something similar.



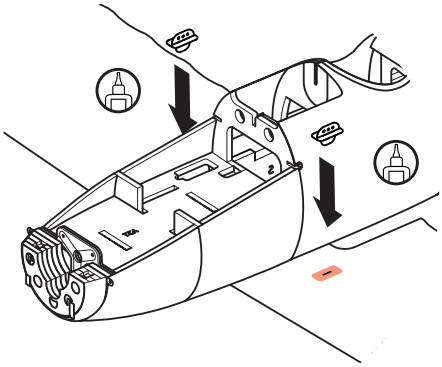


Ensure the magnet is correctly oriented before installation. Do this by matching it to the magnet installed in the fuselage before installing it here.

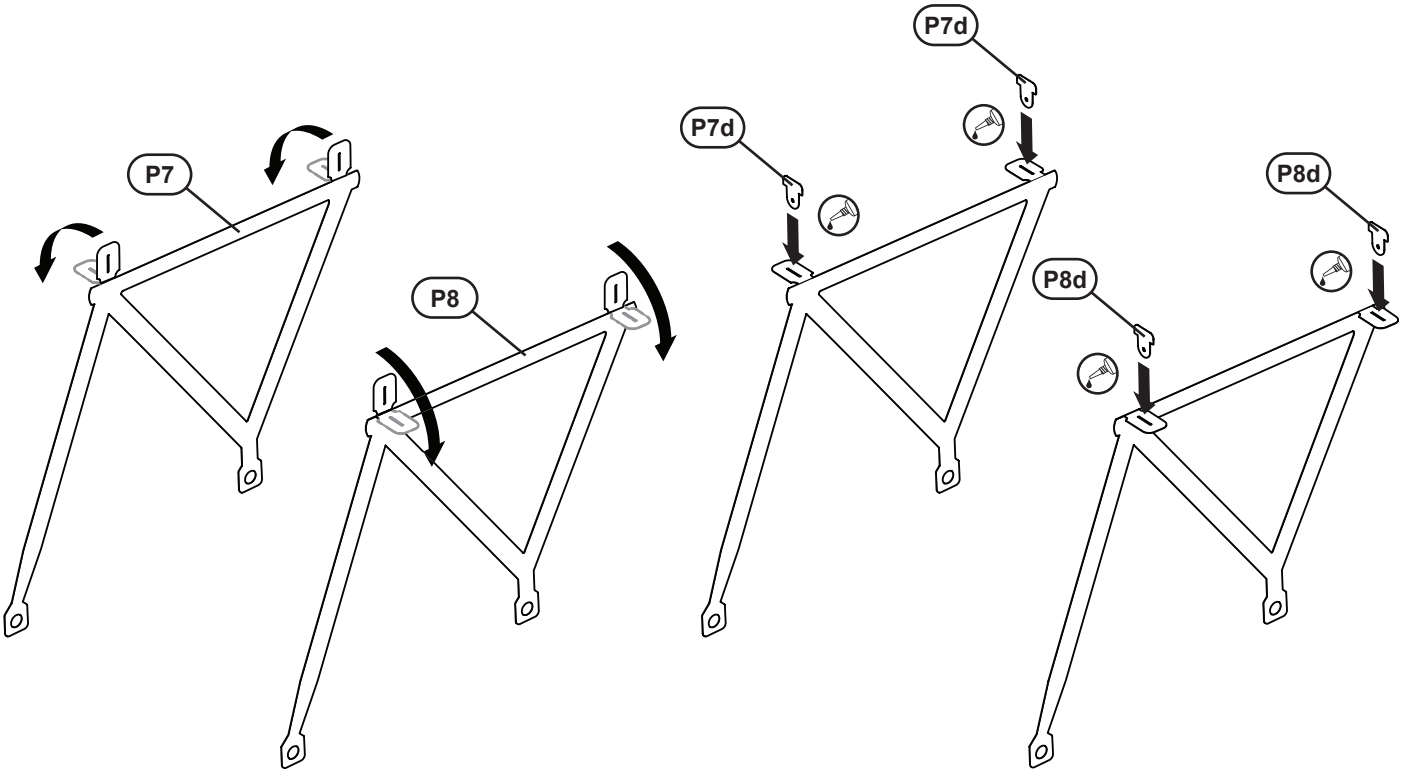


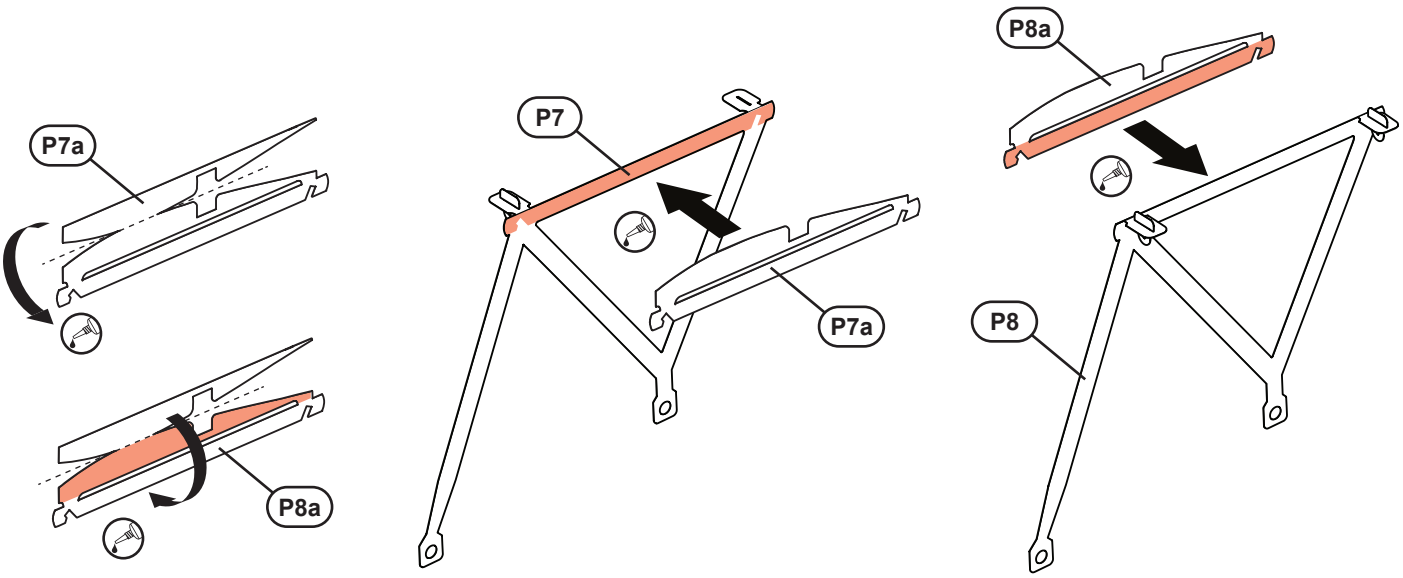


STAGE 6 STRUTS

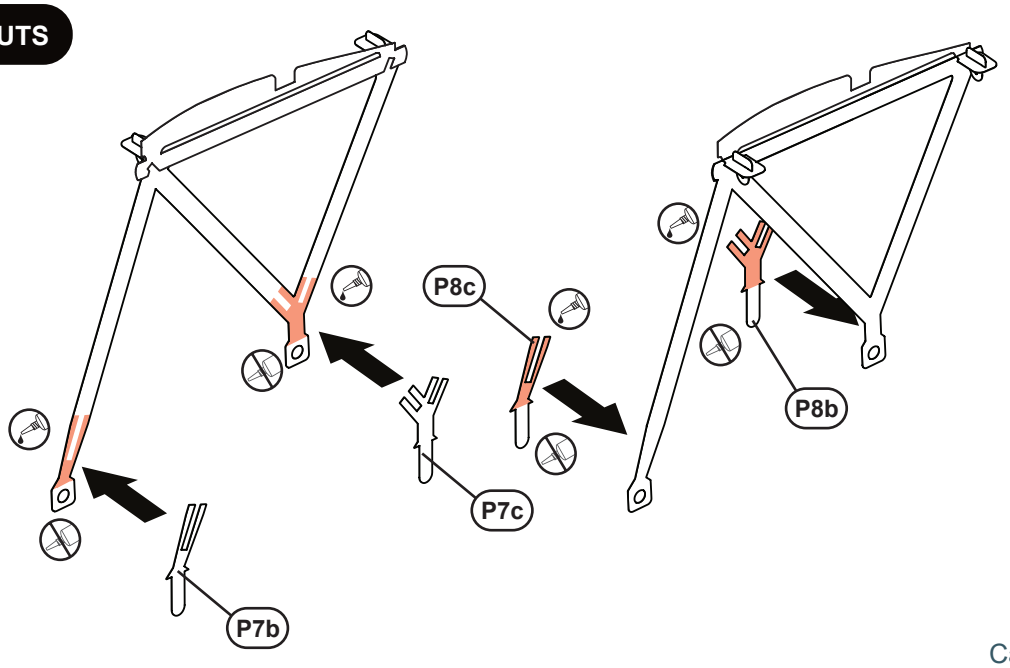


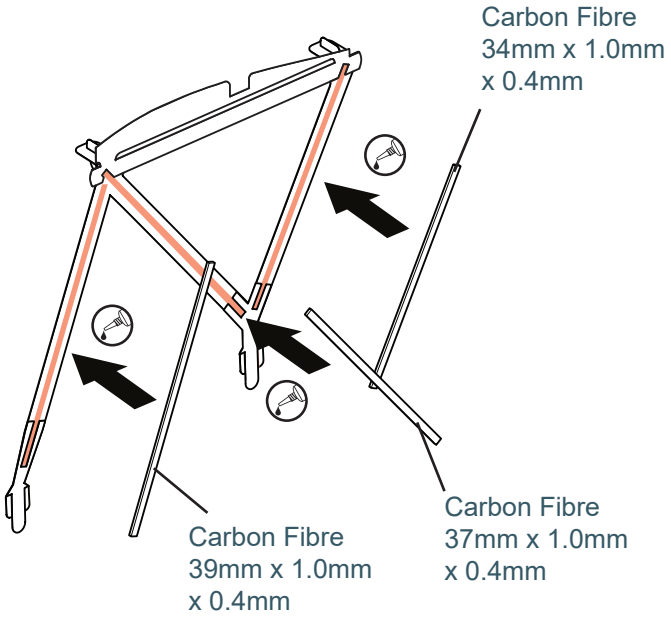
Click here to view build video

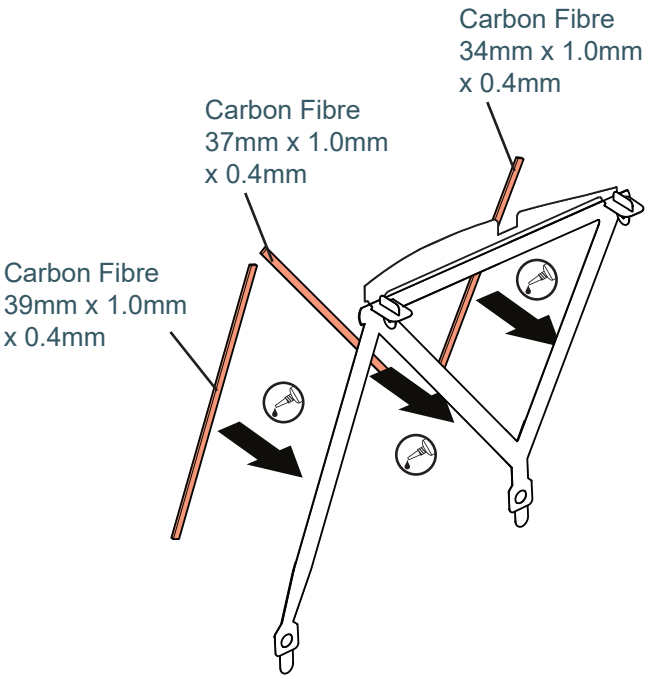




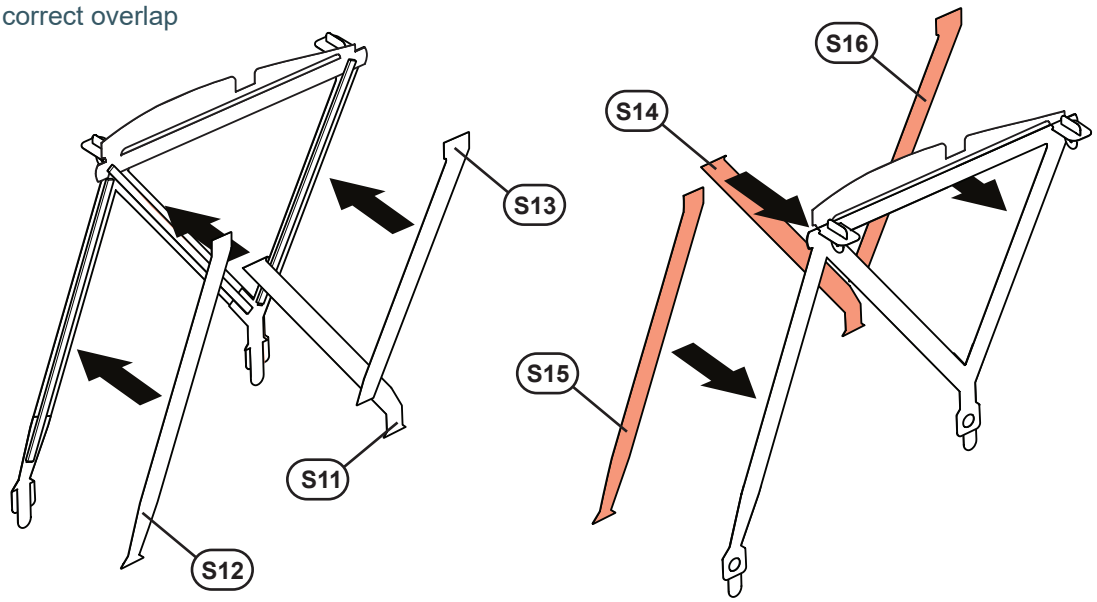
STAGE 6 STRUTS



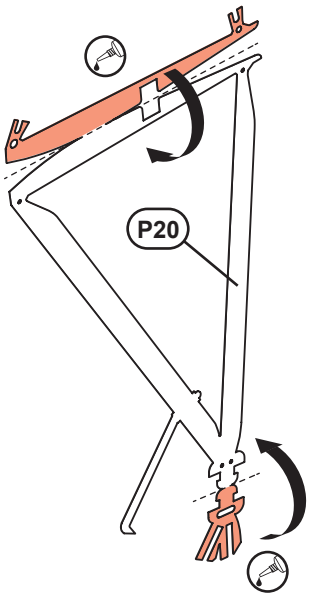


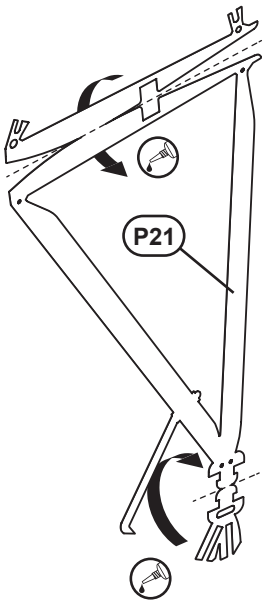


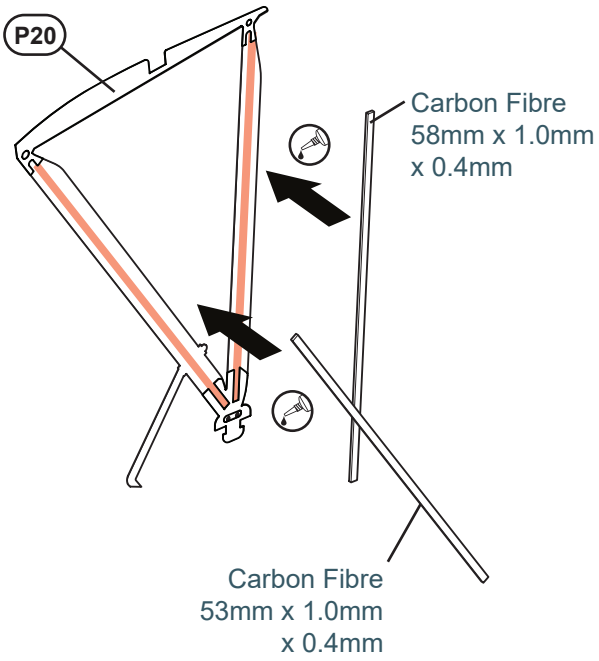
Attach stickers in number order to ensure correct overlap

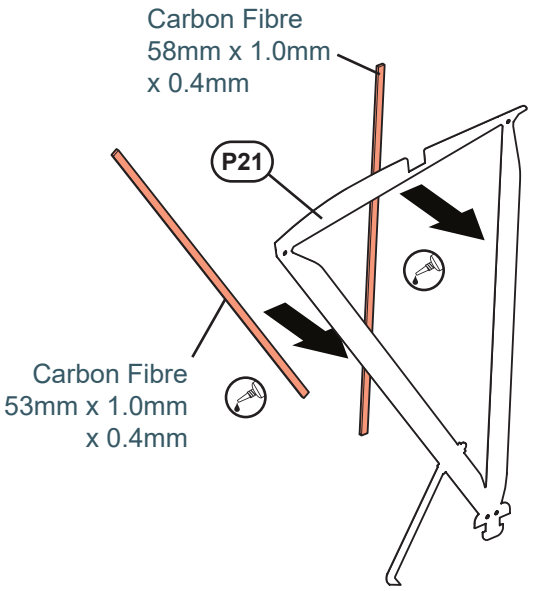


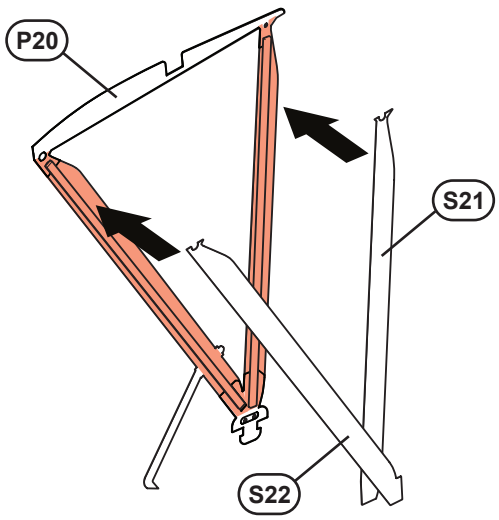
STAGE 6 STRUTS

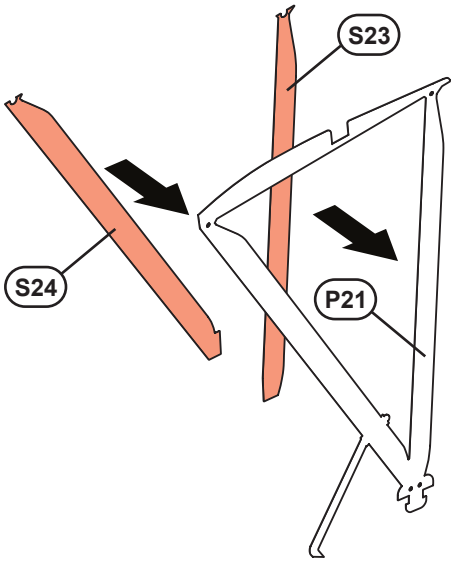


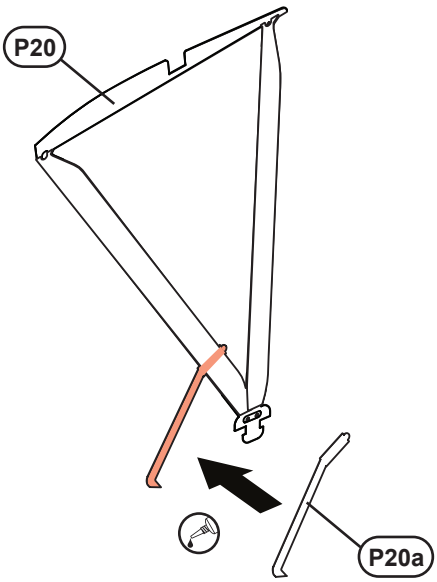


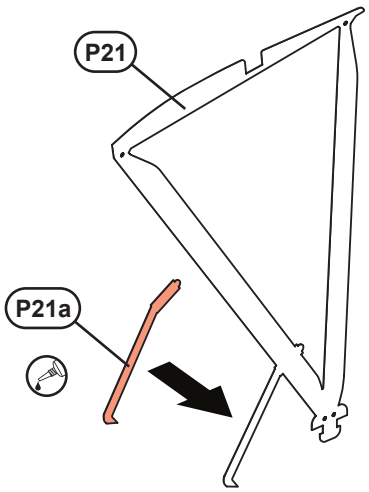




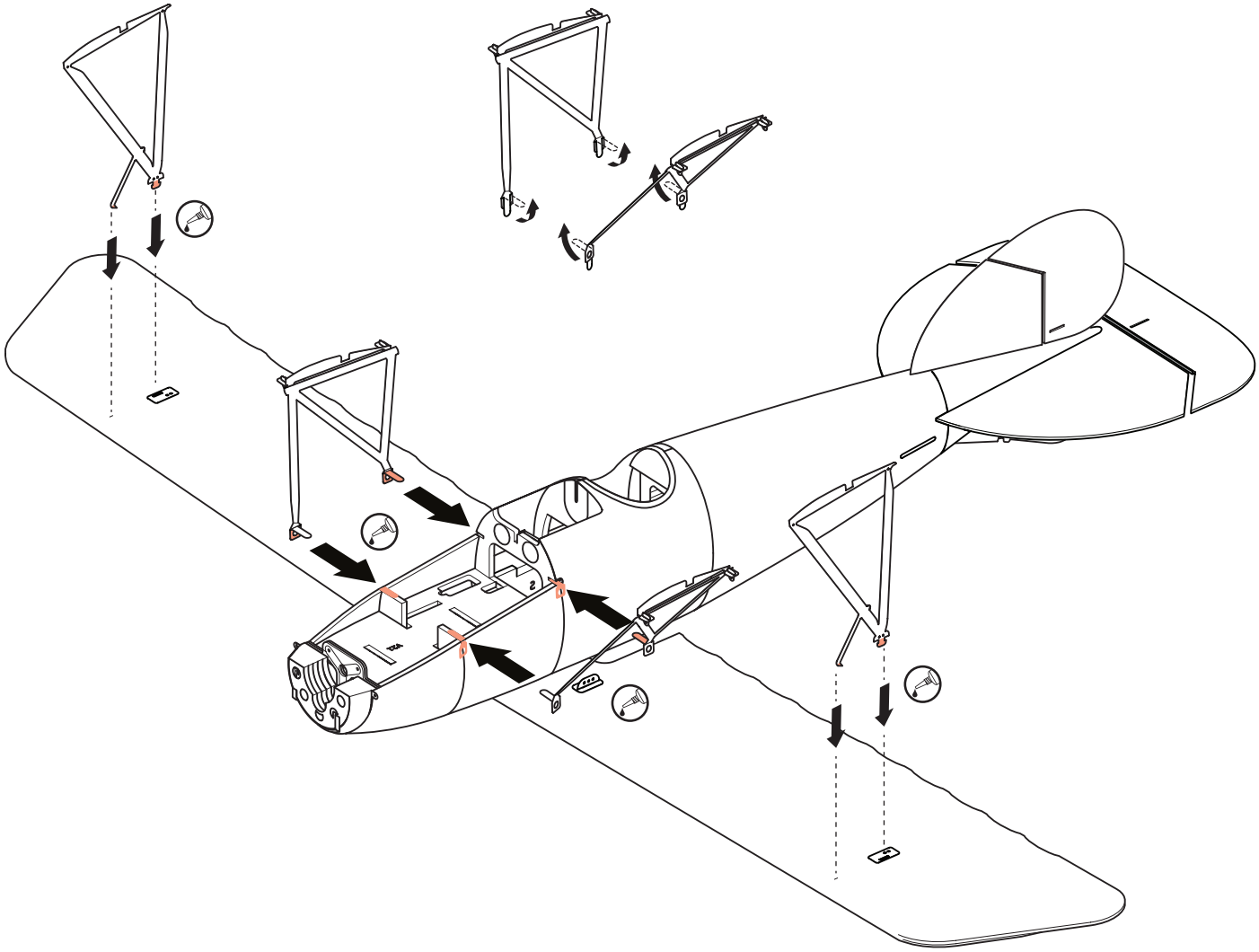




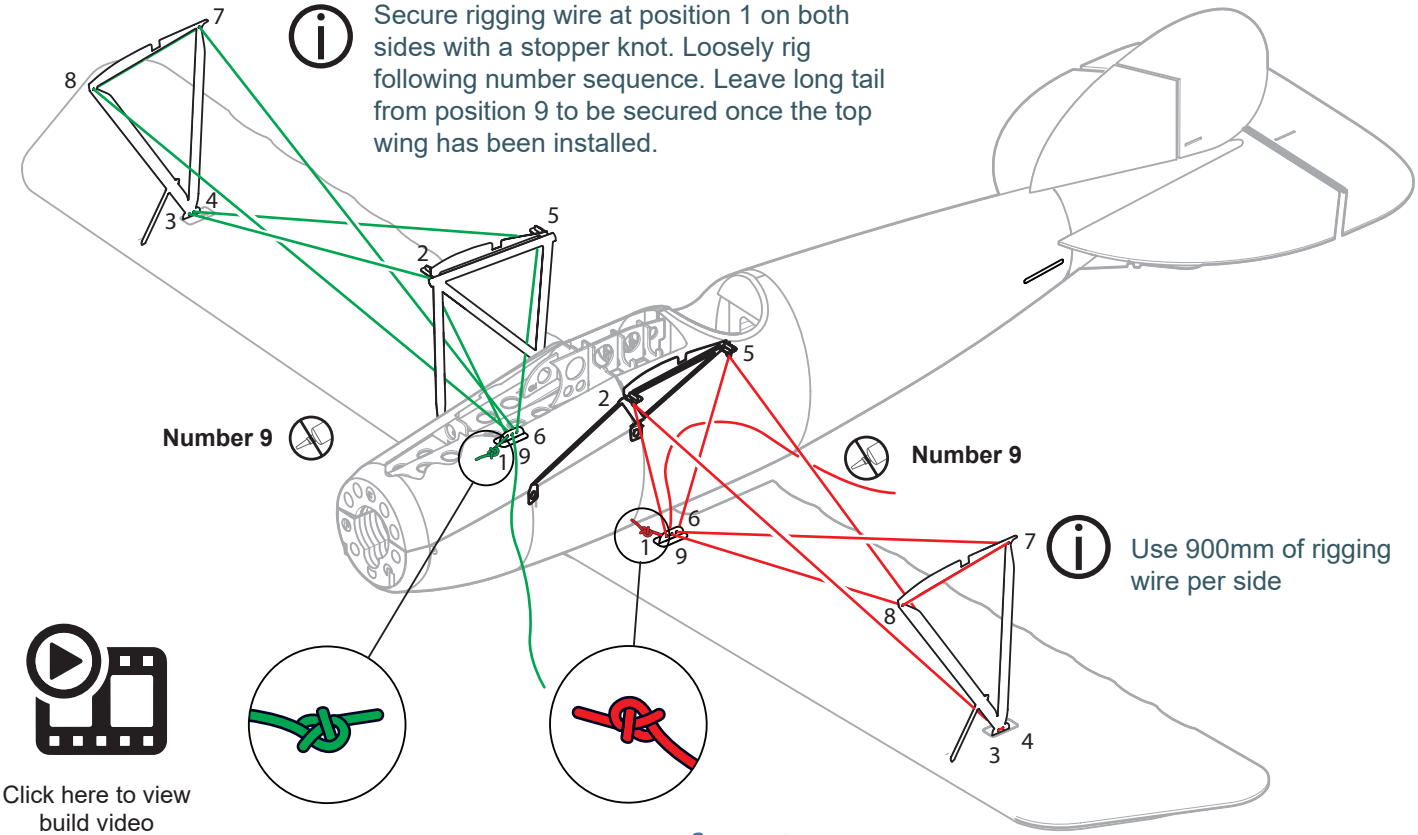




STAGE 6 STRUTS



STAGE 7 RIGGING

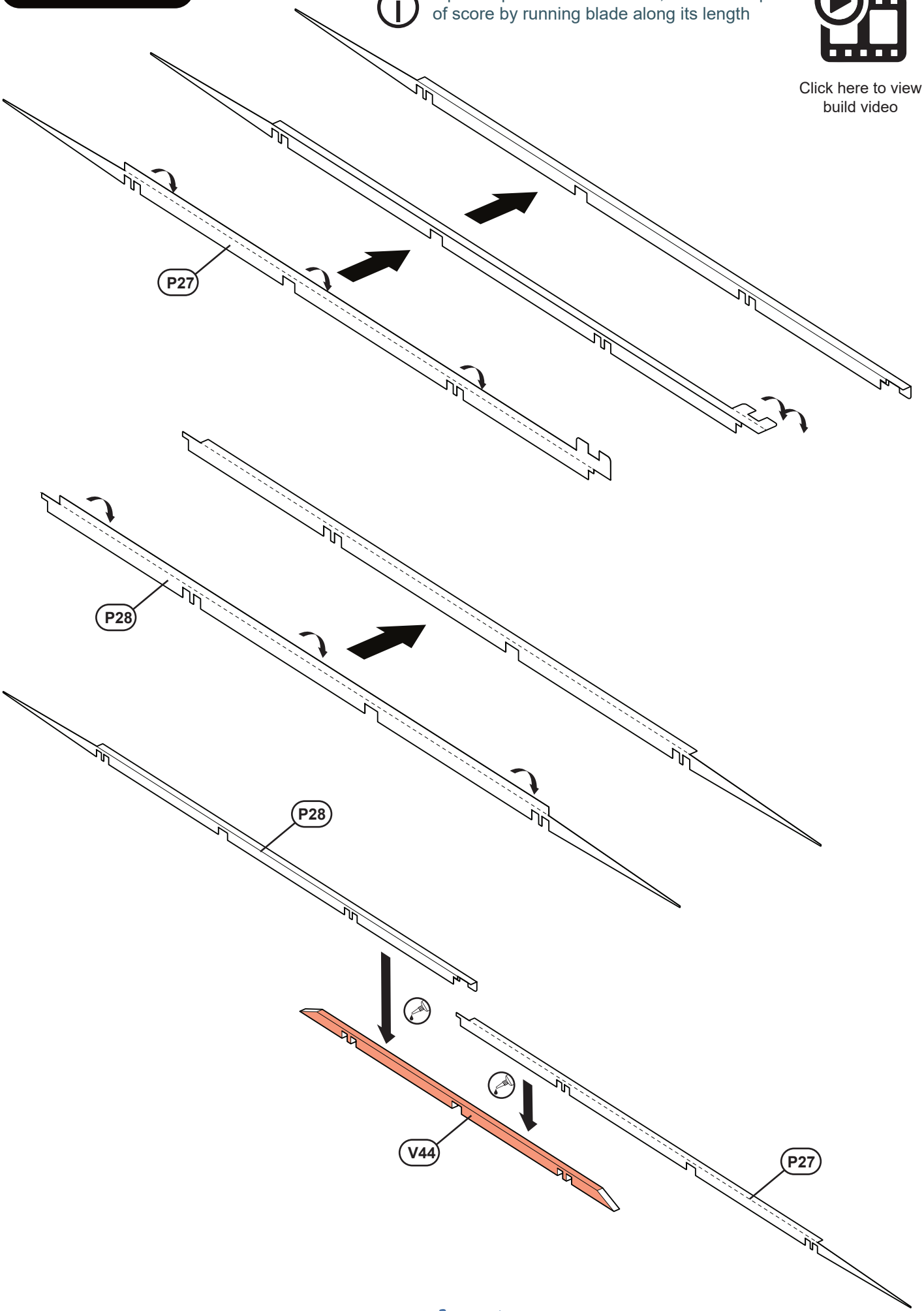


Click here to view build video

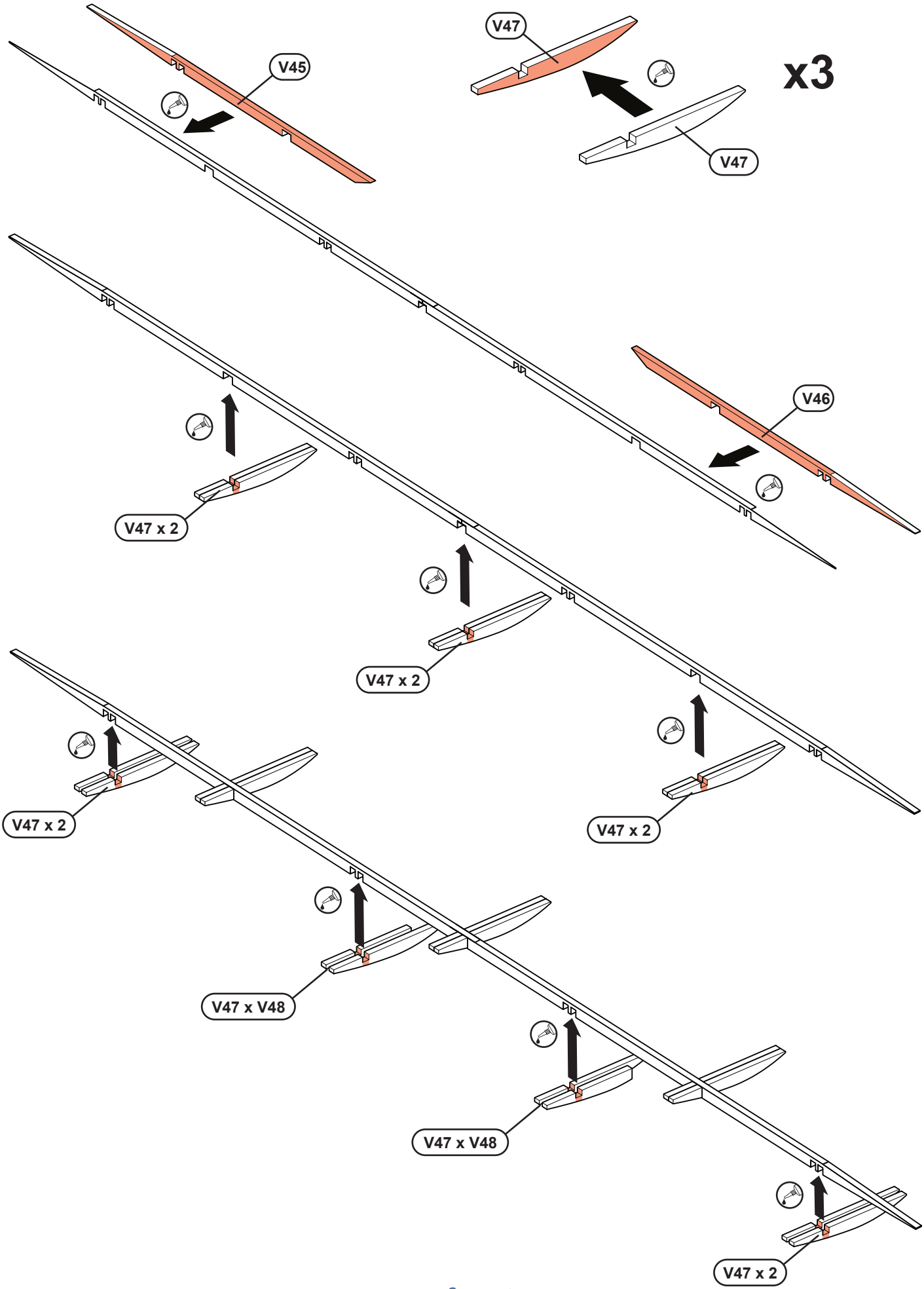
STAGE 8 TOP WING

If plastic part is difficult to fold, increase depth of score by running blade along its length

Click here to view build video

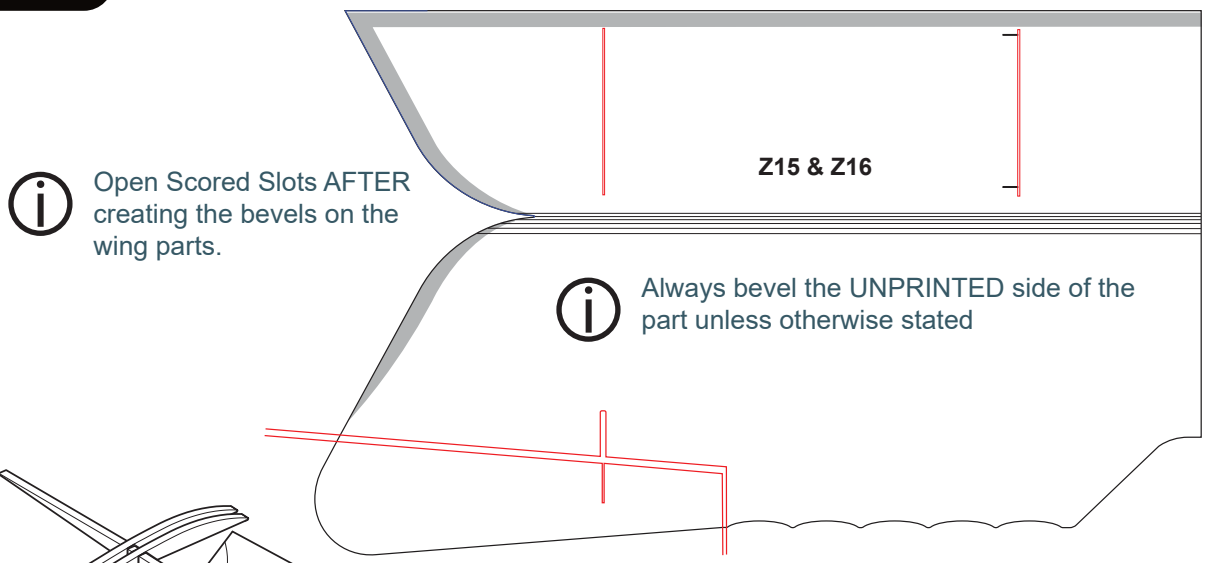


STAGE 8 TOP WING



STAGE 8 TOP WING

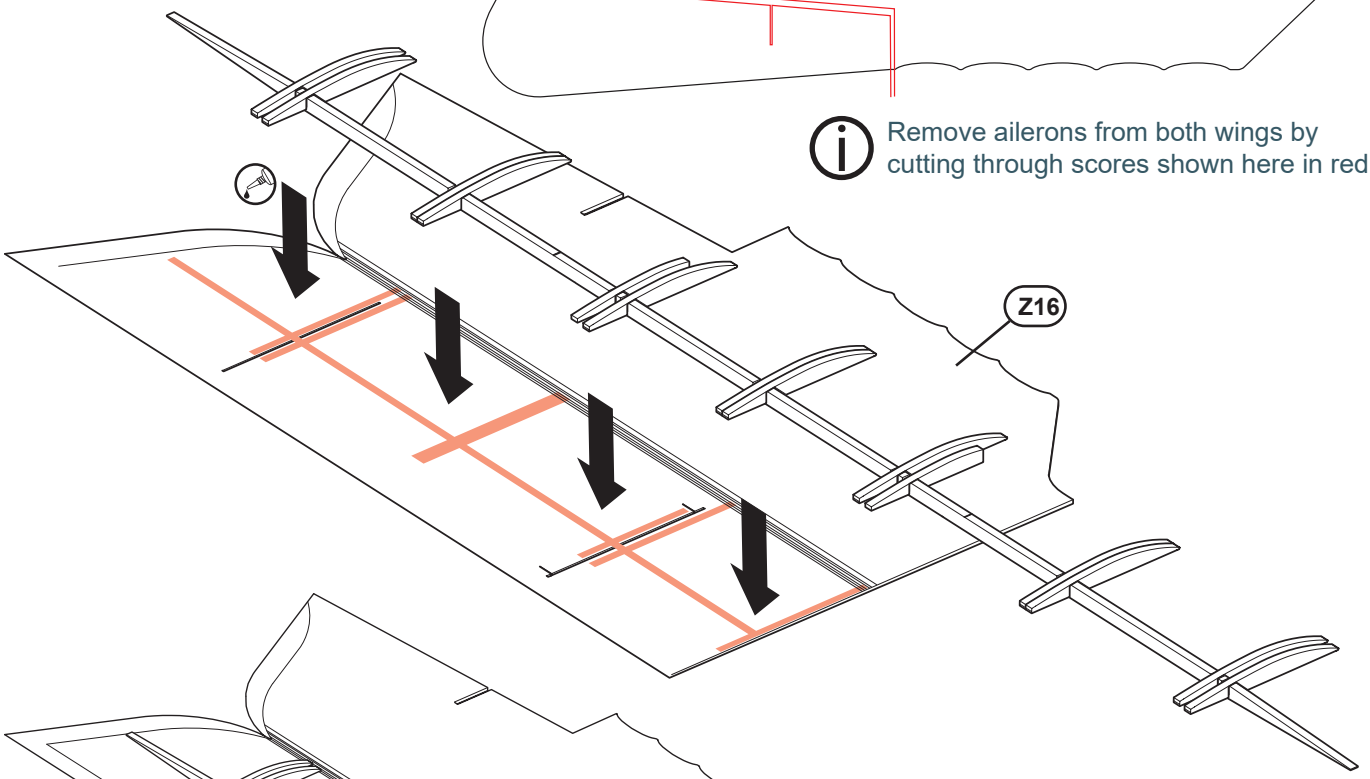
BEVEL GUIDE

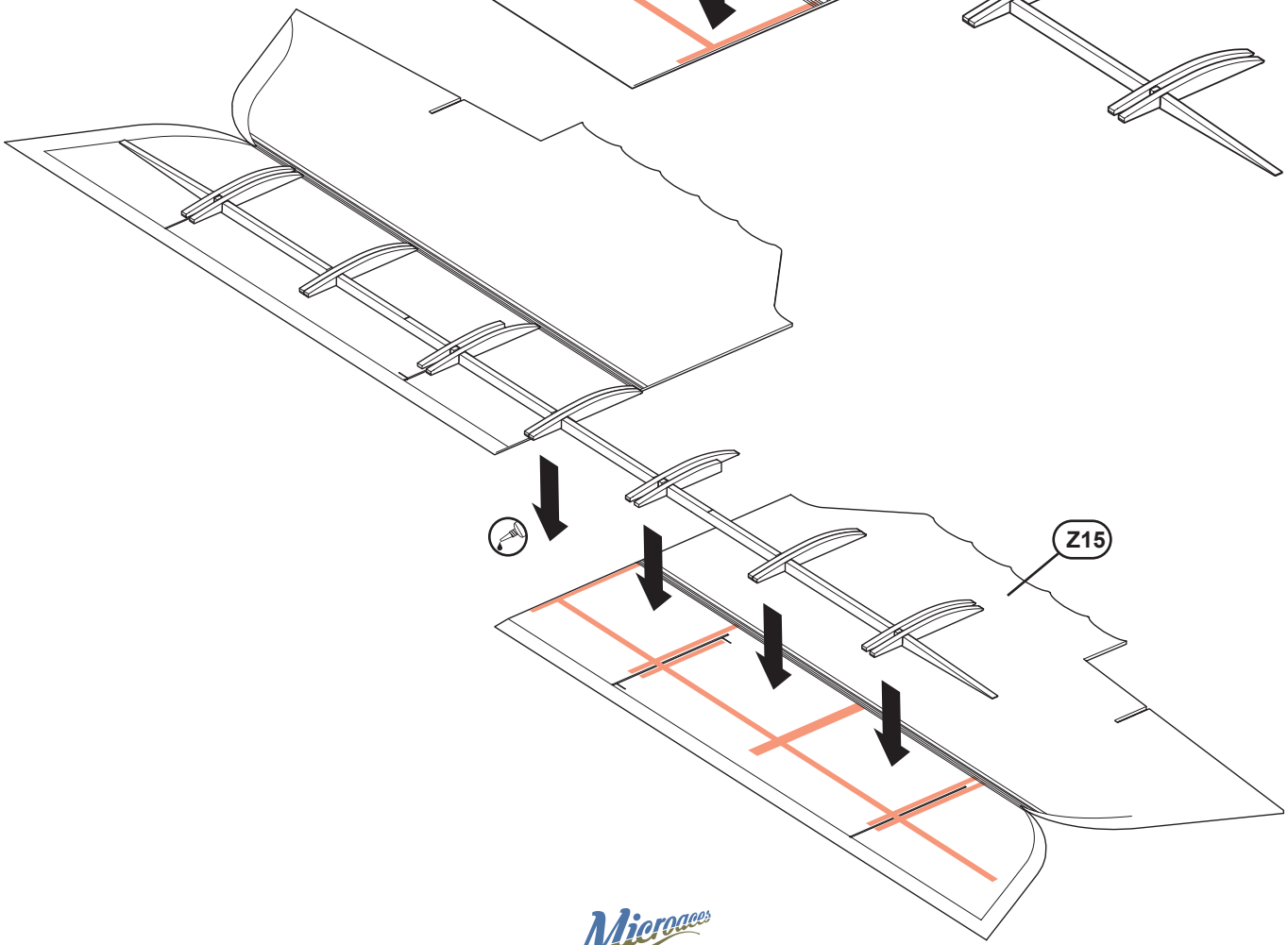


Open Scored Slots AFTER creating the bevels on the wing parts.

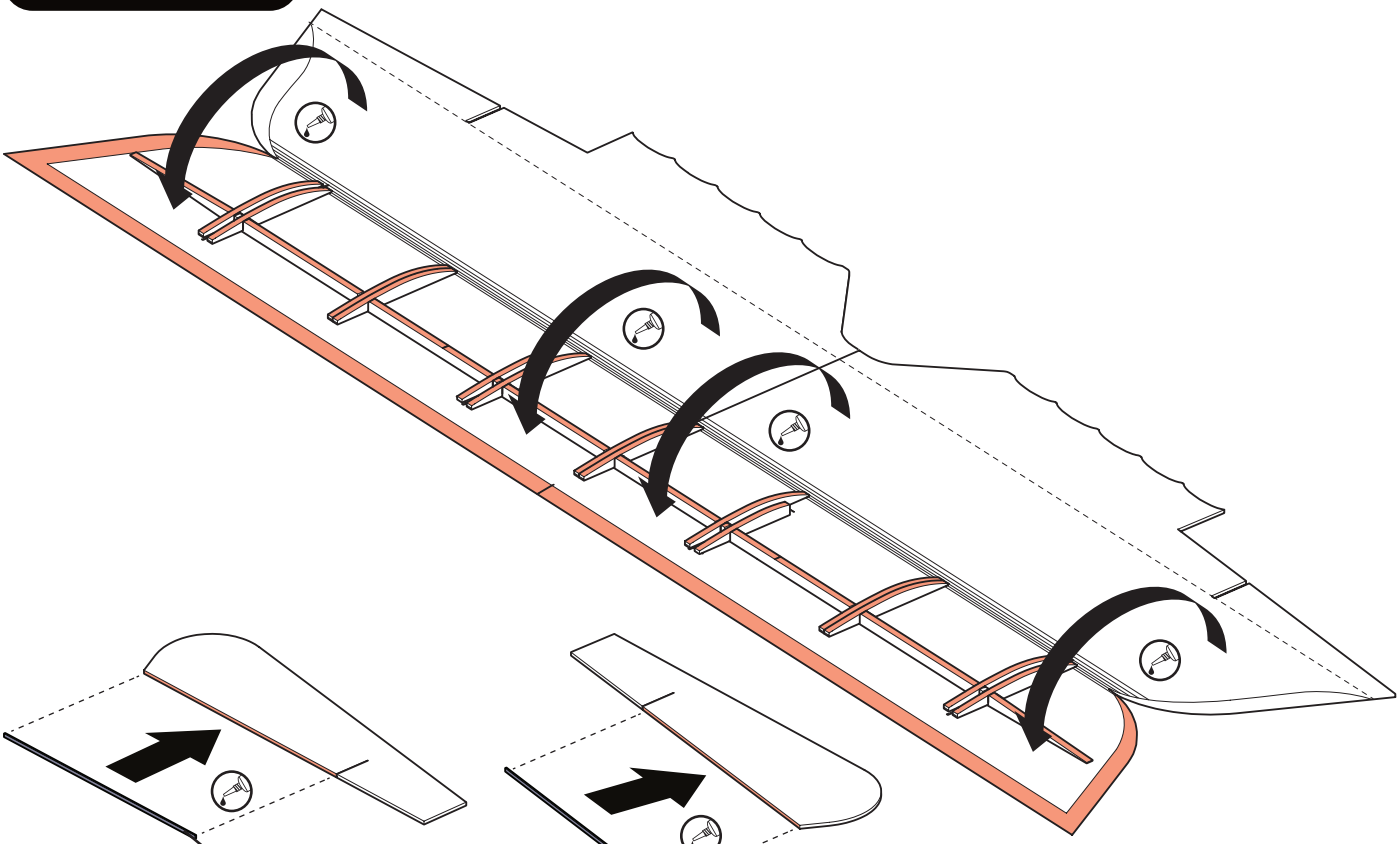
Always bevel the UNPRINTED side of the part unless otherwise stated

Remove ailerons from both wings by cutting through scores shown here in red.



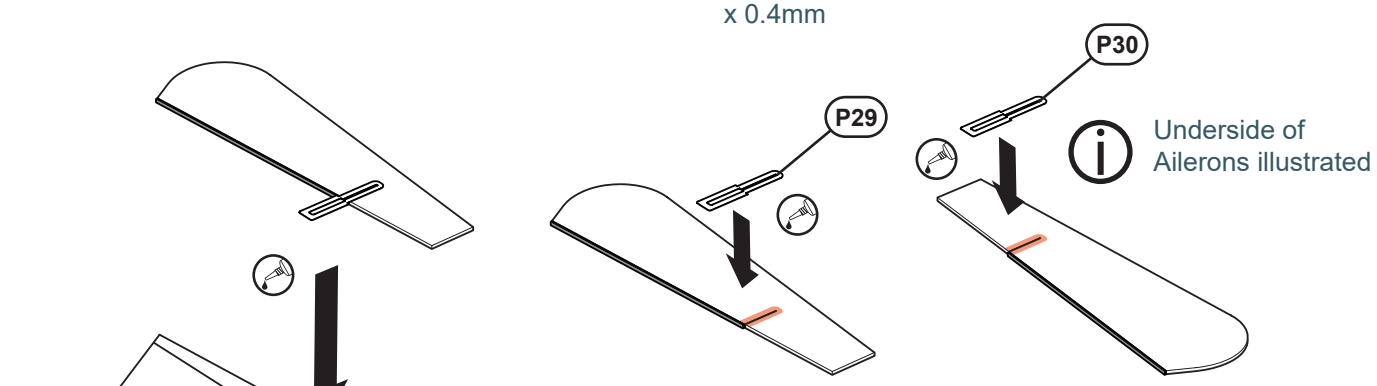


STAGE 8 TOP WING

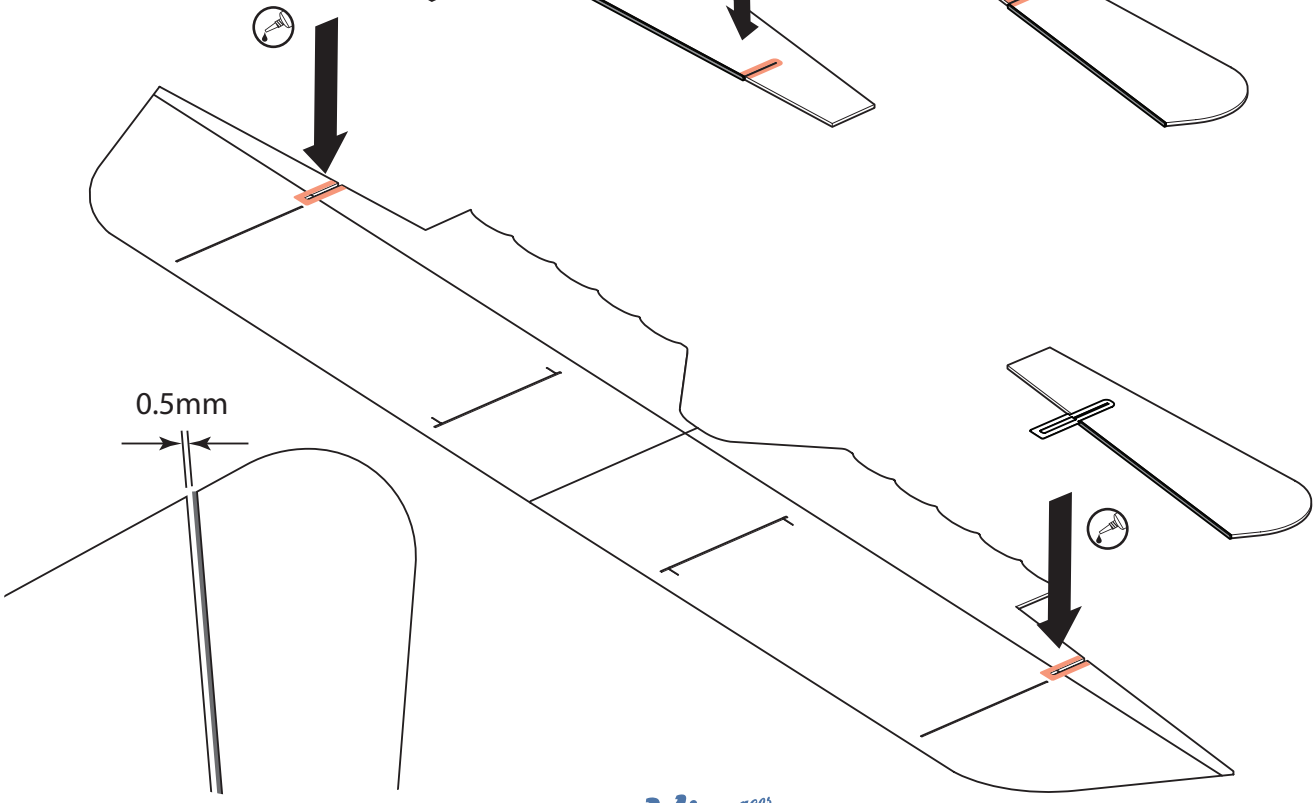


Carbon Fibre
67mm x 1.0mm
x 0.4mm

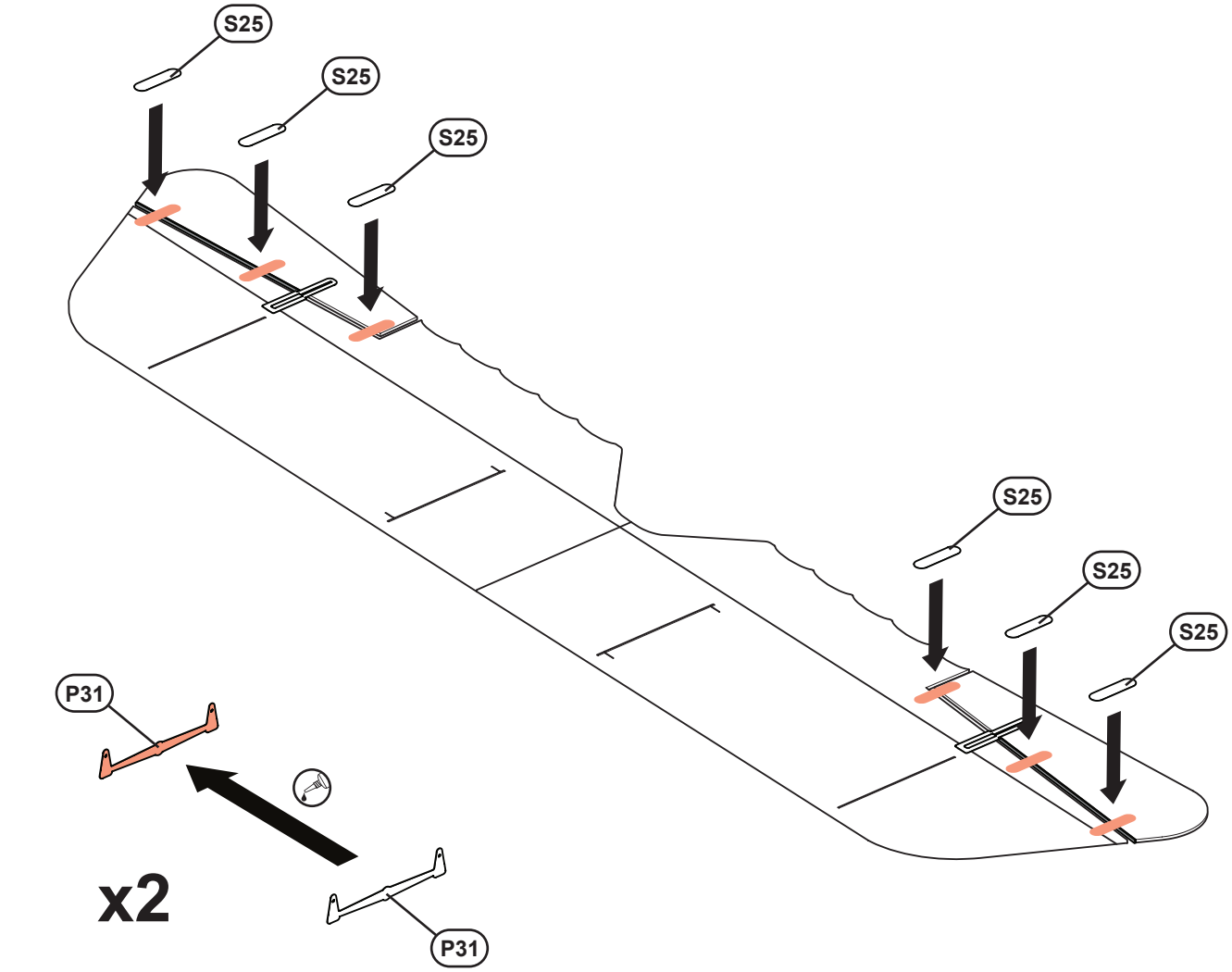
Carbon Fibre
67mm x 1.0mm
x 0.4mm

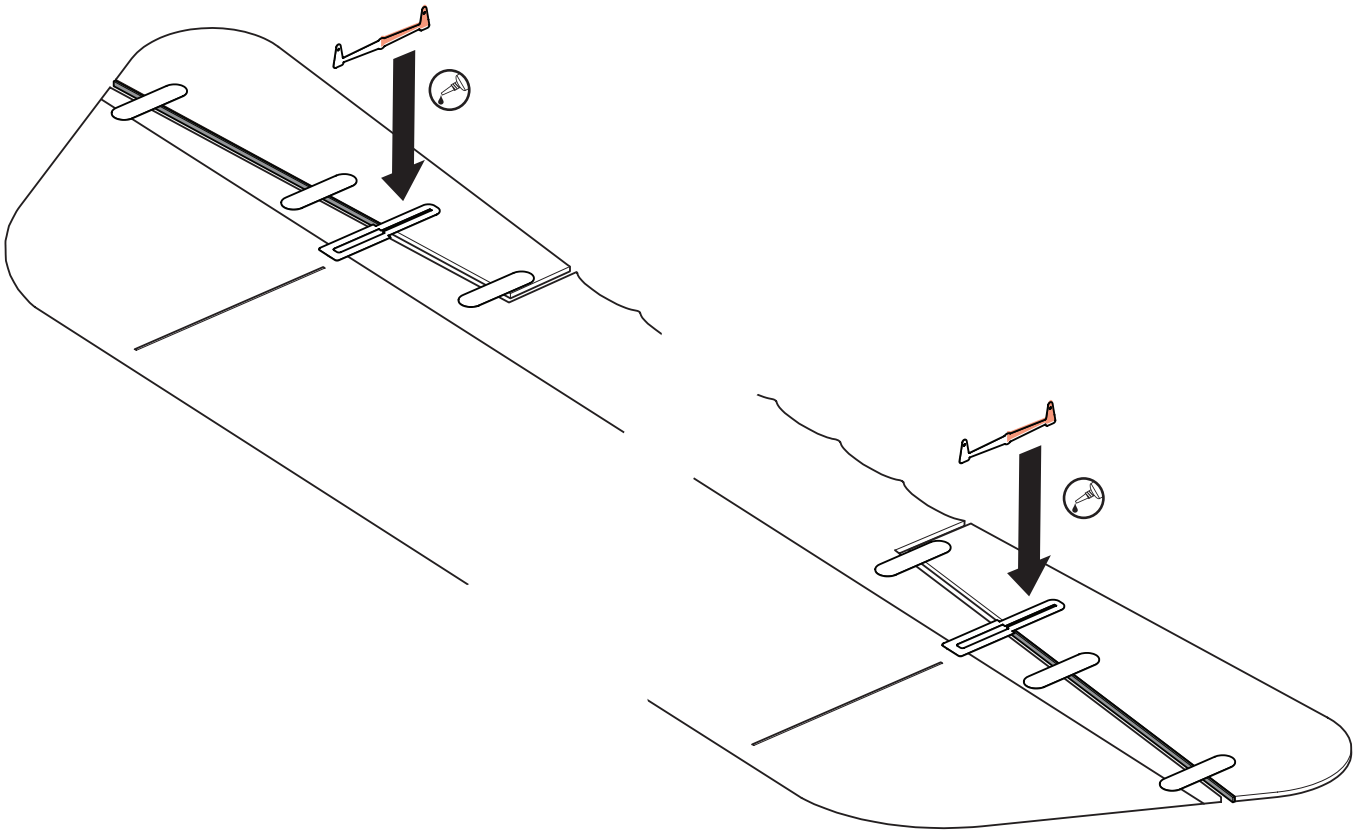


Underside of
Ailerons illustrated



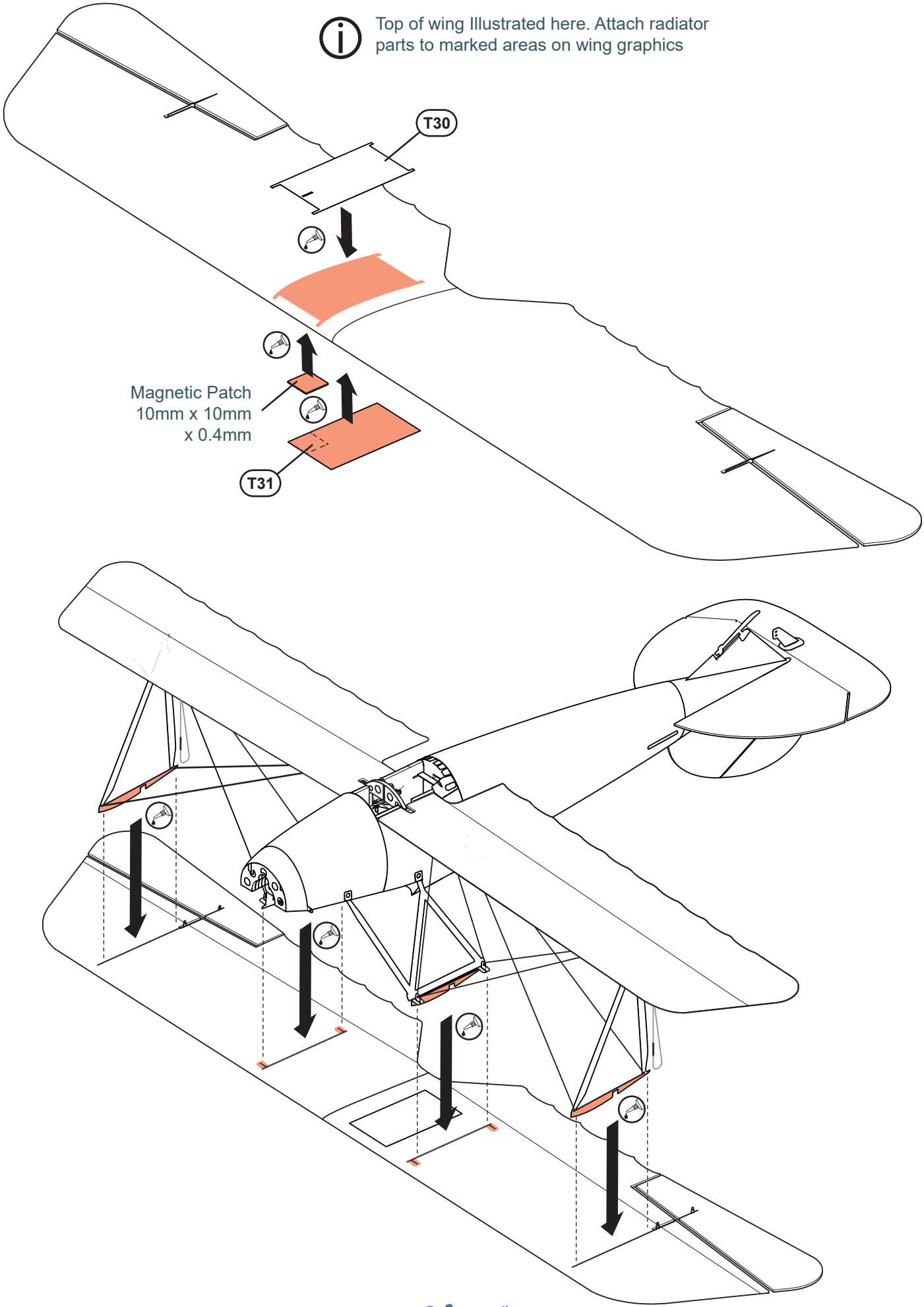
STAGE 8 TOP WING





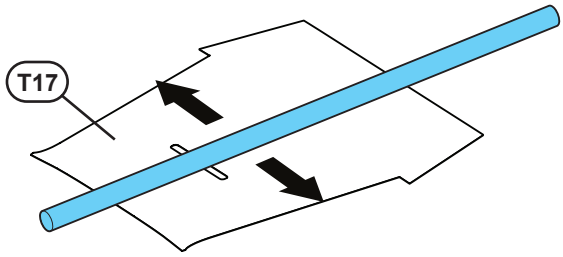
STAGE 8 TOP WING

Top of wing Illustrated here. Attach radiator parts to marked areas on wing graphics

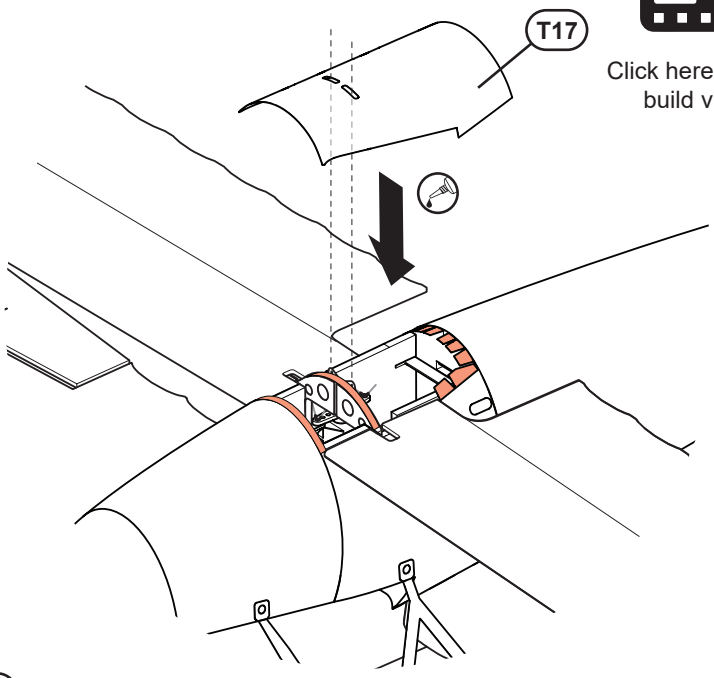


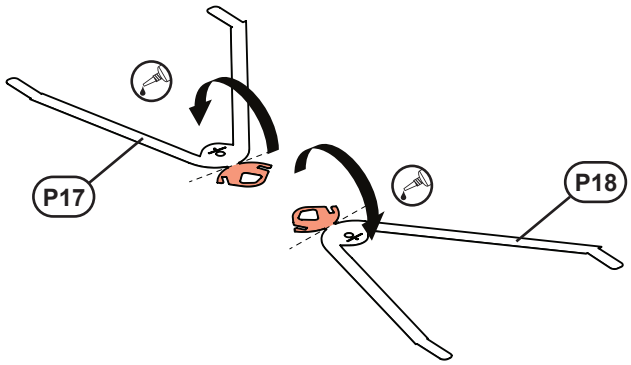
STAGE 9 UNDERCARRIAGE

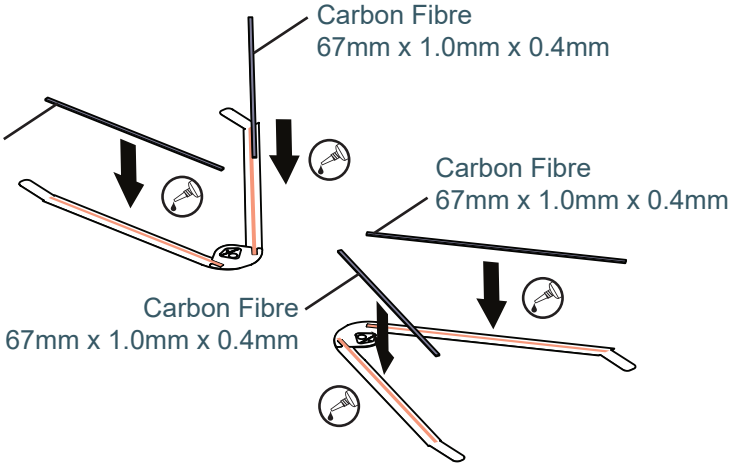
Shape the Tyvek using a dowel, paint brush handle or something similar.

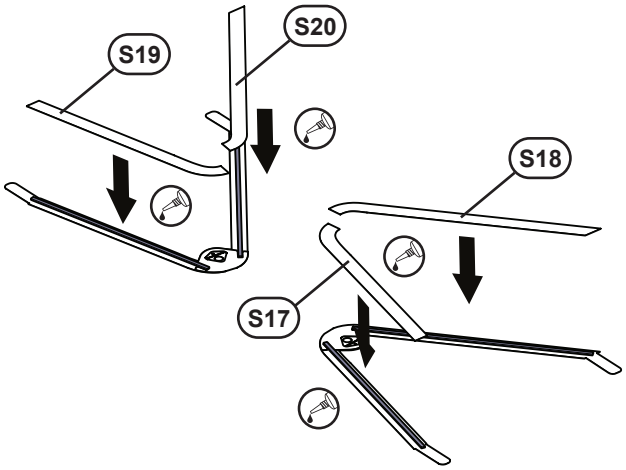


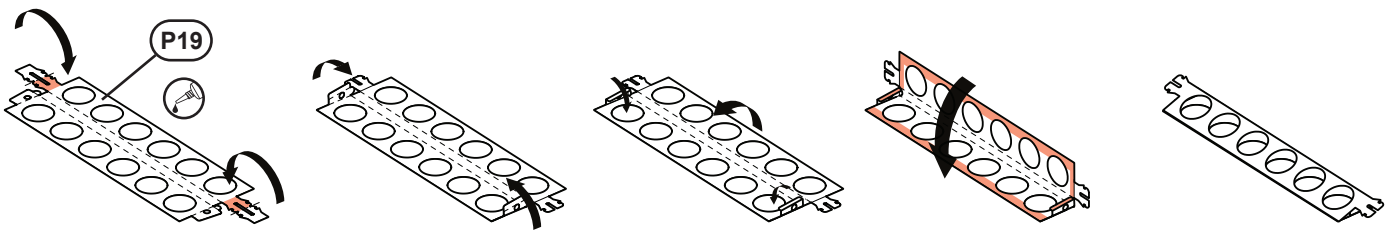
Click here to view build video





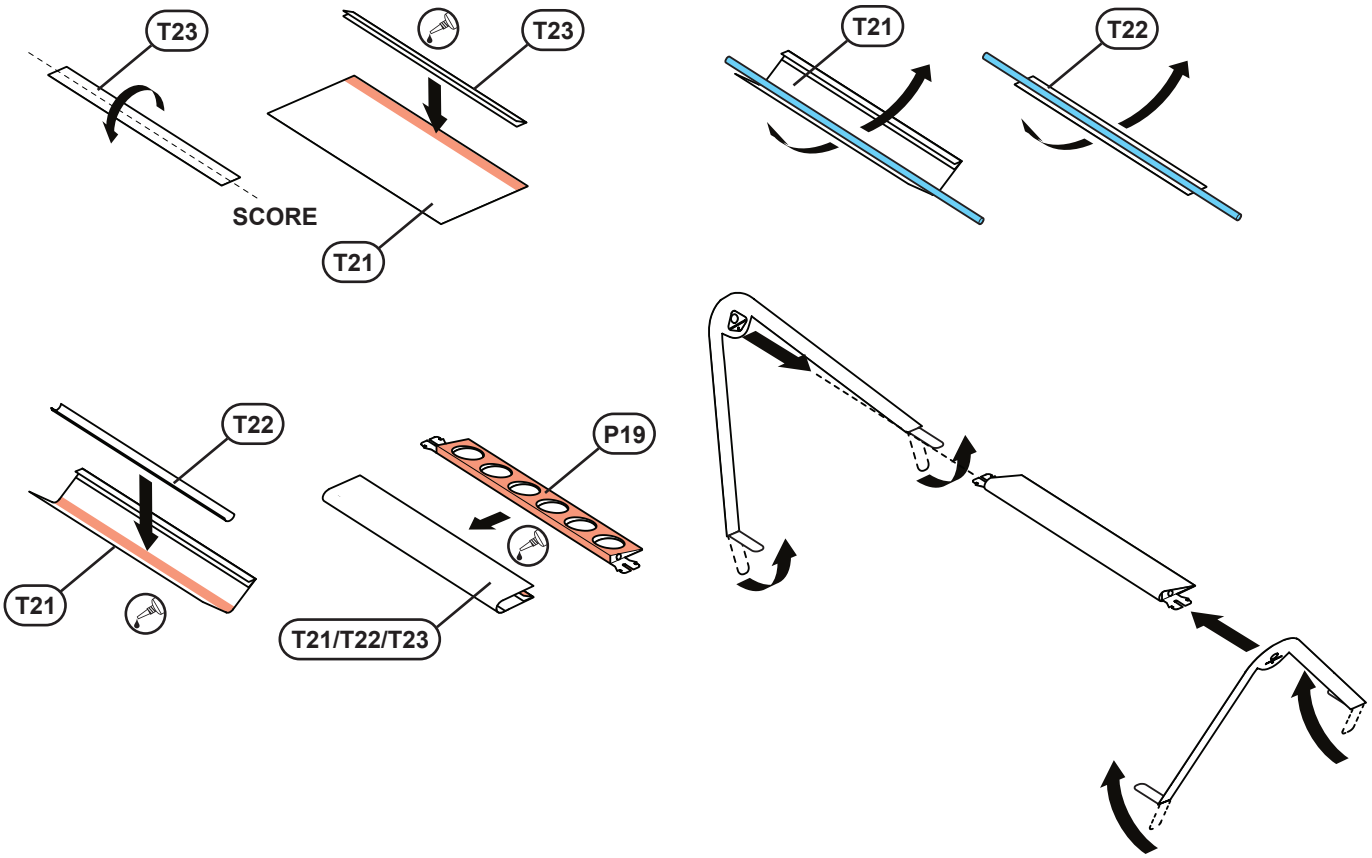


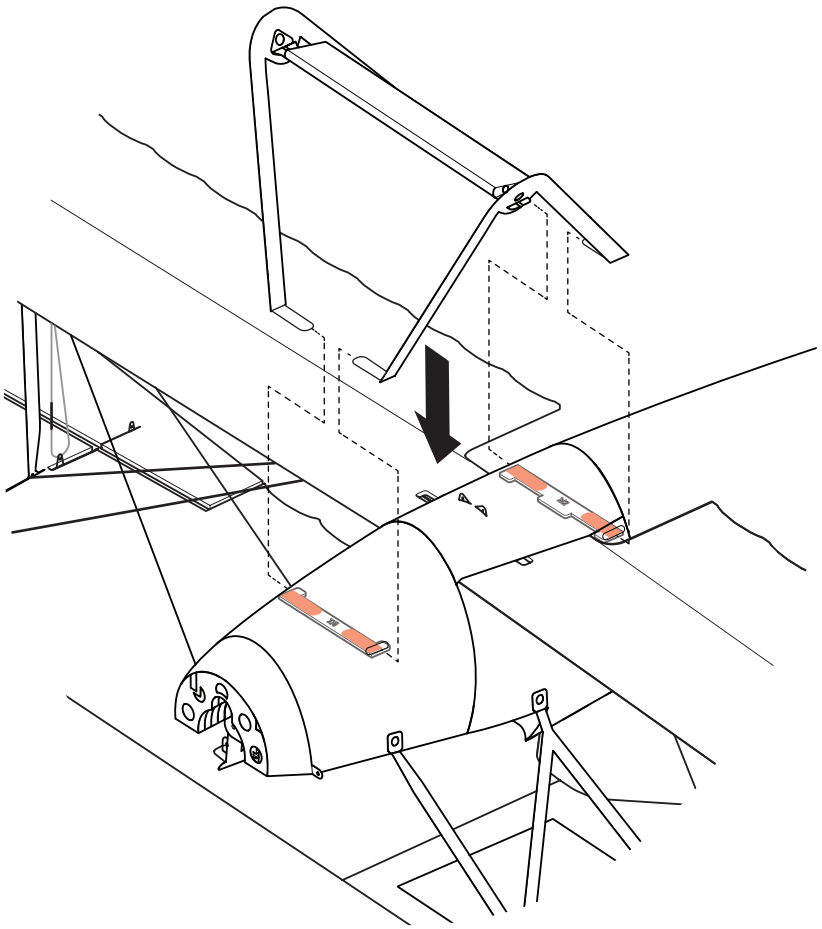




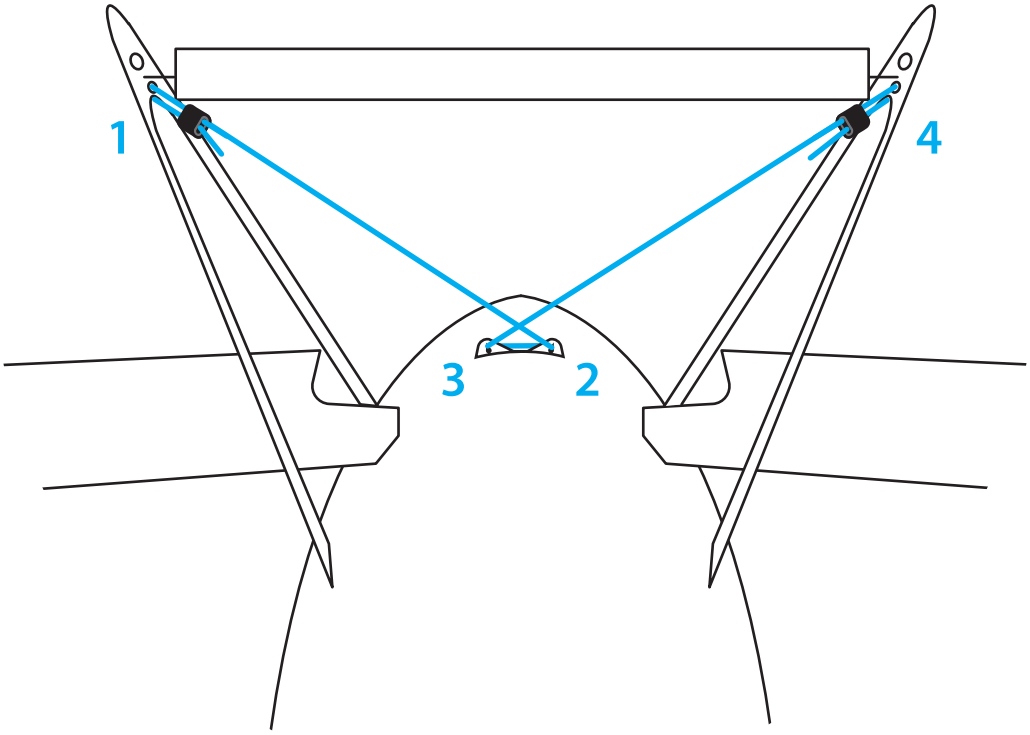
STAGE 9 UNDERCARRIAGE

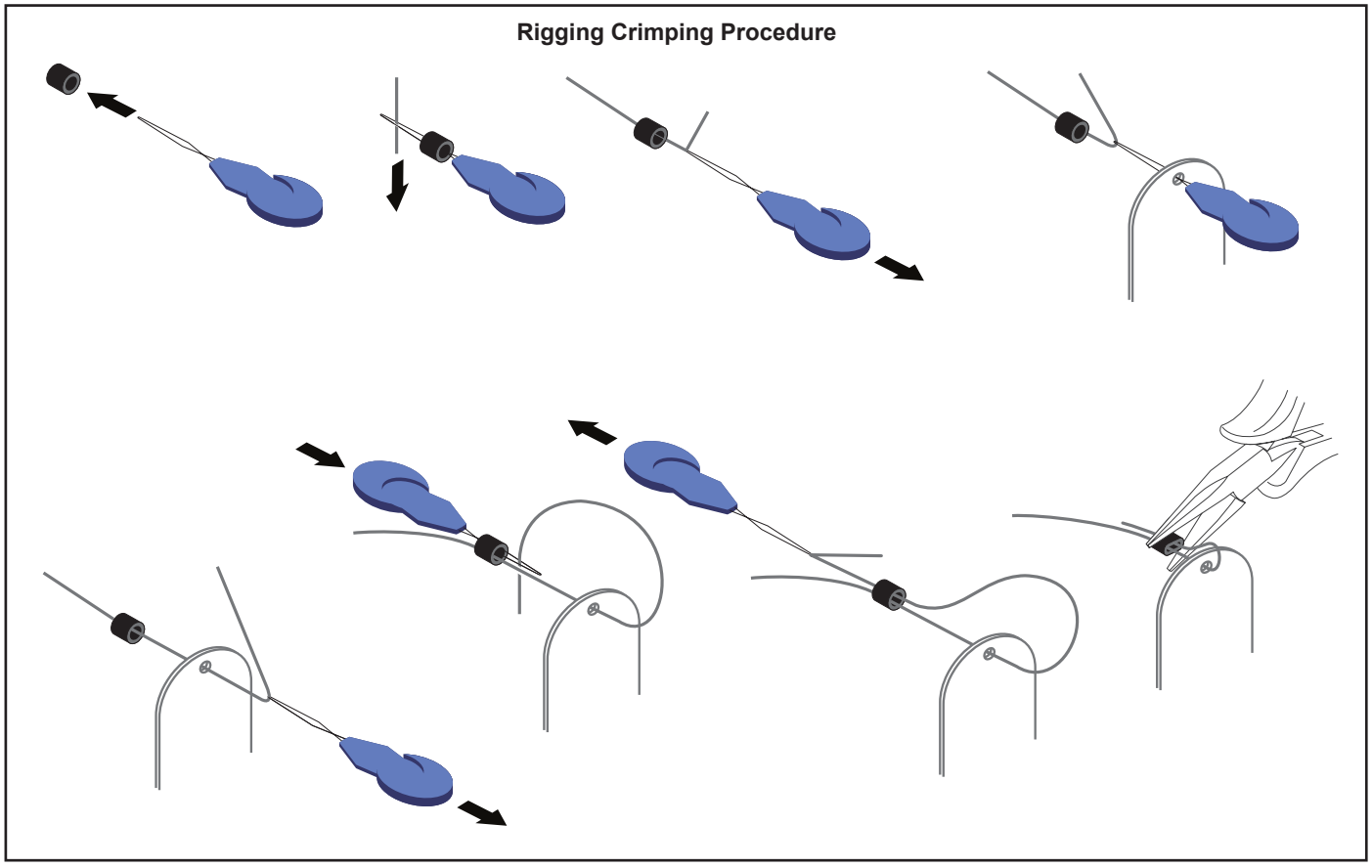
Shape the Tyvek using a dowel, paint brush handle or something similar.



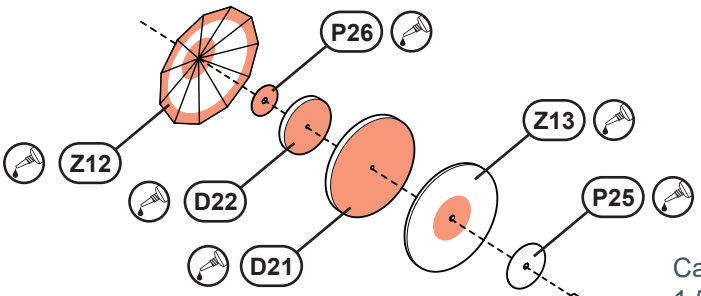


STAGE 9 UNDERCARRIAGE

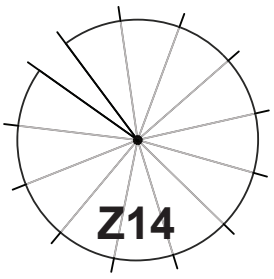




STAGE 9 UNDERCARRIAGE



Always score the
UNPRINTED side of the part
unless otherwise sttaed

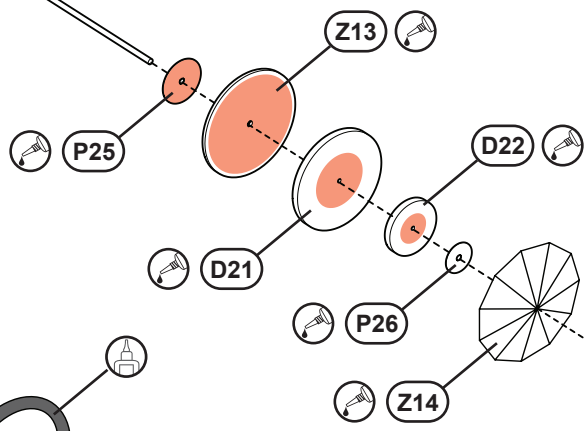


SCORE

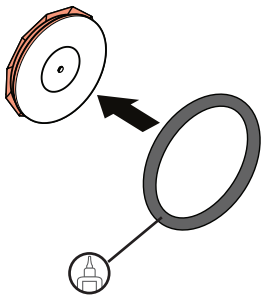
Carbon Fibre
1.5mmØ x 100mm

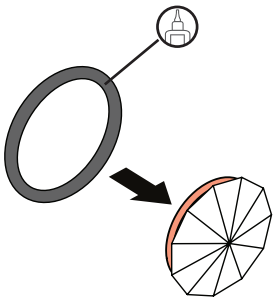
DO NOT GLUE TO
AXLE AT THIS STAGE

Assemble each wheel onto the axle
temporarily to ensure good alignment

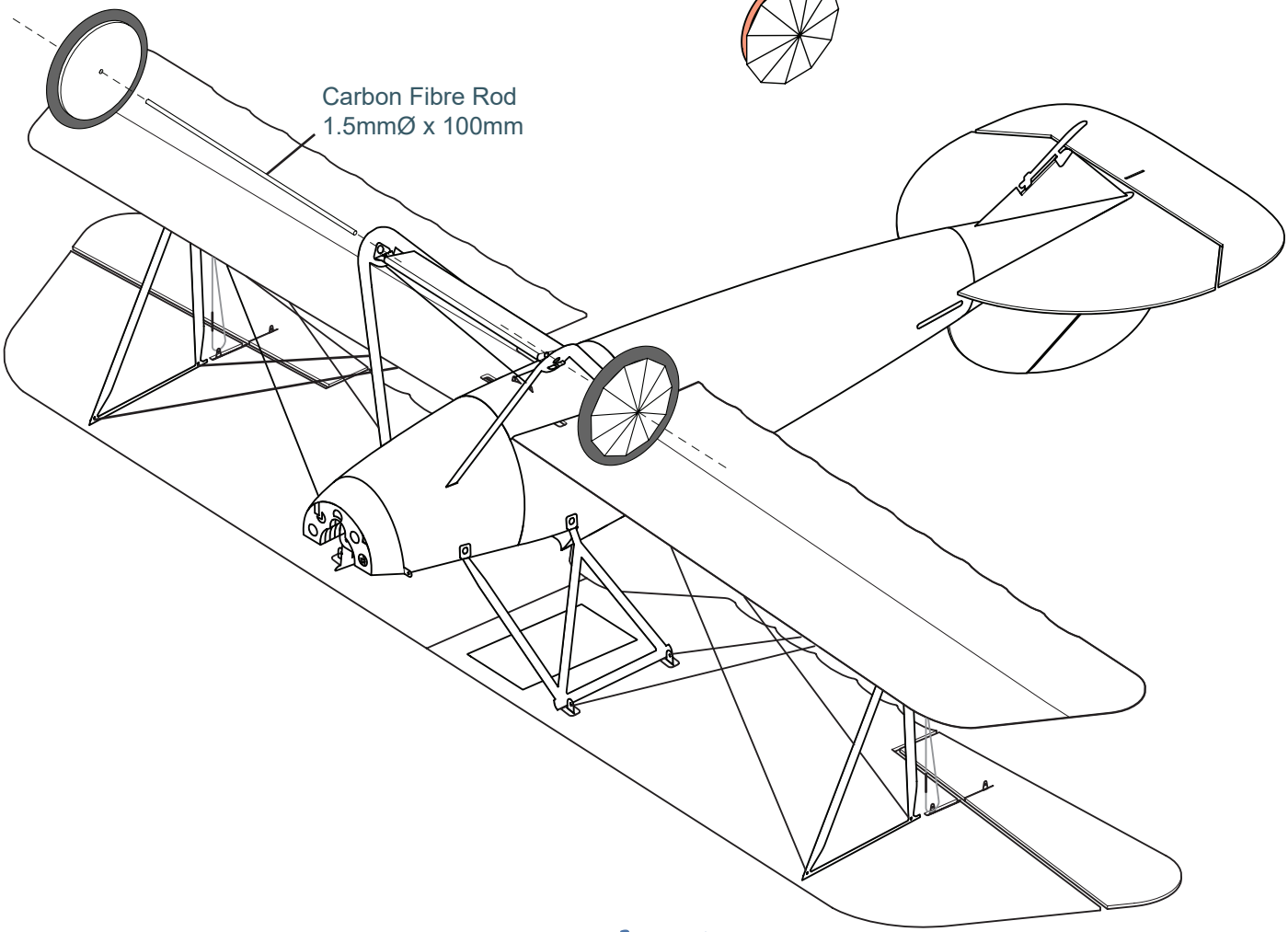


Time
2 Hours



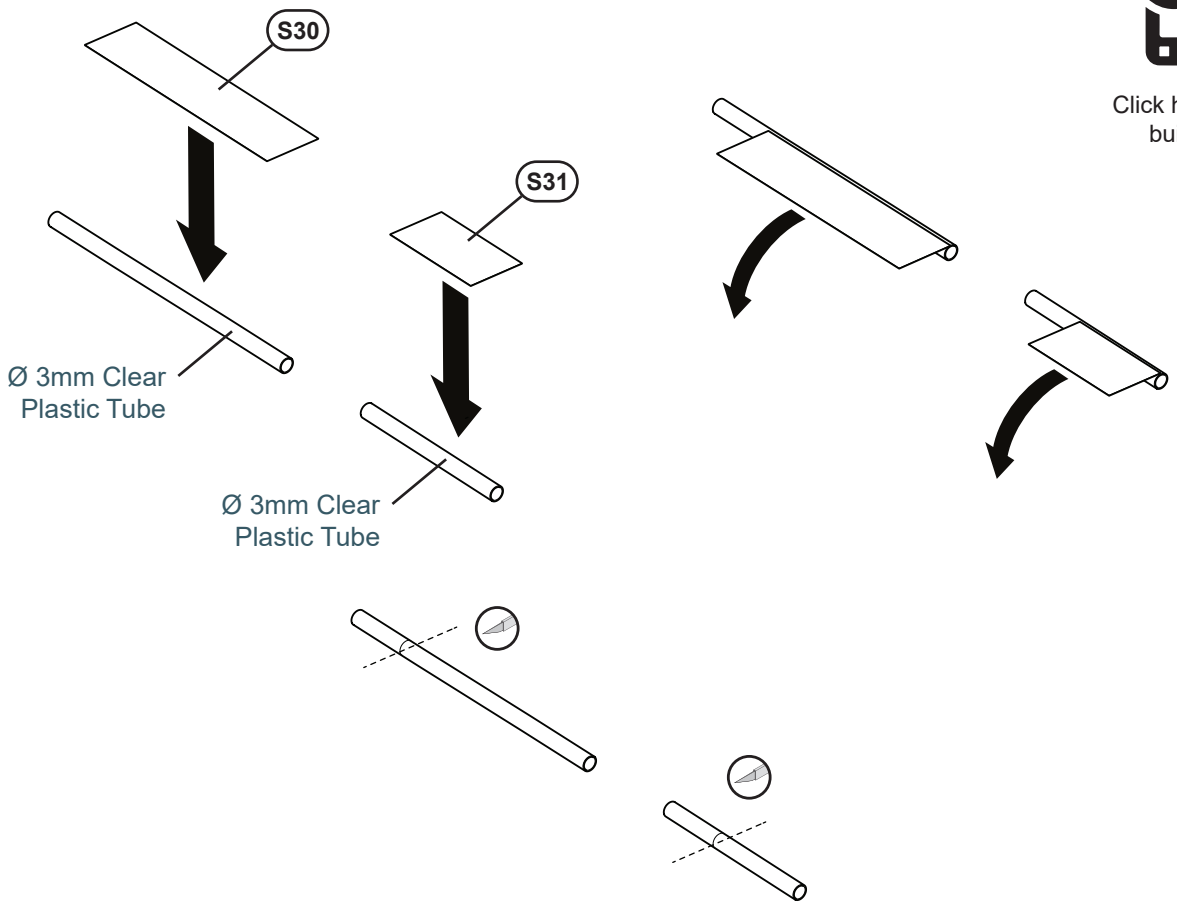


Carbon Fibre Rod
1.5mmØ x 100mm

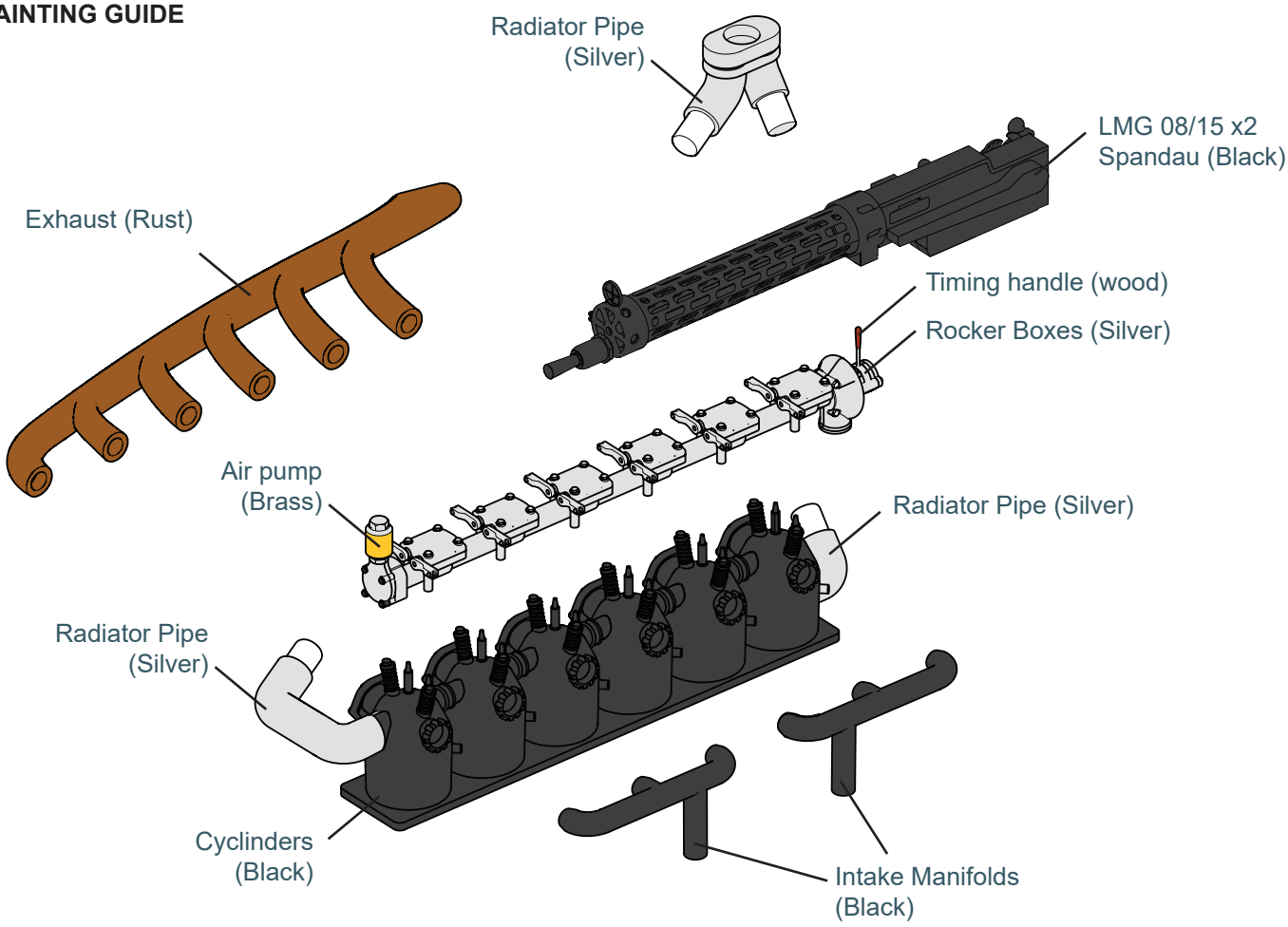


STAGE 10 DETAILS

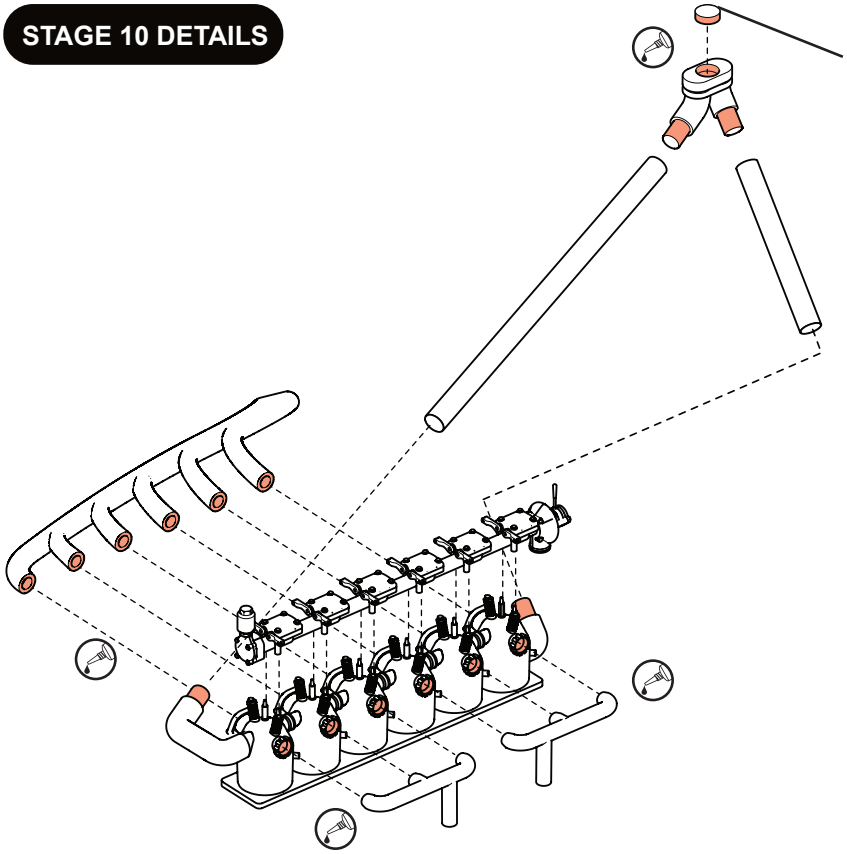
Click here to view build video

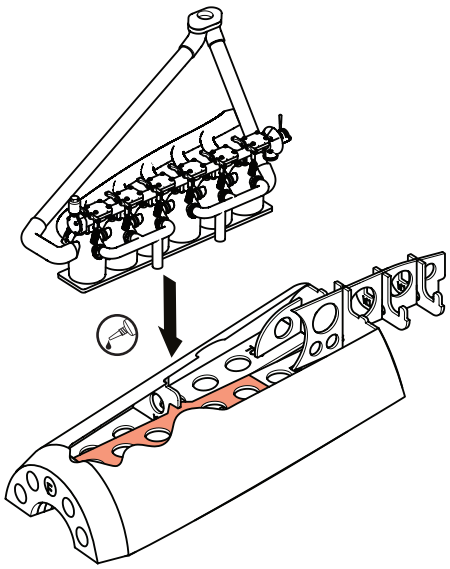


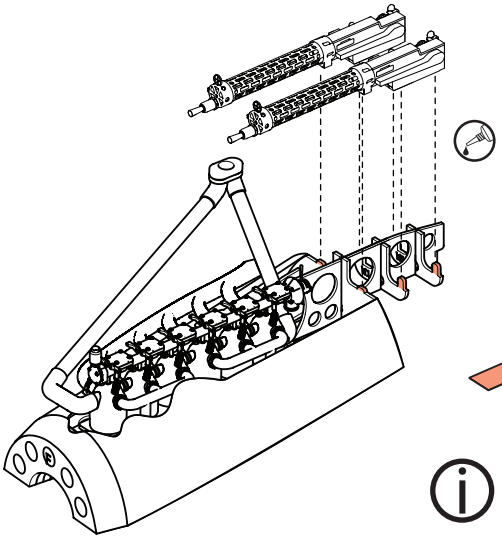
PAINTING GUIDE

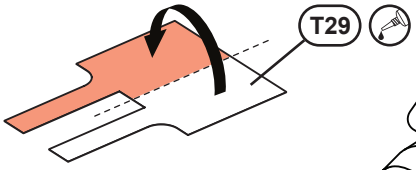


STAGE 10 DETAILS

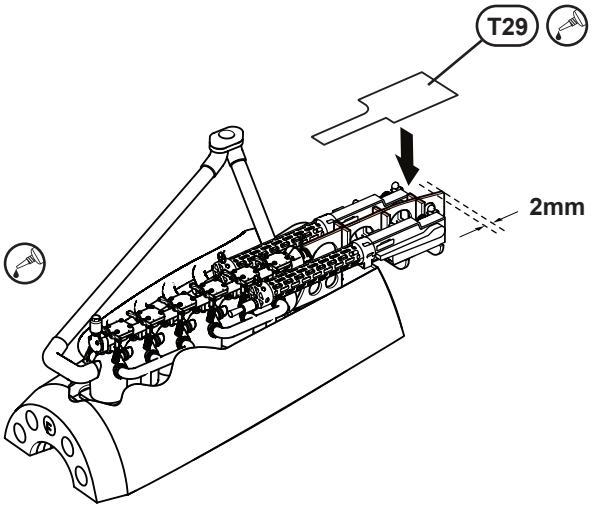




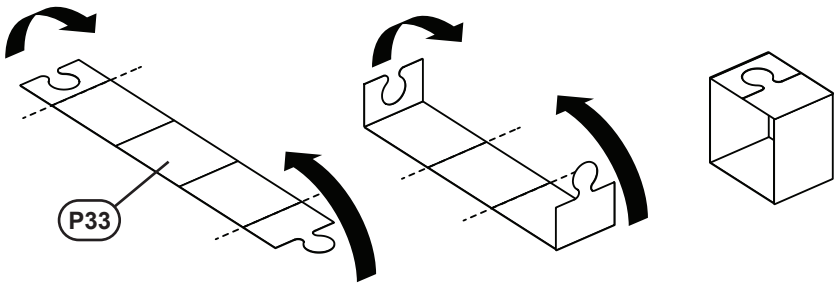


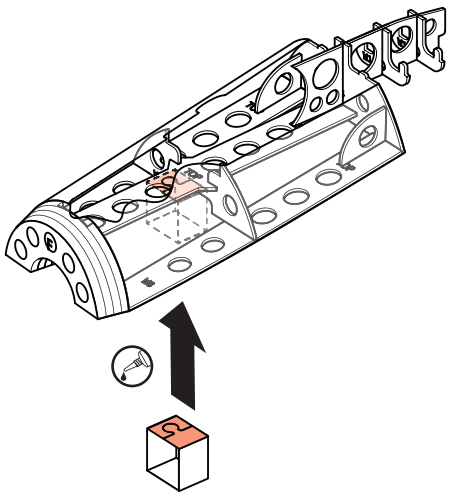


Unprinted side shown

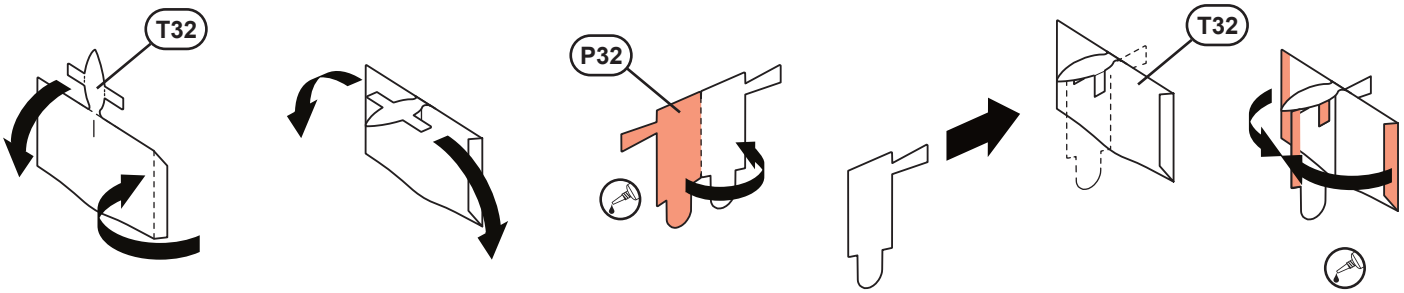


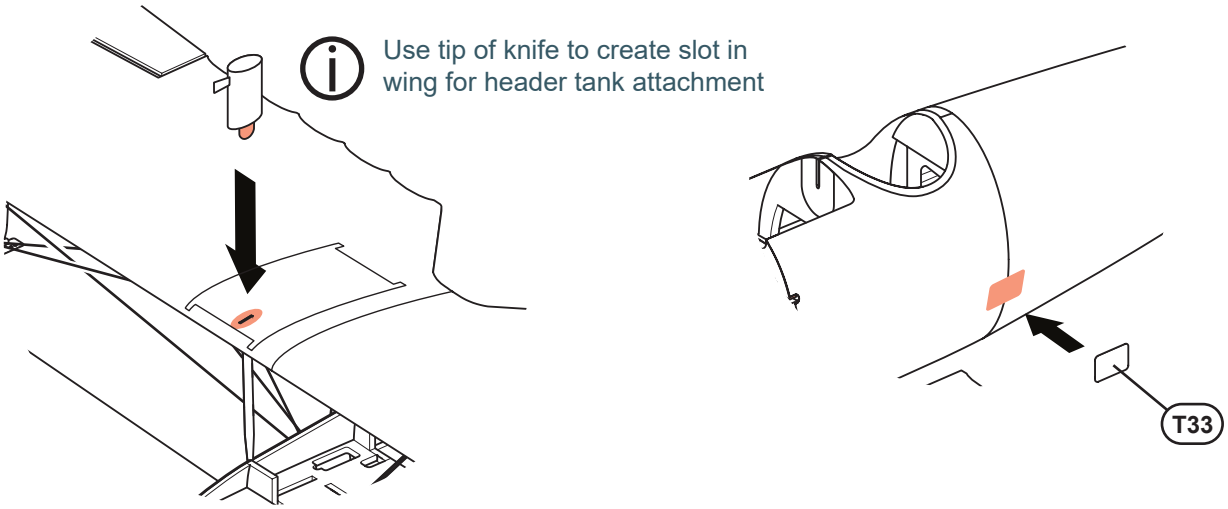
Small Battery Holder

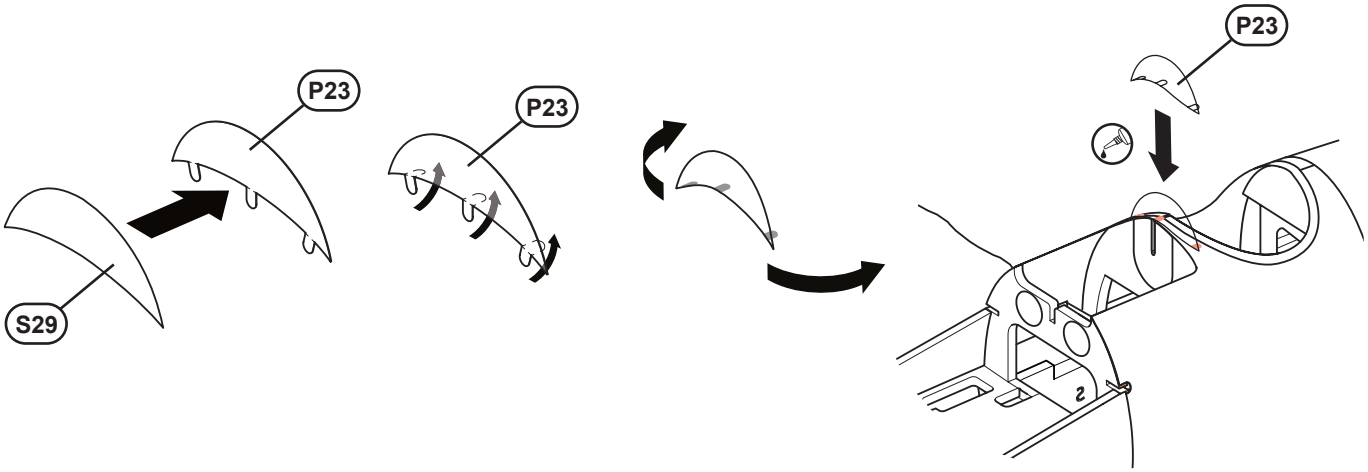


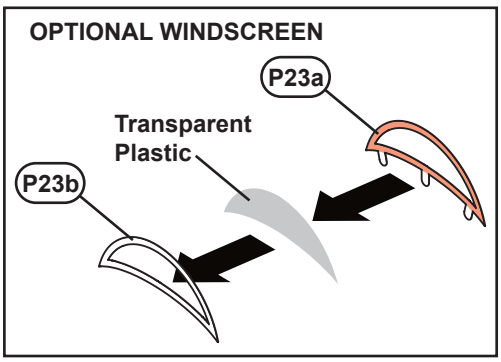


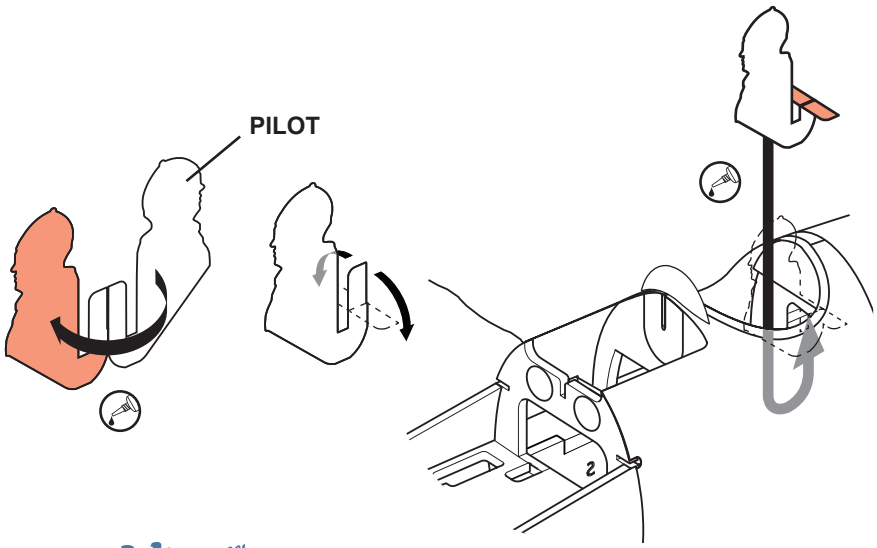
STAGE 10 DETAILS









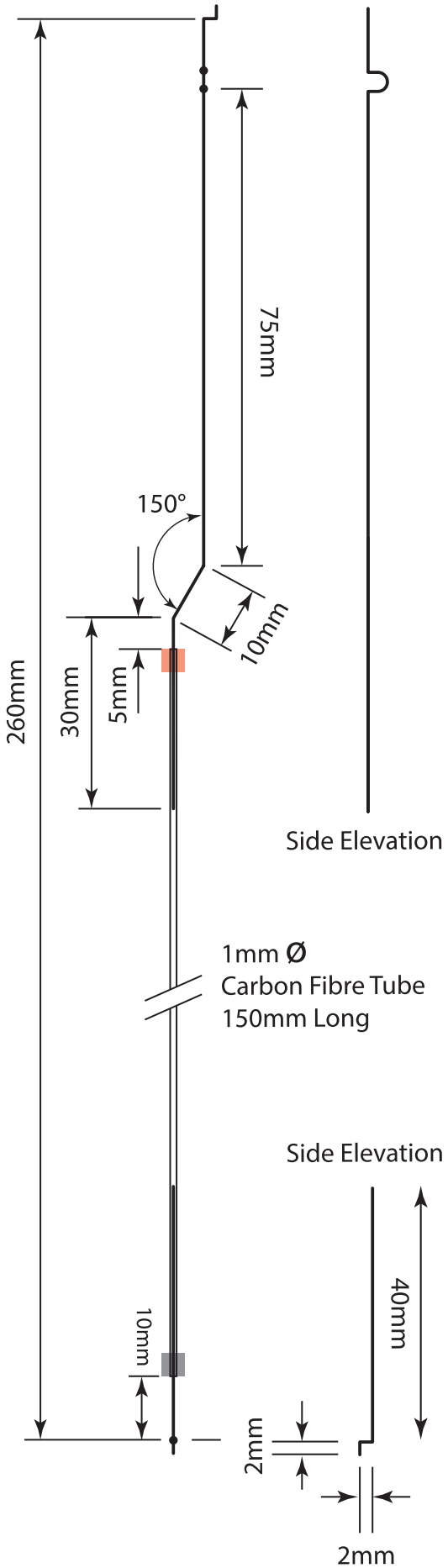


STAGE 11 CONTROLS

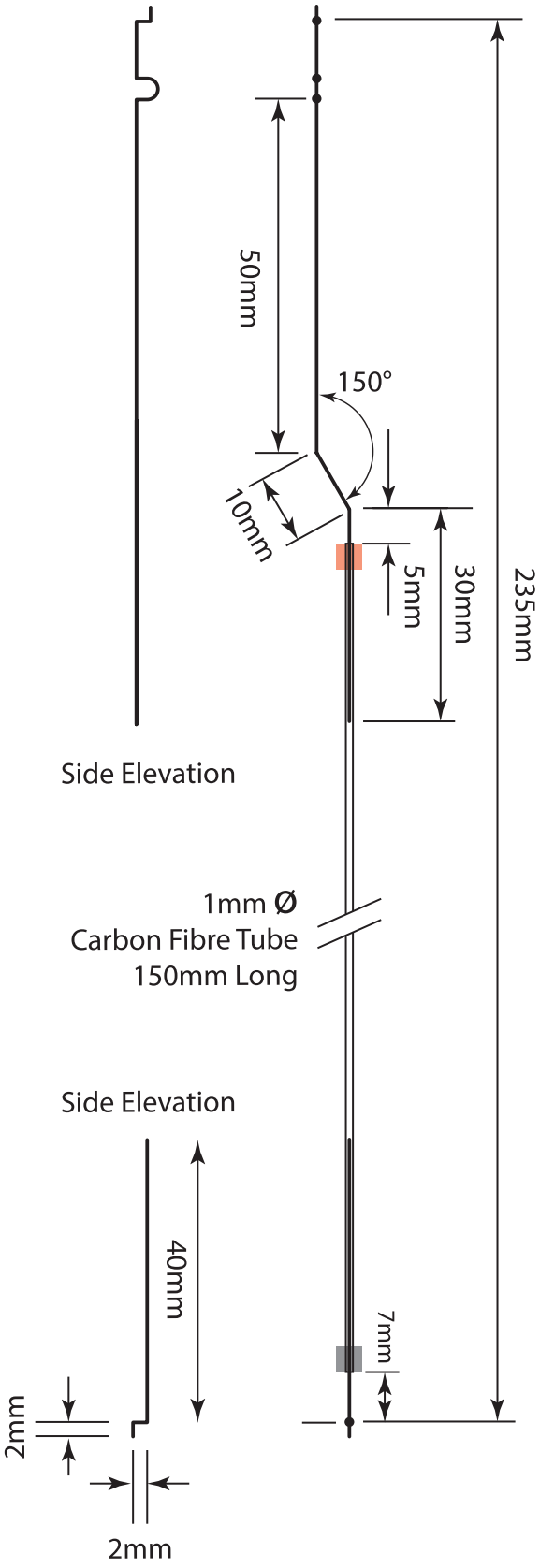
Create control rod from supplied wireforms & carbon fibre tubes. Use wire cutters and miniature pliers for best results

Click here to view build video

Elevator Control Rod

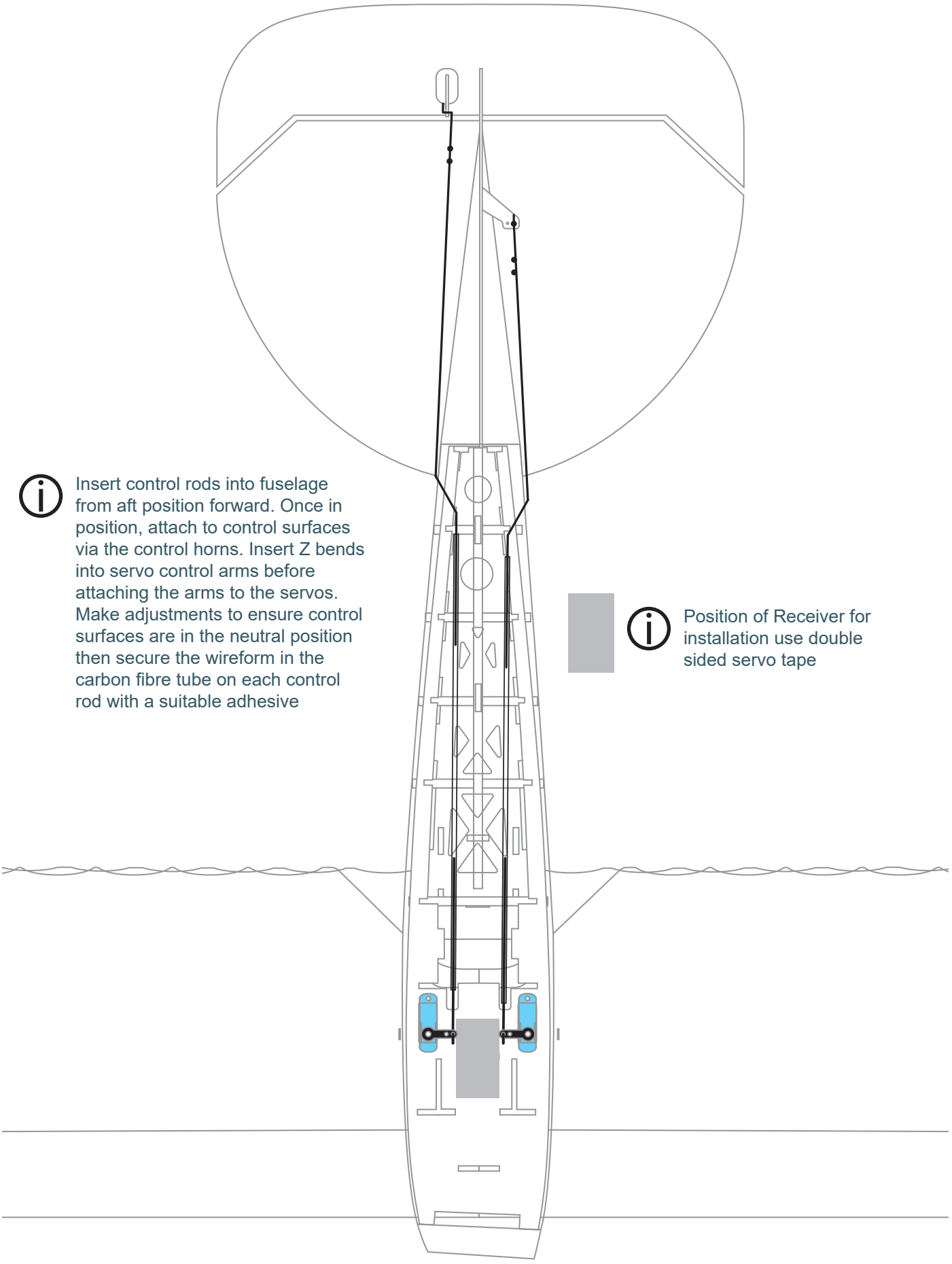


Rudder Control Rod



STAGE 11 CONTROLS

Top View

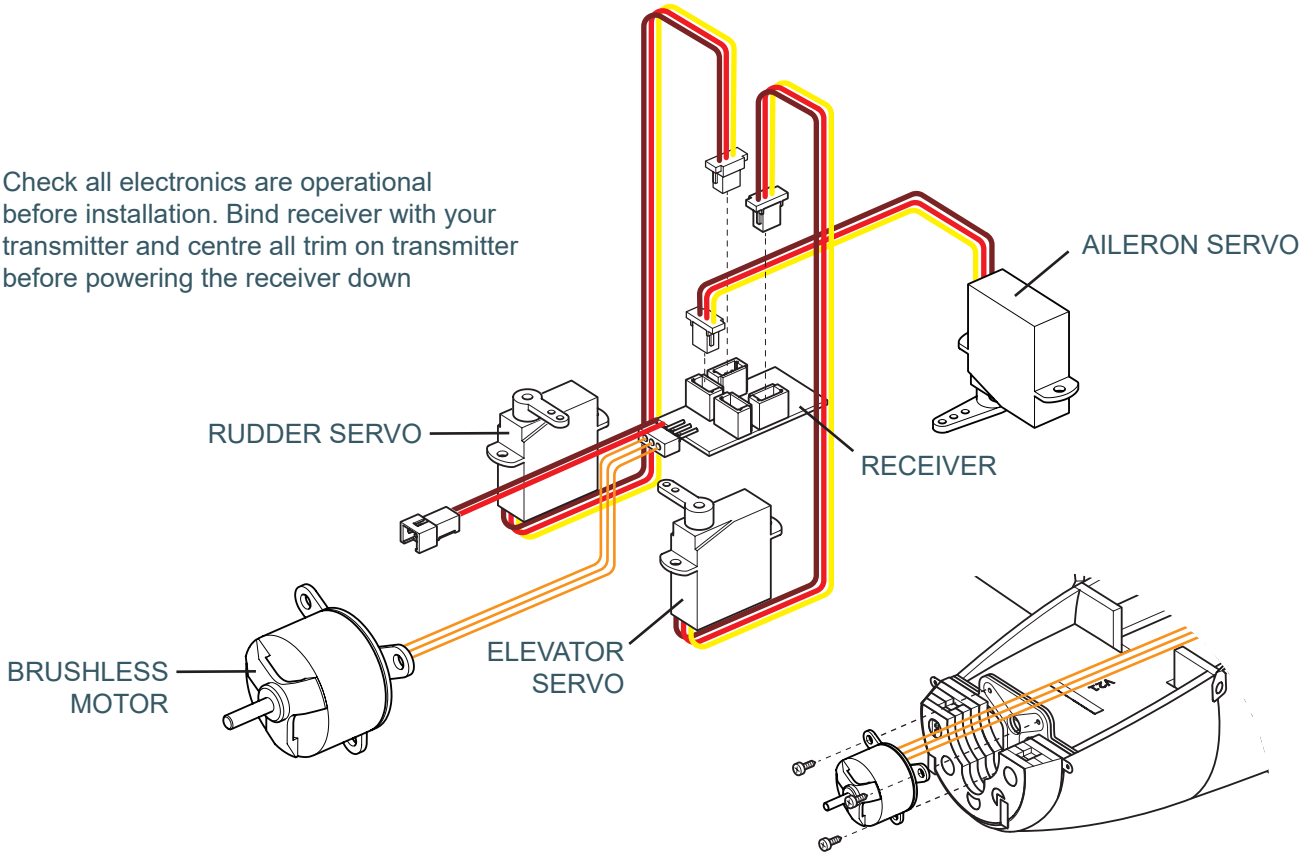


Insert control rods into fuselage from aft position forward. Once in position, attach to control surfaces via the control horns. Insert Z bends into servo control arms before attaching the arms to the servos. Make adjustments to ensure control surfaces are in the neutral position then secure the wireform in the carbon fibre tube on each control rod with a suitable adhesive

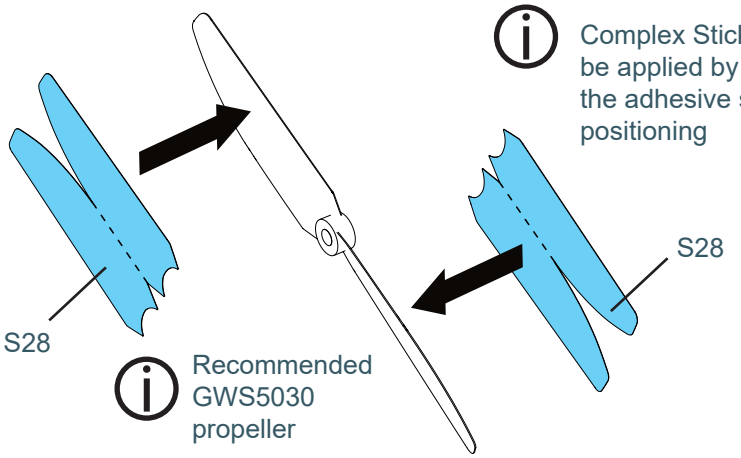
Position of Receiver for installation use double sided servo tape

CONFIGURATION OF ELECTRONICS FOR THE ALBATROS DV

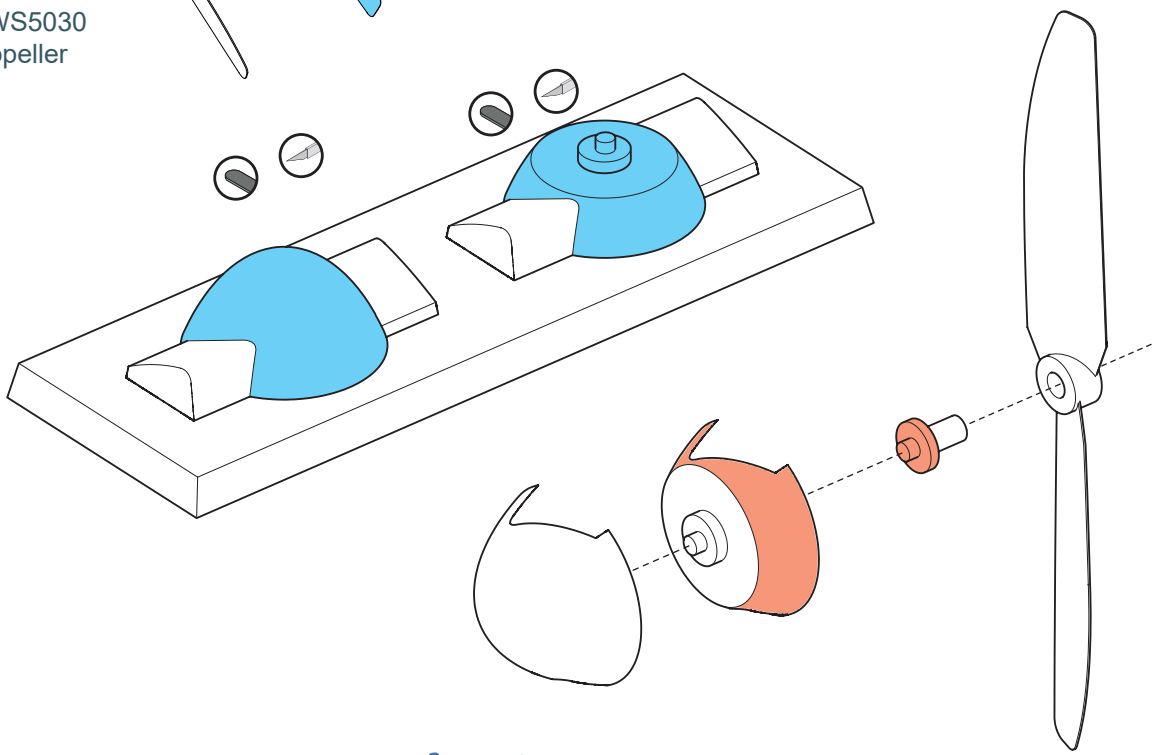
Check all electronics are operational before installation. Bind receiver with your transmitter and centre all trim on transmitter before powering the receiver down

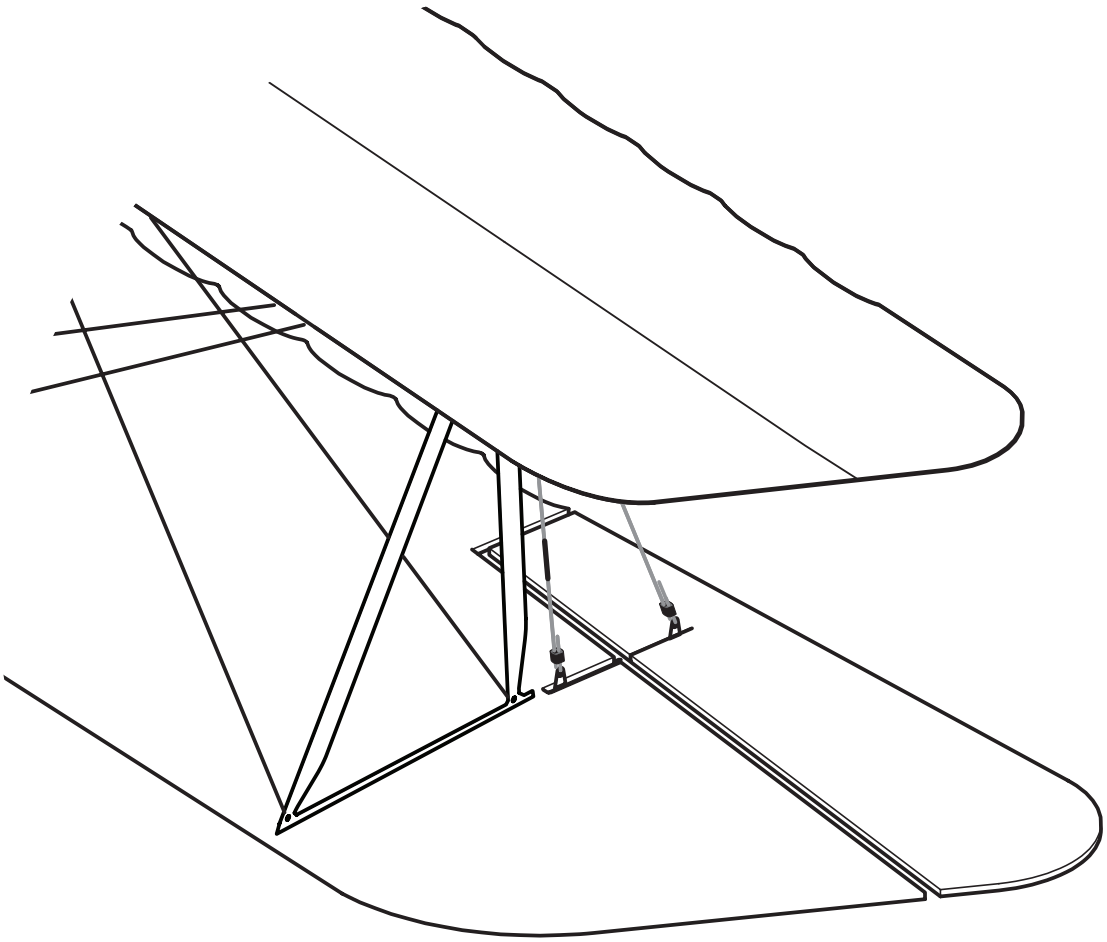


Complex Stickers can be applied by wetting the adhesive side to aid positioning

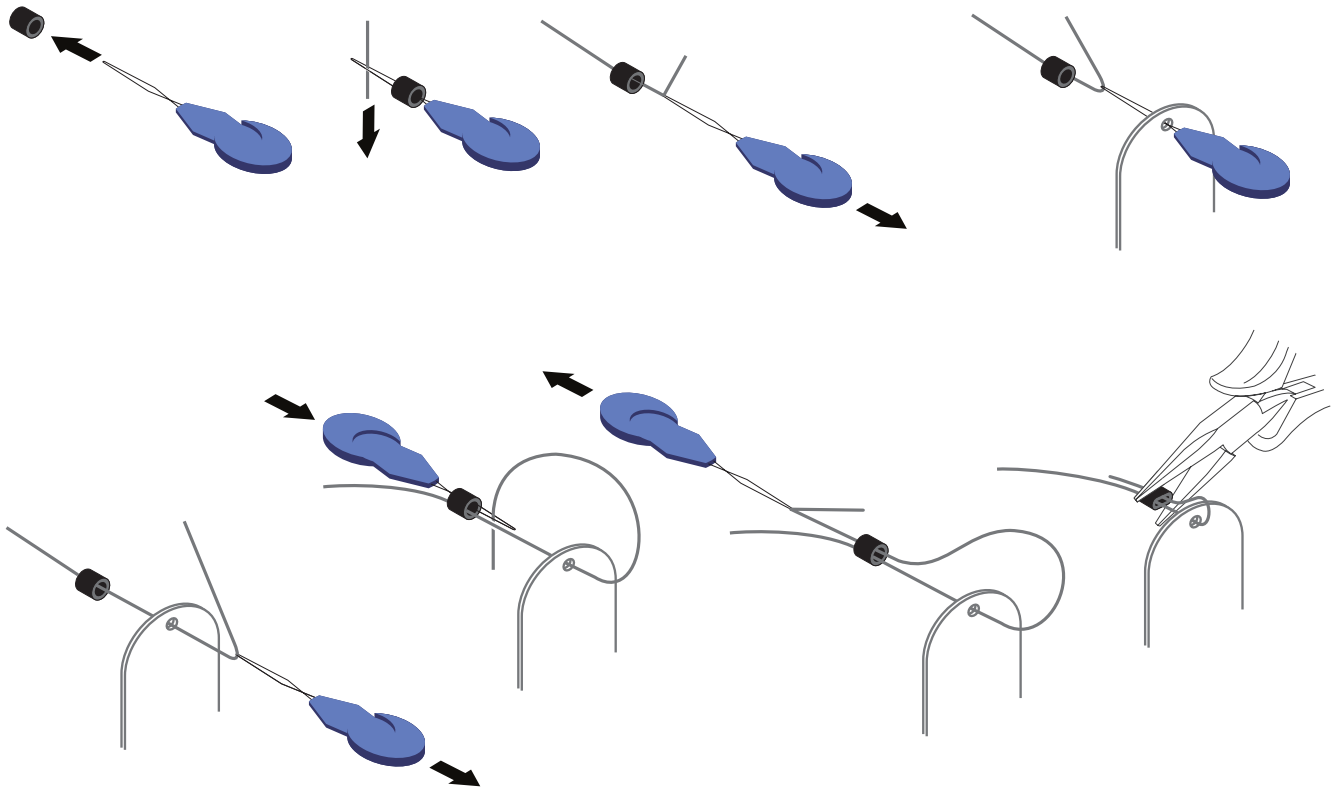


Recommended GWS5030 propeller

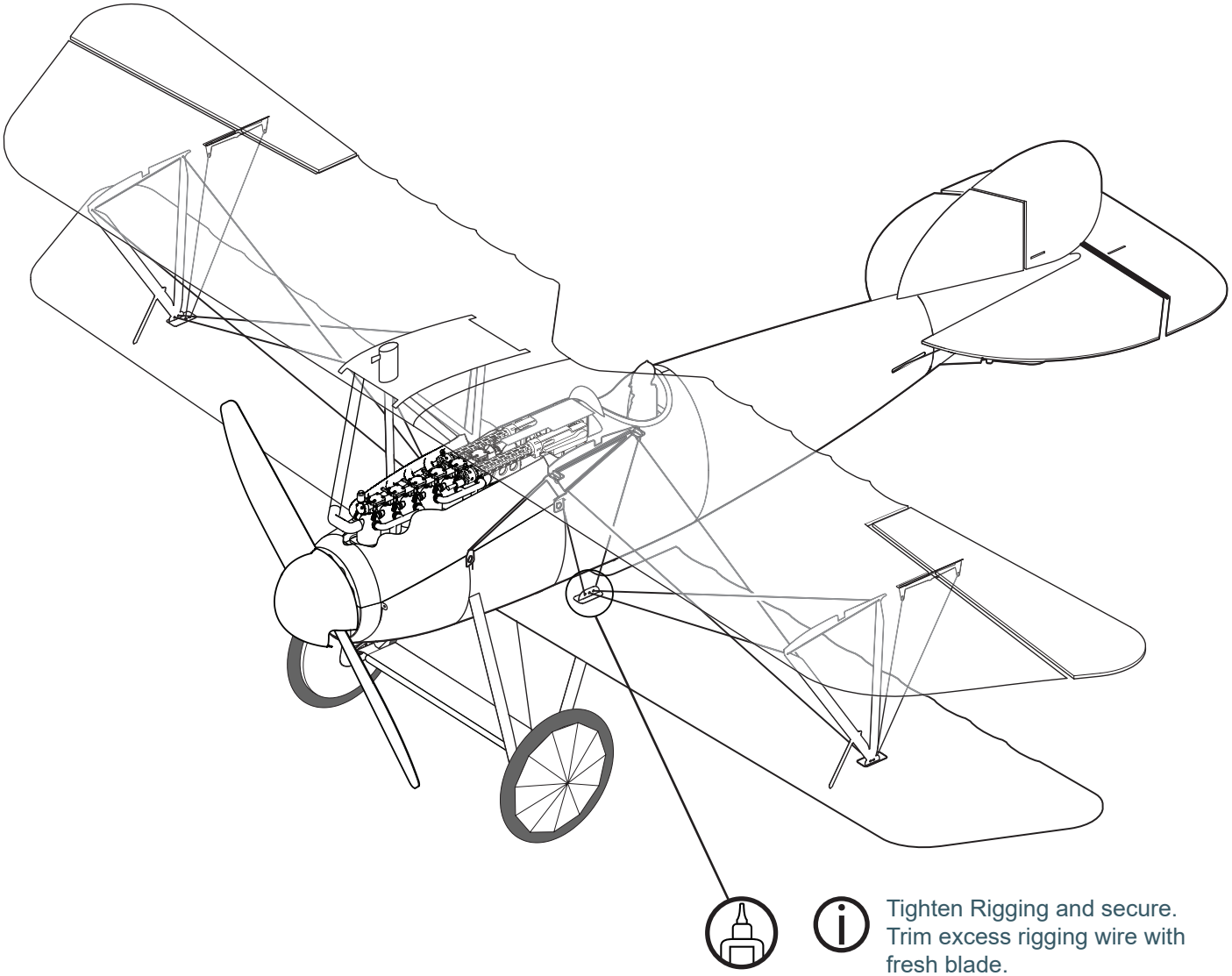




Rigging Crimping Procedure



STAGE 11 CONTROLS



Tighten Rigging and secure. Trim excess rigging wire with fresh blade.

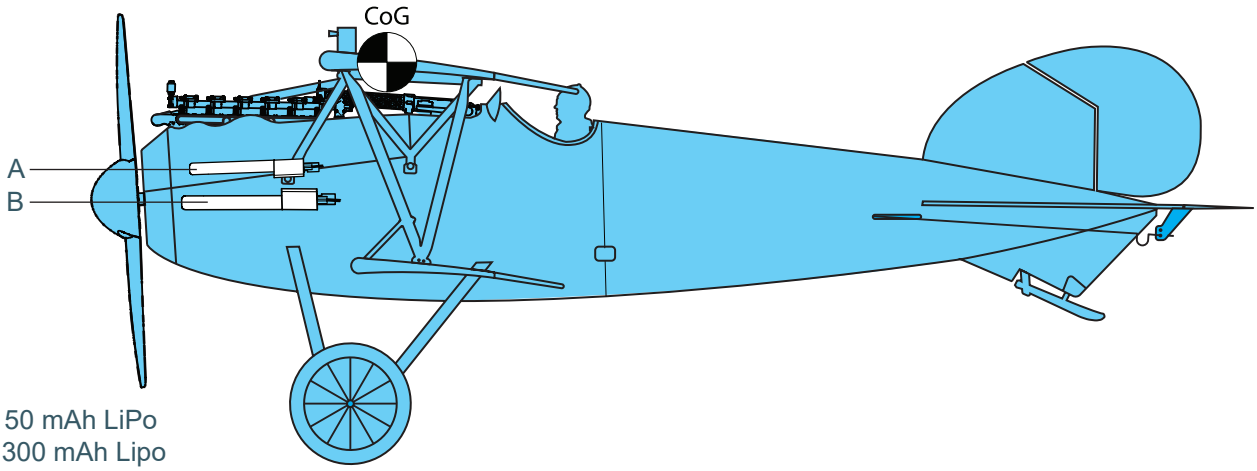
CENTRE OF GRAVITY

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.

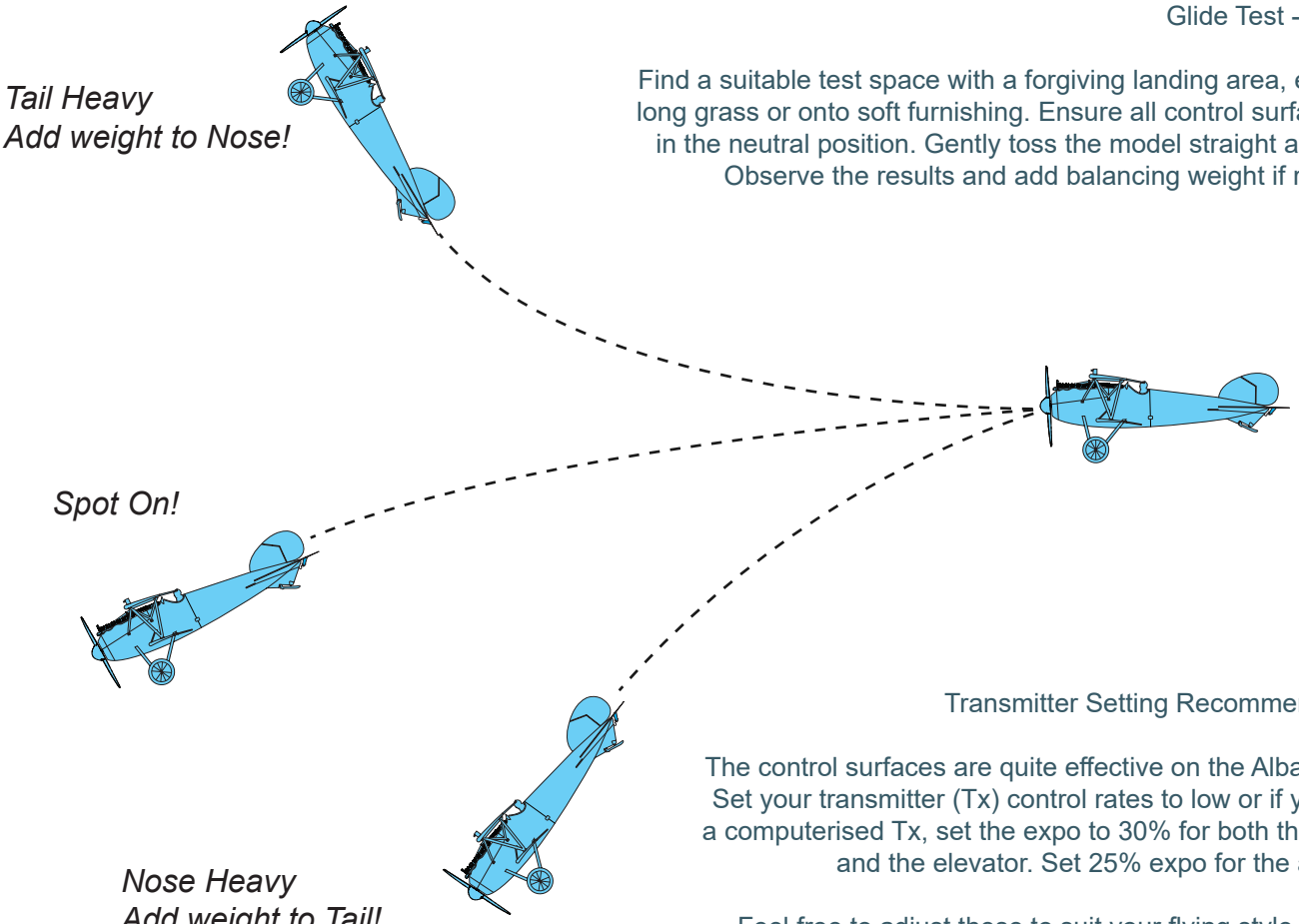
ⓘ Battery Position



A - Small 150 mAh LiPo
B - Larger 300 mAh Lipo

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.



Transmitter Setting Recommendations

The control surfaces are quite effective on the Albatros DV. Set your transmitter (Tx) control rates to low or if you have a computerised Tx, set the expo to 30% for both the rudder and the elevator. Set 25% expo for the ailerons.

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