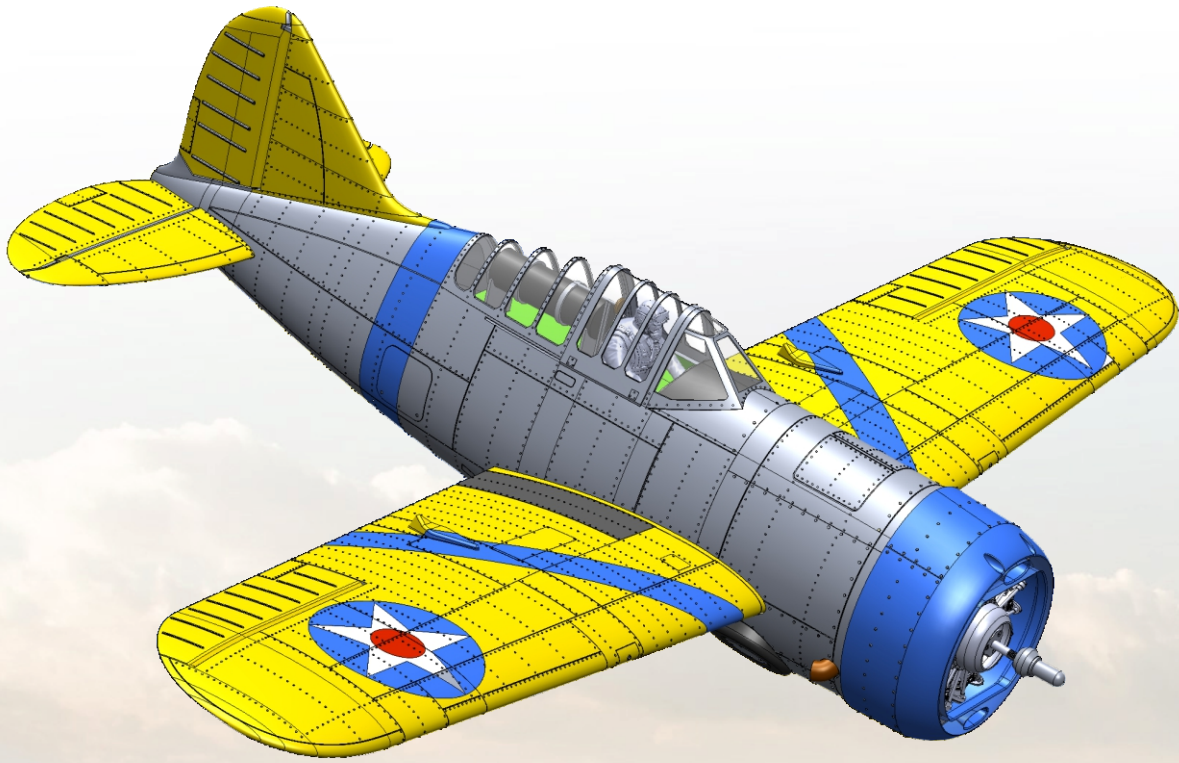


Bastlero.
www.bastlero.com

USER GUIDE

Created for 3D printer



scale
1:10



wingspan
43,3In / 110cm



made of
52 pcs



printed weight
18oz / 500g



total weight
31,8oz / 900g

F2A Buffalo
USAF Fighter



ASSEMBLY INSTRUCTION

RC Model printed on 3D printer



Visit our website, www.bastlero.com, to purchase a product you are interested in. Once you've made your purchase, you will receive access to download the file in



Download the files onto an SD card. We have optimized the universal G-code output to work with a wide selection of printers and have tested our products on several printer brands and configurations. If you own a Prusa 3D printer, please use the Prusa G-code files for printing.



Print all of the model parts on your 3D printer. The minimum supported size of the printed surface should be 22x22x20 cm or 20x25x20 cm.



Assemble the model according to the attached PDF manual. For bonding the model parts, we recommend using Super Glue (medium thickness) and Activator.

PRODUCT CONTAINS

- STL files of an RC model F2A Buffalo at a 1/10 scale for a Prusa 3D printer.
- G-Code for an RC model F2A Buffalo at a 1/10 scale, optimized for 3D printing.
- PrusaSlicer .3mf files for an RC model F2A Buffalo at a 1/10 scale.
- Assembly instructions in PDF format
- Scale markings in PDF format

MODEL SPECIFICATION



scale
1:10



wingspan
62In / 110cm



made of
52 pcs



printed weight
99oz / 0,5kg

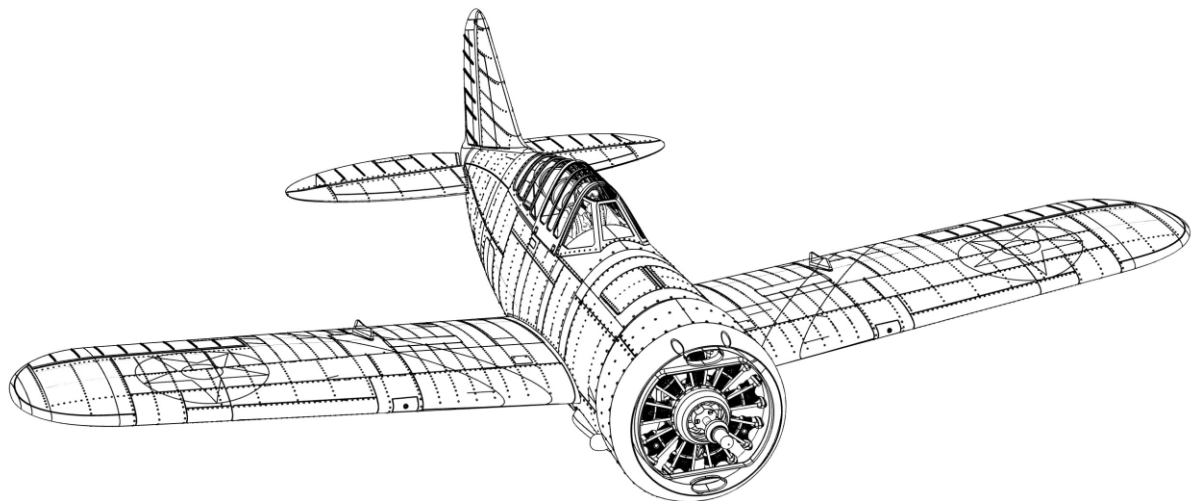


takeoff weight
123oz / 0,95kg

WATEVER YOU NEED

1. PLA/LPLA & PETG filament for print model parts
2. Super glue and Activator
3. 4X Micro Servos (Recommended Turnigy Tg9d) [Link](#)
4. 4X Screw M3 length 15-20 mm & 4X Nut M3
5. 12X screws 2x10mm for mounting servos
6. 8X Magnet diameter 8mm X 1,5 or 2mm [Link](#)
7. 6X Magnet diameter 10mm x 1,5 or 2mm [Link](#)
8. Electric Motor 3536- 910KV (Recommended PROPDRIVE v2 3536 910KV) [Link](#)
9. Speed Controllers 40-50A (Recommended Red Brick 50A) [Link](#)
10. Radio / Receiver 8 Channels
11. Propeller 13X5 or 12x6 [Link](#)
12. Metal Wire 0,7mm-1mm (push-pull servo rod)
13. 2x 30cm Carbon tube diameter 7mm [Link](#)
14. Battery 1500-2200mAh [Link](#)

PRINTED PARTS LIST



| No. | Parts name | Layer H. | Weight | Infil | P. Time | Mtl. | Perime | Main Location |
|-----|----------------|----------|--------|-------|---------|--------|--------|------------------|
| 1 | Fuselage A | 0,25mm | 16g | 0% | 2h52m | LW-PLA | 2 | Fuselage_01_-_08 |
| 2 | Fuselage B | 0,25mm | 94g | 2% | 14h40m | LW-PLA | 2 | Fuselage_01_-_08 |
| 3 | Fuselage C | 0,25mm | 46g | 0% | 9h30m | LW-PLA | 1 | Fuselage_01_-_08 |
| 4 | Fuselage D | 0,25mm | 35g | 0% | 7h11m | LW-PLA | 1 | Fuselage_01_-_08 |
| 5 | Fuselage E | 0,25mm | 34g | 0% | 7h8m | LW-PLA | 1 | Fuselage_01_-_08 |
| 6 | Fuselage F | 0,25mm | 4g | 0% | 50m | LW-PLA | 1 | Fuselage_01_-_08 |
| 7 | Fuselage G | 0,25mm | 3g | 0% | 1h | LW-PLA | 1 | Fuselage_01_-_08 |
| 8 | Fuselage H | 0,25mm | 6g | 0% | 1h | LW-PLA | 1 | Fuselage_01_-_08 |
| 9 | Rudder A | 0,25mm | 0,5g | 0% | 4m | LW-PLA | 2 | Rudder_09_-_13 |
| 10 | Rudder Horn | 0,25mm | 1g | 15% | 13m | PLA | 4 | Rudder_09_-_13 |
| 11 | Rudder Hex Axe | 0,25mm | 1g | 15% | 5h25m | LW-PLA | 4 | Rudder_09_-_13 |
| 12 | Rudder Move A | 0,2mm | 10g | 0% | 2h20m | LW-PLA | 1 | Rudder_09_-_13 |
| 13 | Rudder Move B | 0,25mm | 0,3 | 0% | 7m | LW-PLA | 2 | Rudder_09_-_13 |

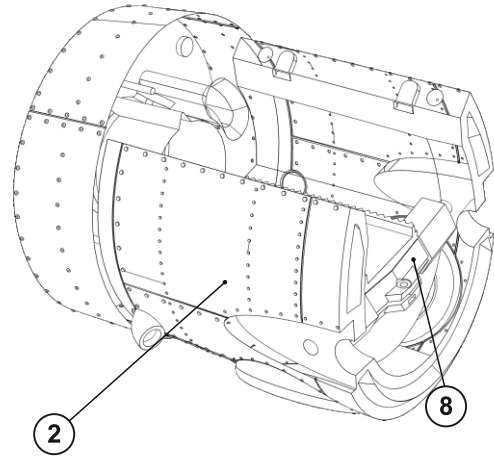
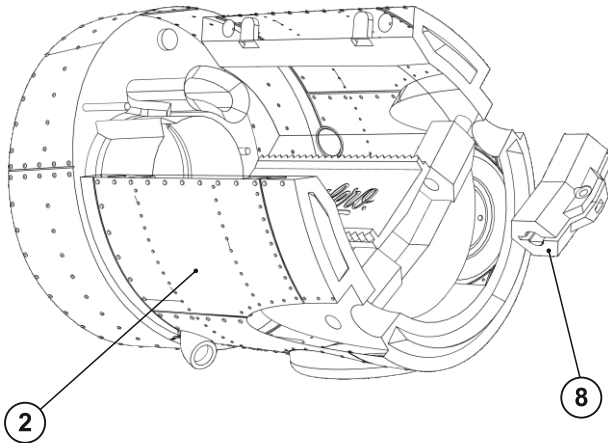
PRINTED

Part List (14-52)

| No. | Parts name | Layer H. | Weight | Infil | P. Time | Mtl. | Perime | Main Location |
|-----|------------------------|----------|--------|-------|---------|--------|--------|--------------------|
| 14 | Left Elevator A | 0,25mm | 4,2g | 0% | 1h33m | LW-PLA | 1 | Elevator_14_-24 |
| 15 | Left Elevator B | 0,25mm | 1,2g | 0% | 24m | LW-PLA | 2 | Elevator_14_-24 |
| 16 | Right Elevator A | 0,25mm | 4,2g | 0% | 1h33m | LW-PLA | 1 | Elevator_14_-24 |
| 17 | Right Elevator B | 0,25mm | 1,2g | 0% | 24m | LW-PLA | 2 | Elevator_14_-24 |
| 18 | Left Elevator Move A | 0,2mm | 5,9g | 0% | 2h39m | LW-PLA | 1 | Elevator_14_-24 |
| 19 | Left Elevator Move B | 0,2mm | 1g | 0% | 28m | LW-PLA | 2 | Elevator_14_-24 |
| 20 | Right Elevator Move A | 0,2mm | 5,9g | 0% | 2h39m | LW-PLA | 1 | Elevator_14_-24 |
| 21 | Right Elevator Move B | 0,2mm | 1g | 0% | 28m | LW-PLA | 2 | Elevator_14_-24 |
| 22 | Axe Elevator Right | 0,2mm | 1,2g | 15% | 18m | PLA | 4 | Elevator_14_-24 |
| 23 | Axe Elevator Left | 0,2mm | 0,7g | 15% | 8m | PLA | 4 | Elevator_14_-24 |
| 24 | Hex Axe Elevator | 0,2mm | 0,8g | 15% | 8m | LW-PLA | 5 | Elevator_14_-24 |
| 25 | Electromotor Holder | 0,25mm | 13g | 15% | 2h9m | LW-PLA | 5 | Accessories_25_-28 |
| 26 | Battery Cip | 0,2mm | 6g | 15% | 47m | PLA | 5 | Accessories_25_-28 |
| 27 | Battery Cover | 0,25mm | 10,4g | 0% | 2h21m | LW-PLA | 1 | Accessories_25_-28 |
| 28 | Wright R-1820 | 0,3mm | 13g | 5% | 2h34m | LW-PLA | 2 | Accessories_25_-28 |
| 29 | Dashboard | 0,2mm | 2,7g | 5% | 20m | PLA | 2 | Cocpit_29_-36 |
| 30 | life raft container | 0,2mm | 9,4g | 5% | 2h14m | LW-PLA | 2 | Cocpit_29_-36 |
| 31 | Canopy Front Frame | 0,2mm | 11g | 15% | 1h42m | PLA | 2 | Cocpit_29_-36 |
| 32 | Canopy Mid Frame | 0,2mm | 12,7g | 15% | 1h43m | PLA | 2 | Cocpit_29_-36 |
| 33 | Canopy Back Frame | 0,2mm | 29g | 15% | 3h | PLA | 2 | Cocpit_29_-36 |
| 34 | Form on Canopy Front | 0,2mm | 76g | 15% | 4h16m | PETG | 10 | Cocpit_29_-36 |
| 35 | Form on Canopy Mid | 0,2mm | 130g | 15% | 7h13m | PETG | 10 | Cocpit_29_-36 |
| 36 | Form on Canopy Back | 0,2mm | 144g | 15% | 8h13m | PETG | 10 | Cocpit_29_-36 |
| 37 | Wing Left A | 0,25mm | 27,6g | 0% | 5h43m | LW-PLA | 1 | Wing_37_-52 |
| 38 | Wing Left B | 0,25mm | 23g | 0% | 4h45m | LW-PLA | 1 | Wing_37_-52 |
| 39 | Wing Left C | 0,25mm | 14,4g | 0% | 3h3m | LW-PLA | 1 | Wing_37_-52 |
| 40 | Wing Left D | 0,25mm | 1,5g | 0% | 31m | LW-PLA | 1 | Wing_37_-52 |
| 41 | Ailerons Left | 0,2mm | 7g | 0% | 3h7m | LW-PLA | 1 | Wing_37_-52 |
| 42 | Wing Right A | 0,25mm | 27,6g | 0% | 5h43m | LW-PLA | 1 | Wing_37_-52 |
| 43 | Wing Right B | 0,25mm | 23g | 0% | 4h45m | LW-PLA | 1 | Wing_37_-52 |
| 44 | Wing Right C | 0,25mm | 14,4g | 0% | 3h3m | LW-PLA | 1 | Wing_37_-52 |
| 45 | Wing Right D | 0,25mm | 1,5g | 0% | 31m | LW-PLA | 1 | Wing_37_-52 |
| 46 | Ailerons Right | 0,2mm | 27,6g | 0% | 5h43m | LW-PLA | 1 | Wing_37_-52 |
| 47 | Ailerons hinge A | 0,2mm | 0,3g | 5% | 3m | PLA | 4 | Wing_37_-52 |
| 48 | Ailerons hinge B | 0,2mm | 0,3g | 5% | 3m | PLA | 4 | Wing_37_-52 |
| 49 | Wing Accessories A | 0,2mm | 0,3g | 0% | 9m | LW-PLA | 2 | Wing_37_-52 |
| 50 | Wing Accessories B | 0,2mm | 0,3g | 0% | 8m | LW-PLA | 2 | Wing_37_-52 |
| 51 | Wing Servo Cover Left | 0,2mm | 2,3g | 0% | 55m | LW-PLA | 2 | Wing_37_-52 |
| 52 | Wing Servo Cover Right | 0,2mm | 2,3g | 0% | 55m | LW-PLA | 2 | Wing_37_-52 |

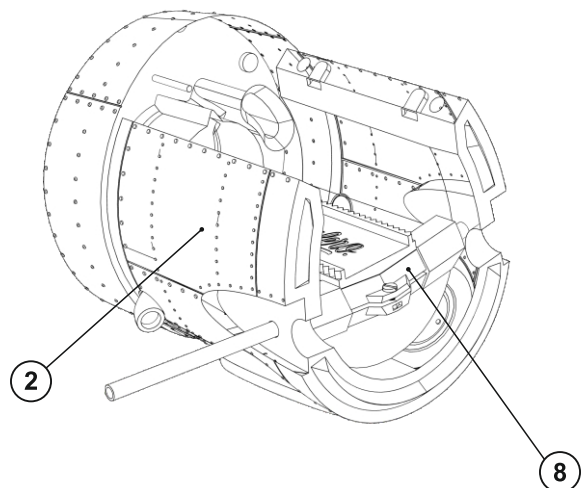
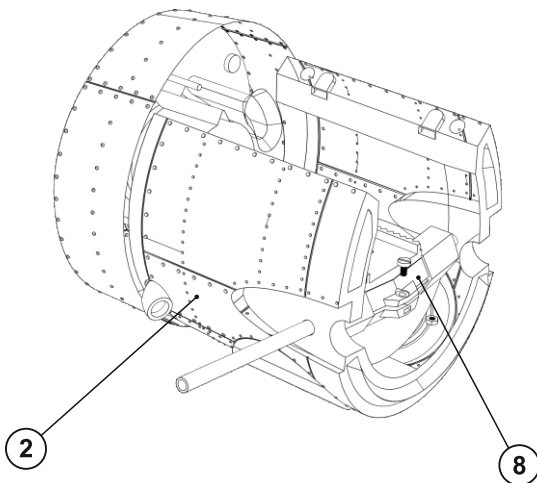
FUSELAGE

Fuselage Assembly



Fuselage Assembly: Start by gluing together the fuselage parts (2-3) using super glue. Continue by inserting part number (8) into the fuselage section (2).

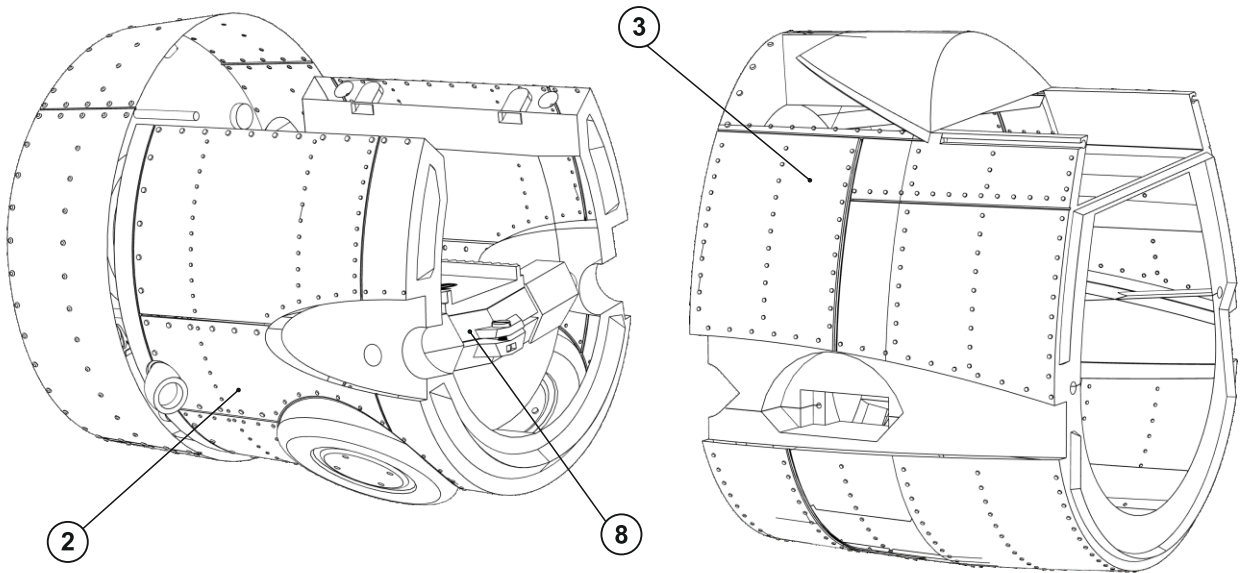
Note: Part number (2) is printed with infill and will have printing imperfections caused by filament retraction. Therefore, pay extra attention to cleaning this part. Before gluing each part together, clean the holes of the



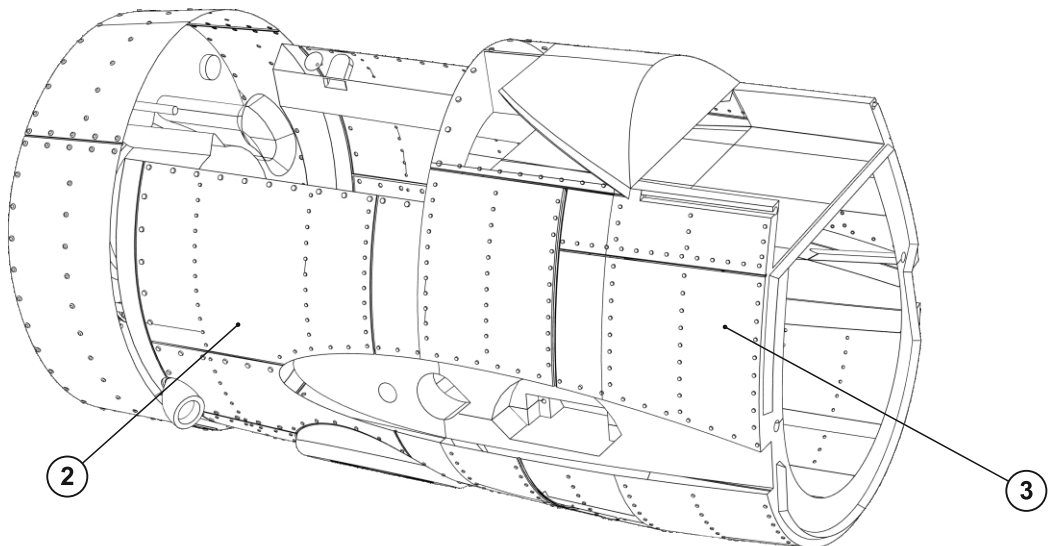
Fuselage Assembly: Make sure you have good clearance for a 7 mm diameter carbon tube, which will serve as the wing spar. If everything fits properly, secure it with glue and insert an M3 screw and nut into part (8). This will be used to attach the wings to the fuselage.

FUSELAGE

Fuselage Assembly - Wing Handlers



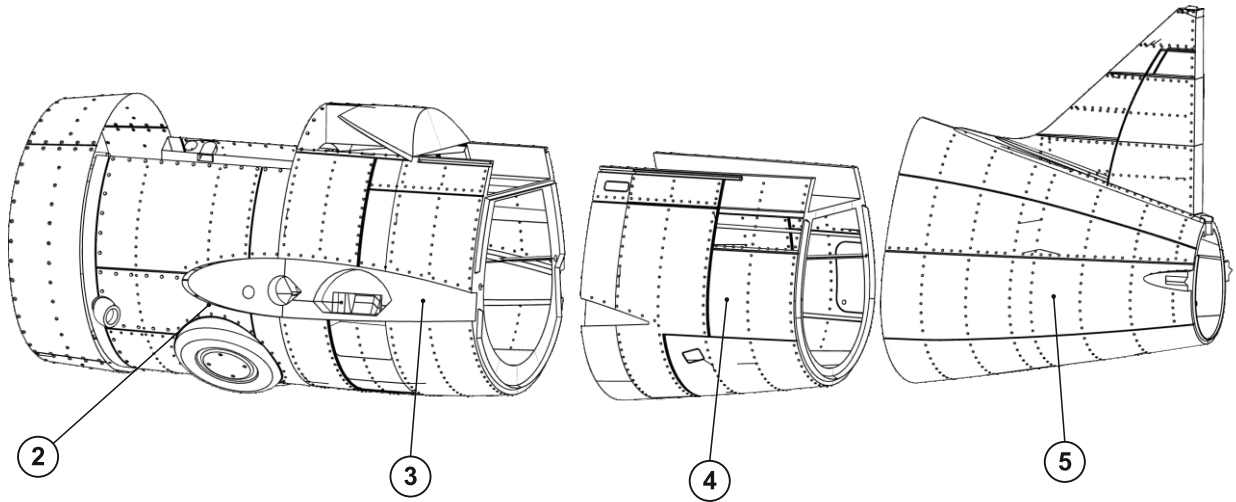
Fuselage Assembly: Continue by joining parts (2 and 3). Before each joining, remember to test-fit the parts without glue and ensure that everything is well cleaned from filament residues. If not, use sandpaper. It is important that the parts fit together well.



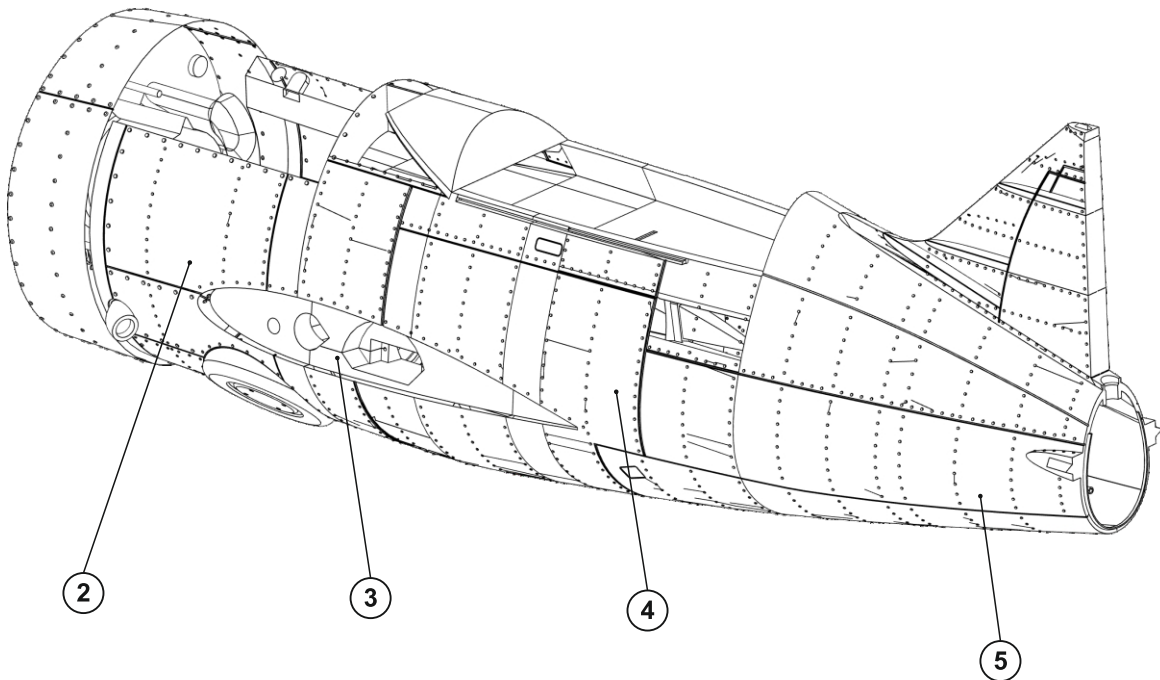
Fuselage Assembly: If everything fits well, use glue and bond the parts.

FUSELAGE

Fuselage Assembly



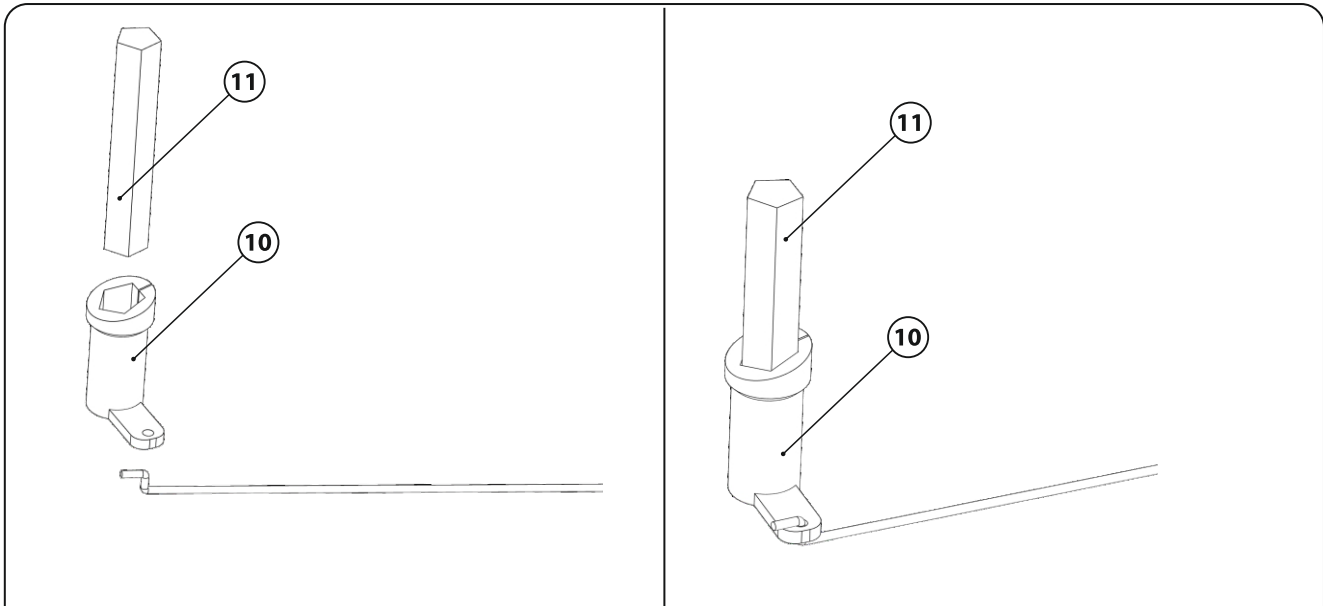
Fuselage Assembly: Proceed in the same manner with parts (4 and 5). Ensure that everything fits and also check the passage of holes for the Bowden cables.



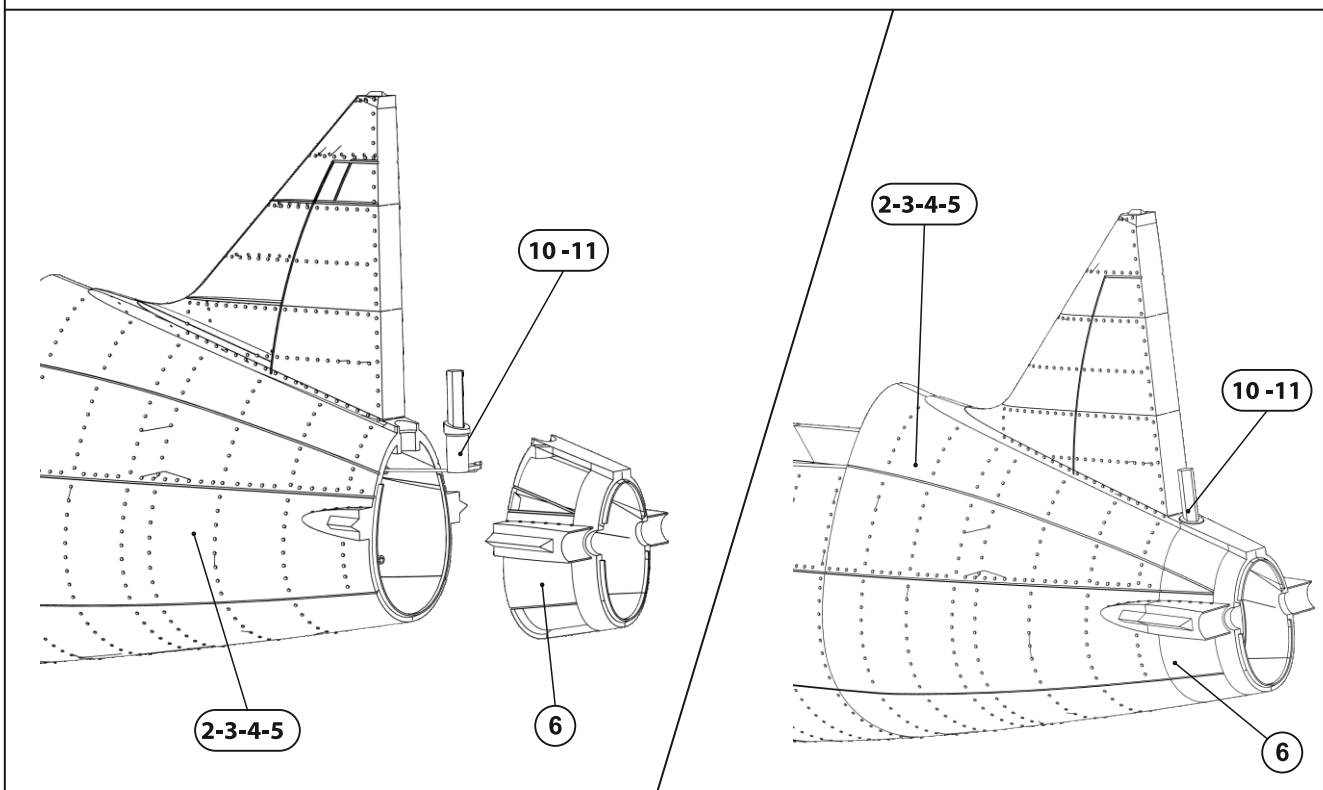
Fuselage Assembly: Glue parts (4 and 5) together once you've confirmed everything fits well.

RUDDER

Fin & Rudder



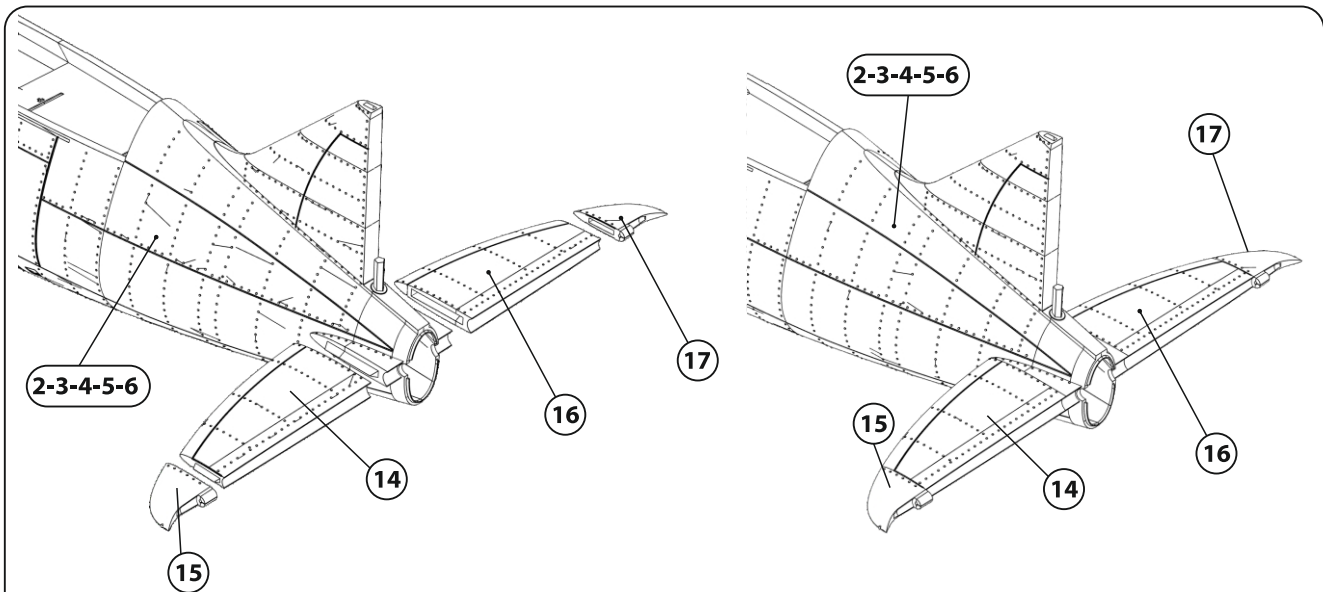
Fin & Rudder: Prepare the rudder axis with parts (10-11). Attach the Bowden cable into part (10).



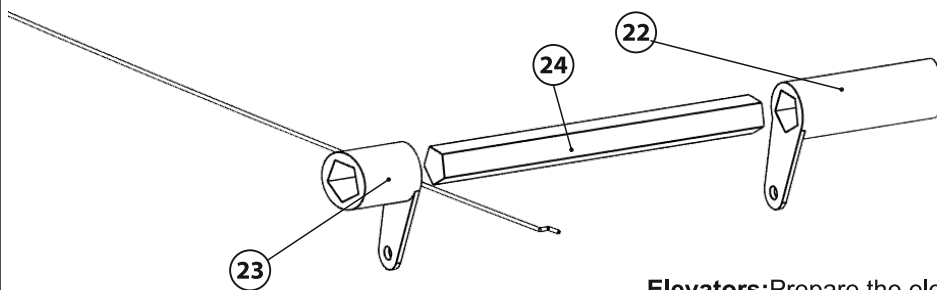
Fin & Rudder: Attach the glued parts (10-11) to part (6), ensuring that you thread the Bowden cable through the hole directed towards the servo. Place part (6) without glue and make sure it can rotate freely. If necessary, clean with sandpaper. If everything fits, glue part (6) to part (5), but be careful not to let the glue get into the part where the rudder axis rotates.

ELEVATORS

Assembly Tailplane & Elevators

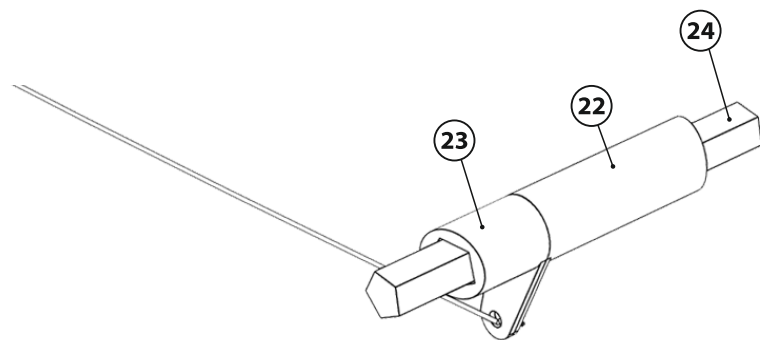


Tailplane: Glue parts (15-16) together and attach them to the fuselage (2-3-4-5-6). Repeat the same process with parts (16-17).



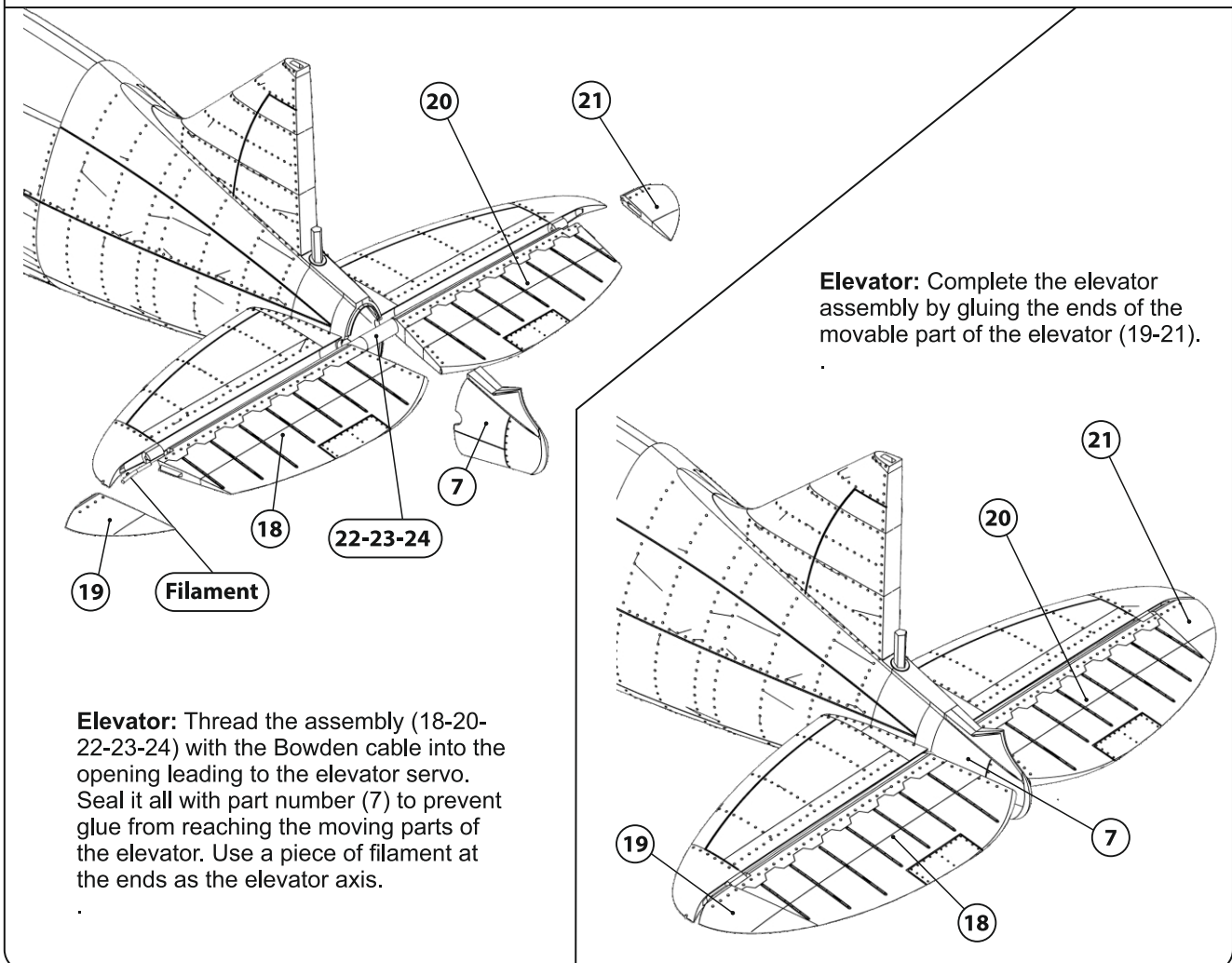
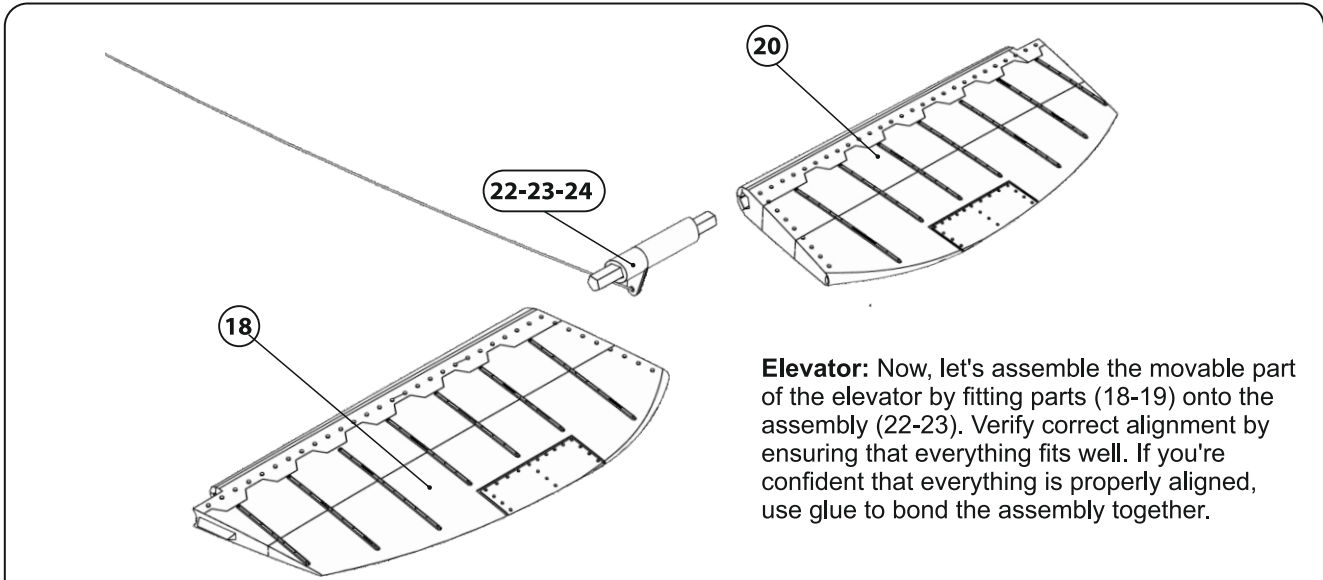
Elevators: Prepare the elevator axis parts (23-24-25) and the elevator Bowden cable.

Elevators: Glue them together as one unit and attach the elevator Bowden cable to the elevator lever..



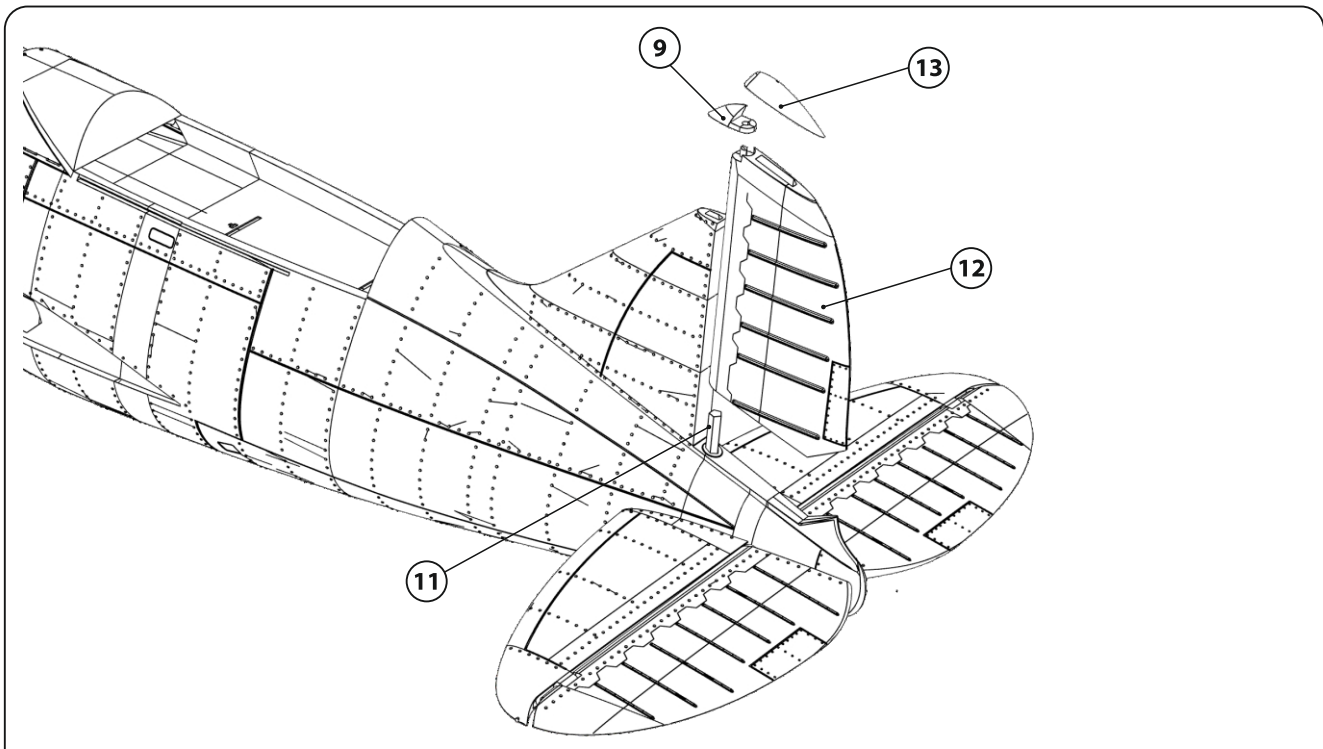
ELEVATORS

Assembly Moving Parts Elevators

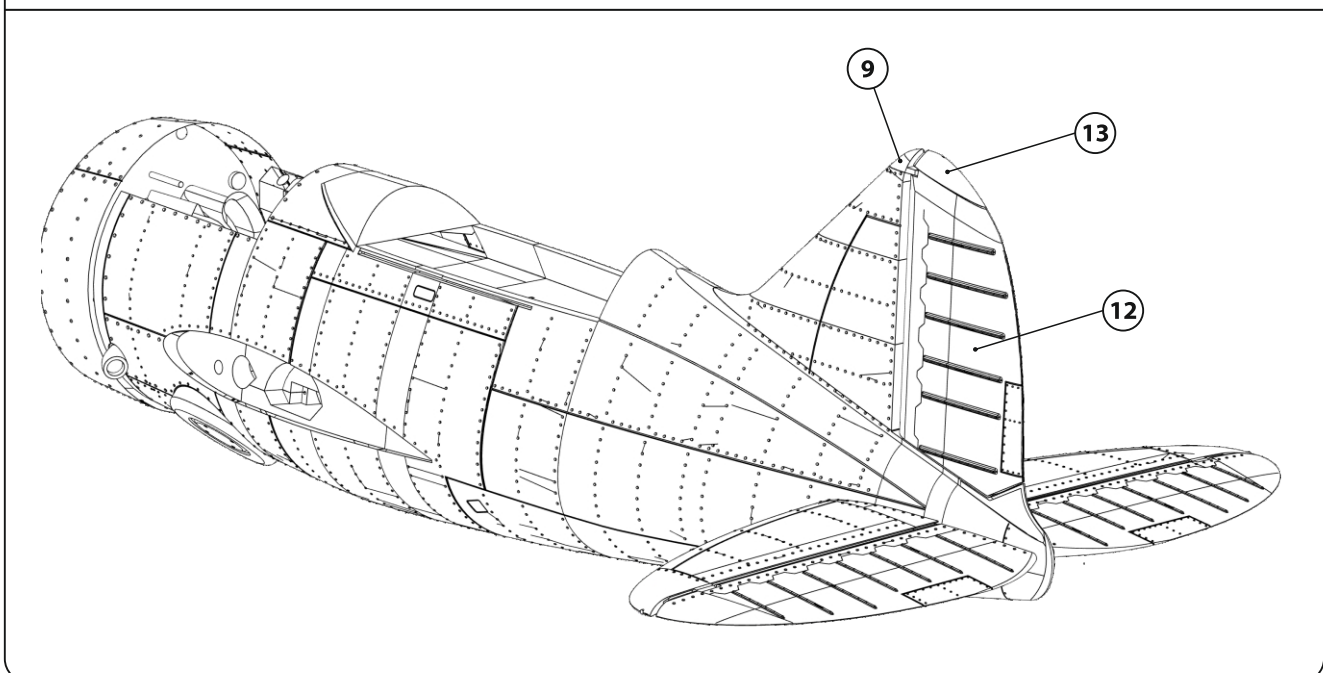


RUDDER

Fin & Rudder

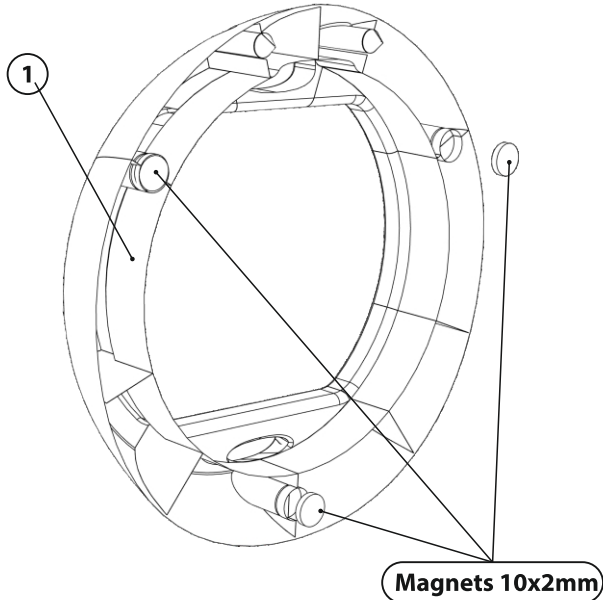


Rudder: To complete the rudder assembly, start by fitting part (12) onto the hex (11). In this step, you must be careful to ensure that the rudder lever is in the correct position, which you can verify by looking into the fuselage from the cockpit or ensuring that part (10) aligns with the fuselage surface. If everything fits well, use glue carefully to avoid compromising the mobility of the rudder axis. Attach the upper part of the rudder with part (9), which serves as the hinge, and complete the assembly with part (13).

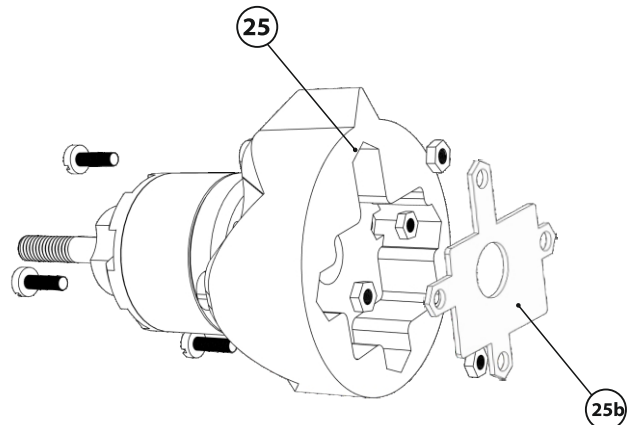


MOTOR HOLDER

Electric Motor Installation

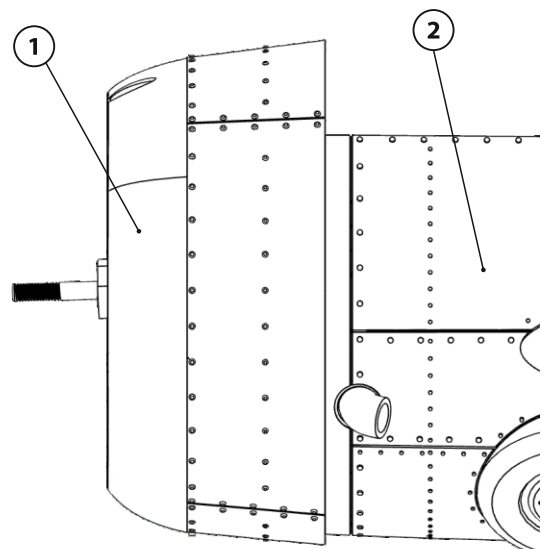
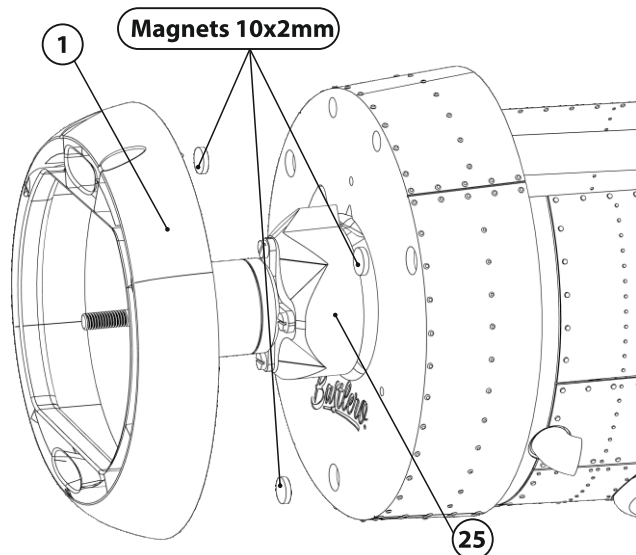


Motor Cover: Before starting with the installation of the electric motor, clean part (1) from any filament residues and embed three 10x2mm magnets into it.



Electric motor holder installation: First, insert the M3 nuts into the motor mount (25) and then glue part (25b) over them to secure them in place.

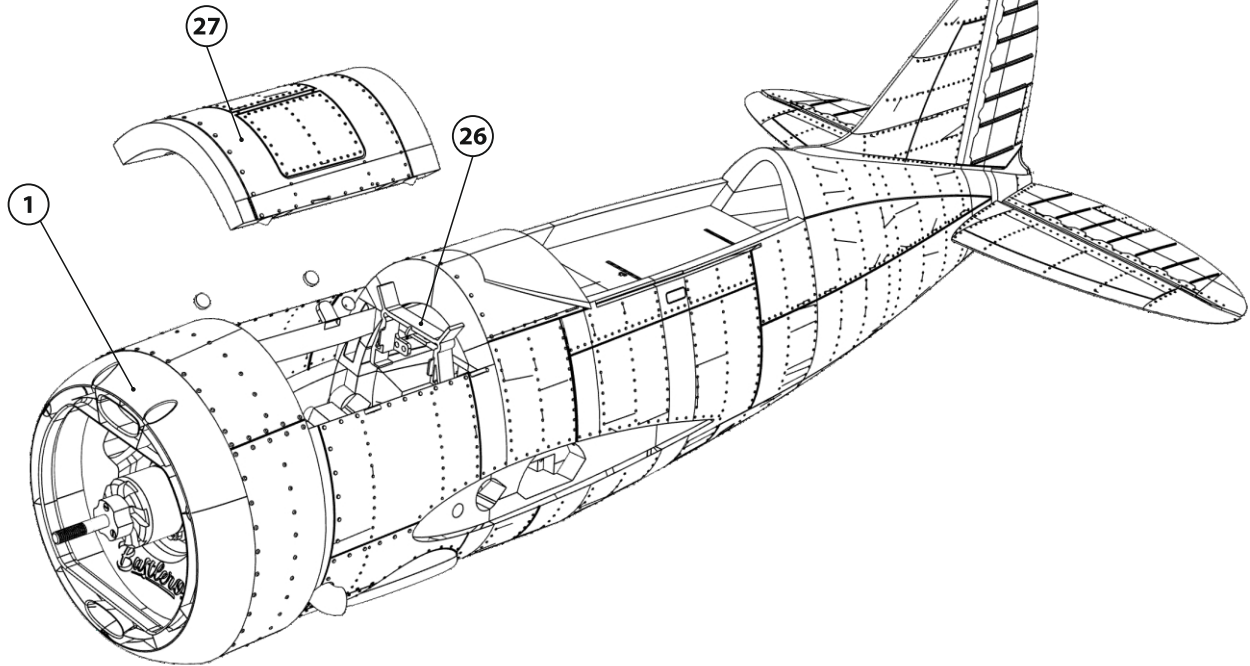
Position the electric motor on part (25) so that the cables, when viewed from the front, point to the left and upwards (they will later be threaded through an opening in the fuselage), and secure it using M3



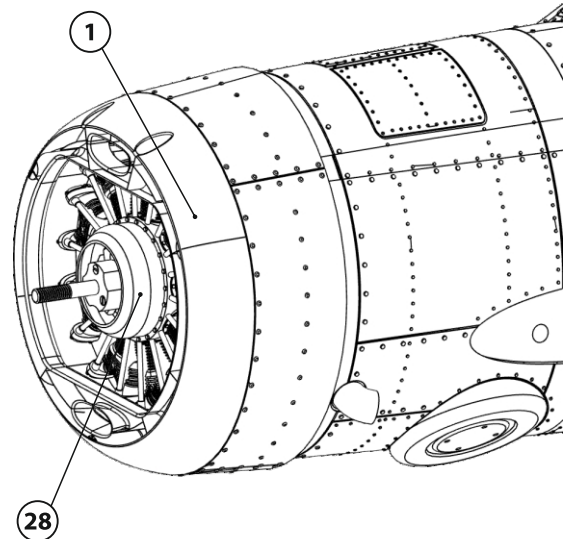
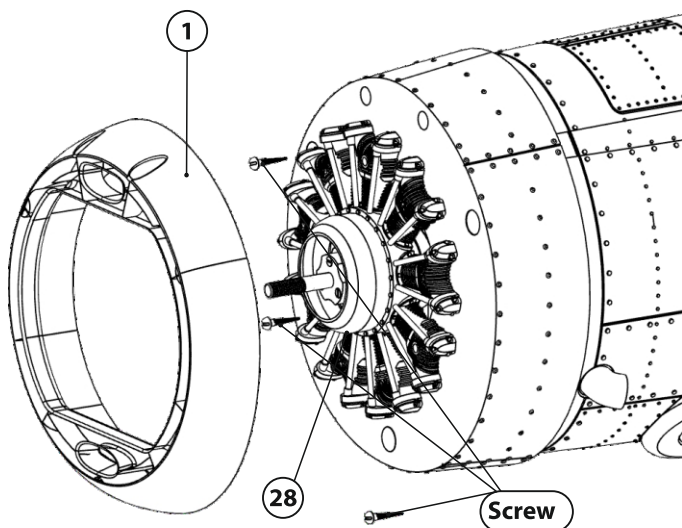
Electric motor holder installation: Embed 3x 10x2mm magnets into the fuselage section (ensure that the magnetic poles are aligned correctly with part 1). In the next step, insert the motor along with its motor mount into the fuselage so that when you attach part 1, the propeller hub protrudes slightly (you can also verify this by fitting the propeller to ensure it doesn't rub against the motor housing). If everything is in order, secure it with glue.

BATTERY

Battery clip & cover Installation



Battery cover installation: Glue 8x2mm magnets into the battery cover (27) and also into the fuselage, ensuring the magnetic poles are aligned correctly. Now, snap on the battery clip (26), which is adjustable on the rail and can be moved to easily correct the aircraft's center of gravity by shifting the battery position.

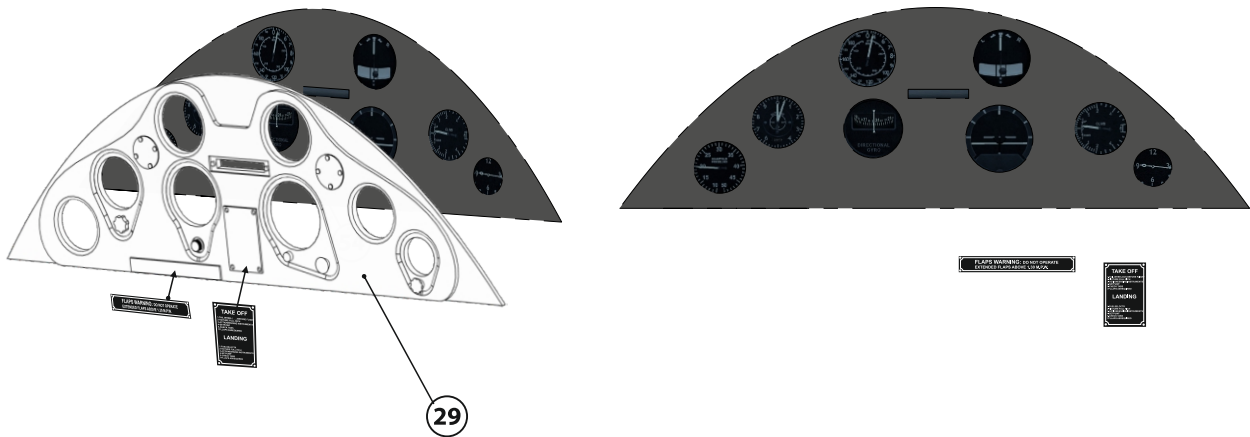


Tail Gear: Now attach the mock engine part (28) using 3 screws.

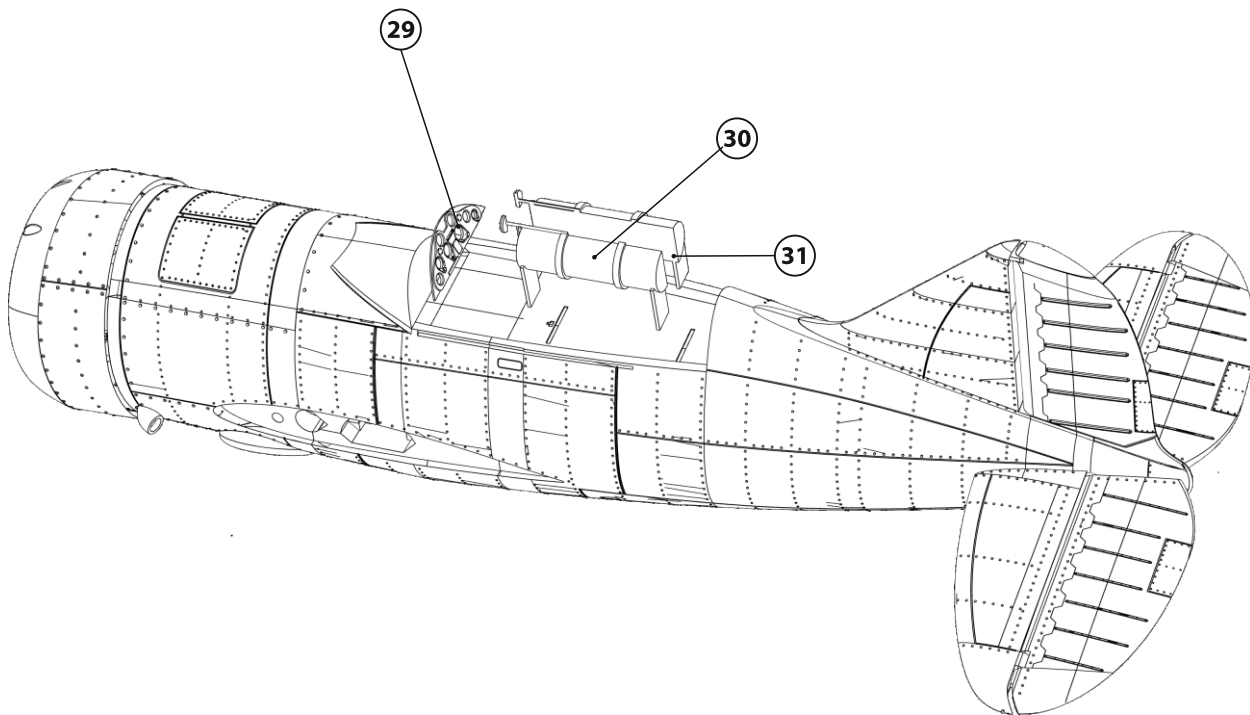
Note: Ensure that the electric motor rotates freely and does not rub against the mock engine part.

COCKPIT

Instruments Panels Installation



Dashboard: The dashboard (29) goes under the printed and cut-out image of the instrument panel, along with the description printed from the laser printer.



Dashboard: Glue the instrument panel (29) to the fuselage of the aircraft and assemble the parts of the emergency equipment compartment (30-31). Then glue them into the cockpit.

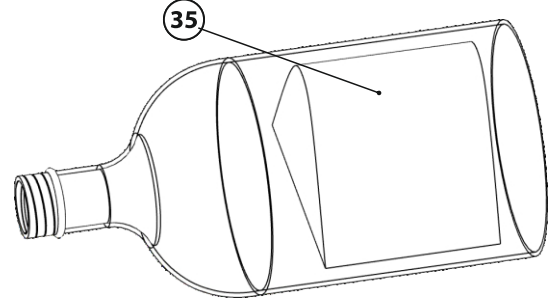
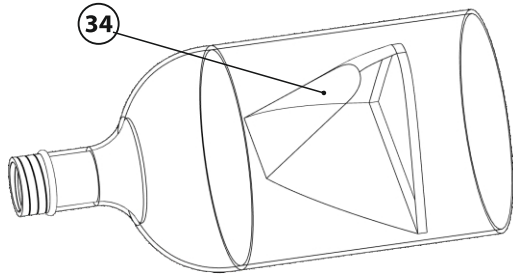
COCKPIT

Bubble Canopy

Canopy: To properly proceed with making the canopy glass, you can refer to the method used in constructing the F2A canopy.

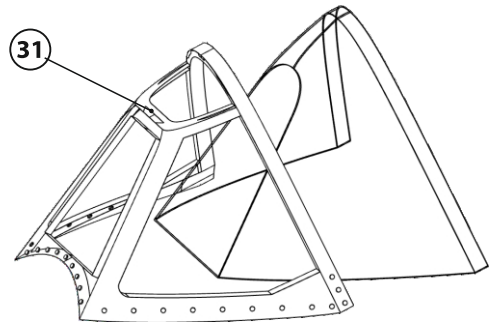
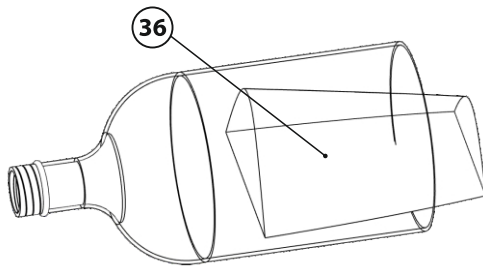


Video instruction

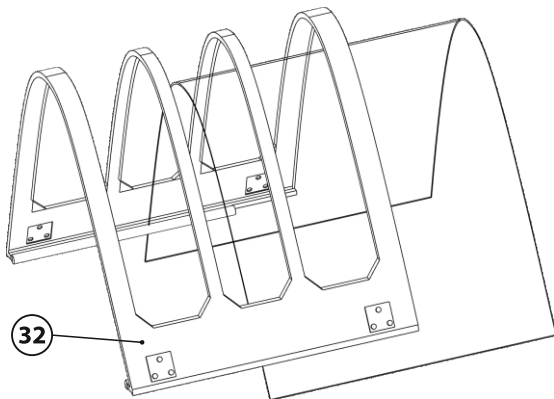


Canopy: If you choose to make your own, print the parts (34-35-36) using PET material and place them inside a PET soda bottle. Fill the space between the mold and the bottle with, for example, old fabric, and then carefully heat them using a heat gun. The top of the bottle will shrink, creating a beautiful striped glass for your canopy.

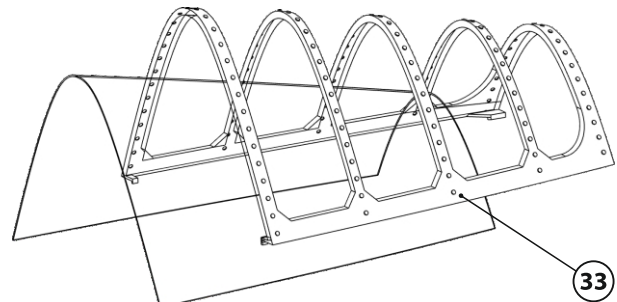
Note: If you do not plan to make the canopy, use parts (31_glass-32_glass-33_glass).



Canopy: cut plexiglass from the moulds (34) and glue into the frame (31)



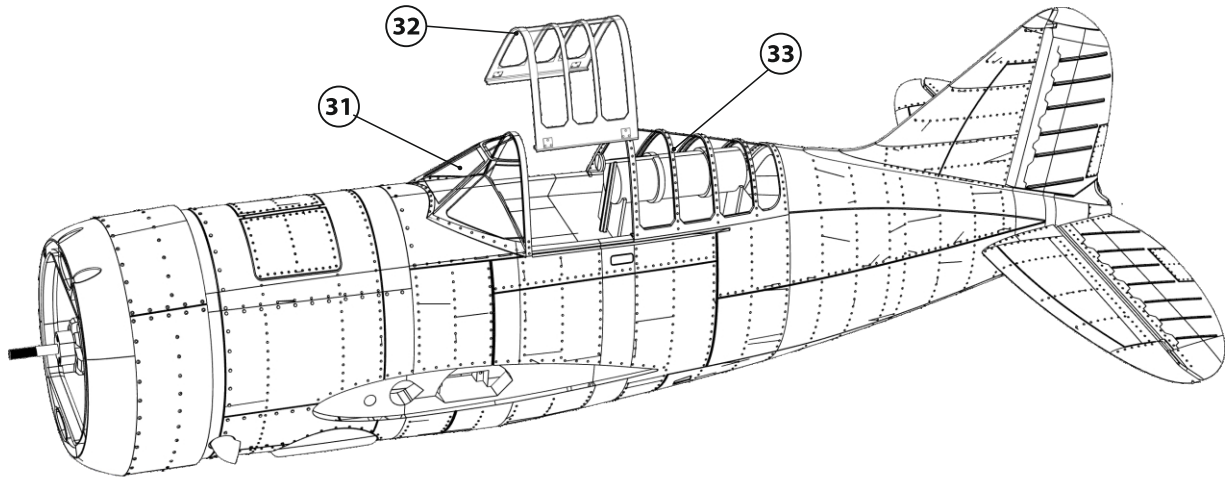
Canopy: cut plexiglass from the moulds (35) and glue into the frame (32)



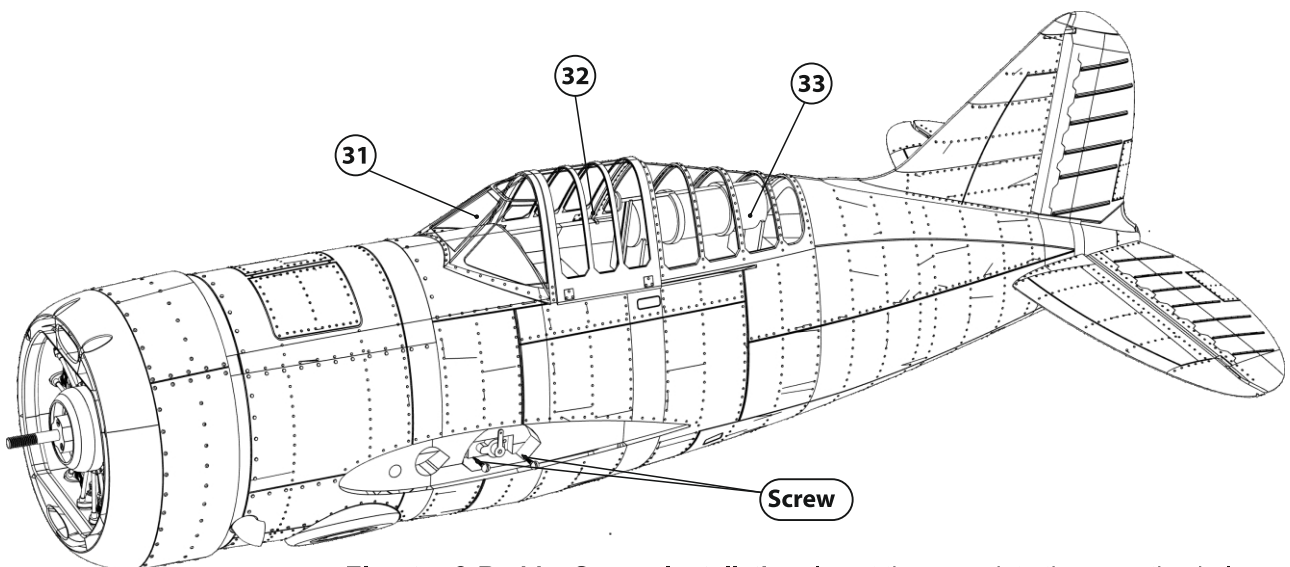
Canopy: cut plexiglass from the moulds (36) and glue into the frame (33)

COCKPIT & SERVOS

Canopy & Servo Installation



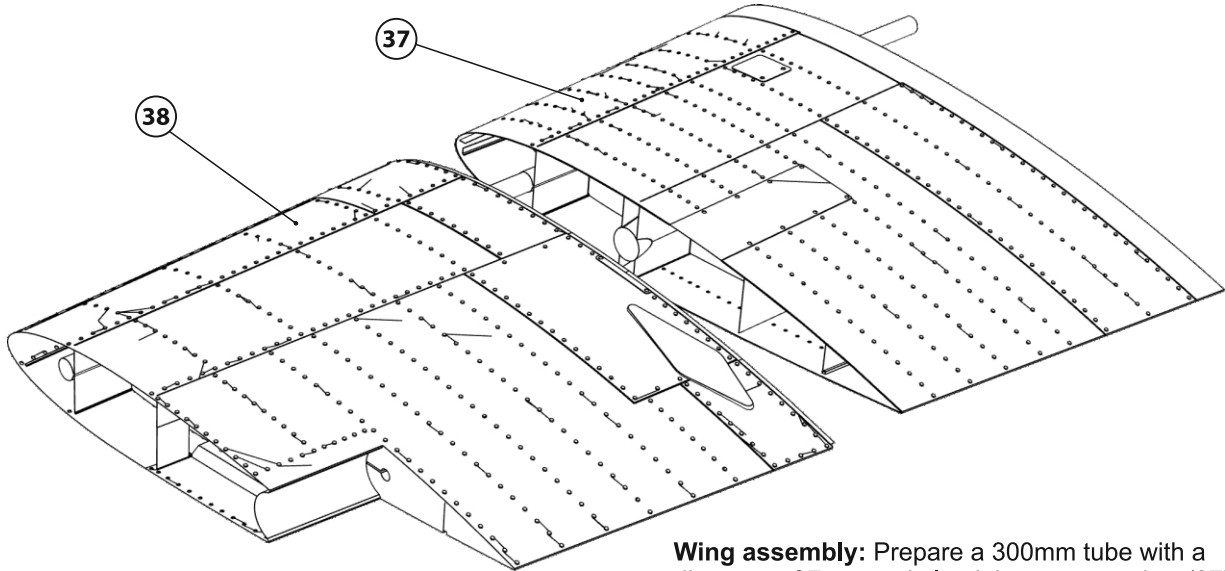
Canopy: Glue the cockpit parts (33-34) to the fuselage of the aircraft. When attaching part (32), do not use glue; it should snap into the groove (which you should clean thoroughly beforehand). This part of the canopy should be movable and able to open or close the cockpit.



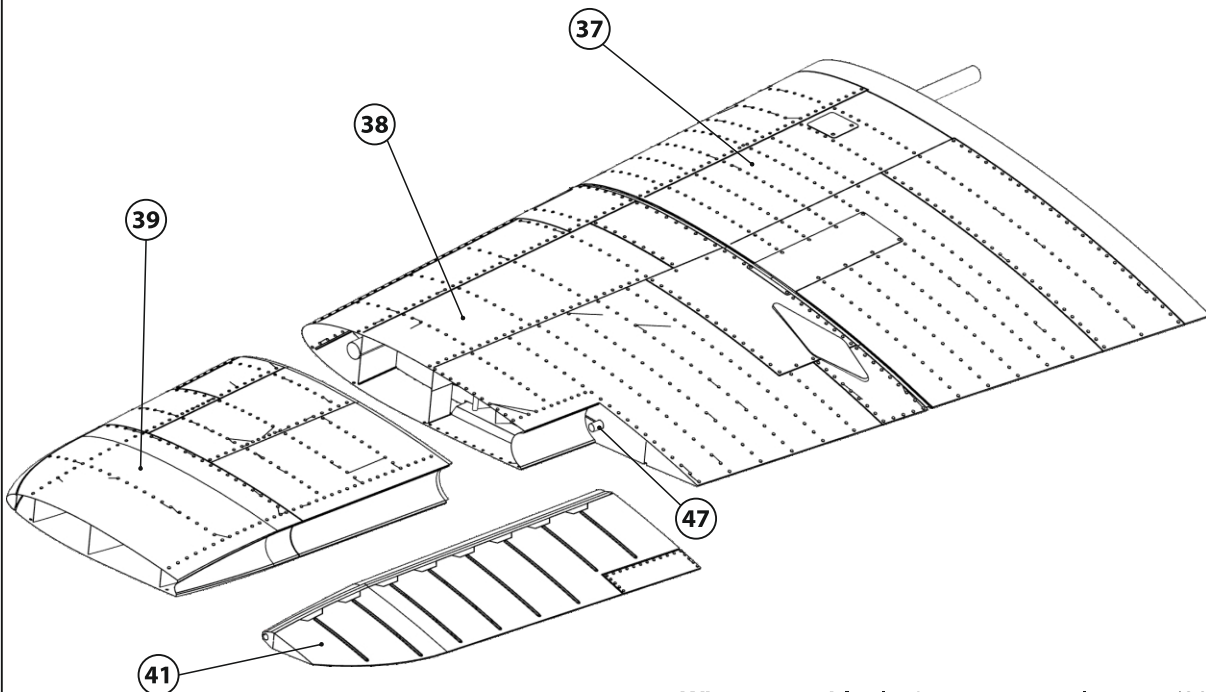
Elevator & Rudder Servos Installation: Insert the servo into the mounting hole on the side of the fuselage, thread the servo cable inside the fuselage, and secure the servo with two screws. Then, connect the control Bowden rod from the elevator. Repeat the entire process on the other side for the rudder servo of the aircraft. Congratulations, you now have the fuselage of the F2A airplane fully completed.

WING

Wing Assembly



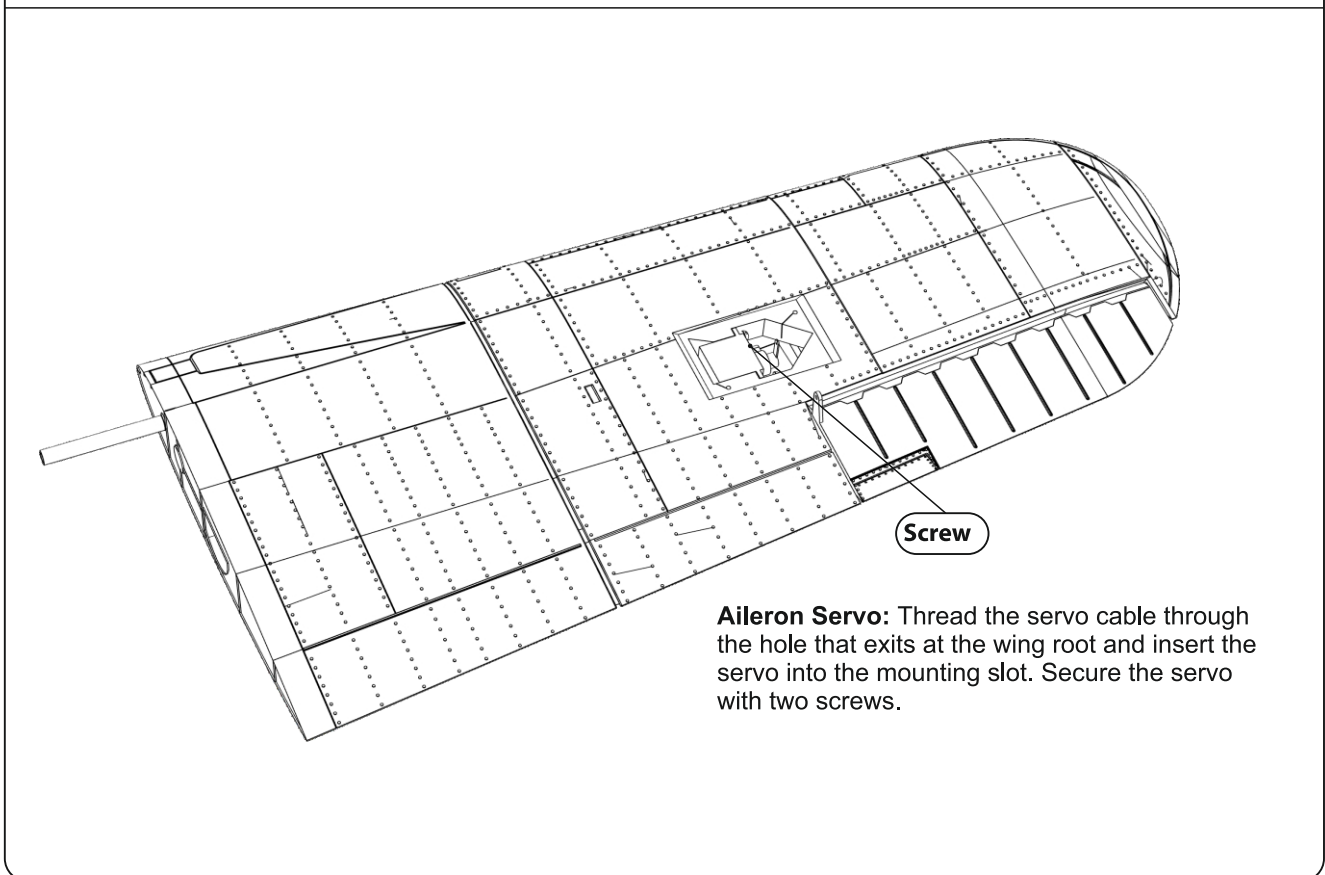
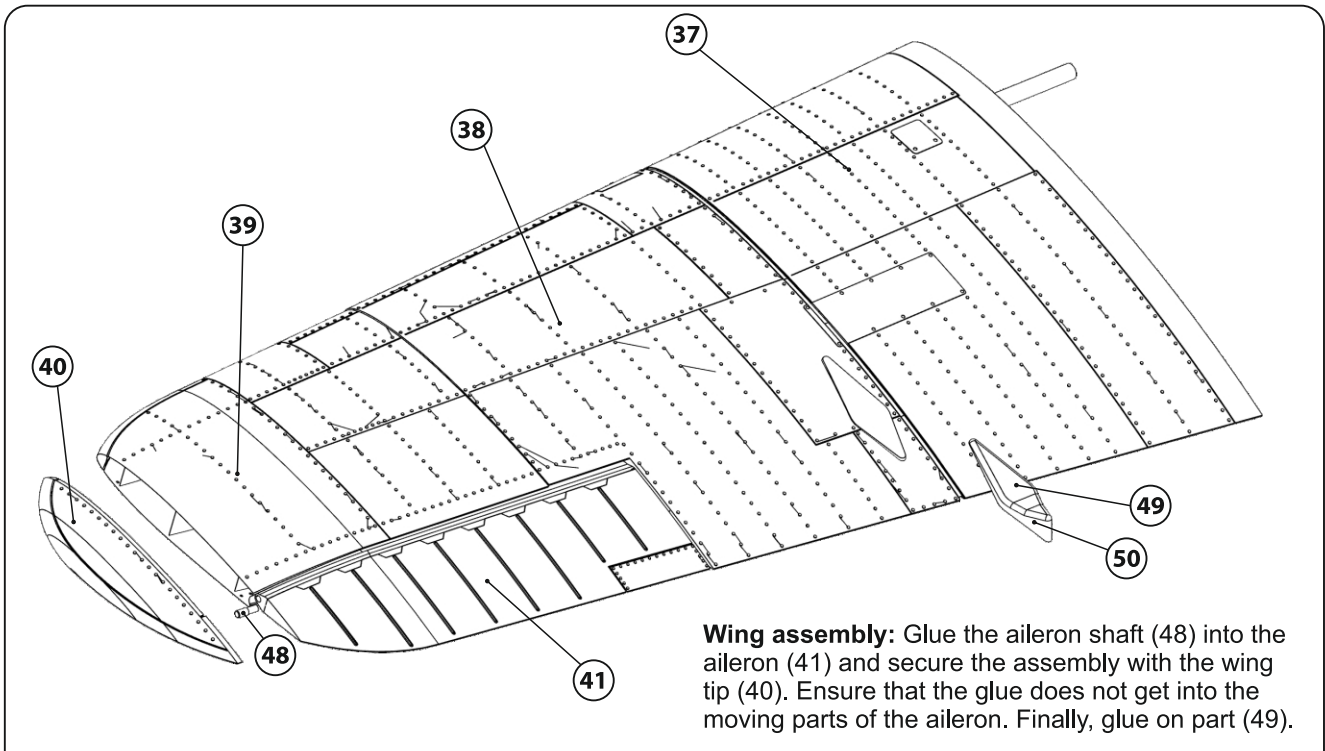
Wing assembly: Prepare a 300mm tube with a diameter of 7mm and glue it into part number (37) so that it protrudes 57mm towards the fuselage. Continue with part (38), which you will place onto the tube and connect with part (37).



Wing assembly: In the next step, glue part (39) and the aileron shaft (47), onto which you will attach the aileron (41).

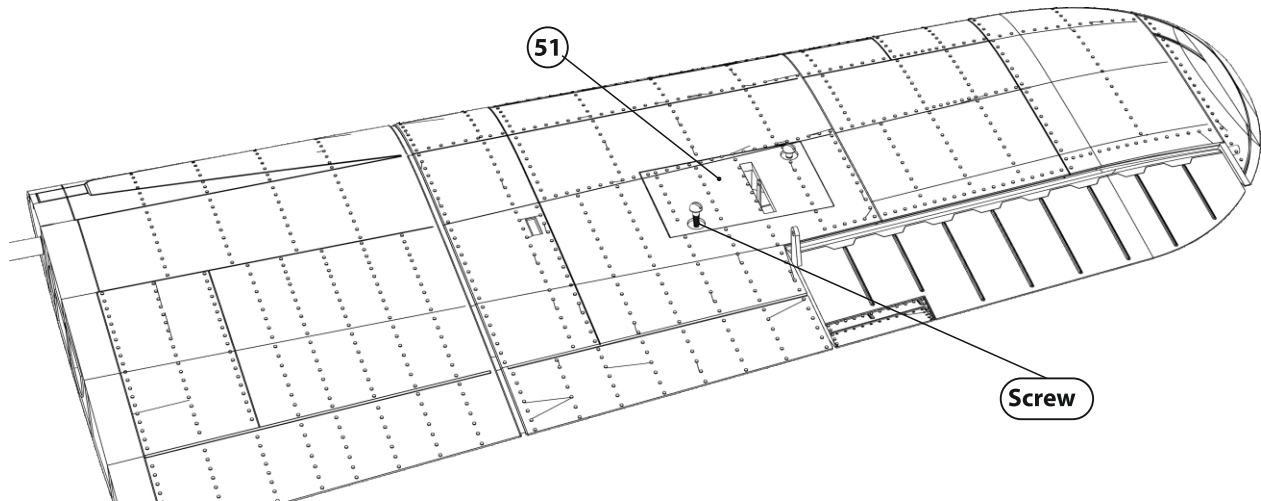
WING

Wing Assembly - Aileron Servo Installation



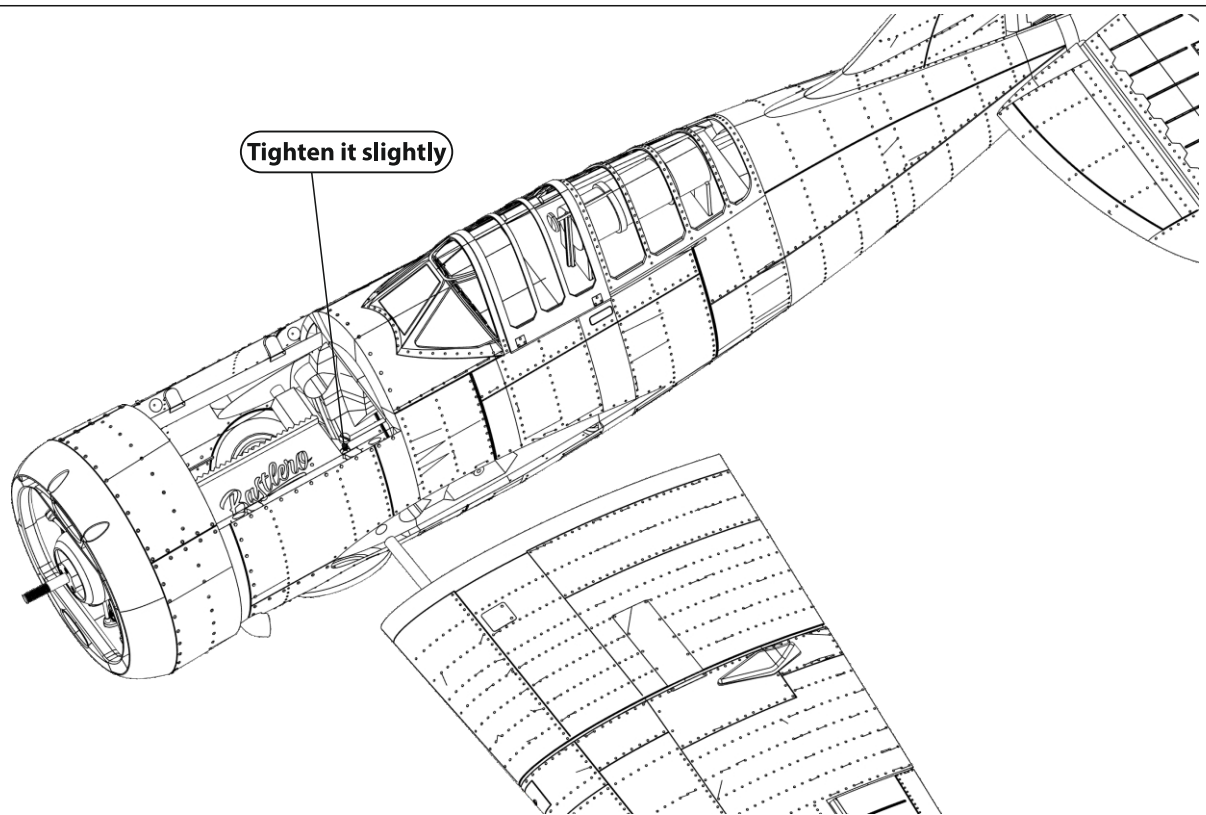
WING

Wing Assembly



Aileron Servo: Attach the servo cover (51) and secure it with two screws. Now you can connect the servo to the aileron using the pushrod.

Note: Repeat the same procedure with parts (42-43-44-45-46-47-48-49-50-52) for the right side of the wing.



Wing assembly: Insert the entire wing into the fuselage using a 7mm tube, then secure the clamp with a screw. Now the model is ready for flight. Congratulations! You have just completed the construction of the F2A.

COG

Centre of Gravity

