

## **OV-10A Bronco**

The OV-10A is a twin-turboprop short takeoff and landing aircraft conceived by the Marine Corps and developed under an Air Force, Navy, and Marine Corps tri-service program. The first production OV-10A was ordered in 1966 and its initial flight took place in August 1967.

The Bronco's mission capabilities include observation, forward air control, helicopter escort, armed reconnaissance, gunfire spotting, utility and limited ground attack; however, the USAF acquired the Bronco primarily as a forward air control (FAC) aircraft. Adding to its versatility is a rear fuselage compartment with a capacity of 3,200 pounds of cargo, five combat-equipped troops, or two litter patients and a medical attendant.

The first USAF OV-10As destined for combat arrived in Vietnam on July 31, 1968. A total of 157 OV-10As were delivered to the USAF before production ended in April 1969.

The aircraft on display was flown to the USAF Museum on October 2, 1991, and is painted as it was when it served in Southeast Asia.

### **SPECIFICATIONS**

**Span:** 40 ft.

**Length:** 41 ft. 7 in.

**Height:** 15 ft. 1 in.

**Weight:** 14,444 lbs. max.

**Armament:** Four M60C 7.62mm machine guns in fuselage sponsons, plus 3,600 lbs. of mixed ordnance or gun pods carried externally.

**Engines:** Two Garrett-AiResearch T76s (-G-10, left; -G-12 right) of 715 shaft hp. each

**Cost:** \$480,000

### **PERFORMANCE**

**Maximum speed:** 281 mph.

**Cruising speed:** 223 mph.

**Range:** 1,240 miles

**Service Ceiling:** 26,000 ft.

## **OV-10 A BRONCO 1/32 SCALE PRECISE CARDMODEL ASSEMBLY INSTRUCTION**

The proposed OV-10 A Bronco 1/32 scale model is comparatively complicated and with high level of similarity to the prototype. Thus, a special attention and precision in the assembly procedure is required. Study carefully the illustrative drawings, cutouts and present instruction before starting the work on the model. See also the pictures in the gallery folder that illustrate the assembly process. Try to imagine the separate assembly phases and the purpose of each detail.

After the acquaintance with the model, you may start the assemblage. Follow the sequence given in the instruction. Cut the necessary details shortly before using them in order to avoid possible mistakes. Score all fold lines before cutting the details. The places of scoring are marked with small thin lines on the continuation of fold lines outside the parts. The scissors markings show where to make cuts on some details.

Do not be in a hurry with gluing - carefully check and shape the details until obtain the exact and correct fit. Before starting the work get hold of the necessary tools: scissors, sharp modeling knife, blunt knife for scoring the fold lines, prickler, ruler, nippers and grinding paper. Additional materials necessary for the assemblage are: sheet of cardboard with thickness approximately 0.5 mm, a piece of wire with diameter 0.5 - 0.8 mm, transparent foil for the canopy. Supply with proper glue. BISON Clear Adhesive, UHU or similar are recommended as the most appropriate ones. Water based glue is not recommended.

Preparation for assembling includes gluing the pages that contain the formers and strengthening elements on 0.5 mm cardboard.

Start with the pilots cockpit interior as it is shown on the view A of the assembly instruction drawings. Assemble the fuselage nose frame 1, 2, then glue there front wheel housing 3 and the internal cockpit part 4. Cover the resulted detail with the front fuselage skin 5. Glue there the pilots rudder control pedals 6 and 7 and then assemble the front instrument panel 8, following view B. Assemble and fix on their places the pilots seats armored bases 9 and 10.

Continue with assemblage of the interior details – gun sight 11, pilots seats 12, 13, rear instrument panel 14, control rods 15 and engine controls 16, 17, following views C, D, E. Complete the nose of the fuselage, carefully forming and gluing part 18 and 19. You can recreate “real landing light by using transparent part 19t, and 19b, covered with metal foil.

Now focus your attention to the rear part of the fuselage. Assemble the framework elements 20 and then carefully form the skin 21, 22. After few dry tests glue the frame inside it. Carefully form the mid part of the fuselage 23. Glue it to the front and rear parts of the fuselage, strictly keeping the coincidence of the bottom line of symmetry and stitching its edges to corresponding ones. Then glue its reinforcement element 23a. This is a bit tricky work and if you allow mistake, the fuselage will become twisted! So be careful.

Now is the time for the canopy. It is highly recommended to cut very carefully their transparent parts 24t and bend them in a tight pipe together with some rectangular piece of paper before starting the Bronco assemblage and to leave it in this form for a day or two. If you do this, you'll have almost correctly shaped canopy. Glue on it the canopy frame 24 and the front armour glassing 24a /its transparent part should be flat/ and glue on its place the gun sight. For completing view G you can glue the canopy to the fuselage at this stage, but if you are not sure that no twisting mistake occurred, the better solution is to glue it after joining the wing to the fuselage.

Now prepare the all models surfaces frames. The views I – K show the assembly sequence. Since you work with a heavy card, now is the time to prepare the wheels as well. Just sandwich the wheel parts, and after drying the glue round them with sand paper and paint them in black color by using ink or paint /view L/.

Build the engine beams as it is shown on view N, using the preliminary prepared vertical stabilizers that assembling process is illustrated on view M. In opposition to the fuselage assembly now you'll have to start from their middle parts 39, 49. Form them carefully, placing the formers 39c /49c/, 39d /49d/, Main wheel housings 38 /48/ and finally the beams to wing formers 39e /49e/.

Add the rear parts of the beams 40 /50/ and assembly their engine cowlings. Complete the view N with adding the vertical stabilizers, strictly keeping the entire engine beams lines of symmetry. Add also the necessary details as the exhaust pipes 48 /58/ air intakes 47 /57/ and antennas 60, 61.

Now leave the prepared details apart for a while and assembly the wing, horizontal stabilizer and the weapon racks holders as it is shown on the views O-Q. Place the rear edges connecting stripes about 1 mm inside the contours to achieve straight and sharp rear edges.

Assemble the undercarriage. Pay special attention to the sequence of gluing parts 69 b and c in a way the metal wire reinforcement element 69 a to be integrated in the construction. Then insert the front wheel and complete the wheel gearing, placing 69d and then the rest of the front landing gear leg, following view R.

The same procedure for integration of the wire element 70a in the 70b and c should be performed. The sequence of the main landing gear assemblage is shown on a view S. Note that the symmetrical parts of the landing gear have a same notation, so be careful and keep apart left and right parts.

Prepare the propellers, following the view T. Glue the blades at 120 degrees from each other in the plain perpendicular to the rotation axes, keeping constant their root angle of attack. Note that the propellers rotate in opposite directions. Ensure their free rotation in their bearings 75, 80.

Now you can put the all subassembly parts together as it is shown on the view U. Keep the appropriate orientation of the parts so that the geometry of the aircraft to be correct.

Assemble the external fuel tank /view V/, and together with the undercarriage, propellers and the other small external details complete the design following view W.

Now your OV-10 A Bronco is ready. Enjoy!

# 1/32 SCALE OV-10 A BRONCO ASSEMBLY INSTRUCTION

A

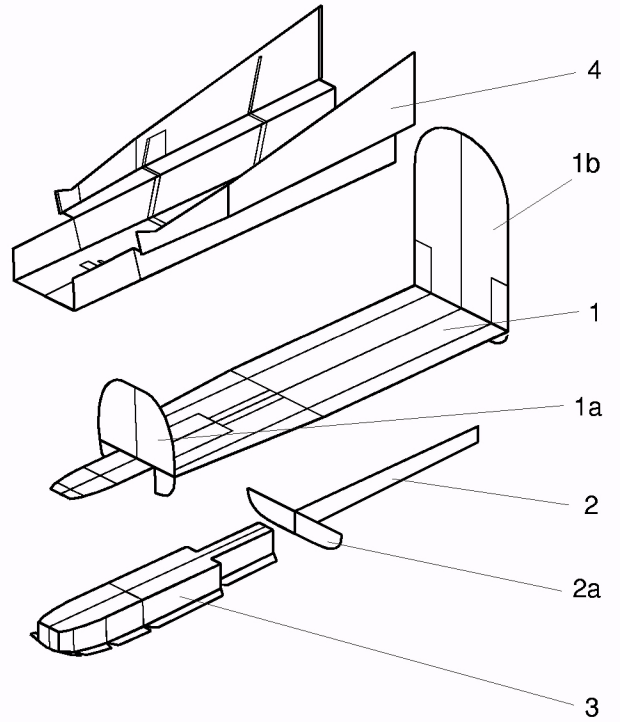
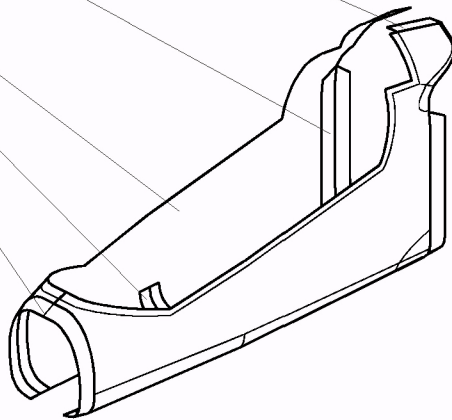
5d

5e

5

5a

5b,5c



B

9b

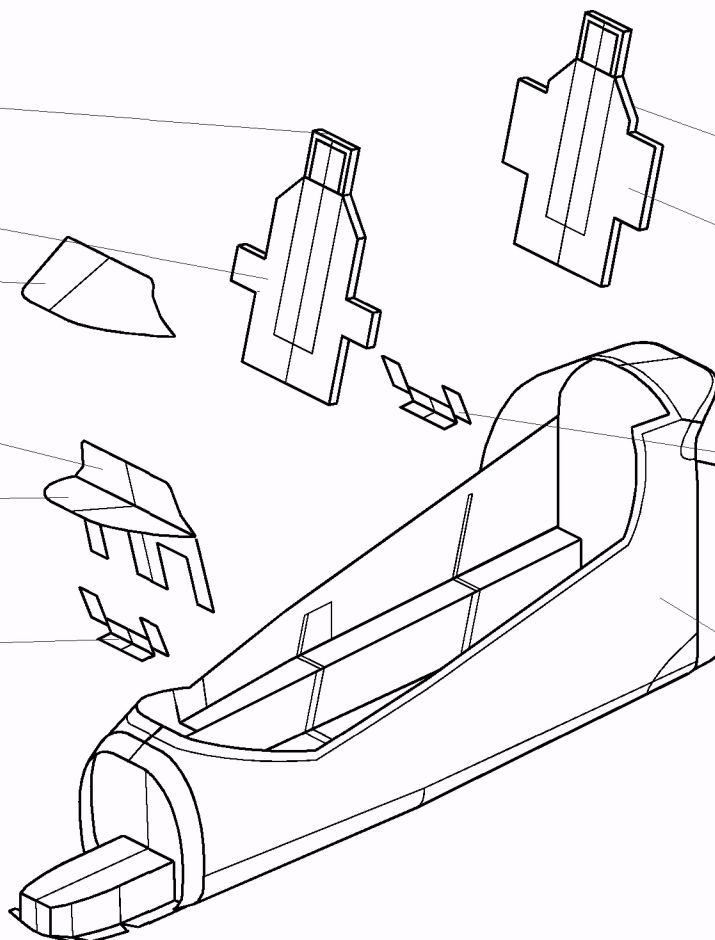
9,9a

8,8a

7,7a

7b

6,6a



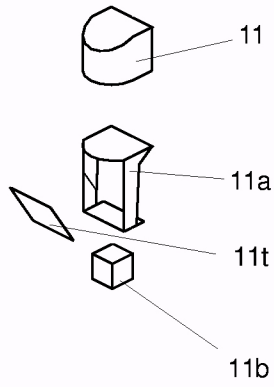
10b

10,10a

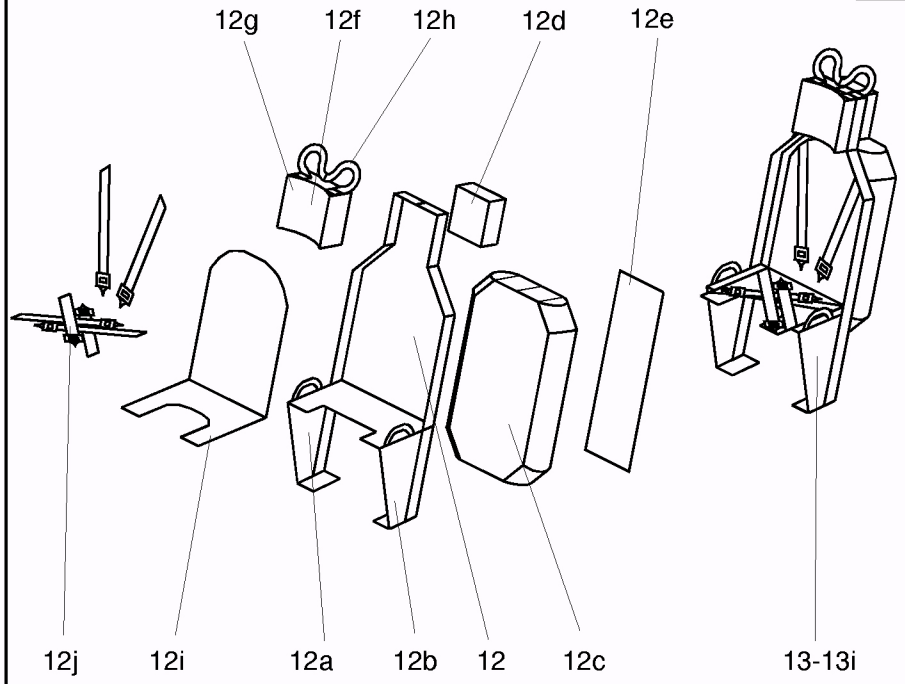
6,6a

A

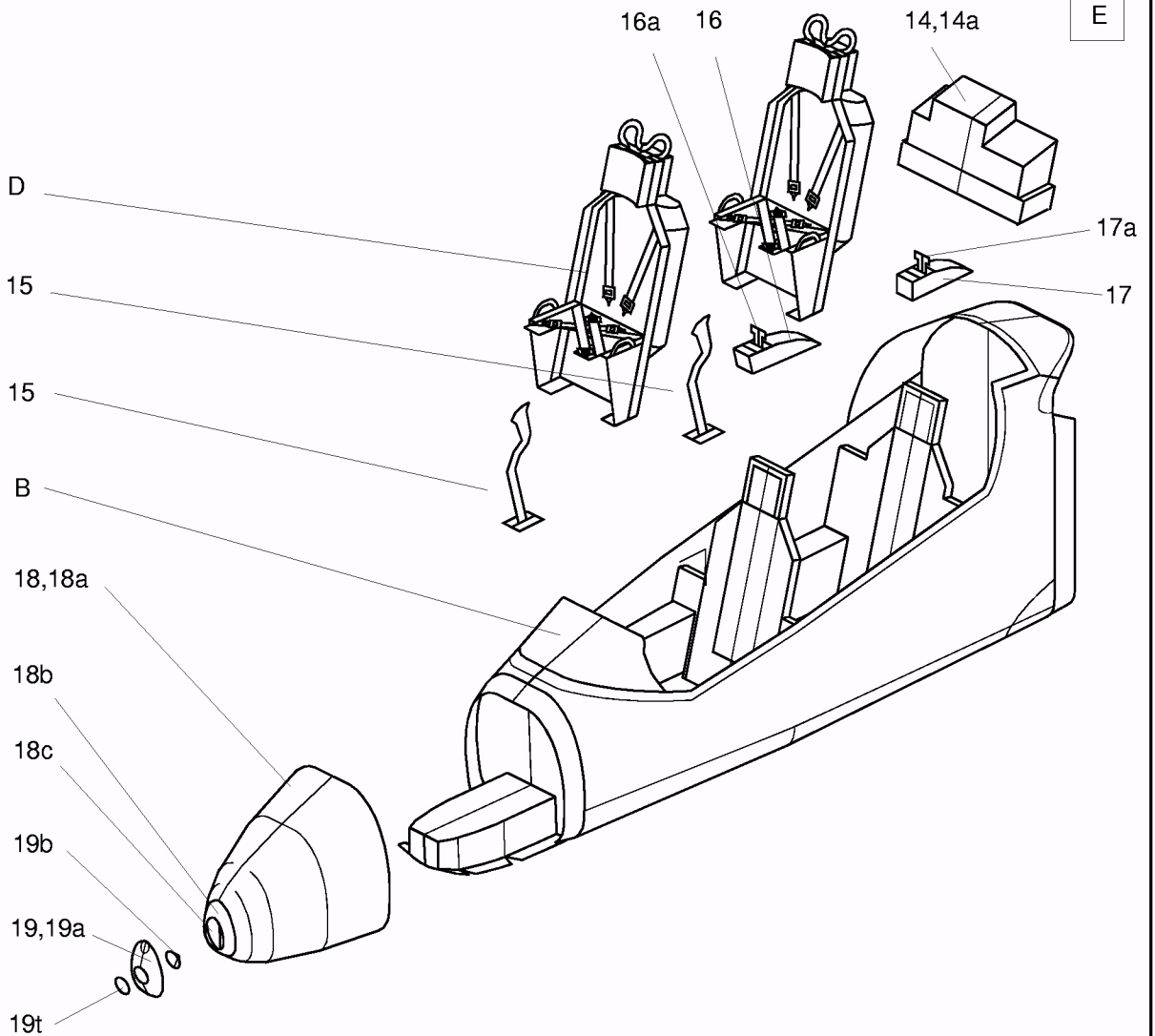
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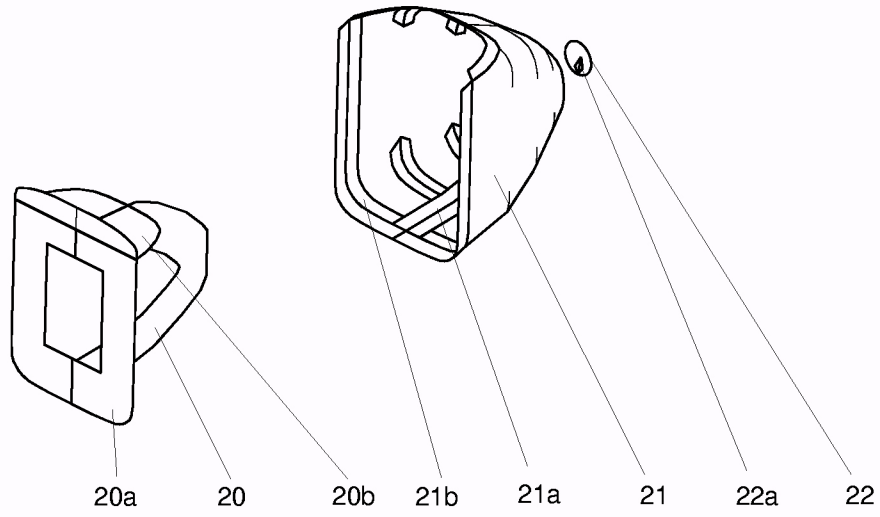
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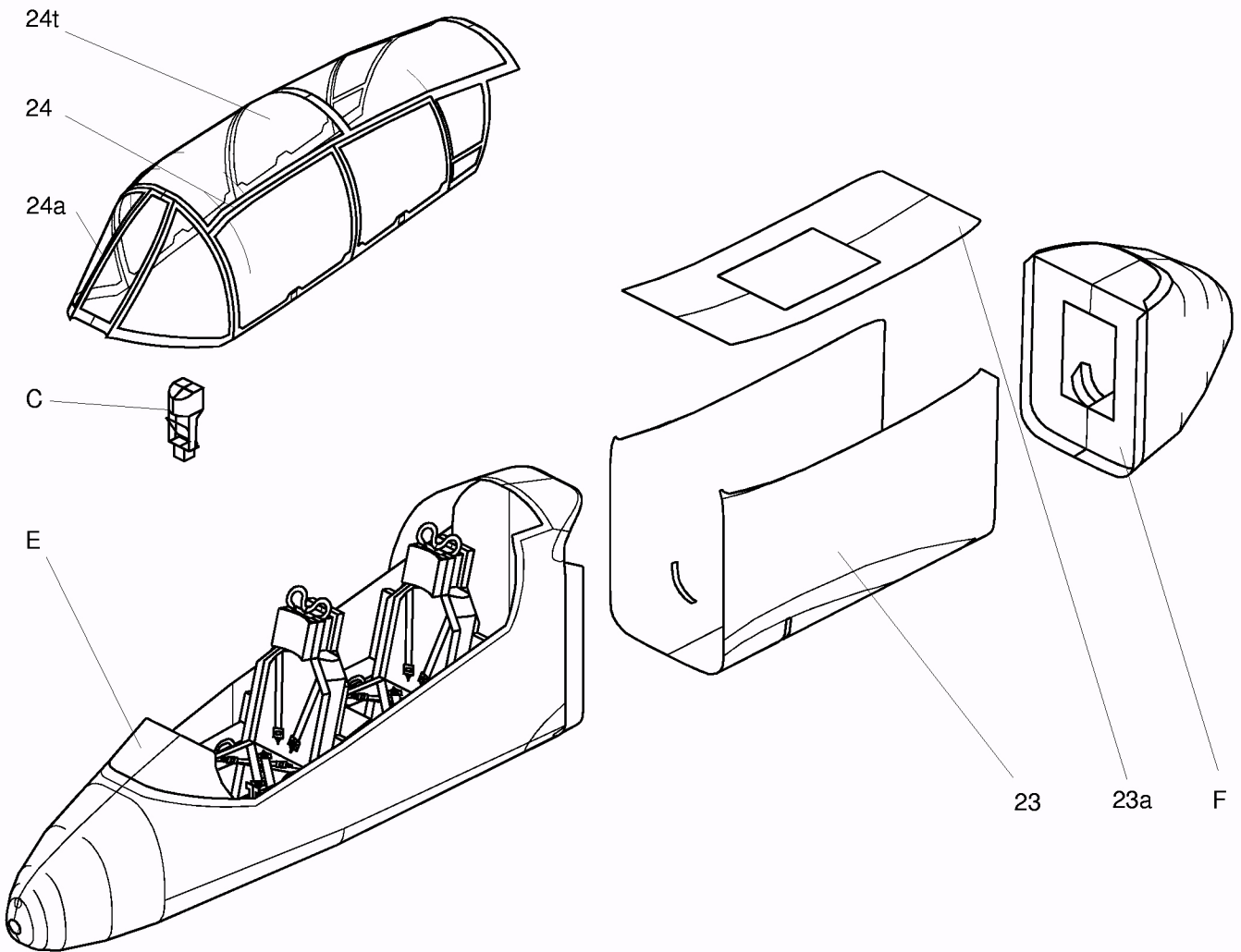
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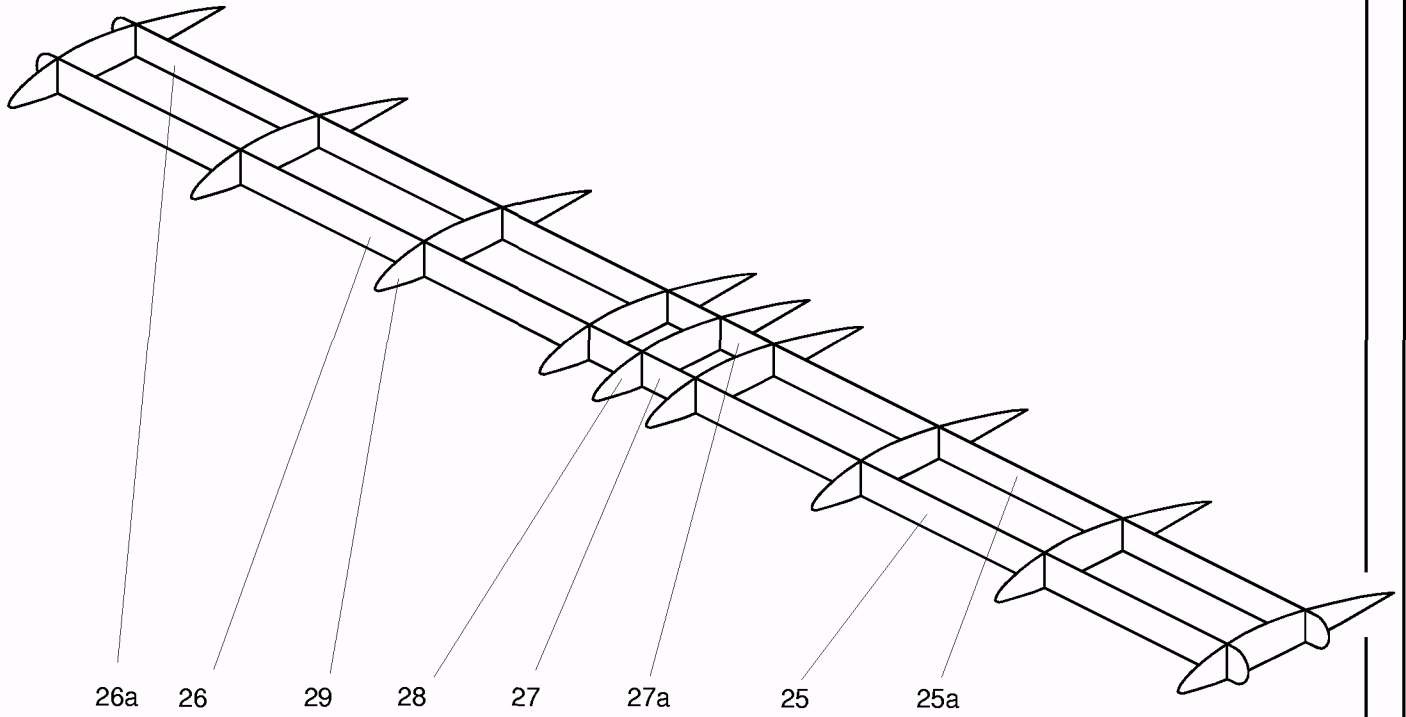
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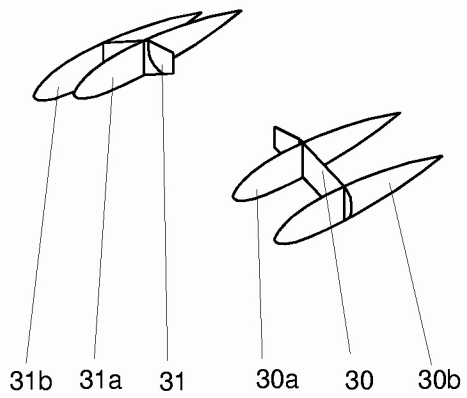
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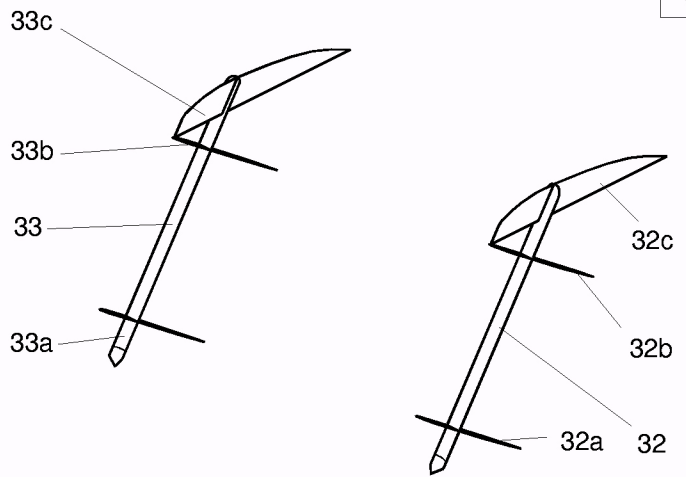
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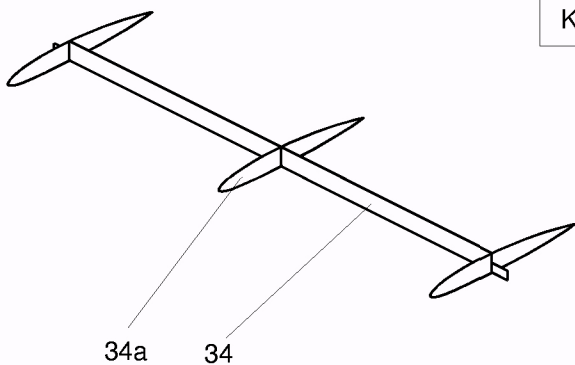
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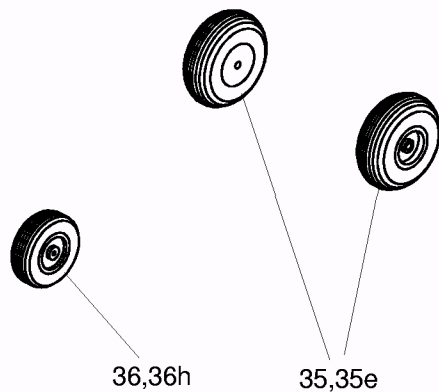
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K

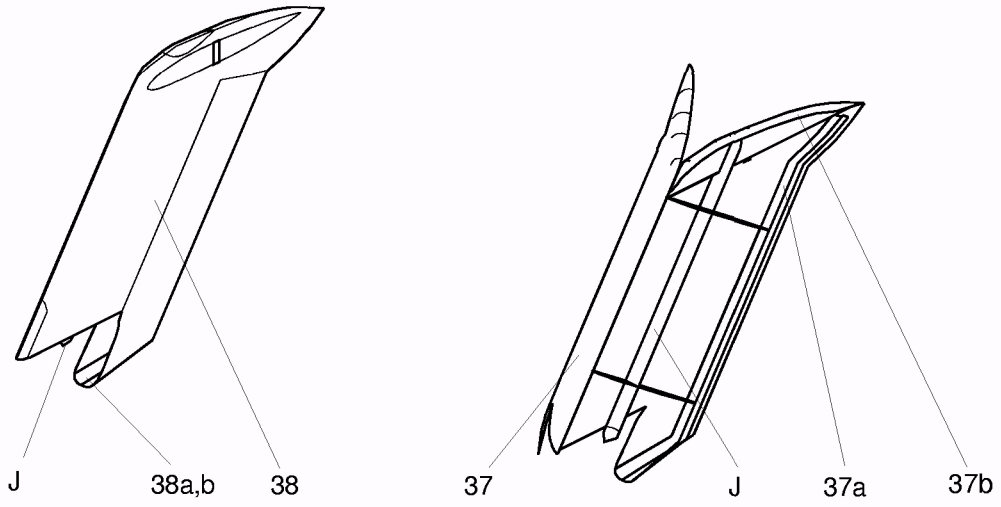


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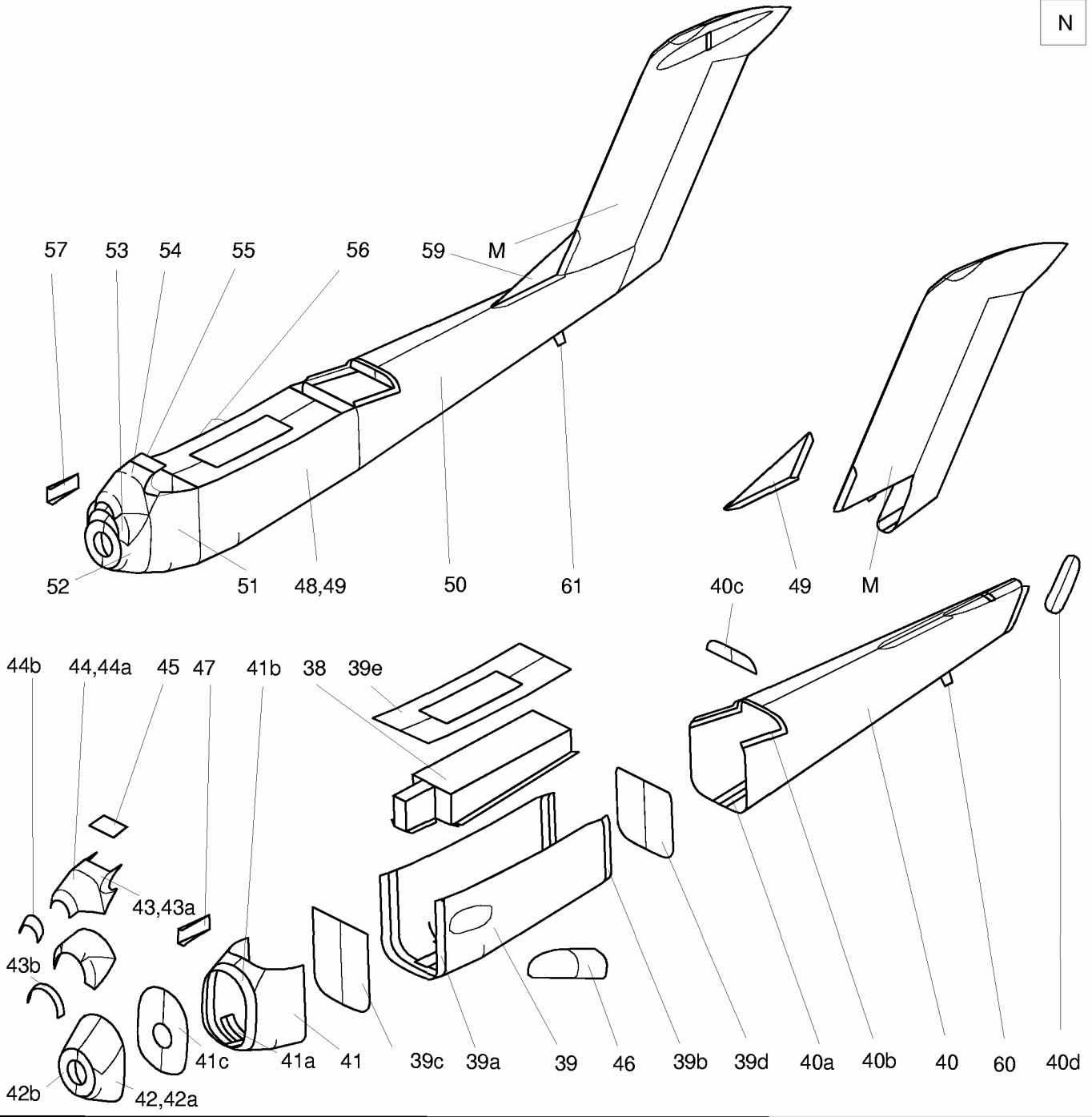




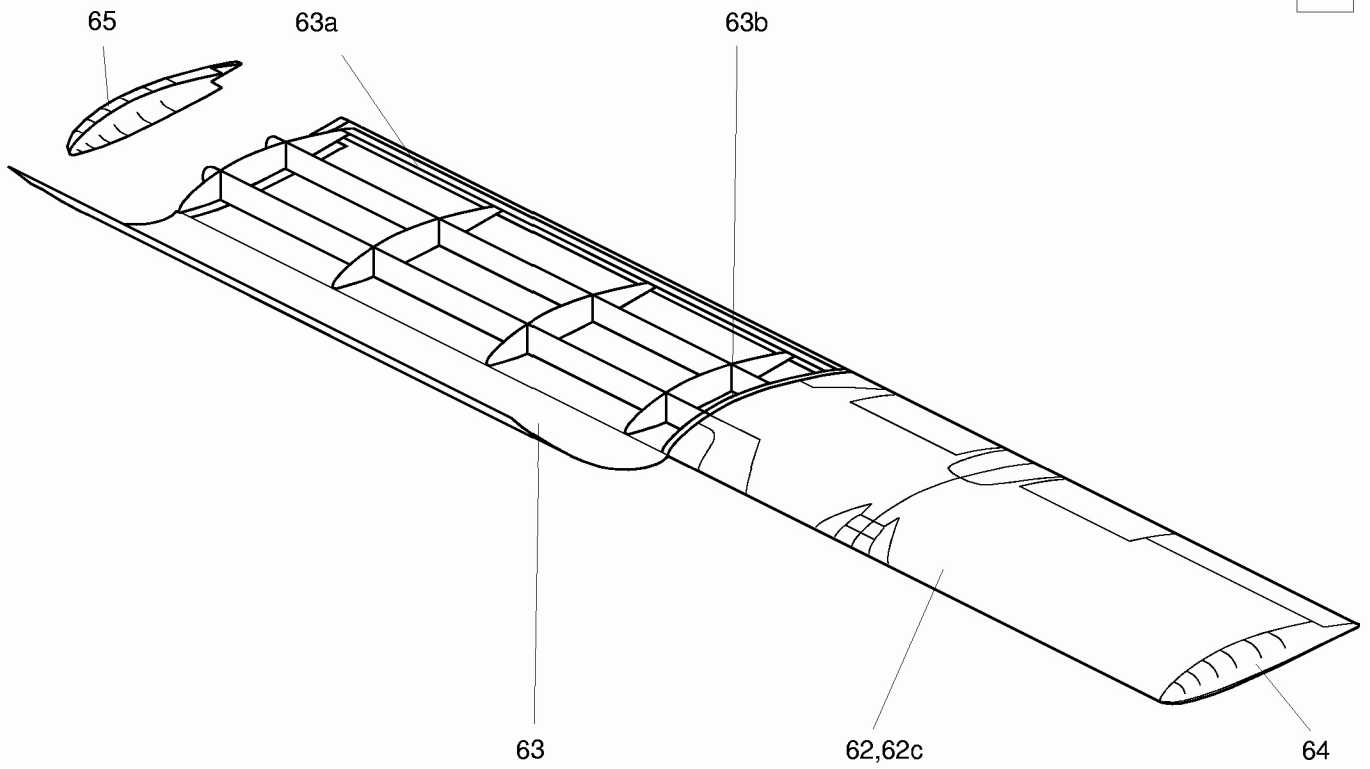
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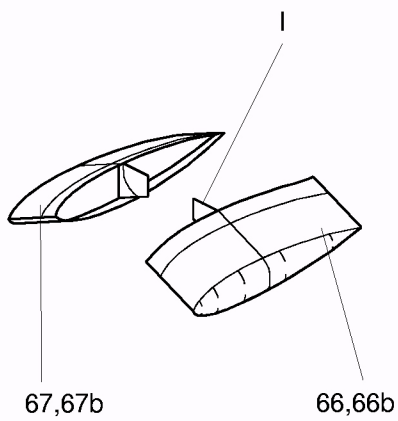
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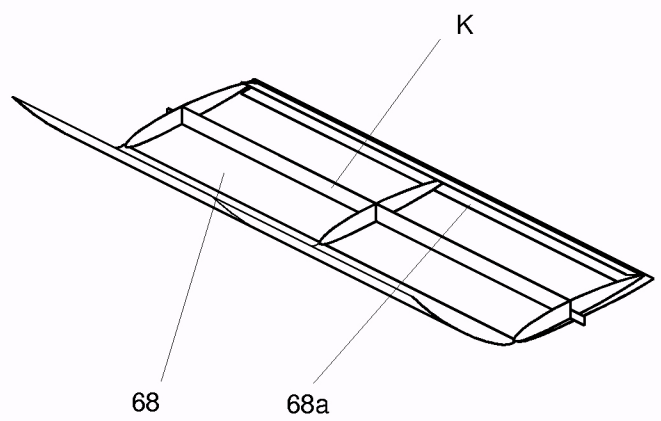
O



P

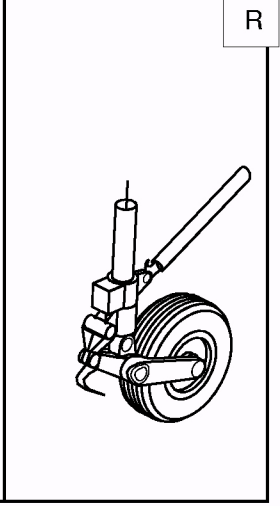
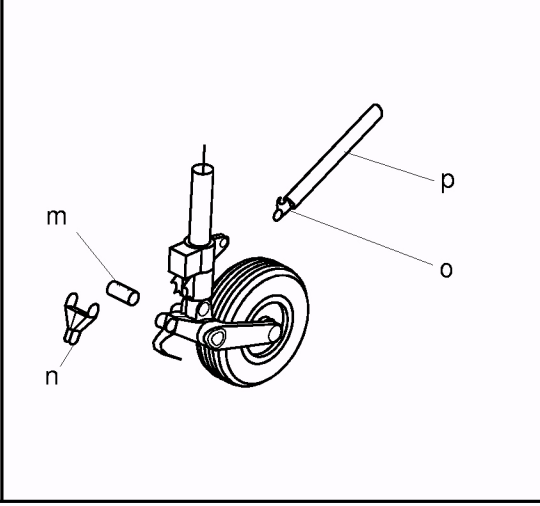
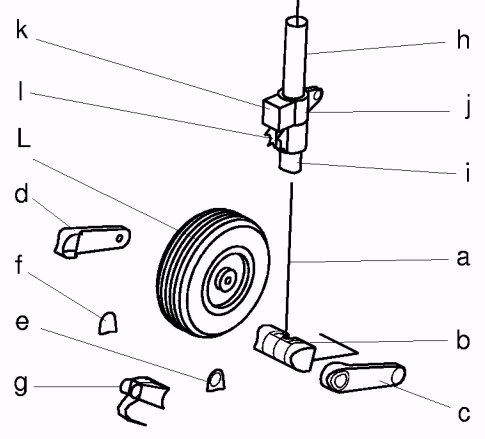


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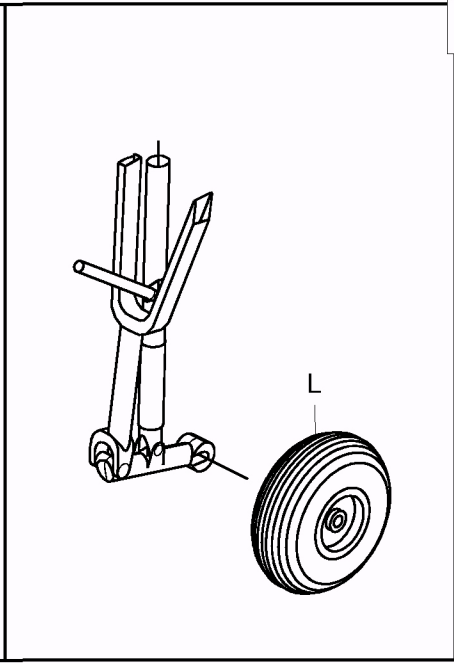
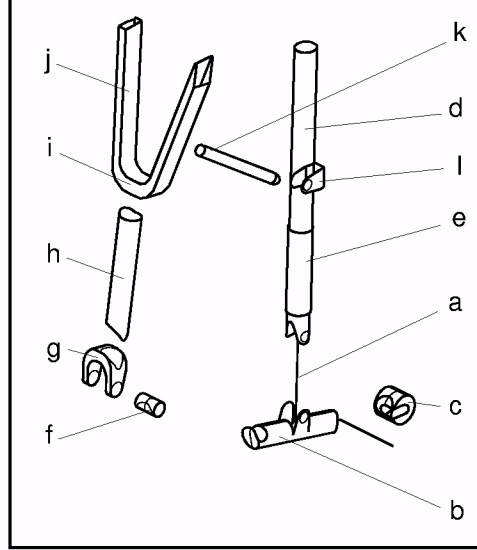


R

69

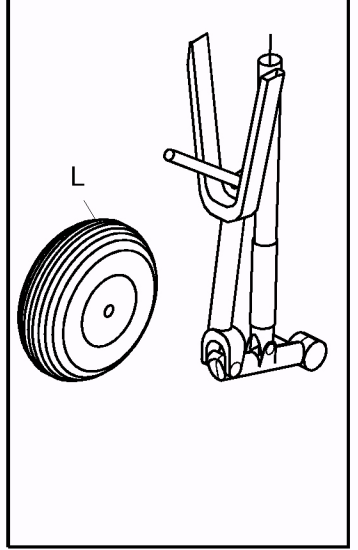


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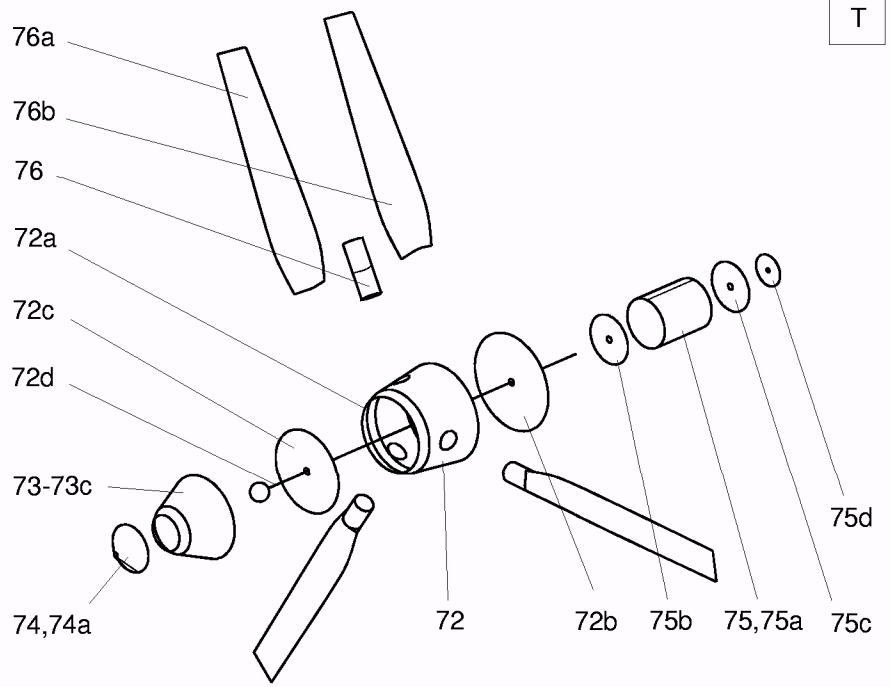
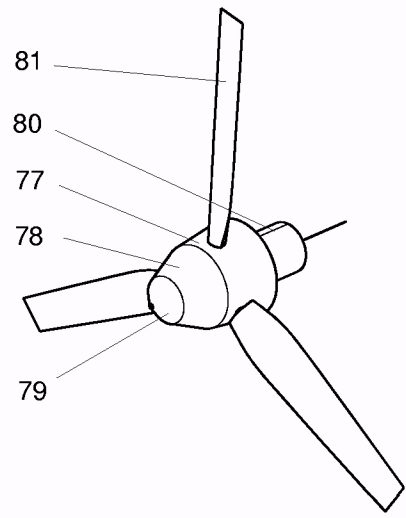


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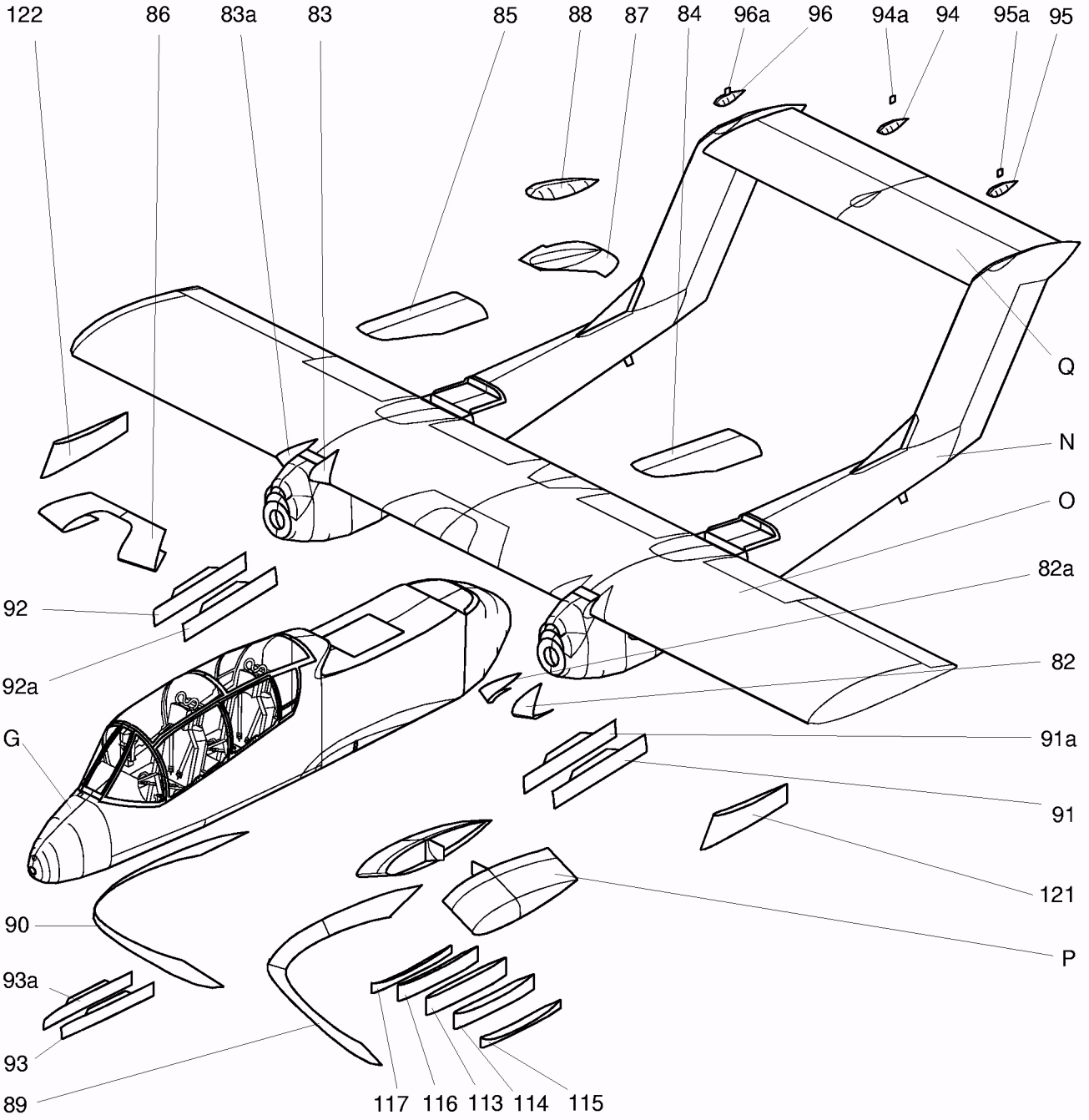
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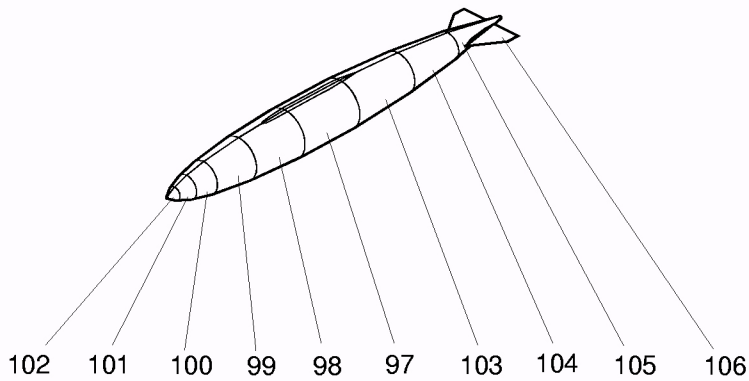
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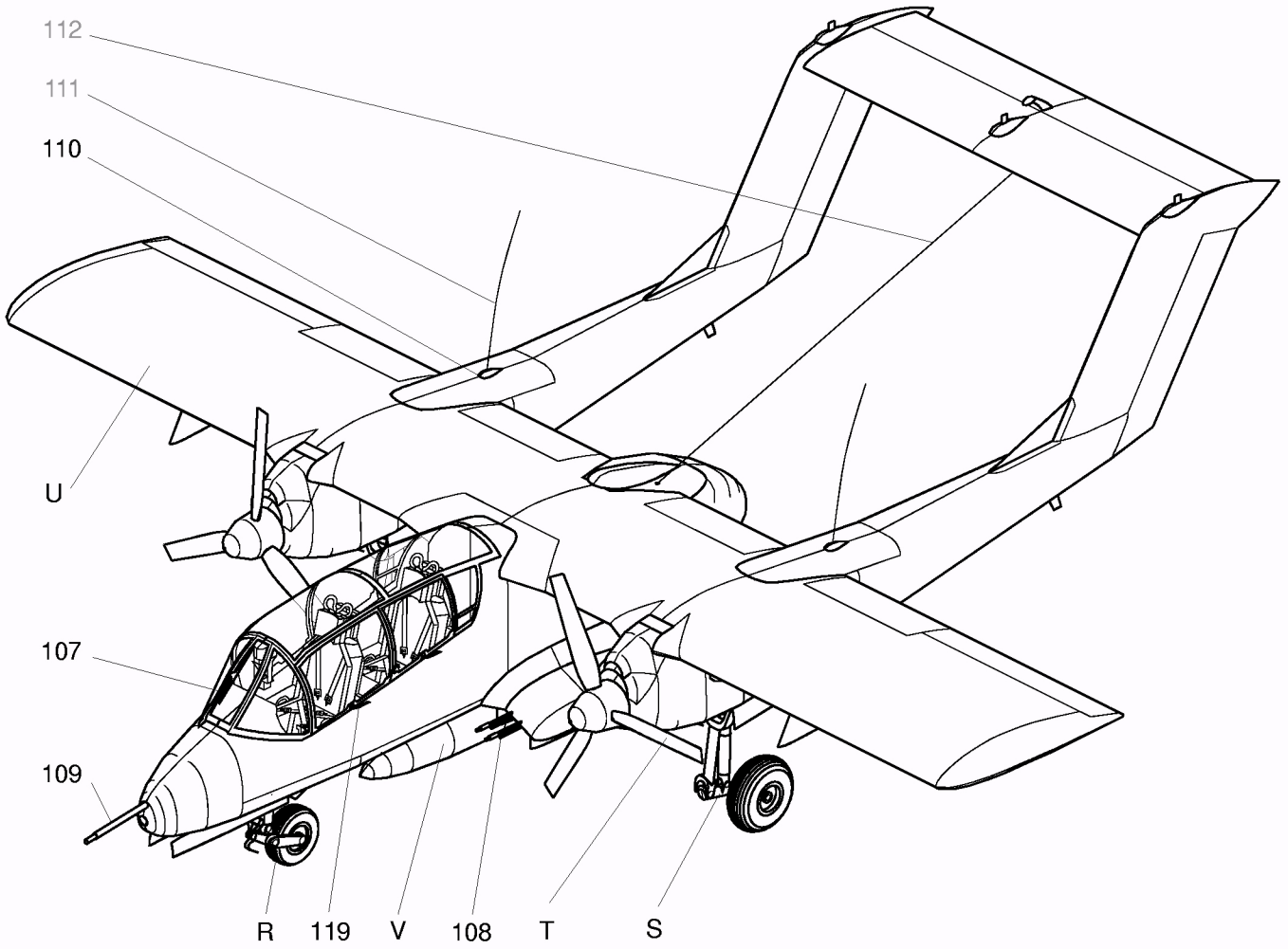


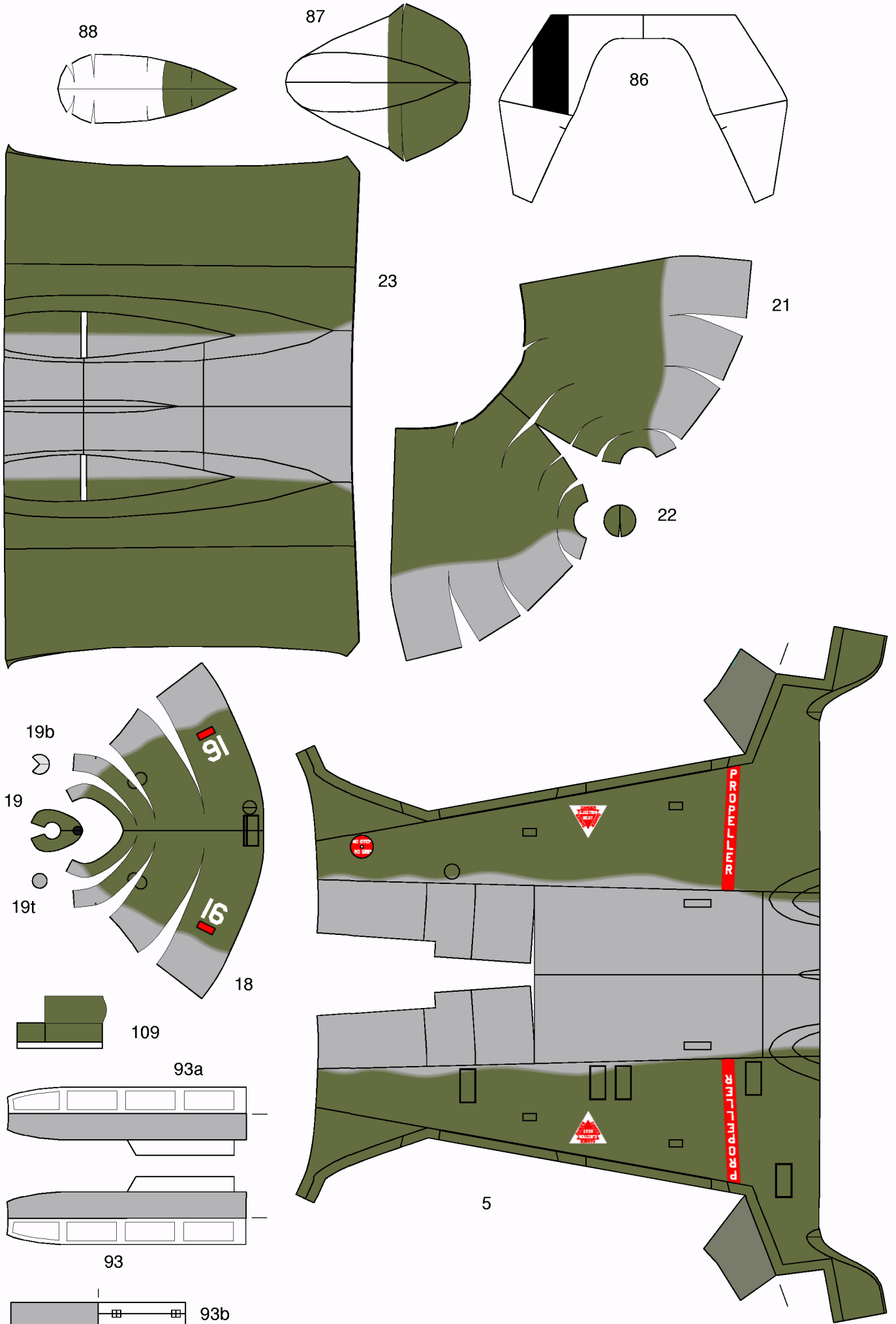
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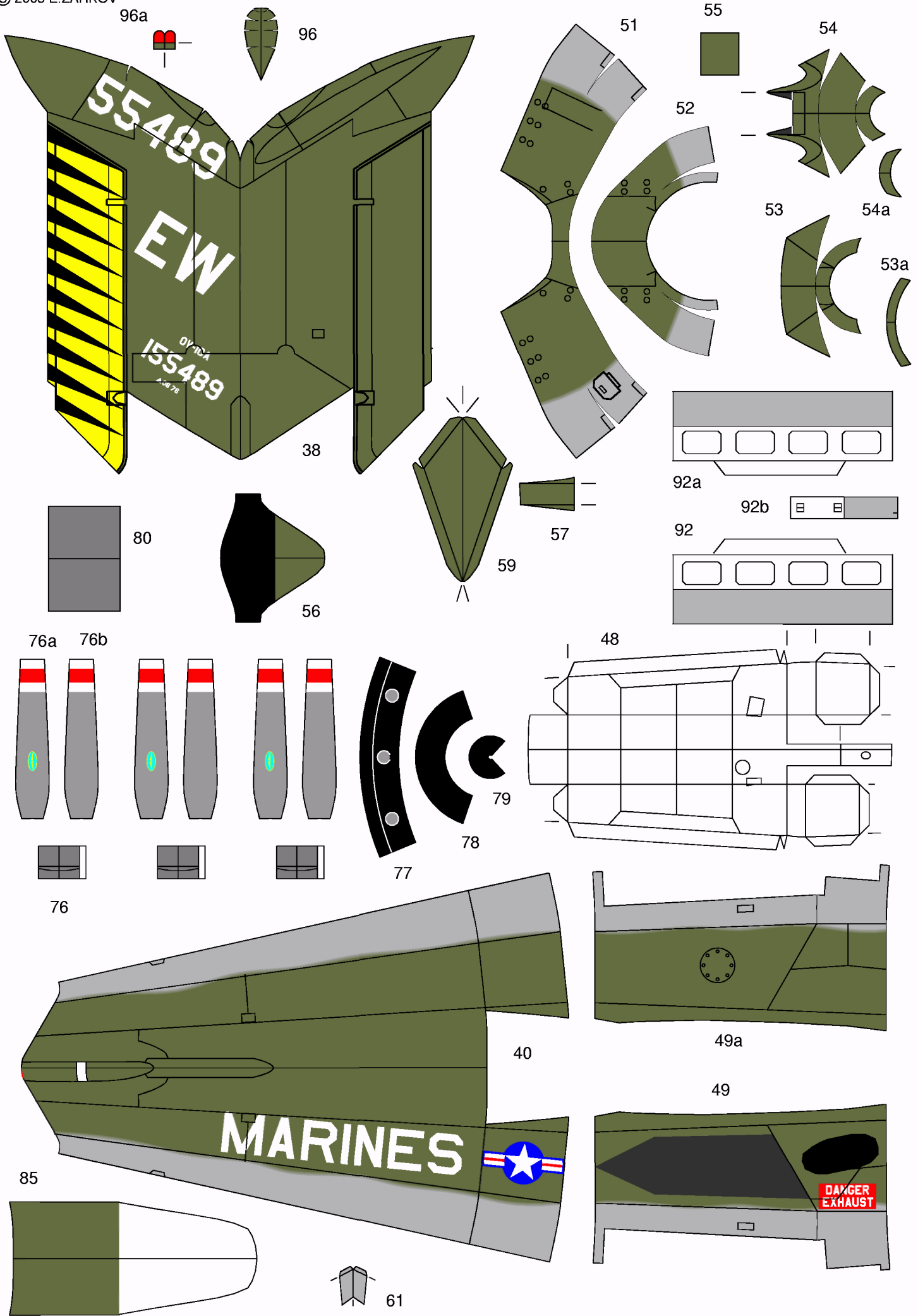


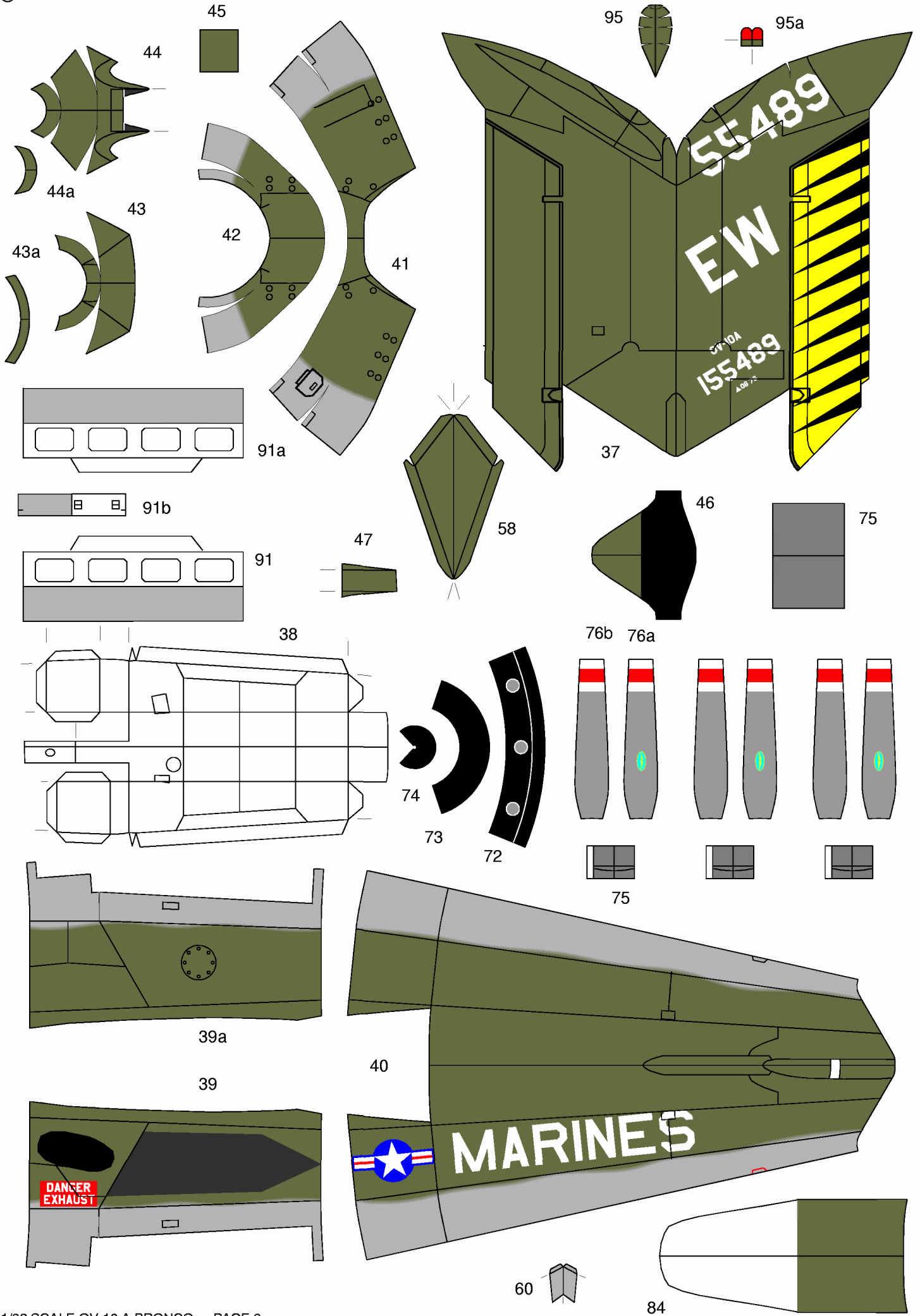
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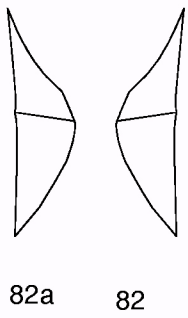
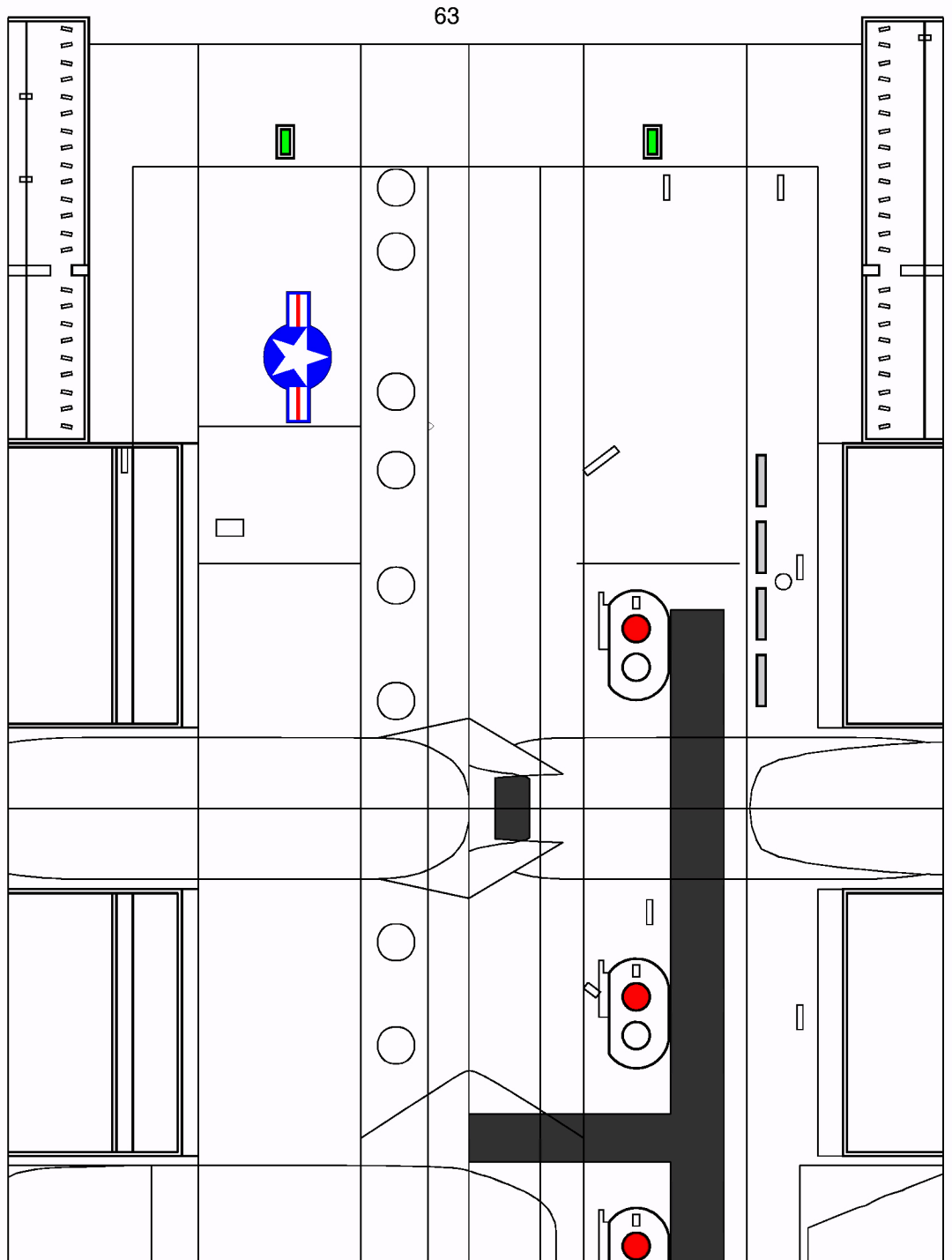
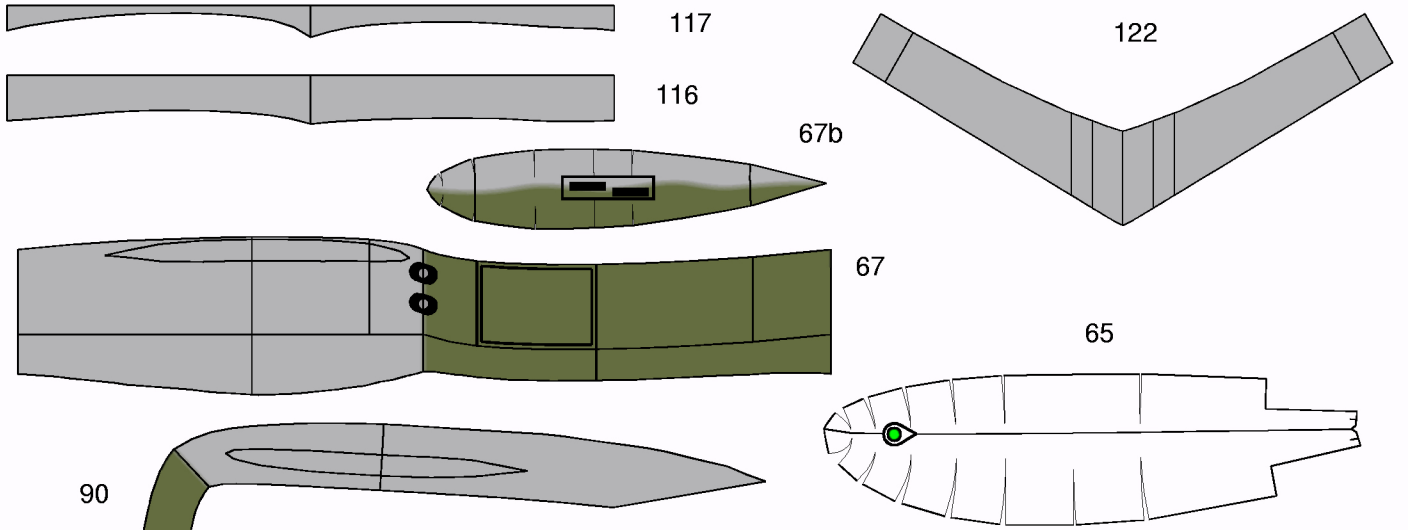


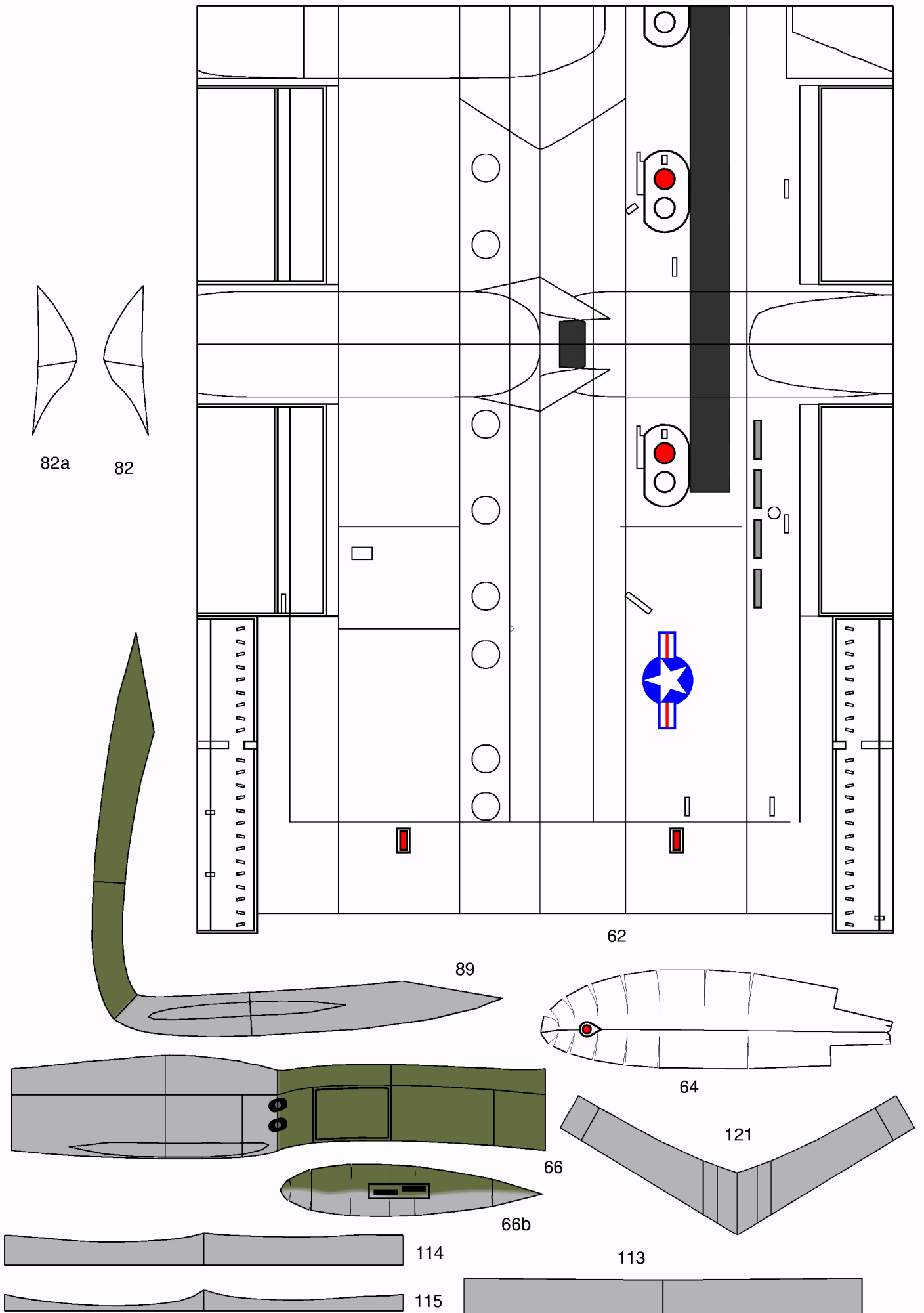


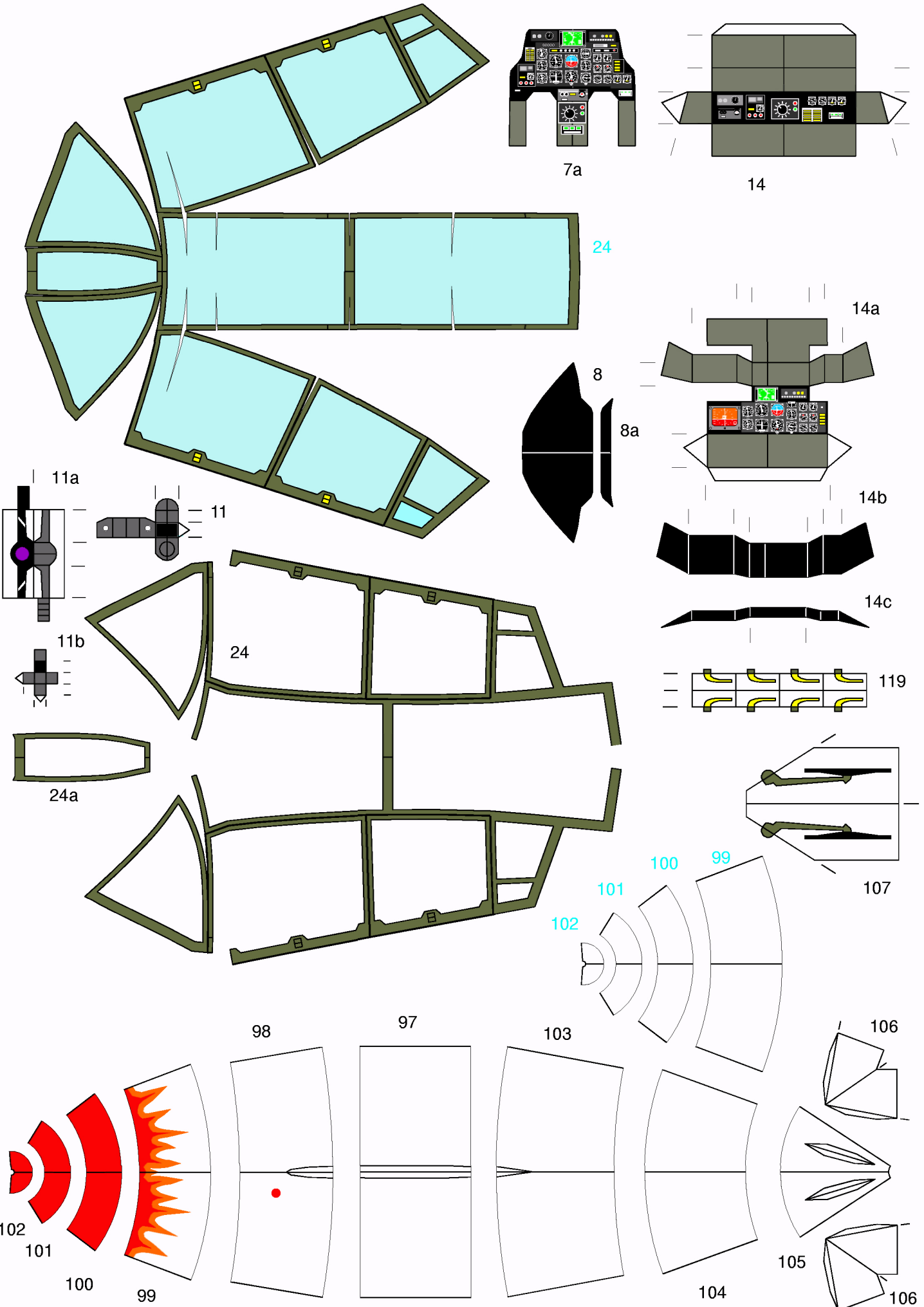


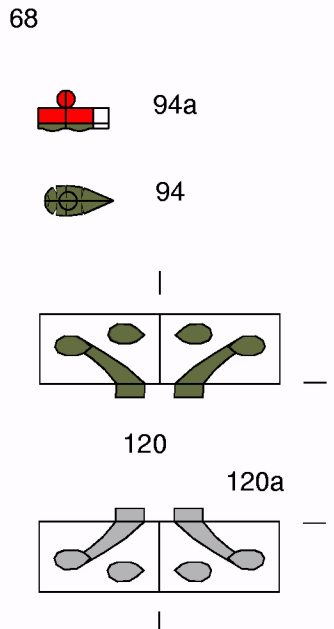
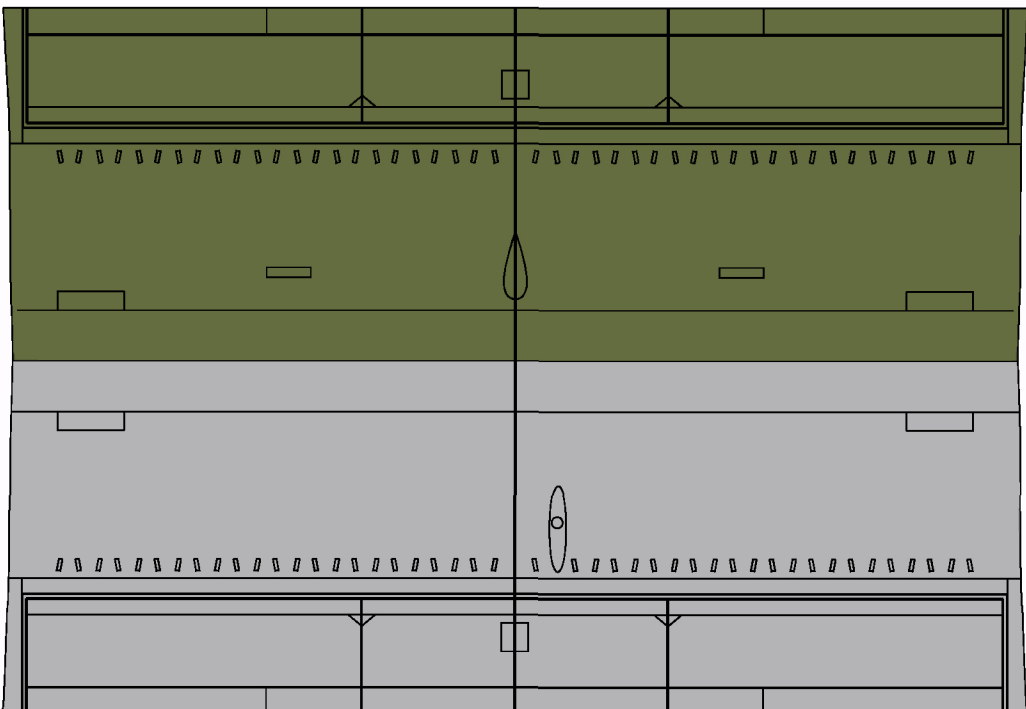
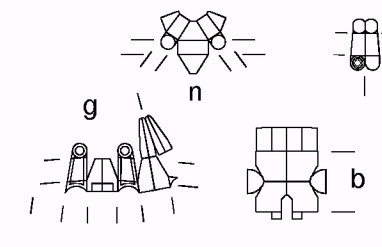
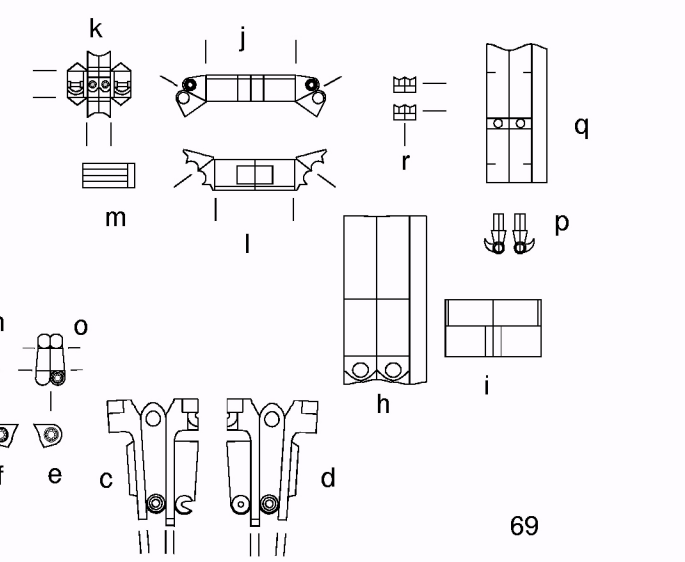
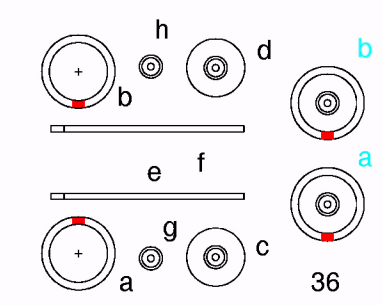
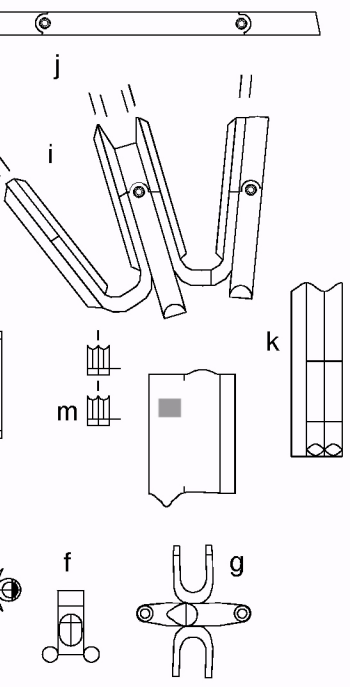
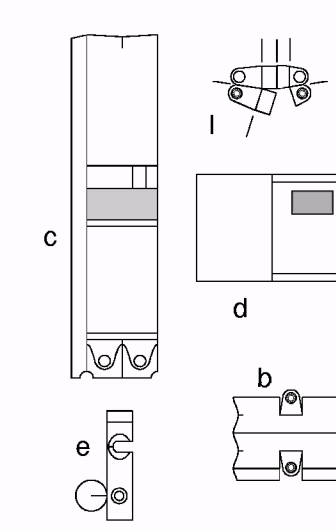
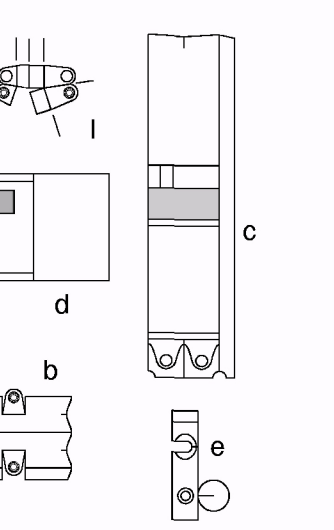
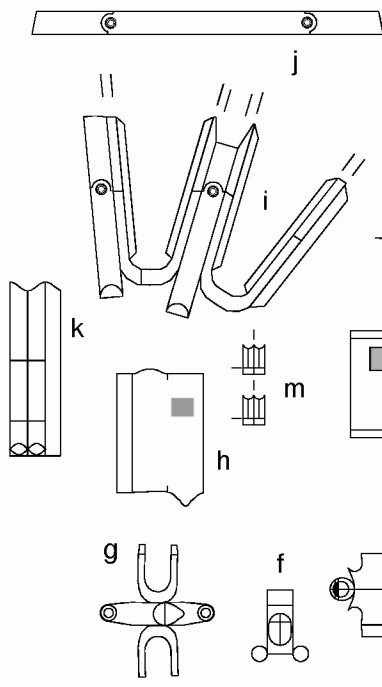
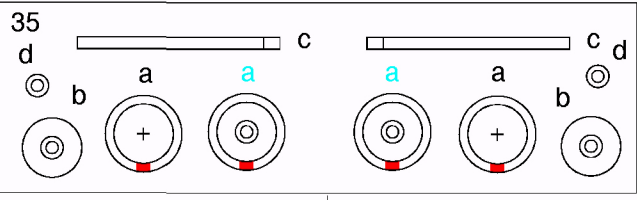


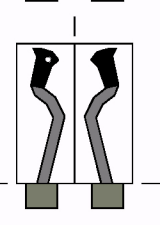
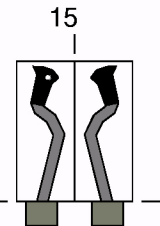
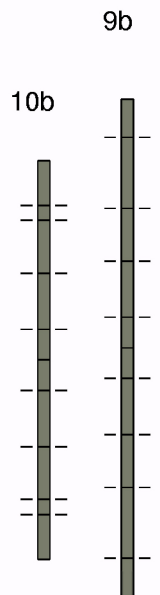
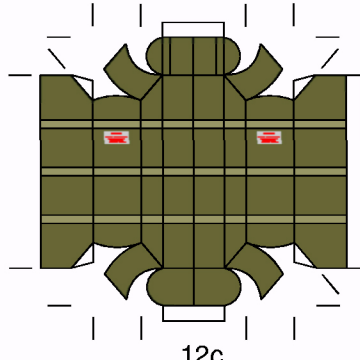
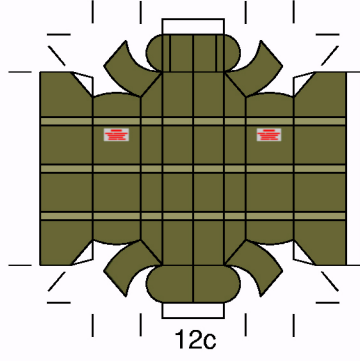
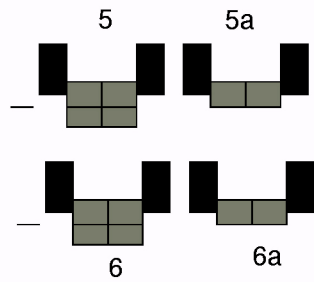
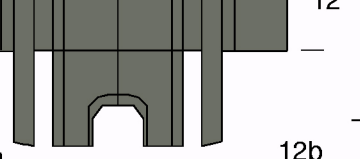
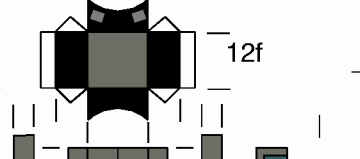
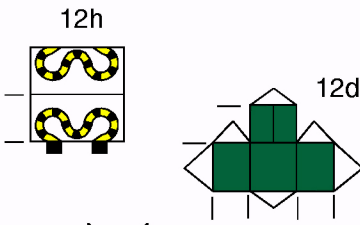
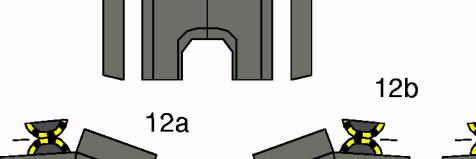
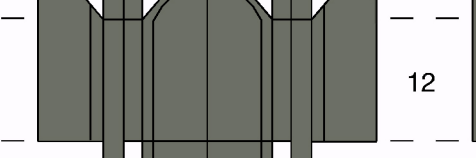
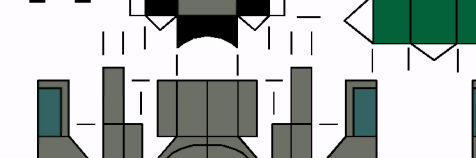
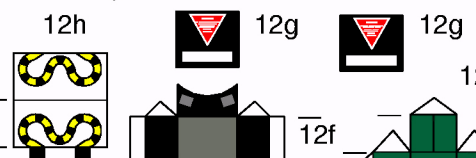
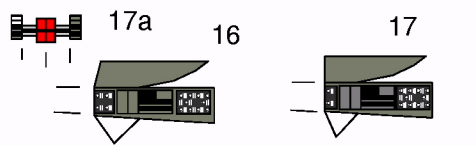
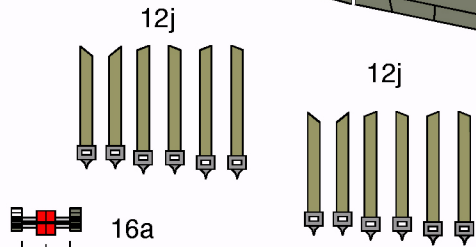
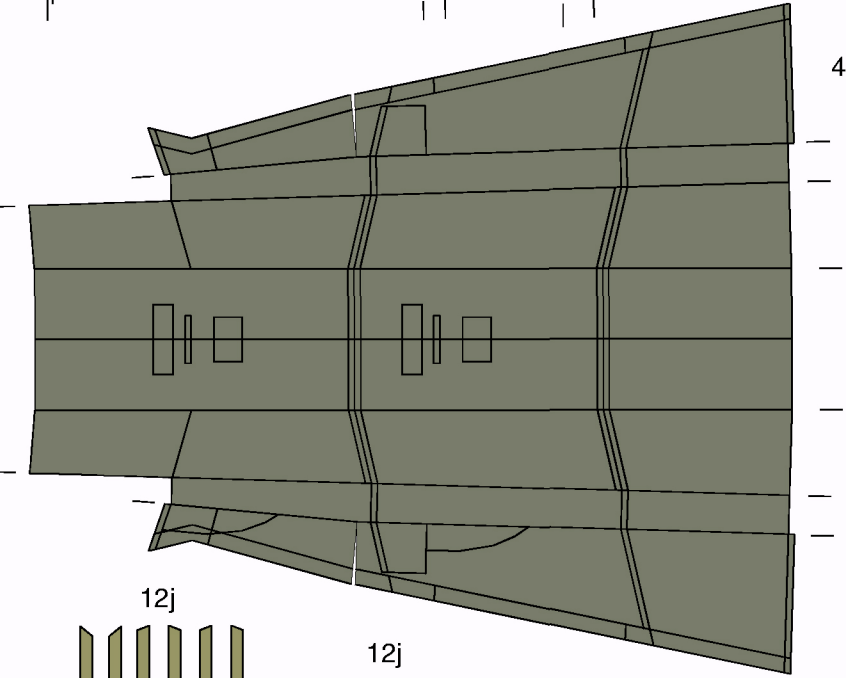
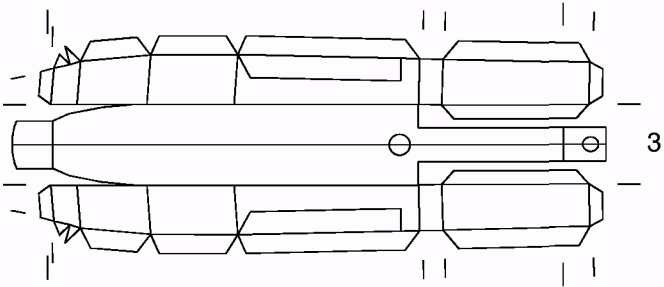


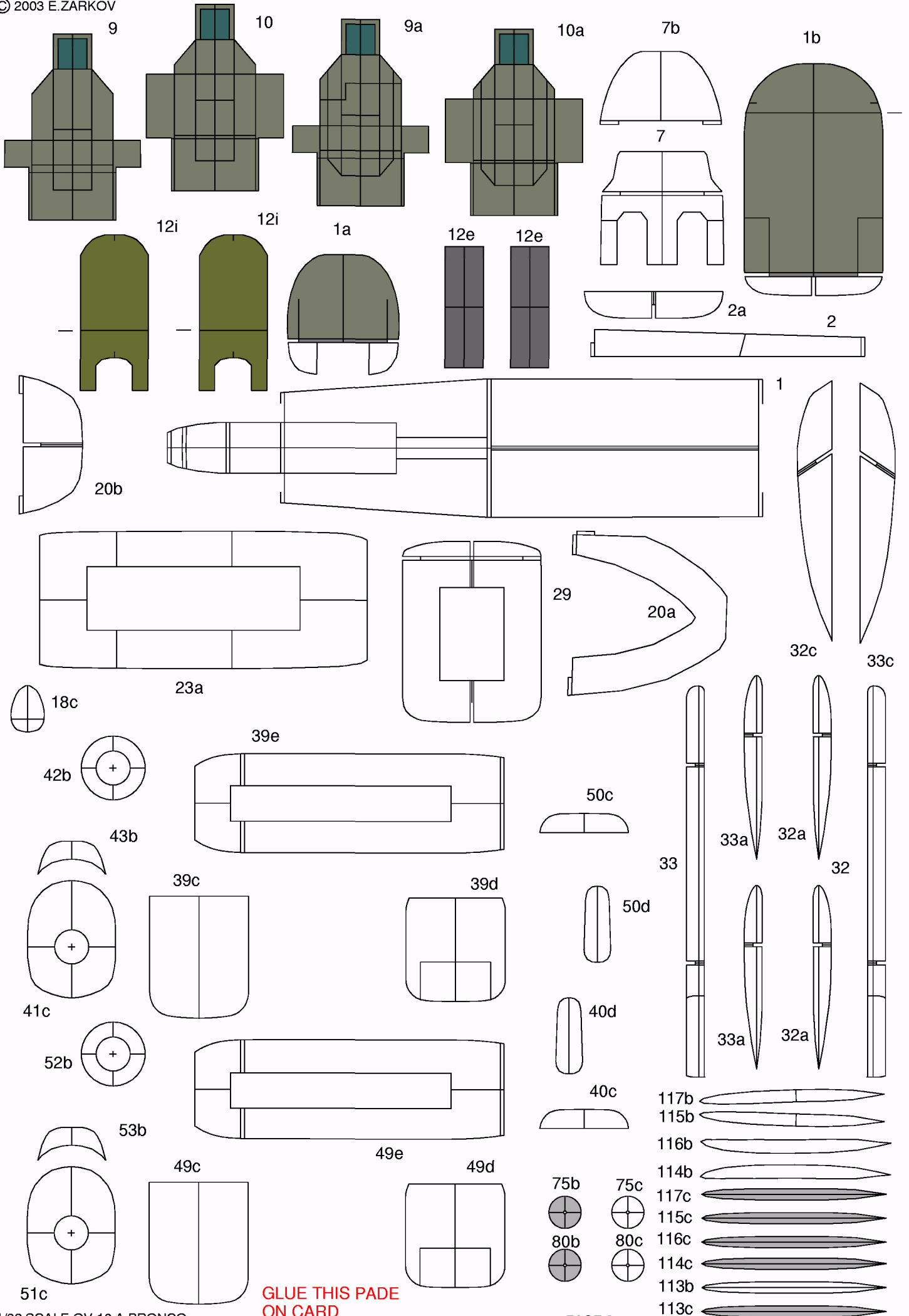




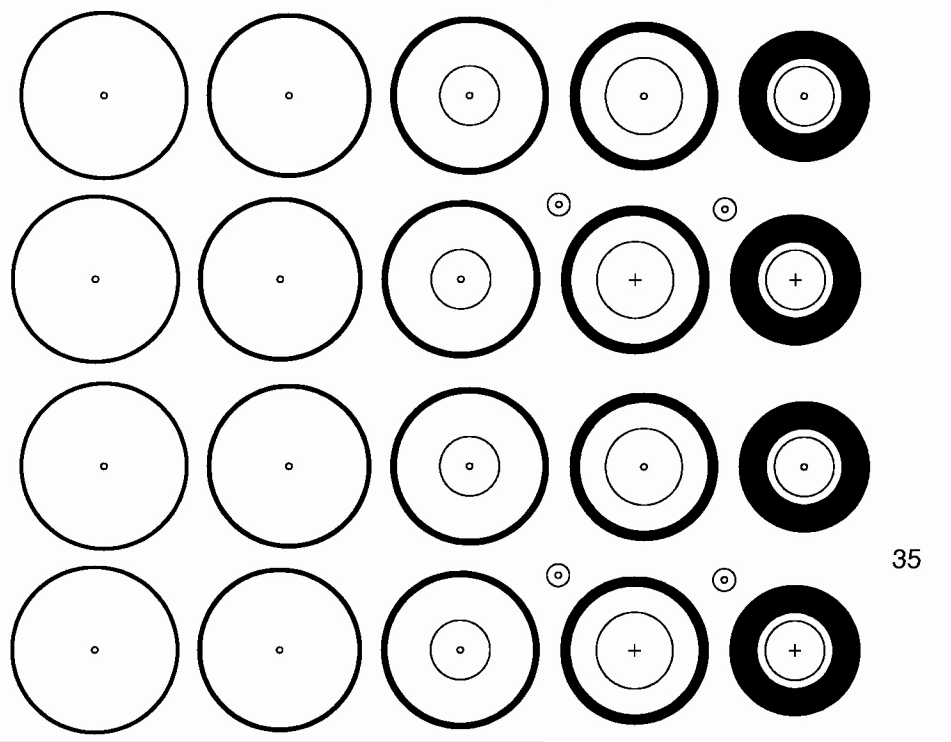




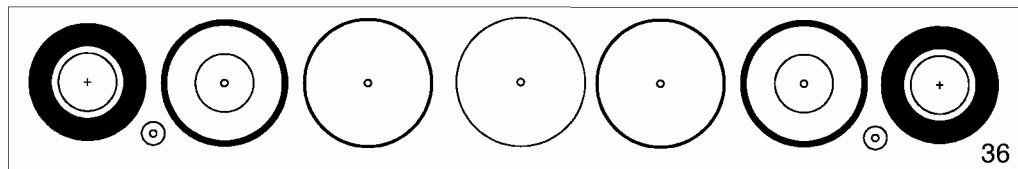




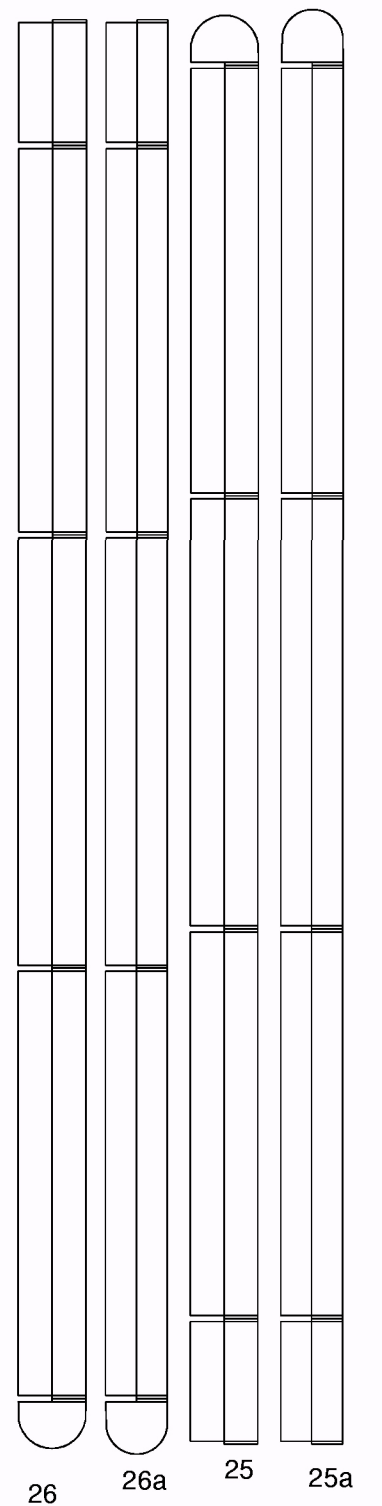
GLUE THIS PADE ON CARD



35



36



26

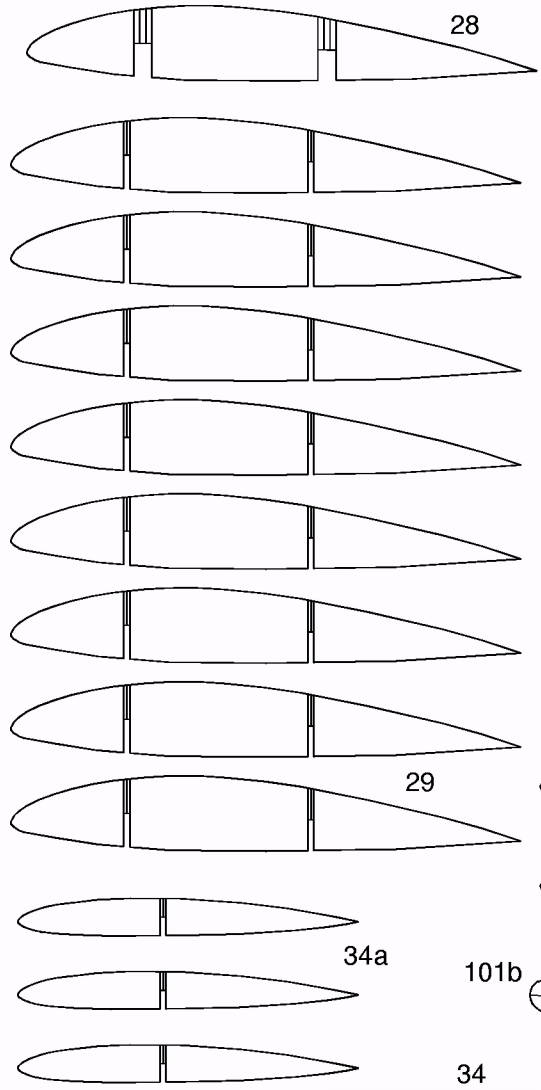
26a

25

25a

31

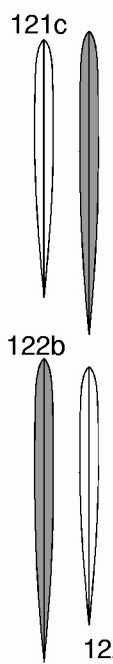
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28

29

34a

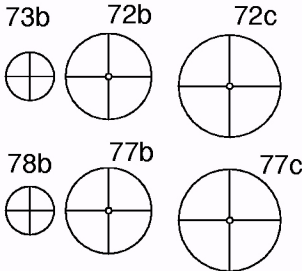


121c

121b

122b

122c



73b

72b

72c

78b

77b

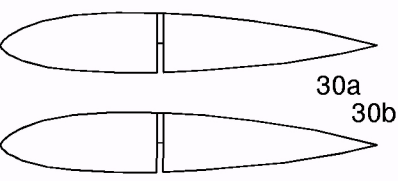
77c

27

27a

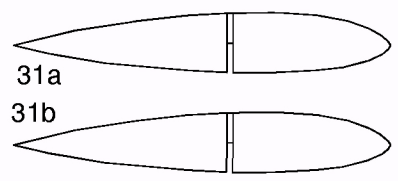
27b

27c



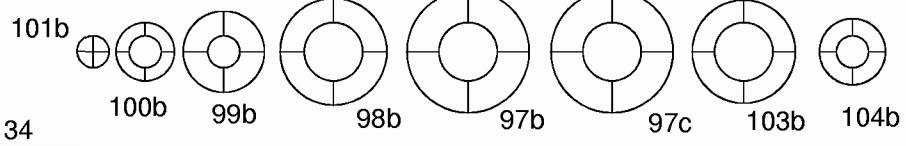
30a

30b



31a

31b



101b

100b

99b

98b

97b

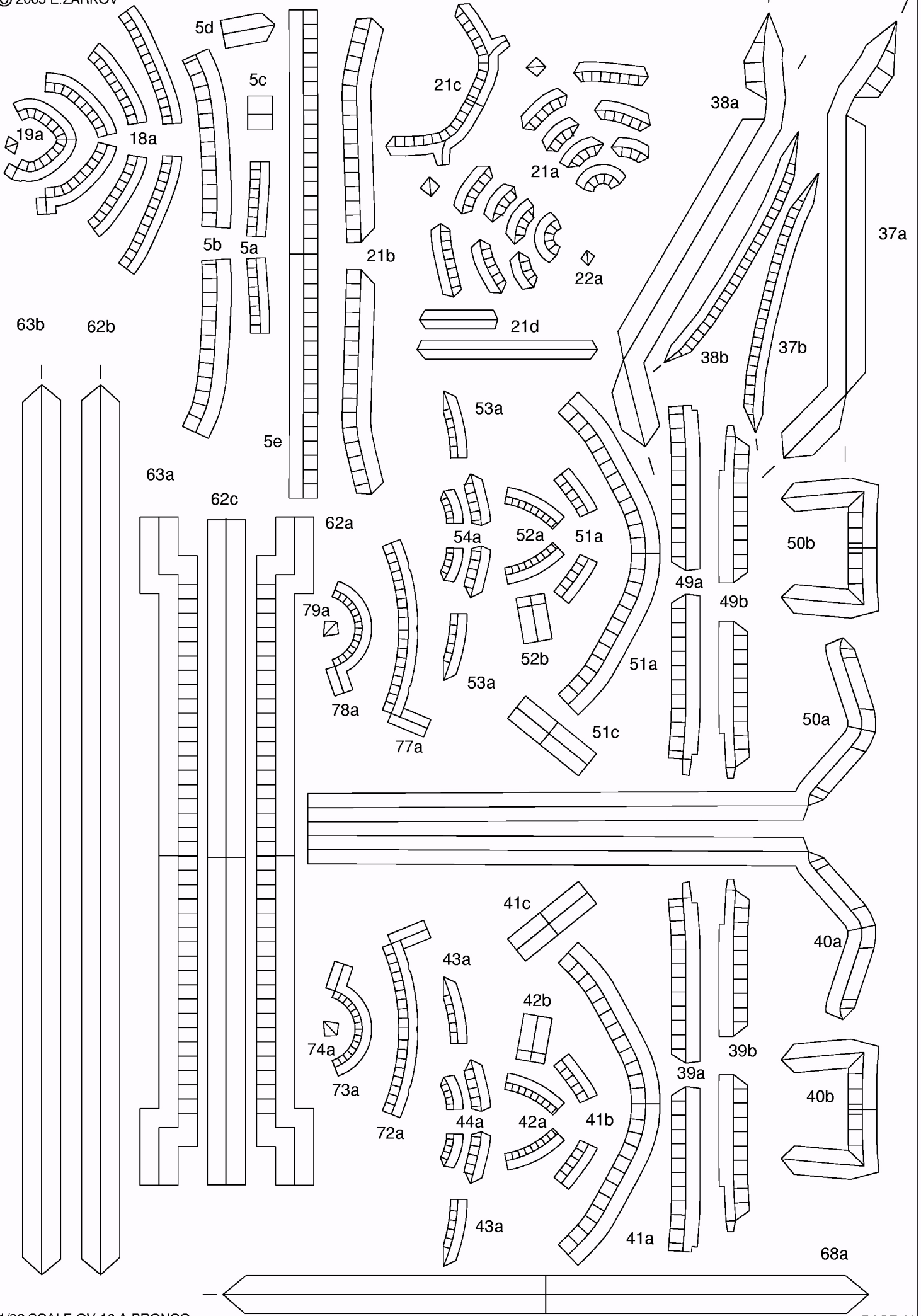
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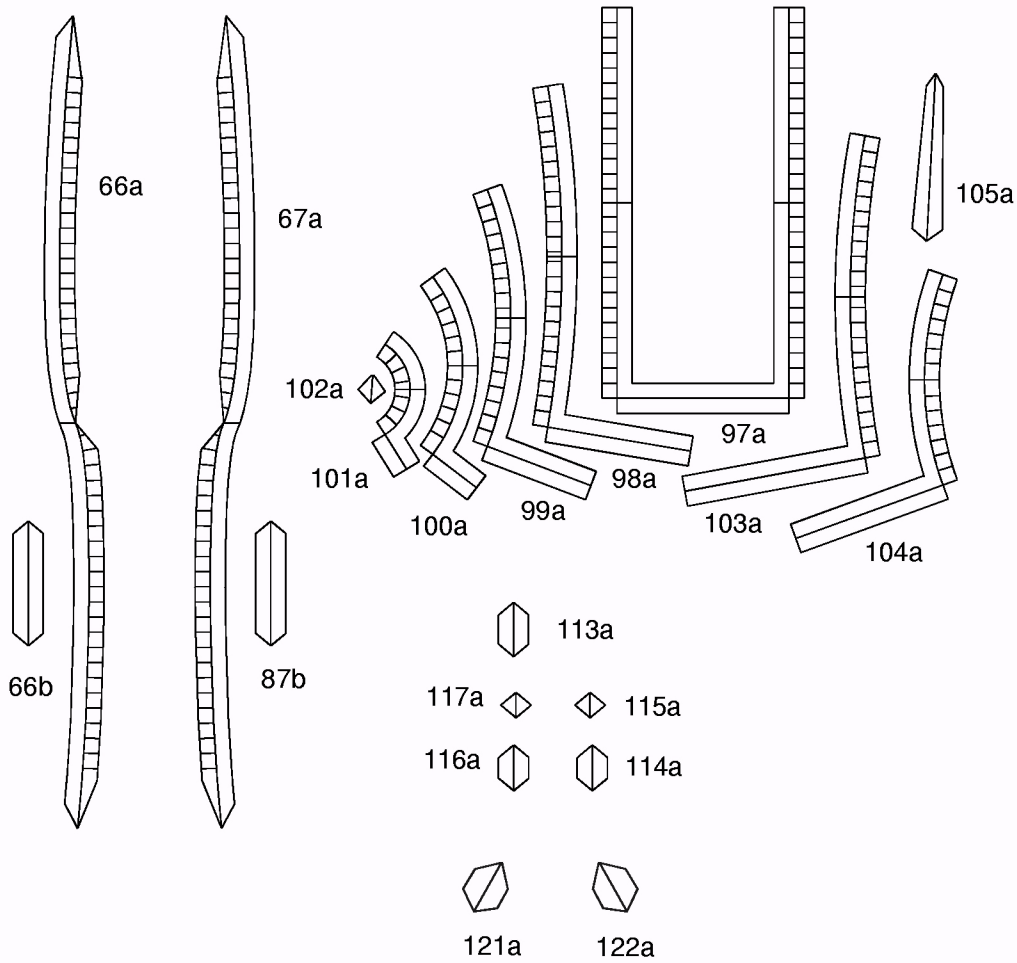
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34

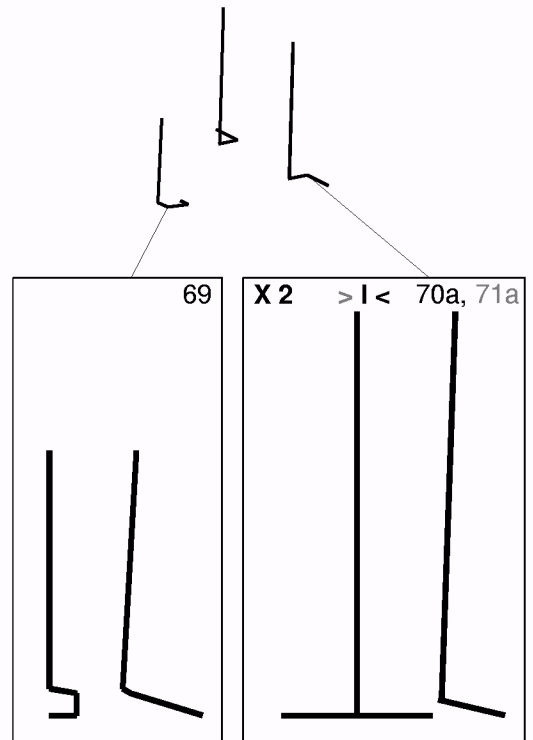
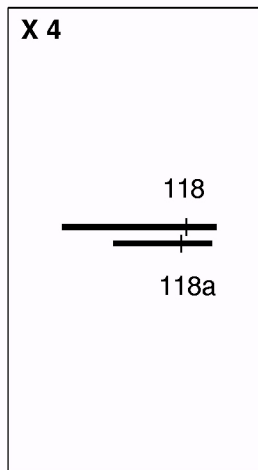
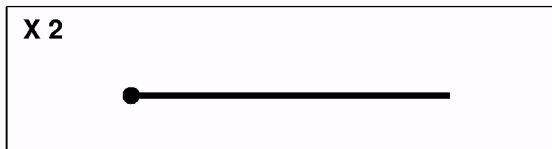
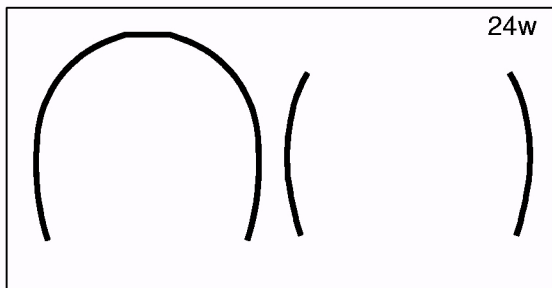
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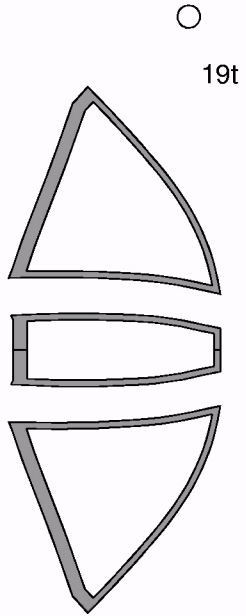






USE 0.8 mm WIRE FOR THESE PARTS

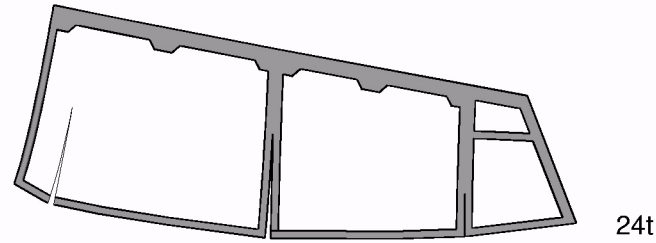




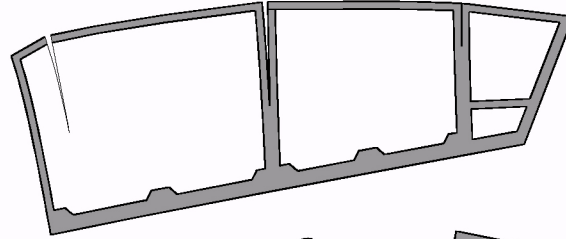
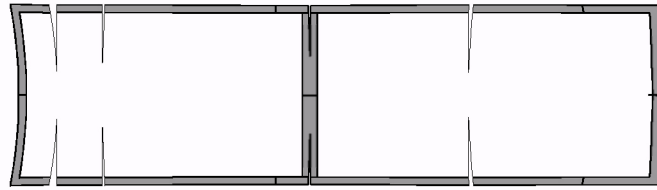
19t



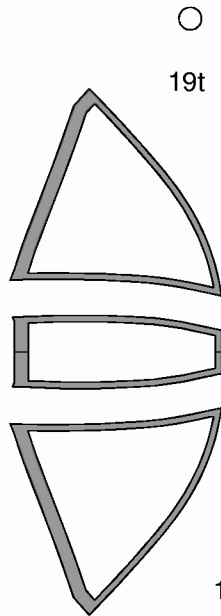
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24t

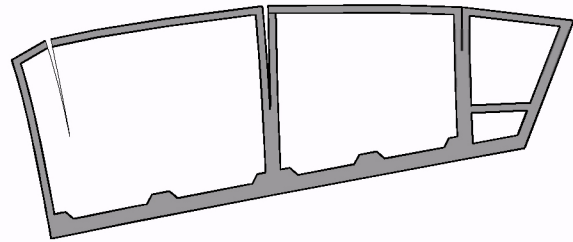
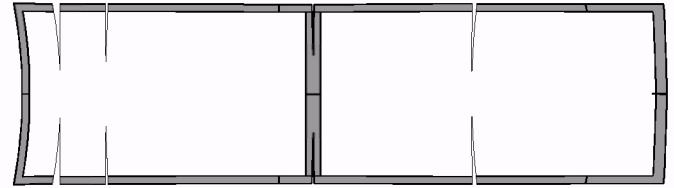
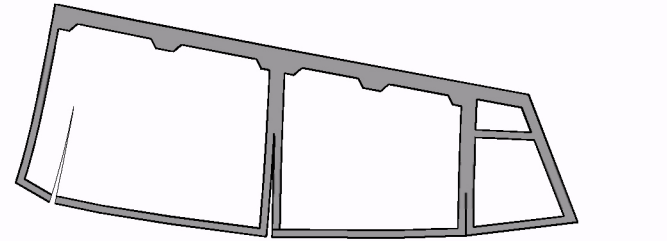


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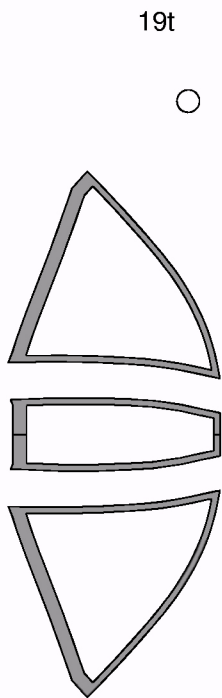


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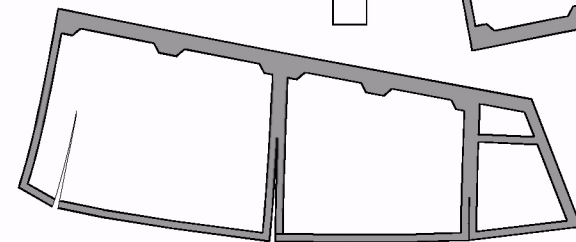
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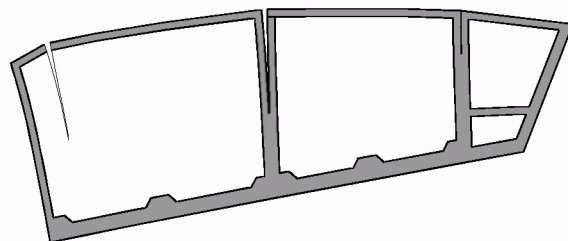
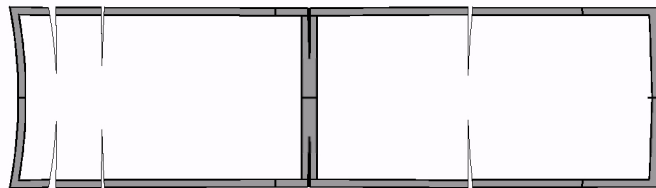
19t



11t



24t



TRANSPARENT PARTS

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