

Mikoyan and Gurevich **MiG-3**

1/32 SCALE PRECISE CARD MODEL

Soviet WW II night fighter
Moscow, USSR,
winter 1942



Options for
Junior and highly detailed
Expert variants of this
famous aircraft are
included in the kit

1/32 SCALE MiG-3

ASSEMBLY INSTRUCTION

The proposed MiG-3 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. 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 - cuts on the wing-fuselage joint cowlings and holes for transparent areas.

Do not be in a hurry with gluing - carefully check and shape the details until obtaining 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. The model can be built in one of two variants - with expert or junior level of difficulty. You must choose the variant and print the necessary pages. The parts that are intended for expert level assembly are marked with small letters *e* above the parts numbers. The parts that are needed only for junior level are marked in a same way with small letters *j*.

Preparation for assembling includes gluing page 5 that contains formers and strengthening elements on a cardboard and cutting the transparent details from appropriate transparent foil.

Start with some subassemblies.

If you choose expert level, assembly the interior of the cockpit as it is shown on the view A. then prepare the gun sight B, rear part of the canopy interior together with the radio equipment C, pilot's seat D and transparent canopy E. Then carefully assembly the internal parts of the air intakes F. For your convenience a 3-view of the left intake is shown on this view.

Assembly the wheel housings G and water-cooling radiator H. Make the wheels, gluing their slice made from heavy card to each other, temporary inserting a pins in the wheels centers. Round them by using sand paper and paint their edges with black ink or paint. Continue with the main landing gear parts following view I. Do not glue the main gear legs to their covers now. You should do it directly on a model.

View J shows the propeller assemblage sequence. Pay attention to angle of attack of each propeller blade and its angle of placement. The angles of attack must be equal and the blades must lay in one plane perpendicular to the propeller axe at 120 degrees to each other. Ensure free rotation of the propeller in its bearing.

After assembling the wings frame /view K/you are ready to start building the fuselage. Start with the middle part 8. Form it then insert interior A and finish the segment, gluing formers 8d, e and f on

their places. Continue with the segment 9, gluing to it transparent part 9t if you choose expert level. Then glue the rear interior part C and former 9b to it. Apply the glue to the internal front edge of 9 and fix it to segment 8, strictly keeping the line of symmetry. Complete view L, adding the controls, seat and gun sight.

In a same way continue with the fuselage nose segments as shown on view M. Note that on the bottom side of between L and segment 11 must be leaved place for the wing longerone 36. You must be very careful if you choose expert level of building the nose. The expert level segment 14 needs closed attention during its forming and gluing to 13 and if you are not experienced enough the results can be worse then the junior ones. Complete the fuselage, assembling its rear segments 16 and 17 and then ad the vertical stabilizer 18-19.

Now start the wings assemblage /view P/. Glue all the connecting stripes on the inner rare bottom parts of the wings segments at about 1 mm inside the parts. Glue the landing light, wheels housing, main frame K and air intakes F on their places then segment by segment close the wing.

After few dry tests glue the wing to the fuselage, strictly keeping symmetry and placement angles. Prepare the wing cowlings 46-51. Cut the upper cowlings parts 46-47 at about 2 mm outside their contours so that the cutting marks can be visible. Then make cuts at each mark approximately to the middle line of the part and then cut the parts on its contour lines. Carefully form the cowlings until obtaining their double concavity shape and after some dry tests glue it to the model. Apply glue not on the rear side of cowlings, but on their mounting places on the wings and fuselage. Pay attention to the shape of the oil cooling air intakes. Complete view P by assembling and gluing the horizontal stabilizer and their fuselage joint cowlings.

View Q and R show the assemblage of the small details – exhaust pipes, cowlings, air intakes and antenna mast. Complete your model, gluing the undercarriage and propeller.

Now your MiG-3 is ready. Enjoy.

MiG-3 Description

"Under a skilful rider it rushed along like an arrow, but when you lost control you could end up beneath its hoofs"

Alexander Pokryshkin, top ace of Soviet Air Forces during WWII

The MiG-3 was the first successful project of the team led by chief designers Artyom Mikoyan and Mikhail Gurevich. First flown in 1940, the aircraft was able to reach a speed of 640 km/h. MiG-3 was fast and maneuverable at high altitude, but the most of the war actions on the Eastern front in this period were made at low and medium altitude, where its performance was not so brilliant. All this together with some another shortcomings shown during its service such as feebleness of its armament and lack of armor caused stopping of its production in 1942.

Despite the shortcomings mentioned at altitudes over 5000 meters MiG-3 was a very dangerous opponent for the German fighters and bombers and number of German pilots had a bad chance to discover it. As a fighters better suited to high altitude combat the MiGs were often assigned to

reconnaissance and air defense units /PVO/ where they saw successful service long time after stopping their production. 3322 aircraft of this type were built between 1941 and 1942.

Technical data and performances

Type: Single-Seat Fighter

First Flight: May 1941

Engine: 1,350 hp Mikulin AM-35A V-12 Liquid Cooled

Dimensions:

Wing span: 10.3m (33 ft. 9.5 in.)

Length: 8.15m (26 ft. 9 in.)

Height: 2.61m (8 ft. 7 in.)

Wing Surface Area: 17.44 m² (187.73 sq. ft.)

Weights:

Empty: 2595 kg (5,721 lbs.)

Max. Take-Off: 3350 kg (7,385 lbs.)

Performance:

Maximum Speed: 640 km/h (398 mph)

Initial climb: 1200 m/min (3,937 ft./min.)

Service Ceiling: 12,000m (39,370 ft.)

Range: 1250 km (776 Miles)

Armament:

One 12.7mm BS machine gun in nose

Two 7.62mm ShKAS machine gun in nose

Bomb Load:

Underwing rails for six RS-82 rockets or two 100 kg bombs

From the author:

In your hands is the next ModelArt kit developed by using digital technologies – MiG-3. Initially I was somehow skeptical about its popularity due to the negative approach of almost all authors of memorial and historical materials concerning this aircraft. Probably they are right – MiG-3 showed many shortcomings, but in appropriate hands /like Pokrishkins'/ or in appropriate missions /like Air Defense/ it proved that it can be a lethal weapon. Many German pilots found it true for themselves during the battle of Moscow in the winter of 1941.

Apart of the historical and service details, I found surprisingly enjoyable its recreation as a scale model. I had a feeling that I'm following step by step the same construction work that has been done by the MiG development team and I enjoyed the complicated solutions found more then 60 years ago on every stage of the model design and test building.

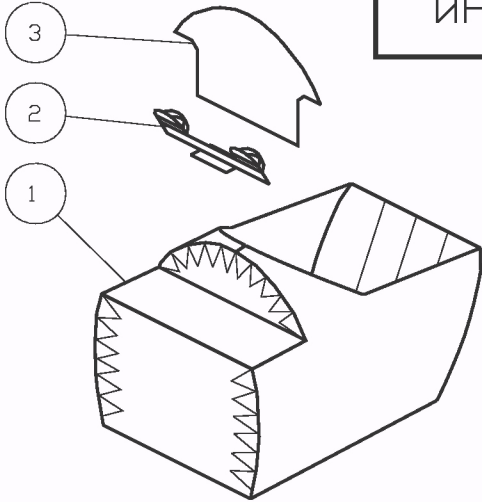
I hope that you'll fill the same during assembly of the kit

Sofia, 27. 03. 2002

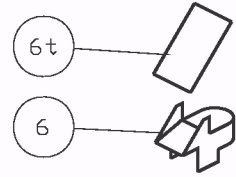
Dipl. Eng. Emil Zarkov, Ph. D

ASSEMBLY INSTRUCTION ИНСТРУКЦИЯ СБОРКИ

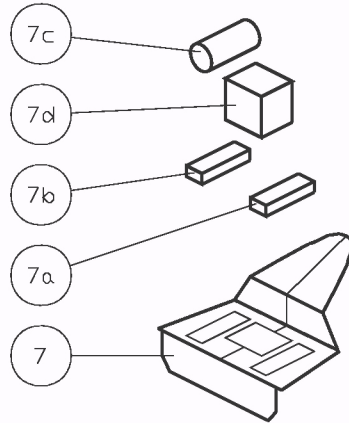
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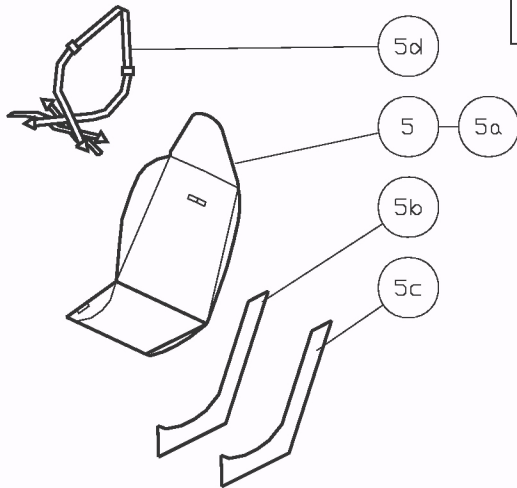
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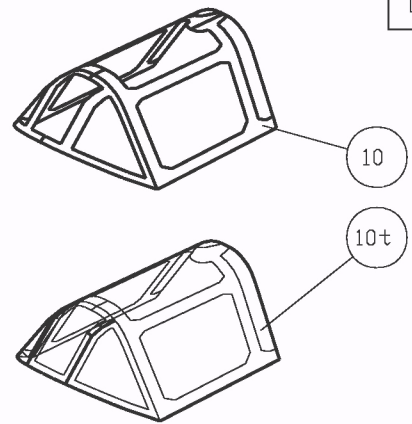
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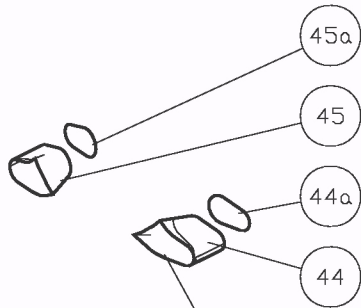
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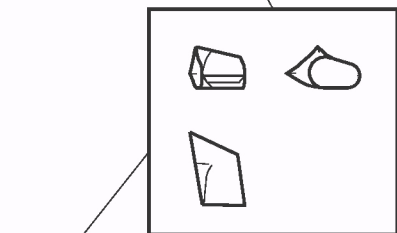
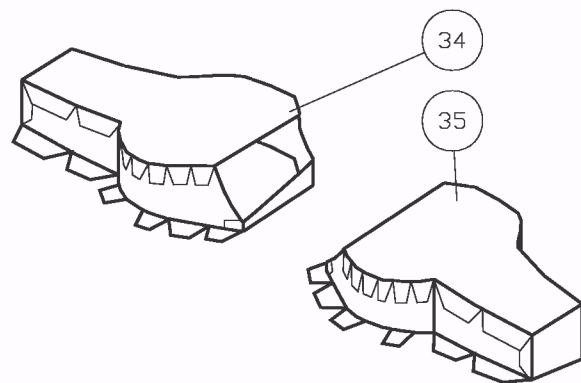
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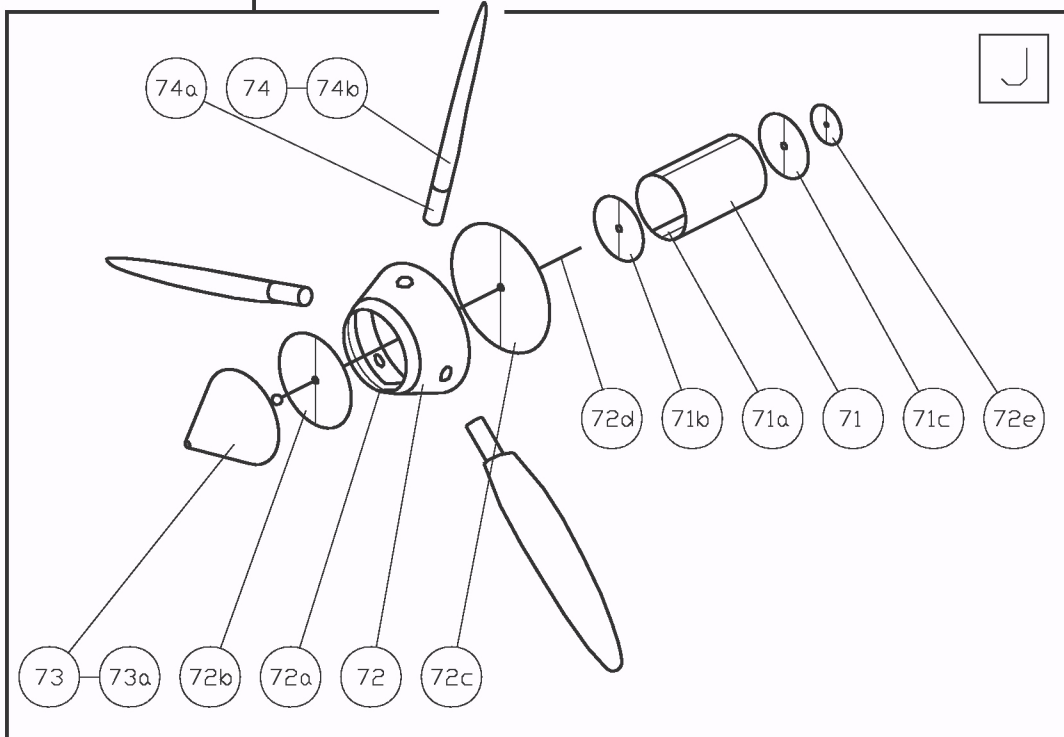
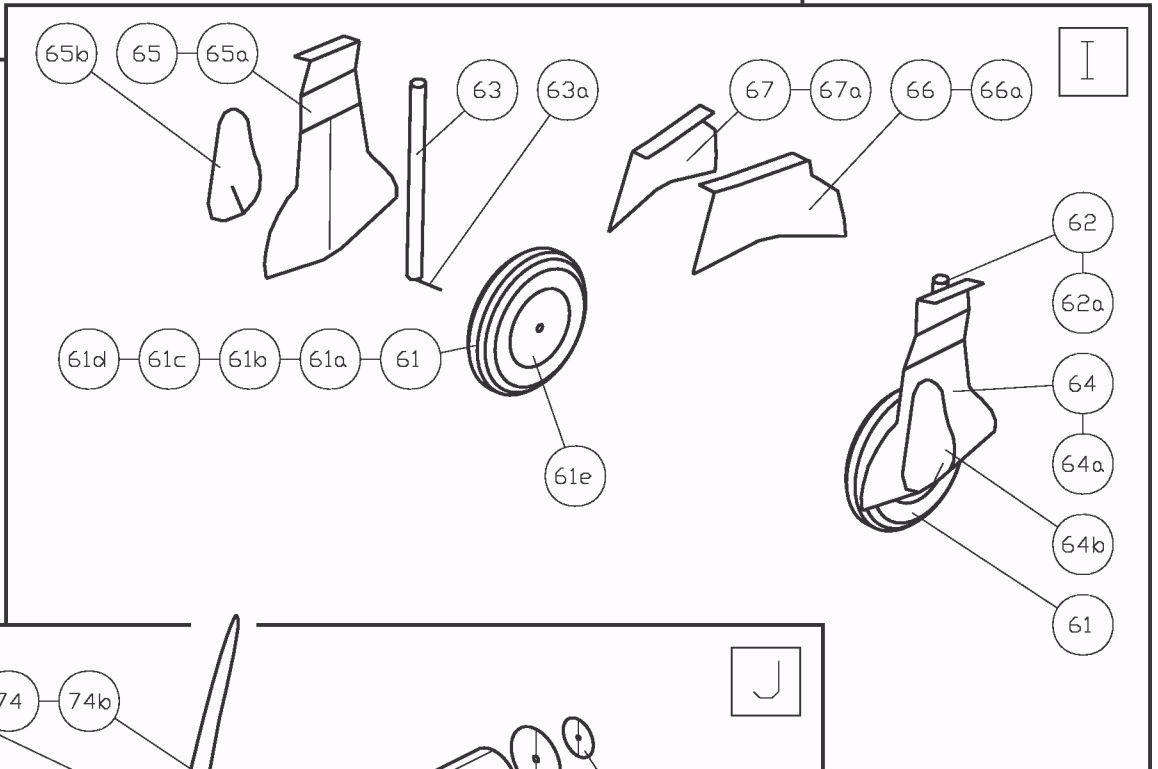
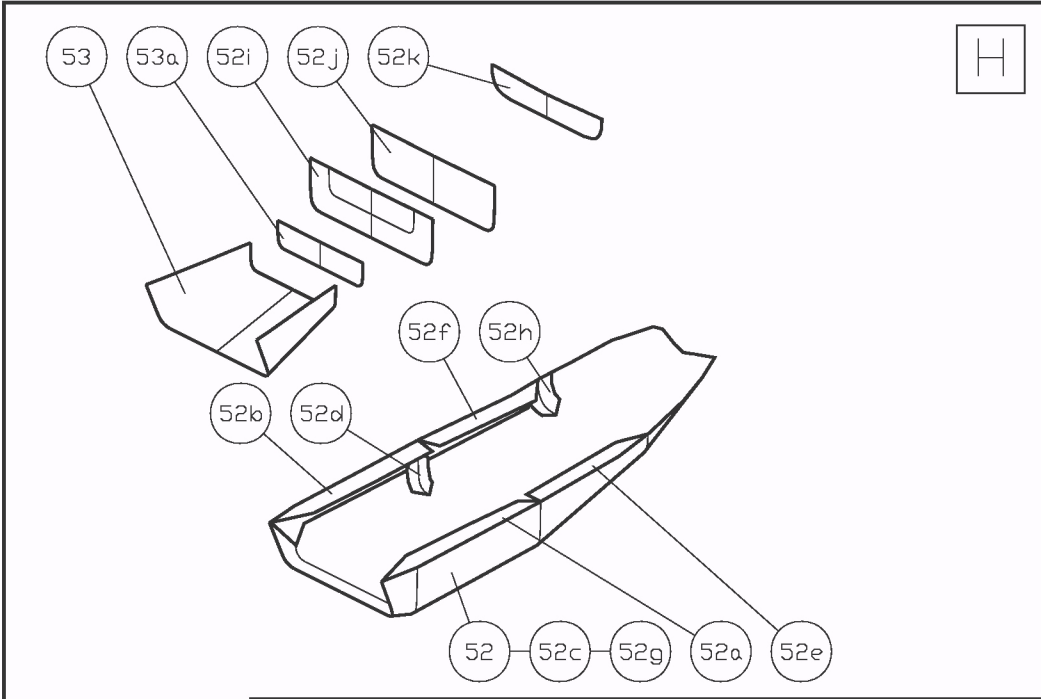
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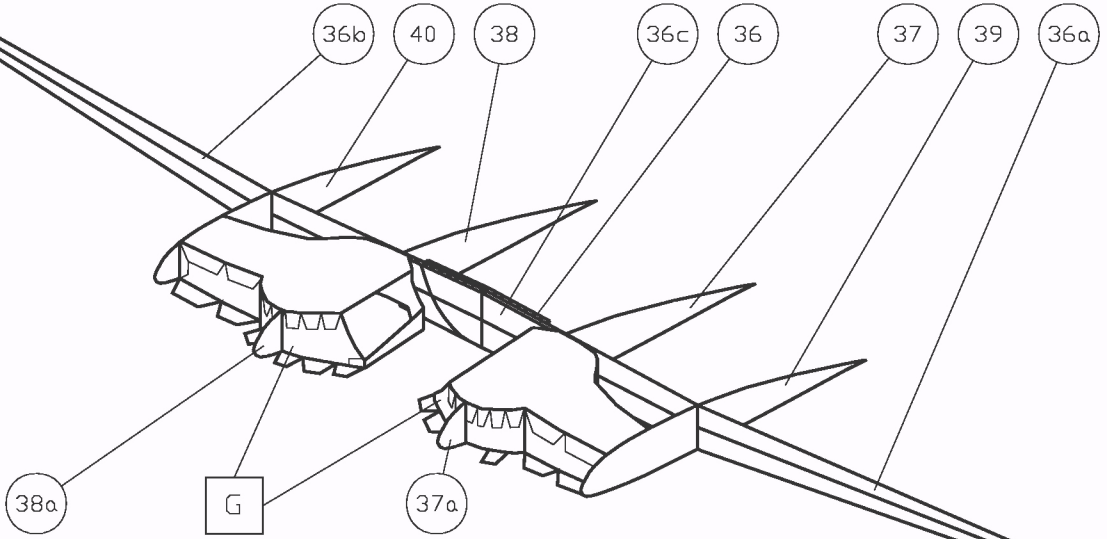
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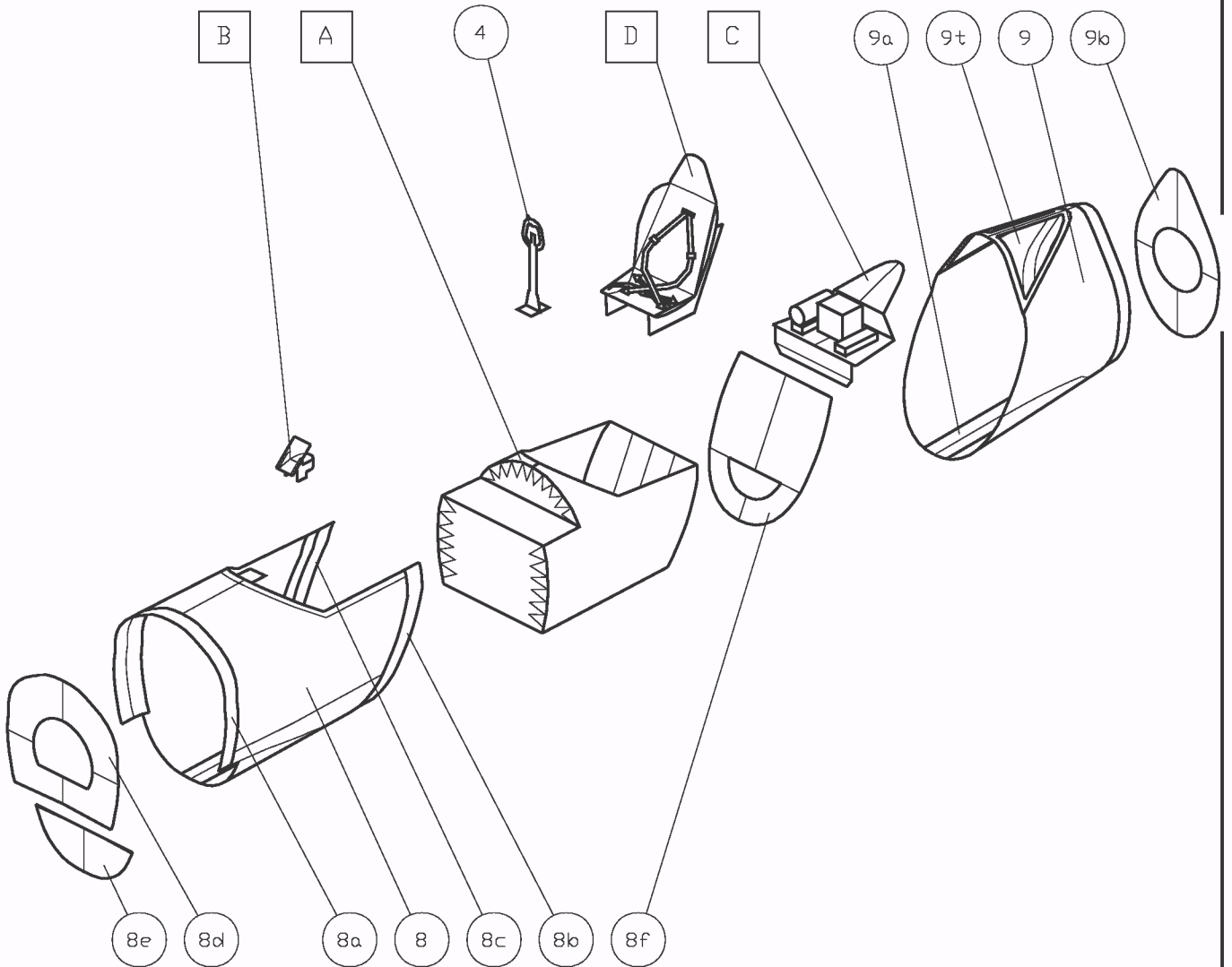
3-view of the left air intake
Проекция левого воздухозаборника

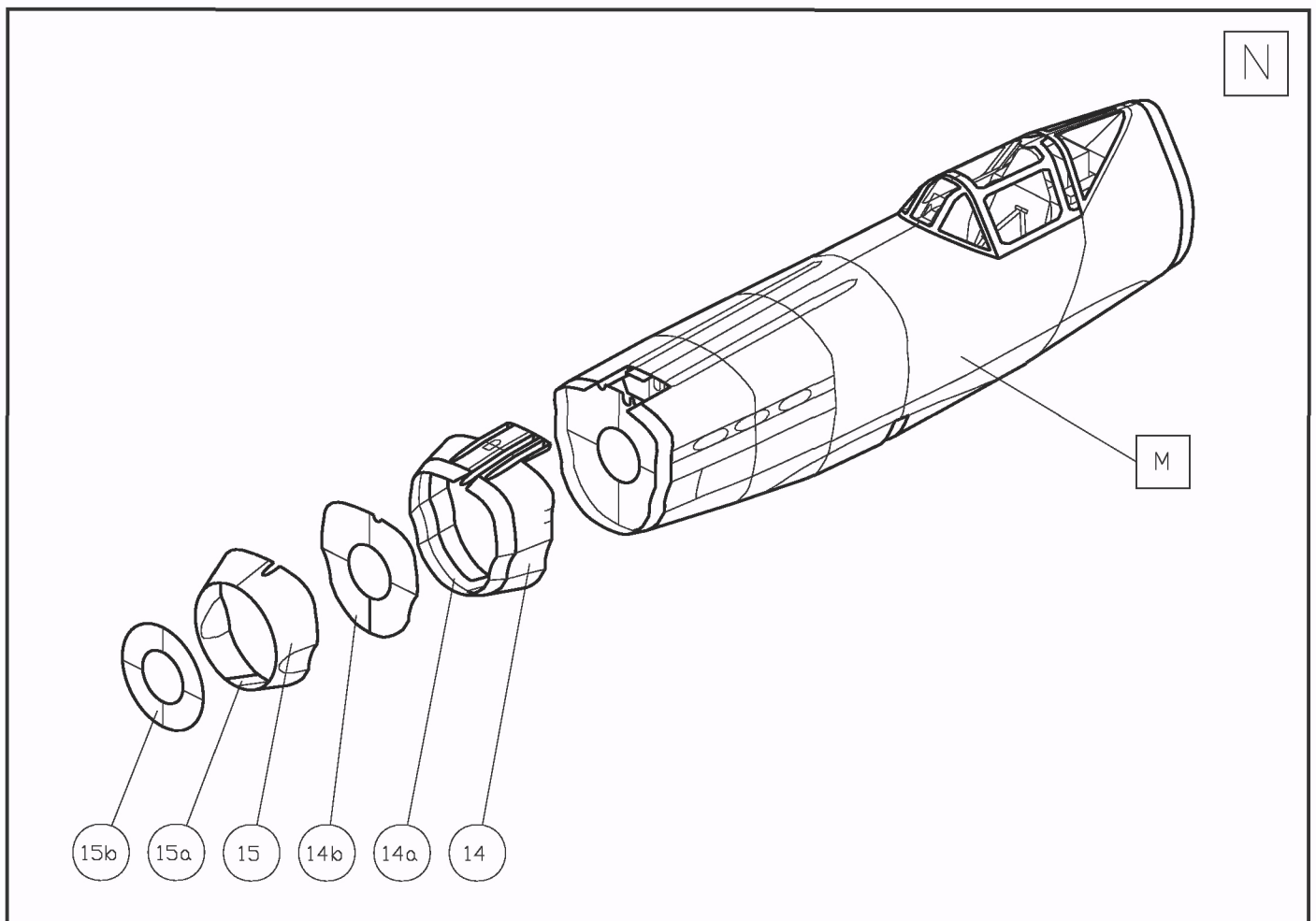
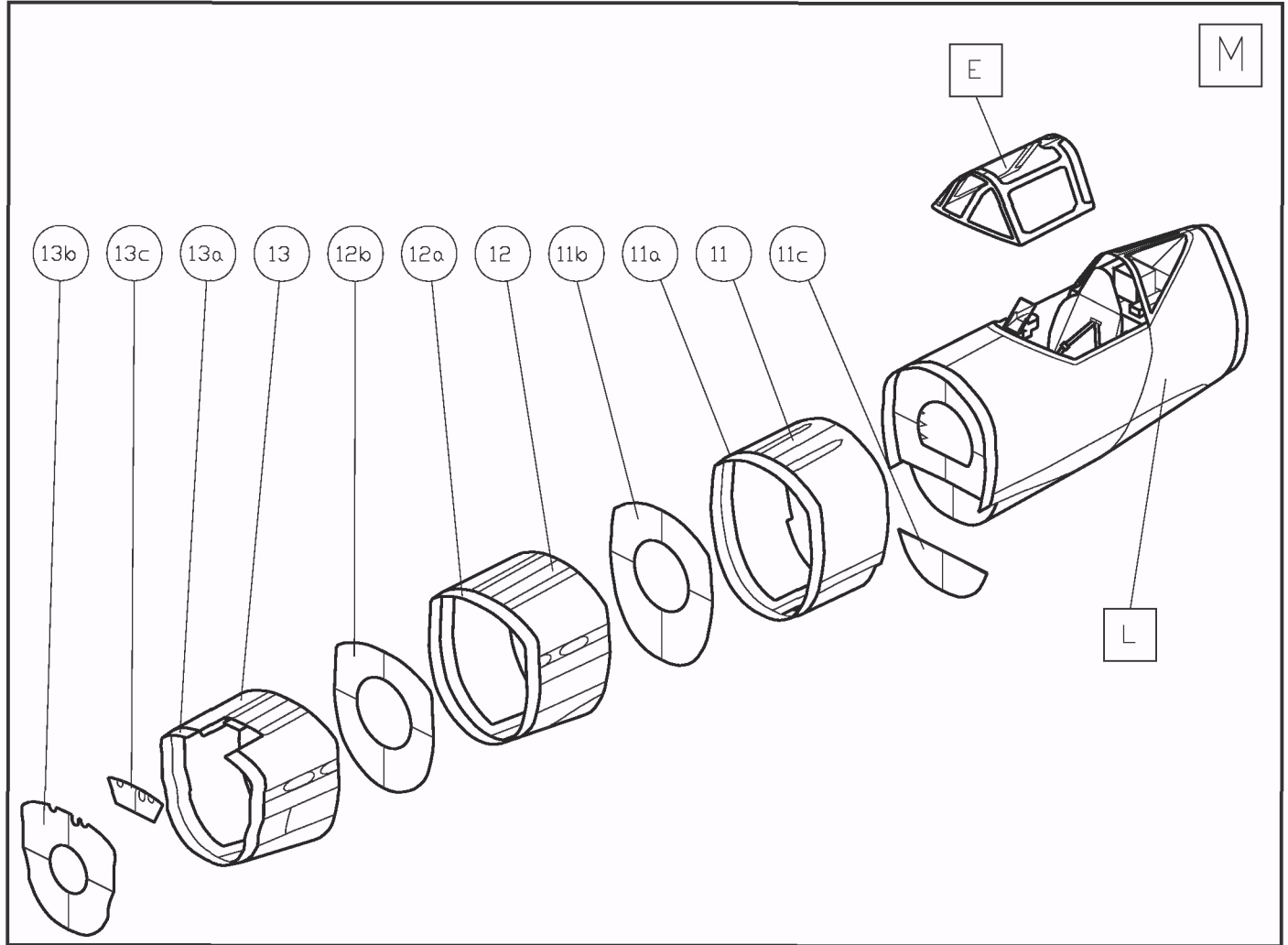


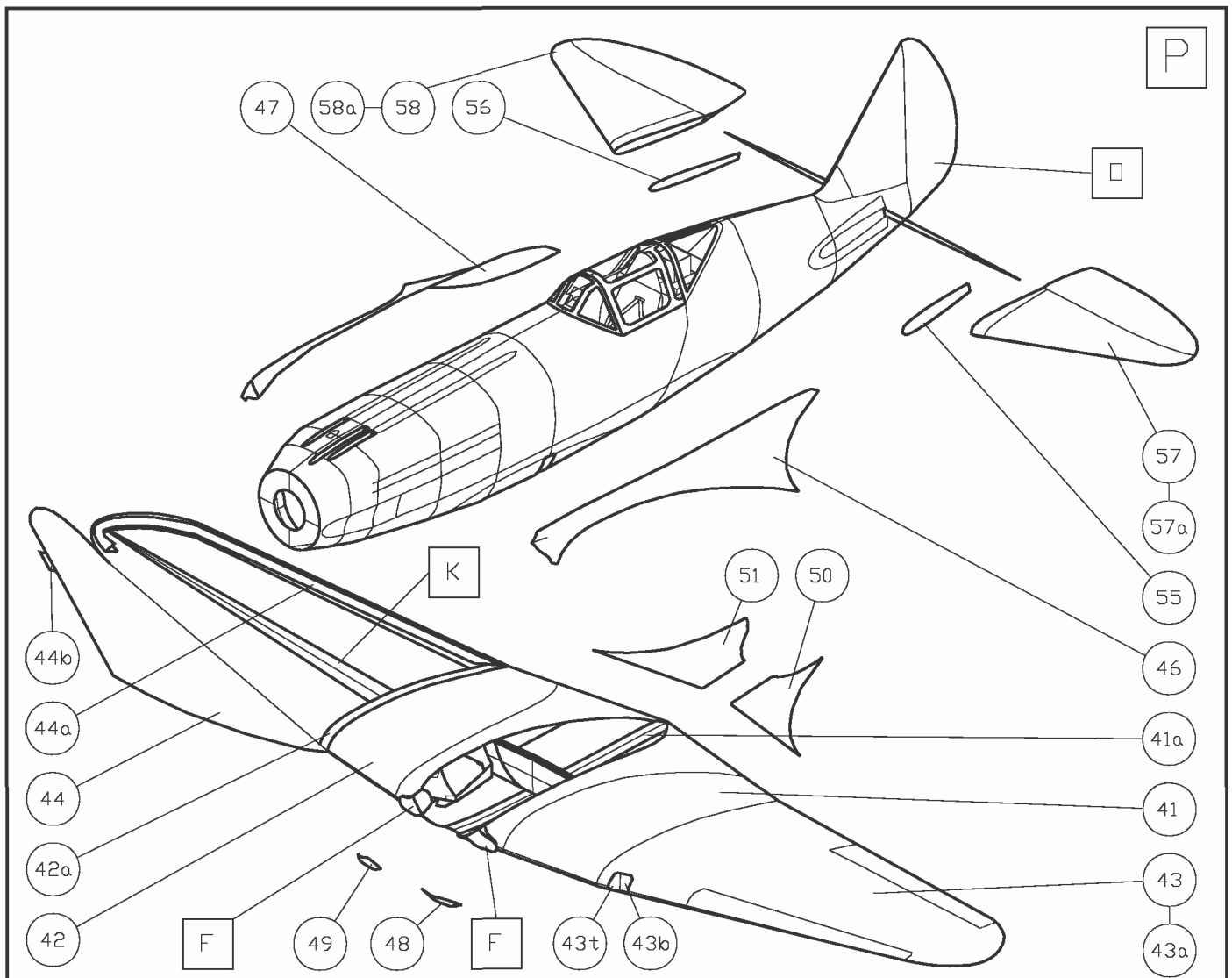
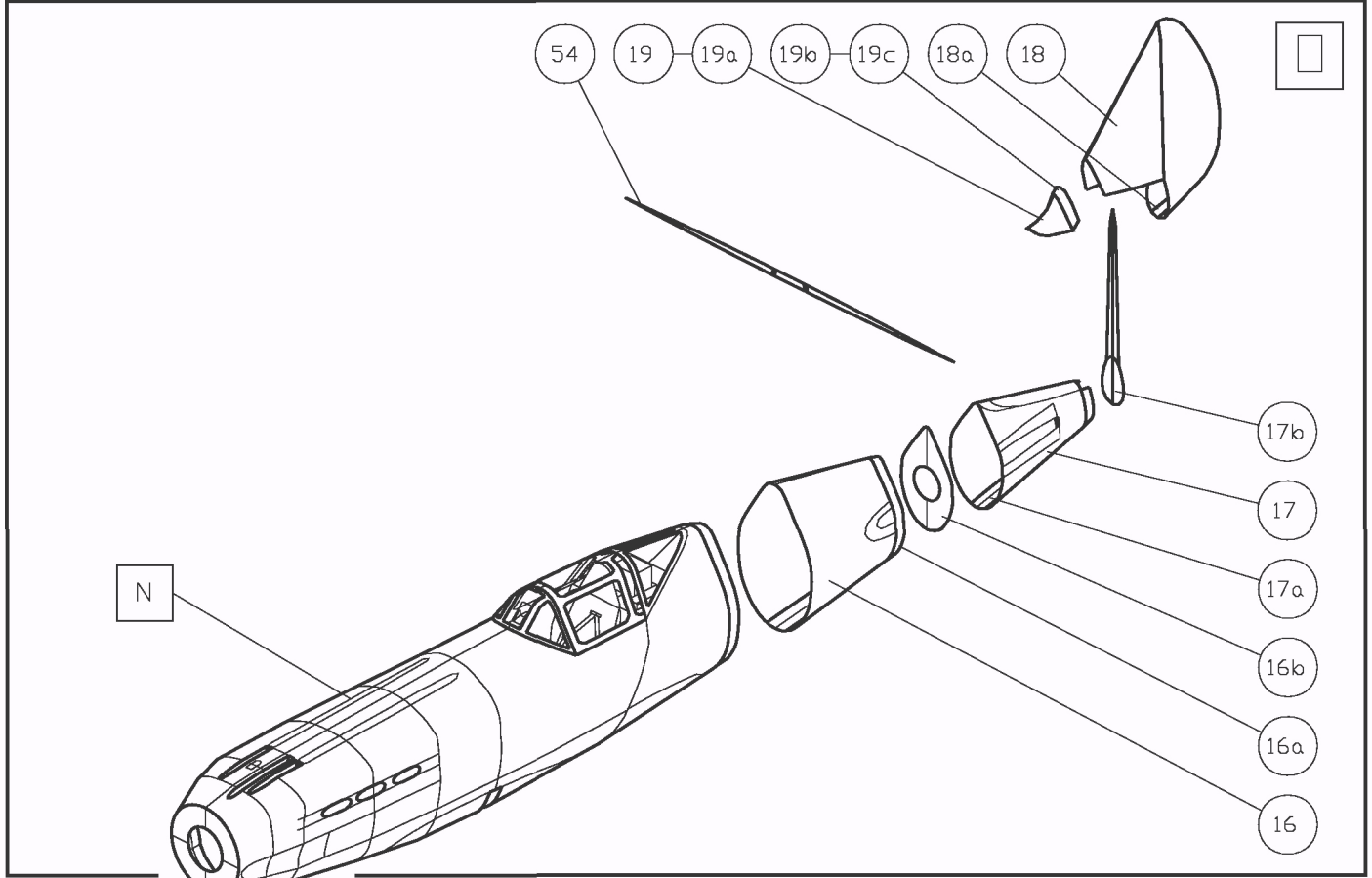
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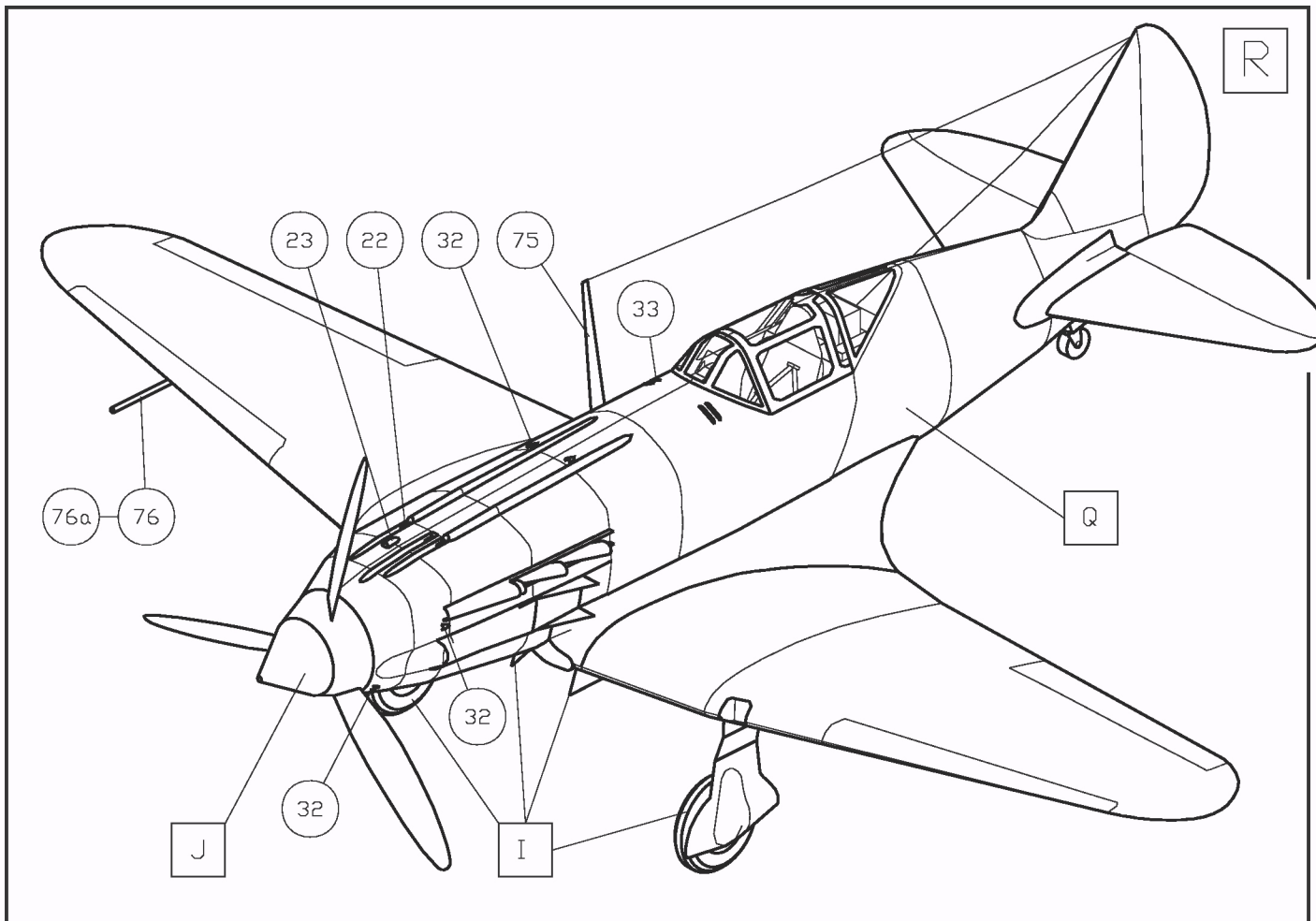
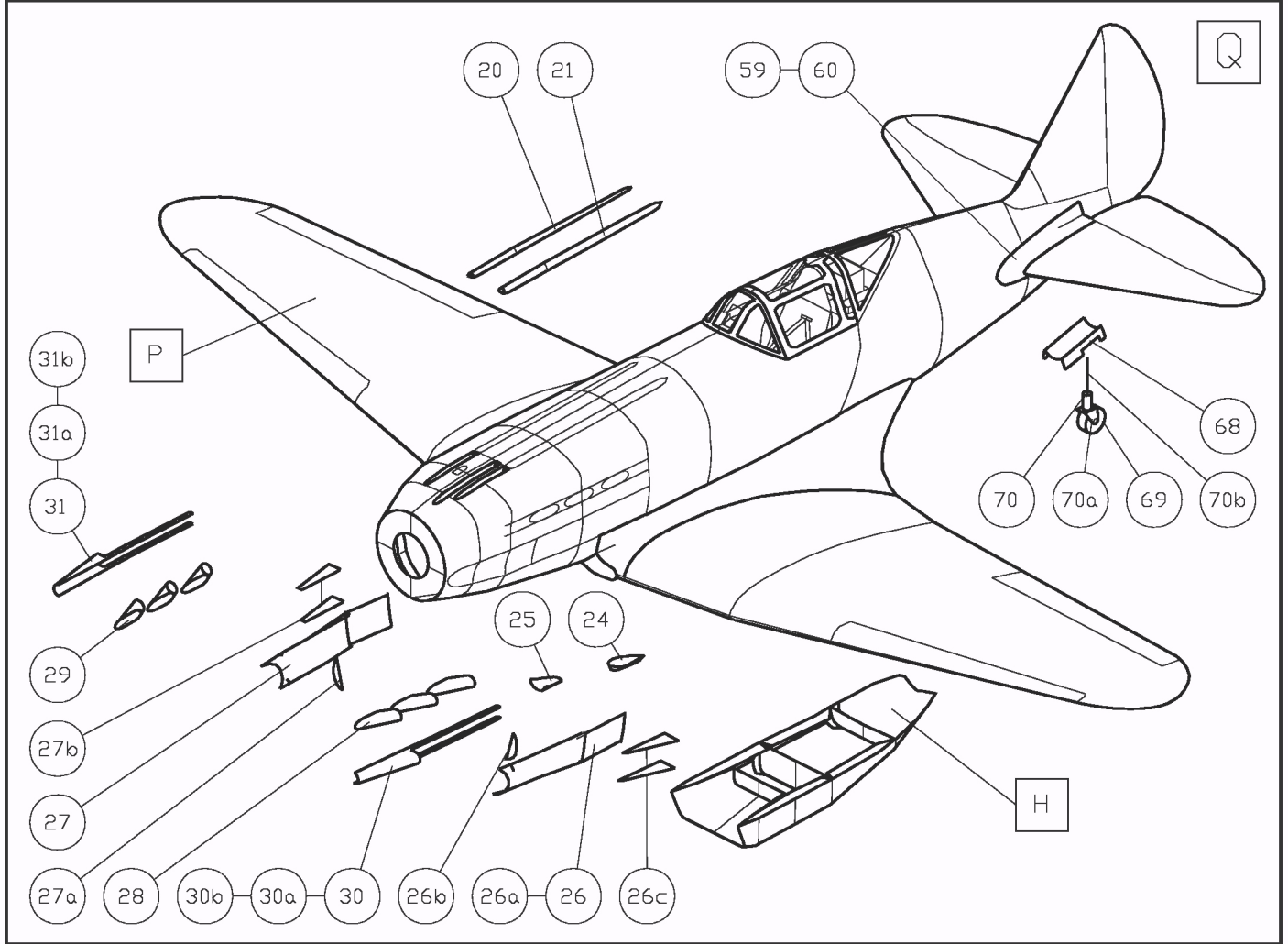


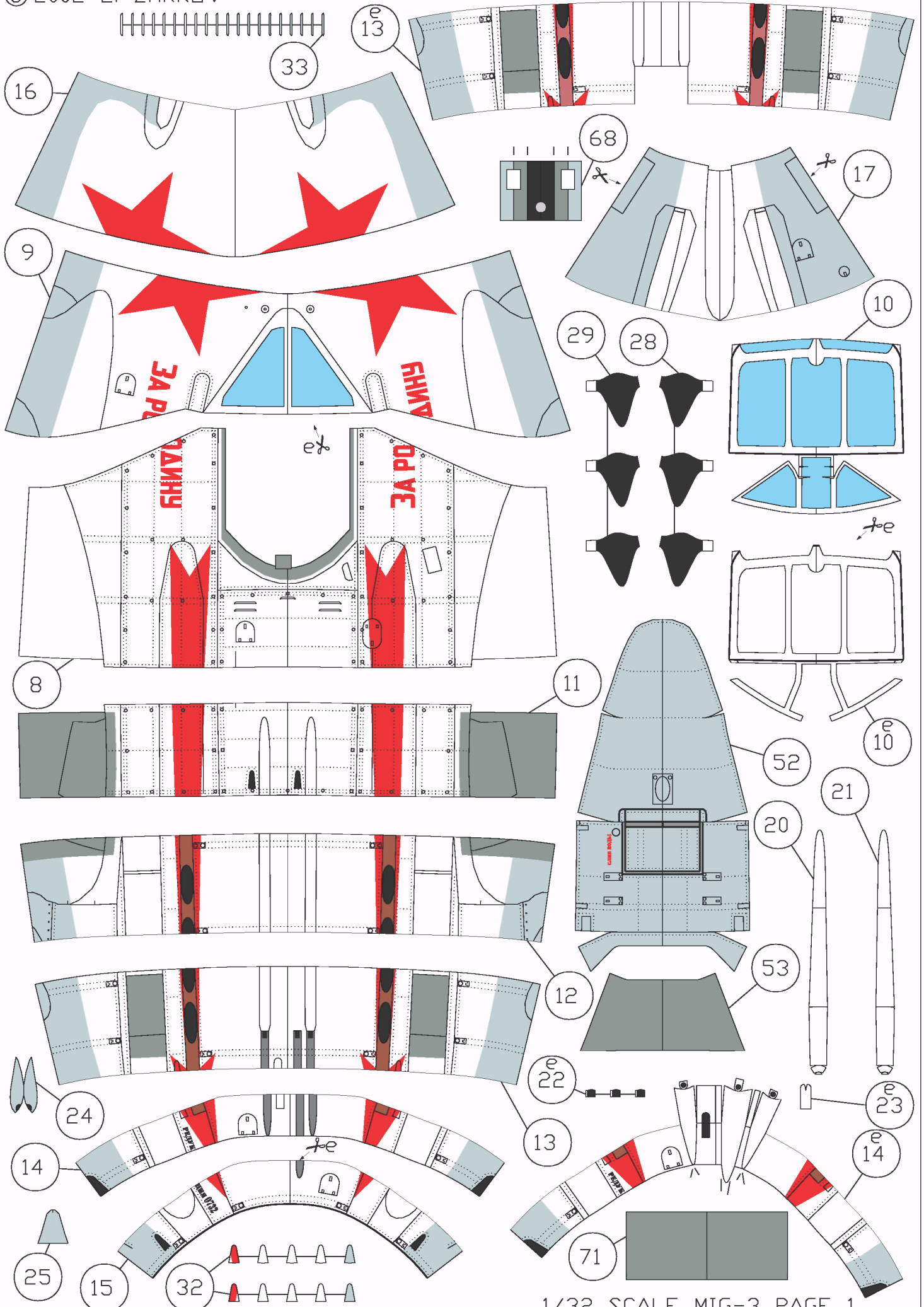
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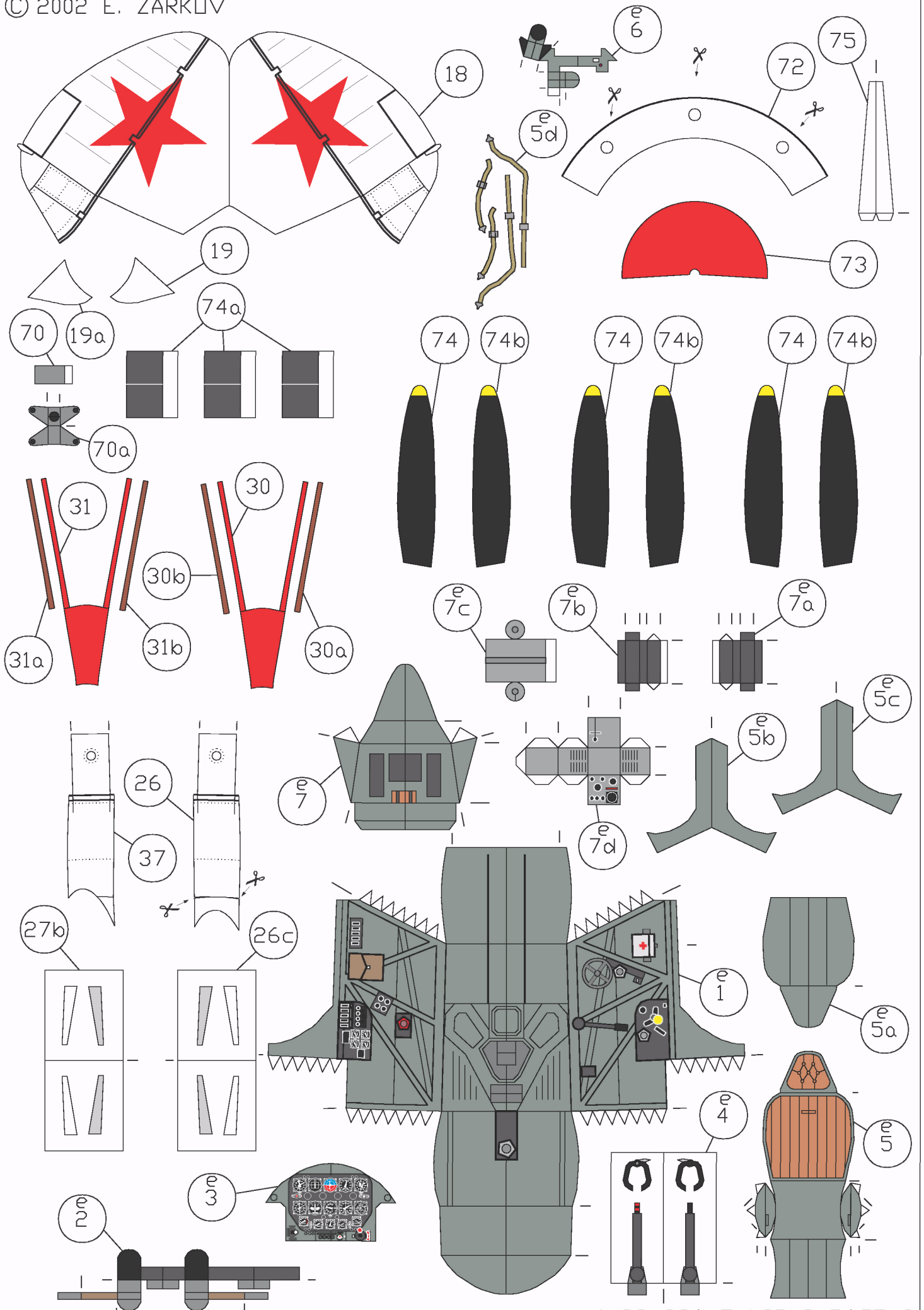


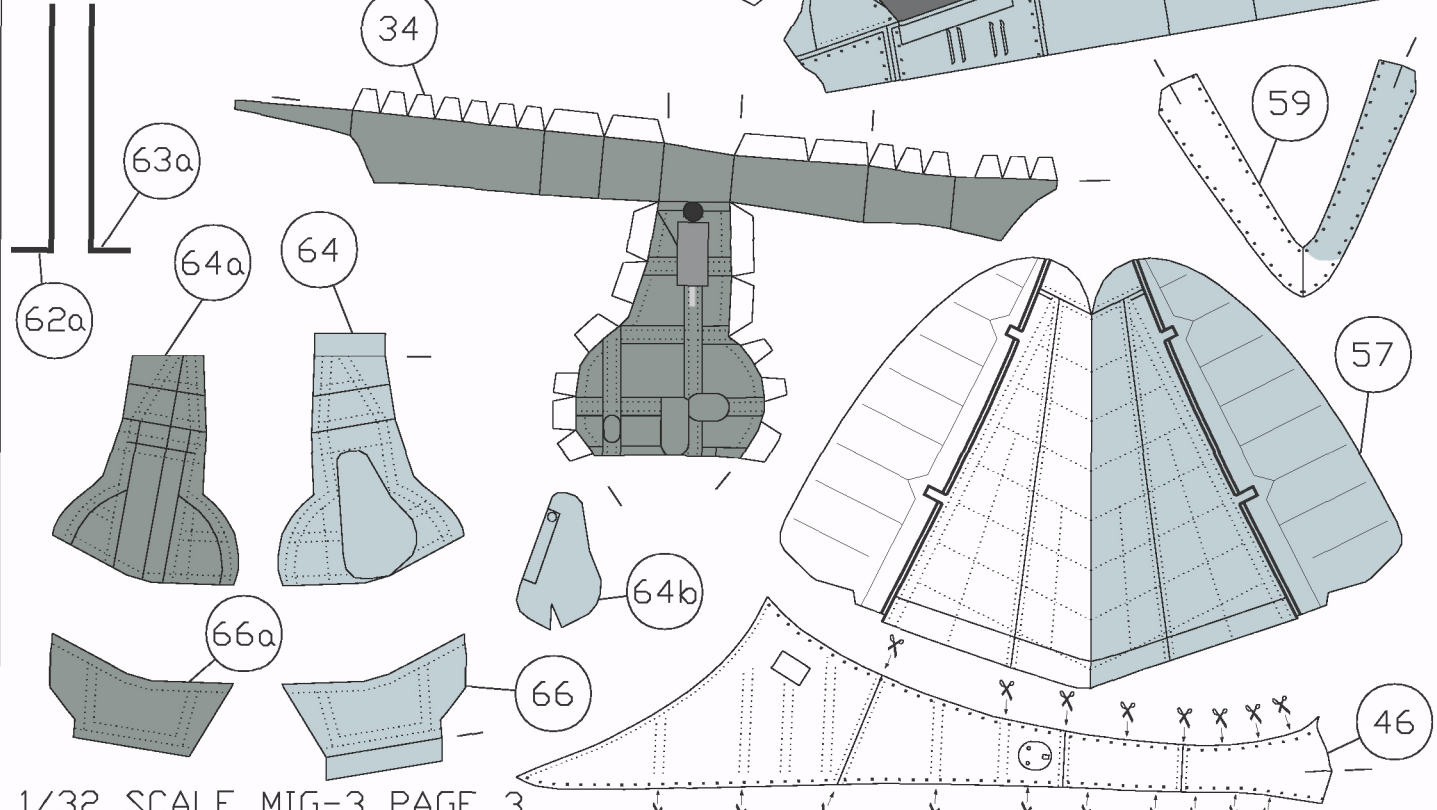
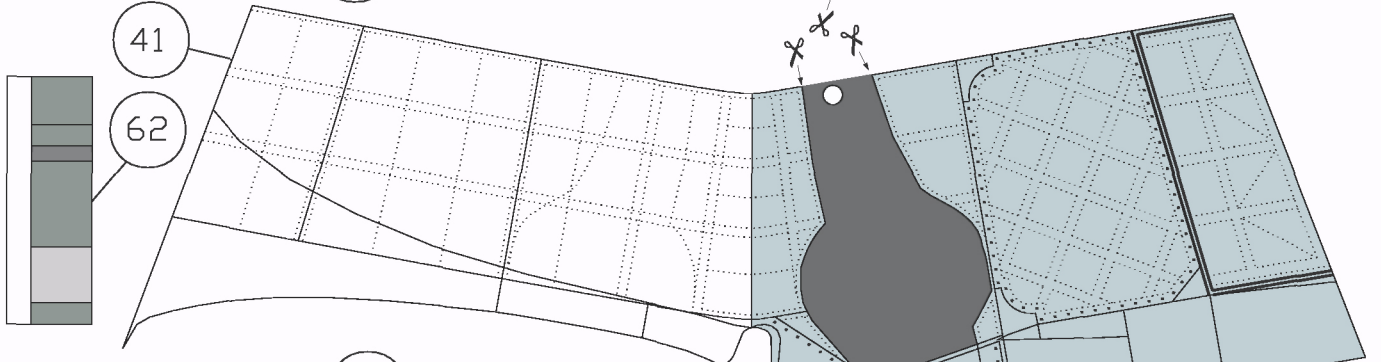
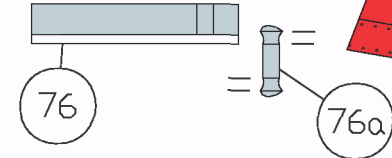
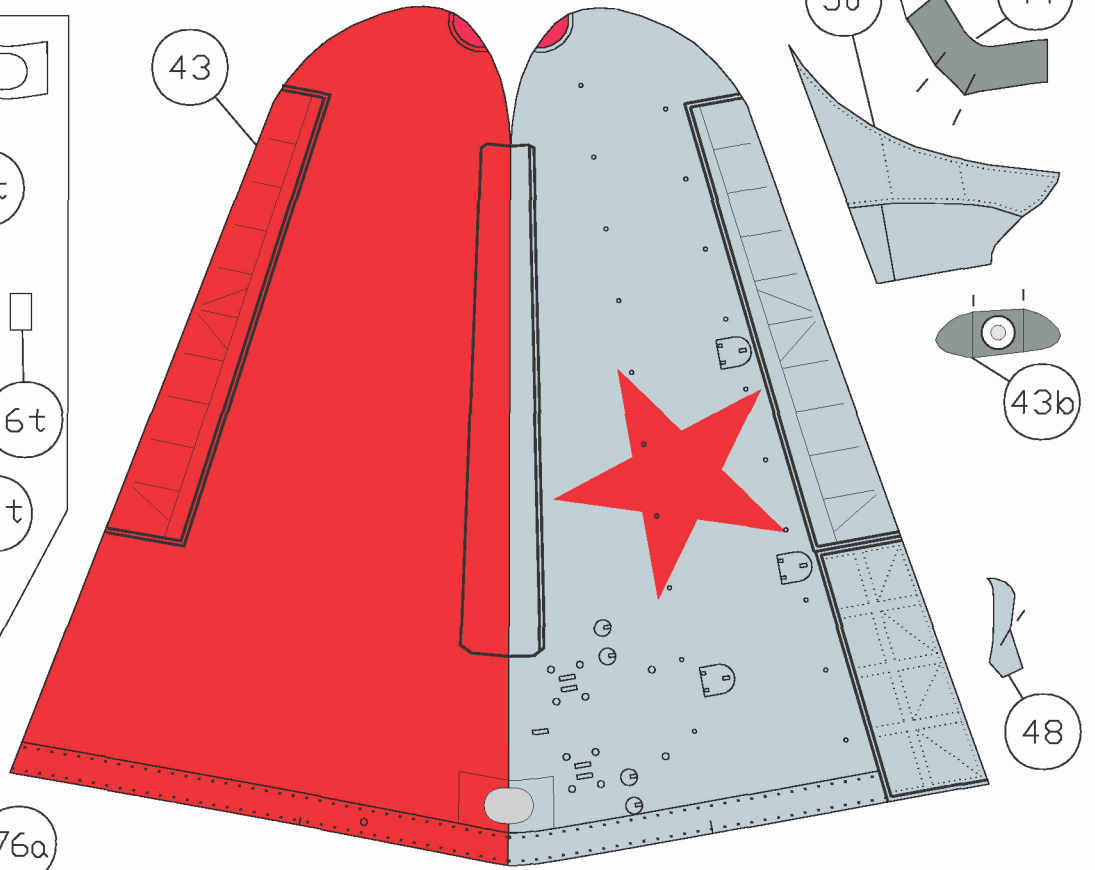
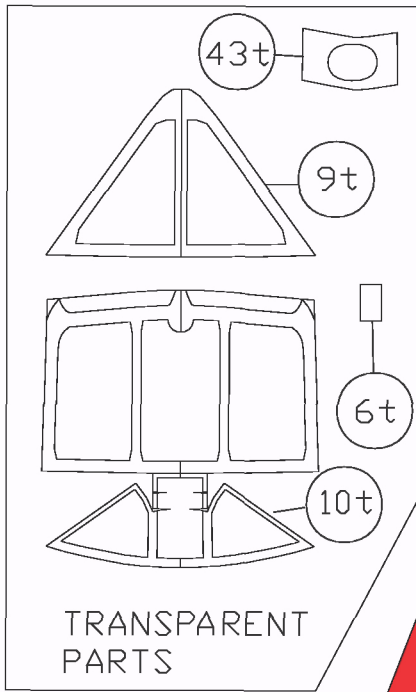


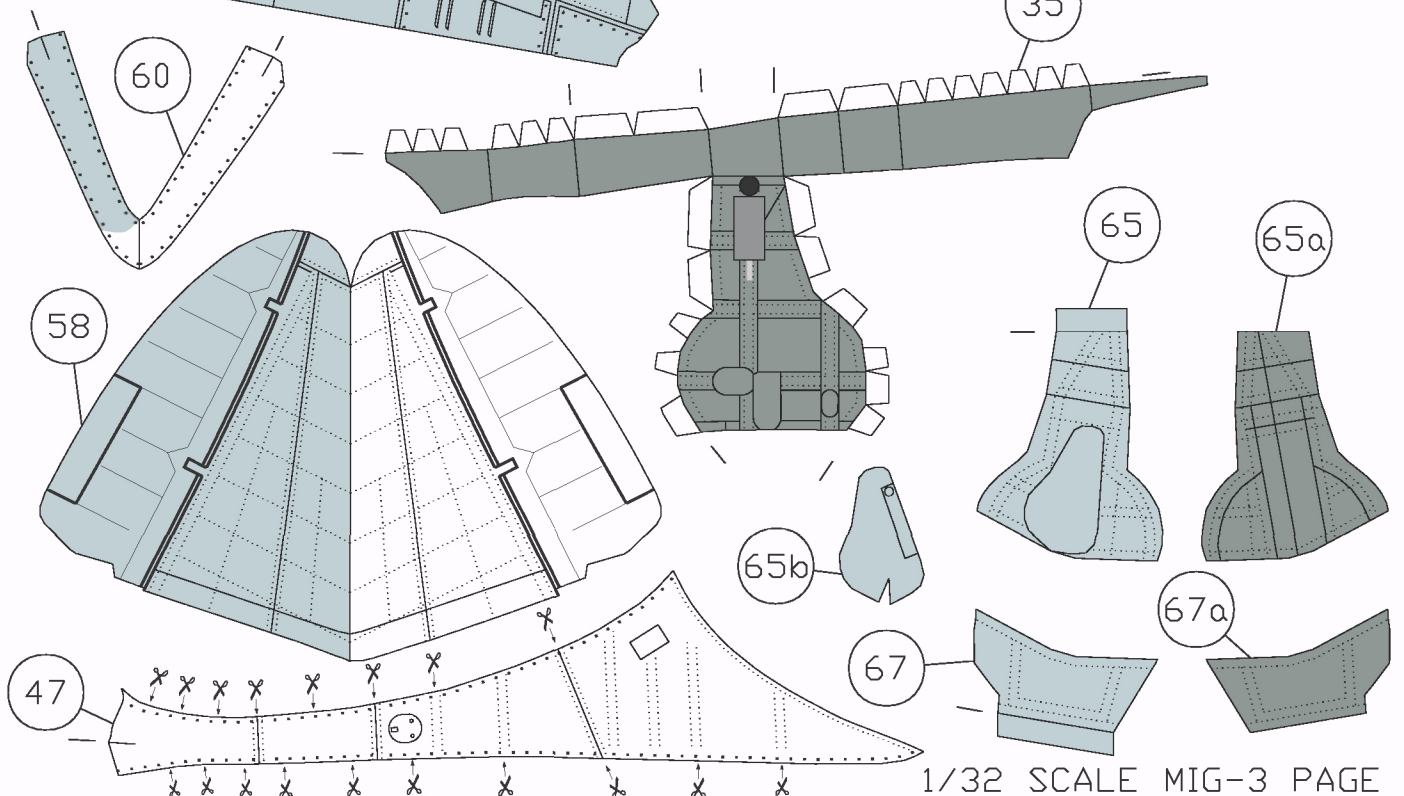
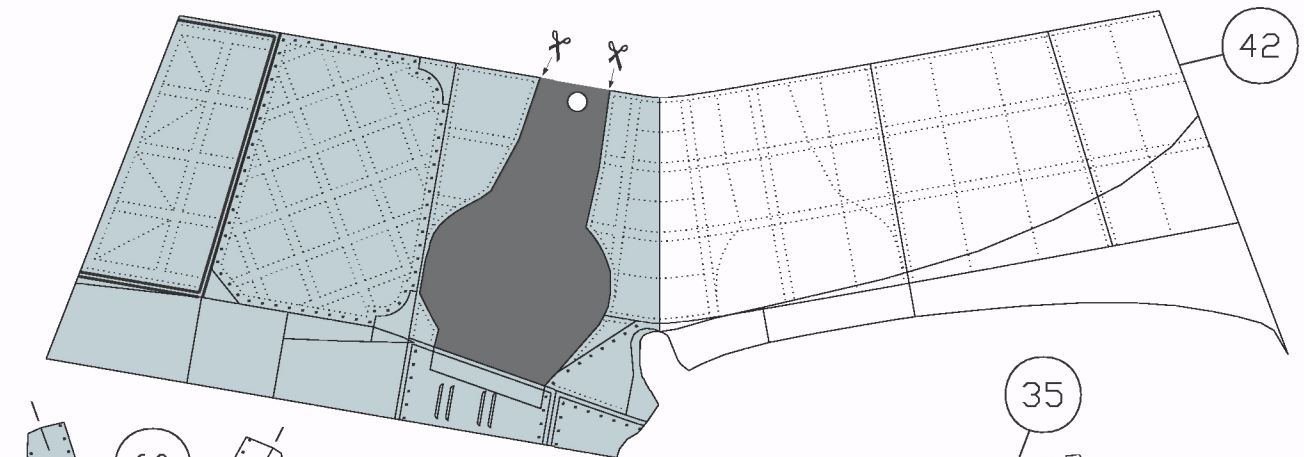
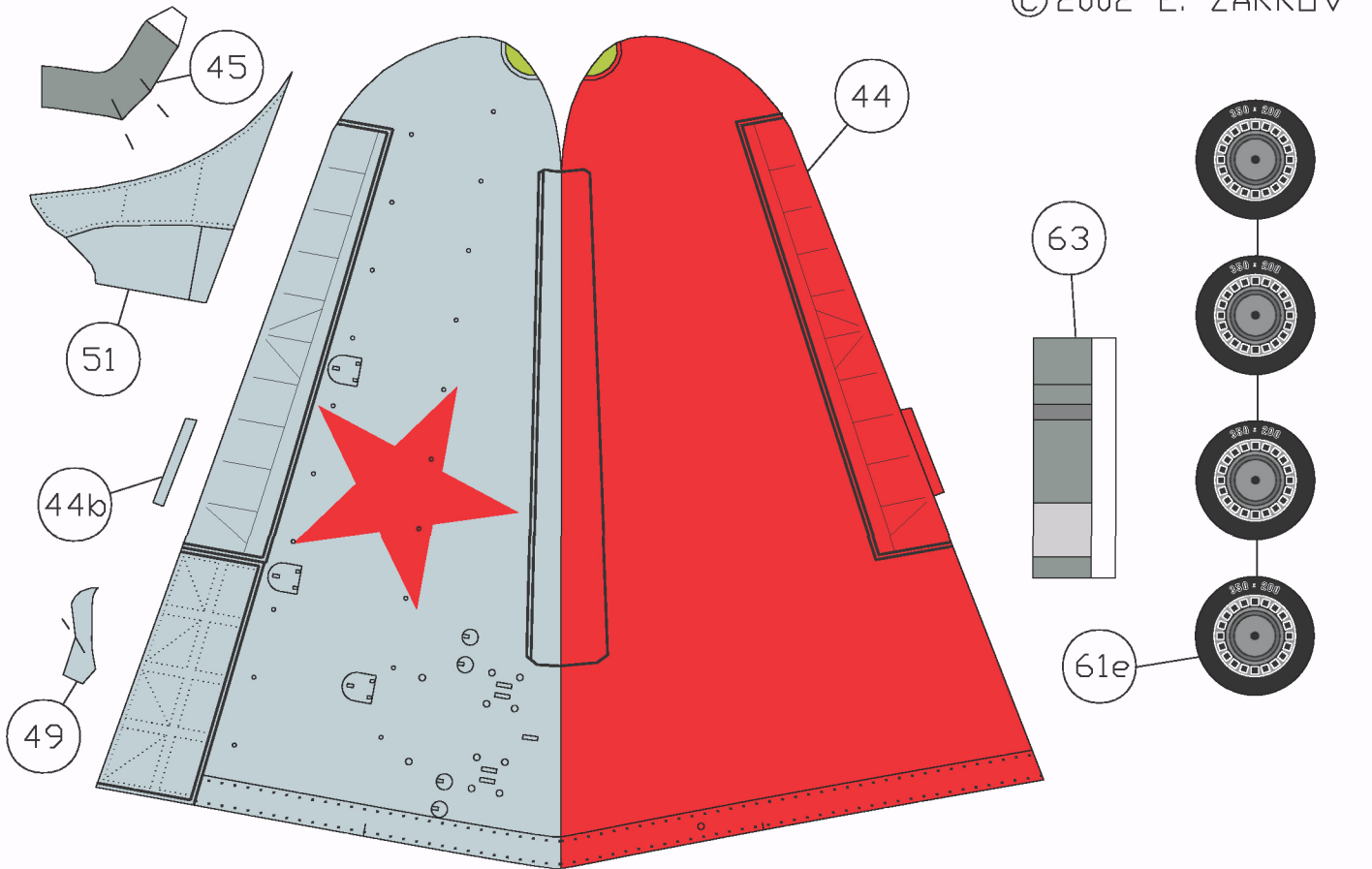


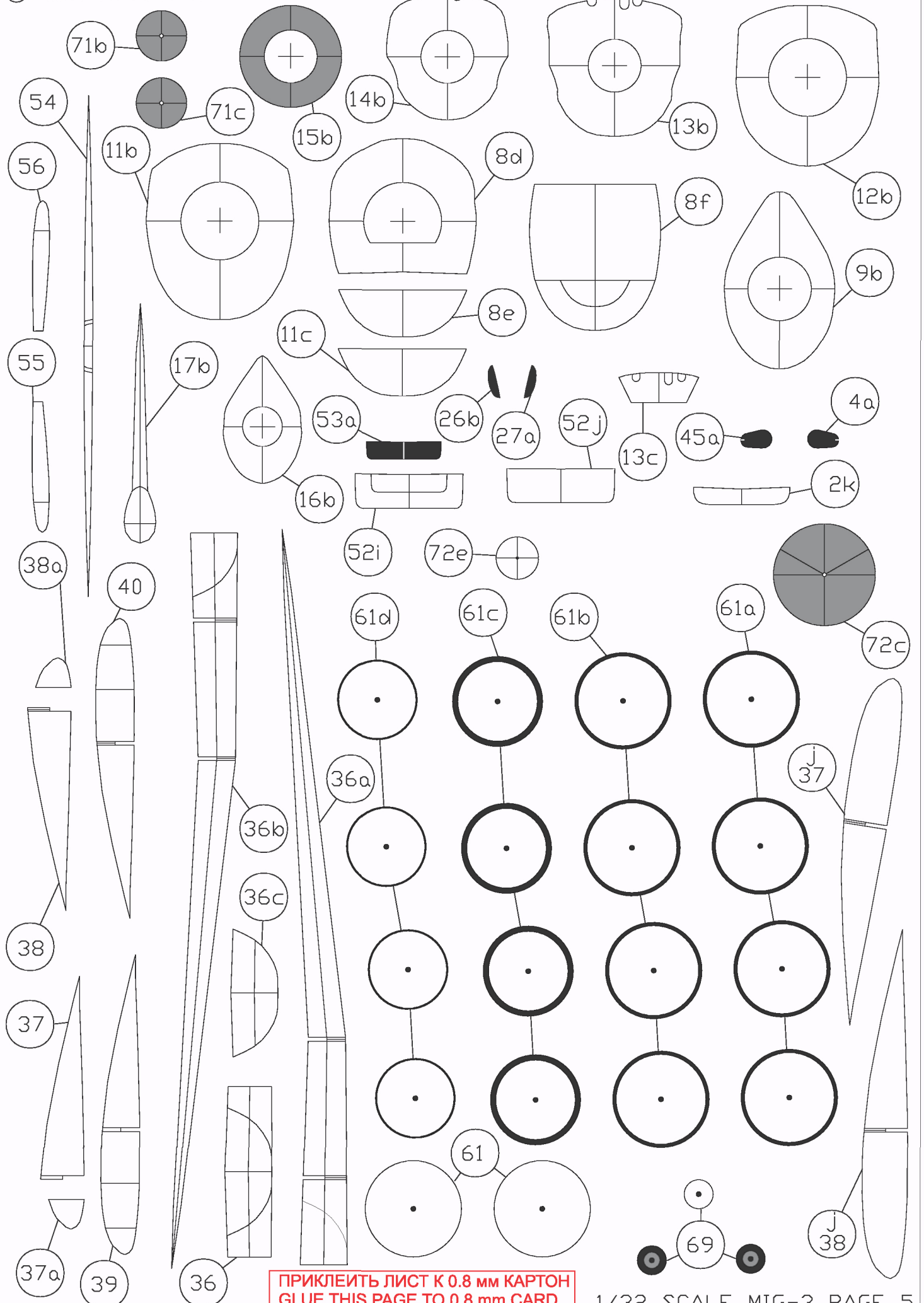




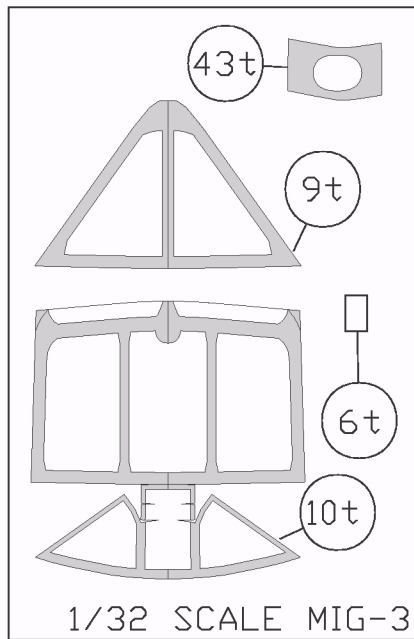
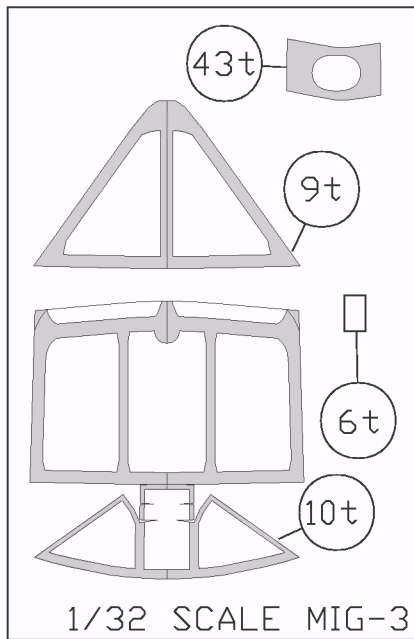








ПРИКЛЕИТЬ ЛИСТ К 0.8 мм КАРТОН
GLUE THIS PAGE TO 0.8 mm CARD



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