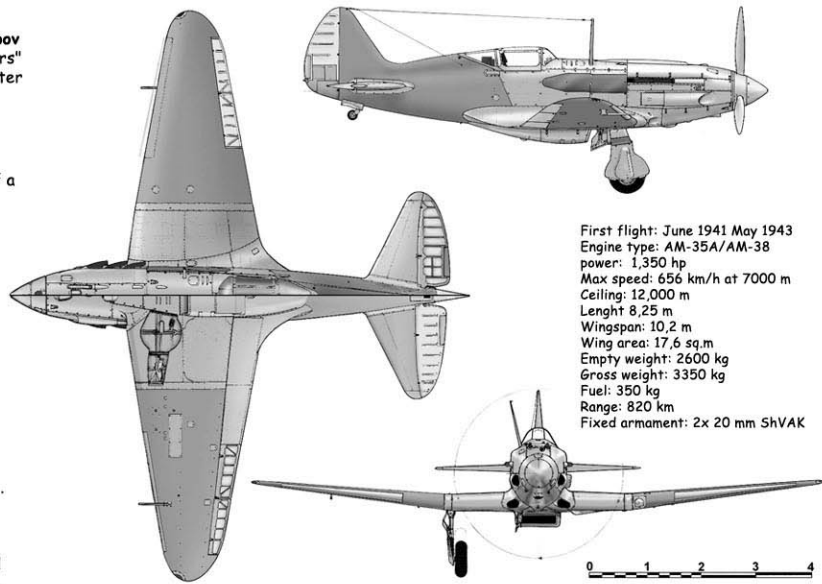


# RUSSIAN MIG-3

Nikolai Nikolaevich Polikarpov the so-called "king of fighters" was the most important fighter designer in the USSR!



First flight: June 1941  
 May 1943  
 Engine type: AM-35A/AM-38  
 power: 1,350 hp  
 Max speed: 656 km/h at 7000 m  
 Ceiling: 12,000 m  
 Length: 8,25 m  
 Wingspan: 10,2 m  
 Wing area: 17,6 sq.m  
 Empty weight: 2600 kg  
 Gross weight: 3350 kg  
 Fuel: 350 kg  
 Range: 820 km  
 Fixed armament: 2x 20 mm ShvAK

Soviet Union- 1938- A new project was born on the basis of the availability of a Mikulin AM-37 engine, designed for an experimental high altitude bomber and never utilized. The engine, despite its heavy weight, was very promising, so the project manager Alexander Mikulin contacted Polikarpov to solicit the construction of an airframe suitable for such a power-plant. Polikarpov was interested to use his experience from the abandoned I-17 project. He decided to draw a high-altitude interceptor with the Mikulin engine. First designed as project X, the MIG-3 was born into existence!

The Mig-3 was conceived as an high altitude fighter, but its original fuel pump was not suited for it, starving the engine even at 5,000 m altitude.

On April 10, 1941, before the official beginning of the war, an attempted interception of a high-altitude German reconnaissance plane was made by three Mig-3s of 31th IAP, based at the Kaunas airport in Lithuania. It was a devastating failure, because all three interceptors entered into a spin during combat flight and were lost, killing one pilot. Changes had to be made...

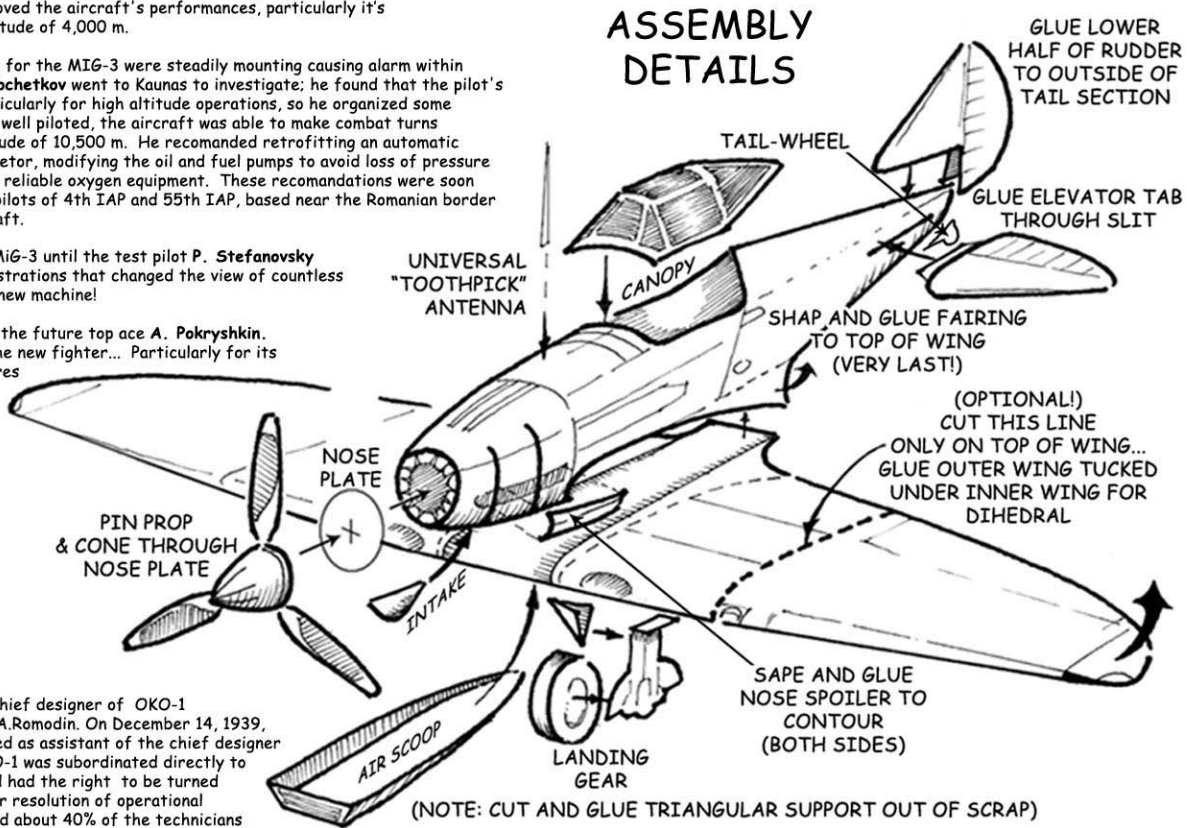
One weak point of the Mig-3 was its poor performance at low altitudes where the most of air combat took place. To remedy to this, the aircraft was equipped with an AM-38F engine boasting a takeoff power of 1600 hp and an AV-5L-110A propeller. The aircraft made its maiden flight on July 31, 1941, and conducted tests for the following 12 days. Test pilots Y.K. Stankevich and chief engineer K.N. Mkrtychan were assigned to the test program. The additional power greatly improved the aircraft's performances, particularly it's maximum speed, up to the altitude of 4,000 m.

Even with modification, losses for the Mig-3 were steadily mounting causing alarm within the ranks. Pilot engineer A. Kochetkov went to Kaunas to investigate; he found that the pilot's training was insufficient, particularly for high altitude operations, so he organized some tests, and discovered that, if well piloted, the aircraft was able to make combat turns without spinning up to an altitude of 10,500 m. He recomanded retrofitting an automatic mixture control on the carburetor, modifying the oil and fuel pumps to avoid loss of pressure at high altitude, and to install reliable oxygen equipment. These recomandations were soon implemented and soon after, pilots of 4th IAP and 55th IAP, based near the Romanian border shot down three hostile aircraft.

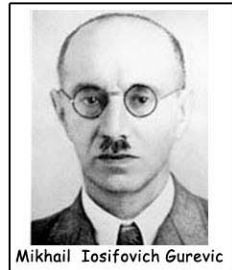
Few pilots wanted to fly the Mig-3 until the test pilot P. Stefanovsky performed some flight demonstrations that changed the view of countless pilots. Training began on the new machine!

The 55th IAP was the unit of the future top ace A. Pokryshkin. He was overly impressed by the new fighter... Particularly for its capability in vertical manoeuvres at a wide range of altitude.

## ASSEMBLY DETAILS

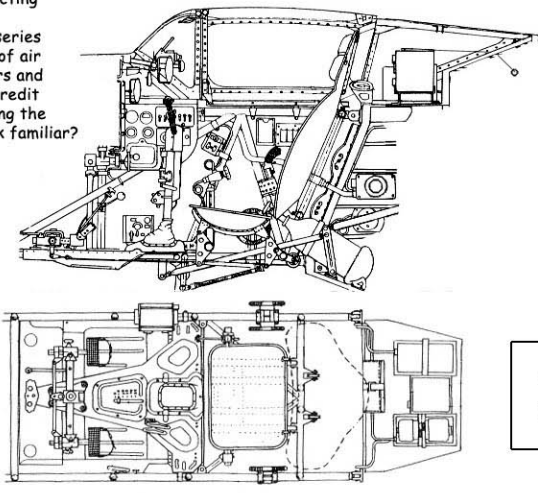
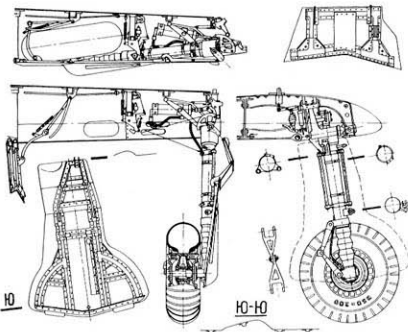


ASSEMBLY REFERENCE PHOTO...



Mikhail Iosifovich Gurevich

A.I. Mikoyan was assigned as chief designer of OKO-1 alongside M.I. Gurevich and V.A. Romodin. On December 14, 1939, Mikoyan was formally appointed as assistant of the chief designer on the plant no. 1 but the OKO-1 was subordinated directly to Voronin, not to Polikarpov, and had the right to be turned directly to the government for resolution of operational problems. The OKO-1 received about 40% of the technicians of the Polikarpov bureau, and part of the production team and facilities. Mikoyan was offered to form his own design team in September, but he initially refused because of his lack of projecting experience and his strong position on the Polikarpov's team. In fact, he worked as production inspector at Zavod 1 in I-153 series production, and he worked on a commission studying the causes of air accidents, so- he had frequent reasons to contact both designers and production technicians, obtaining great experience and gaining credit thanks to his skills. He was a friend of M.I. Gurevich- then heading the Polikarpov's bureau preliminary design group. Do his initials look familiar?



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