

# AIRCRAFT



## OF THE ACES: MEN & LEGENDS

# SOVIET ACES OF WORLD WAR 2



Iain Wyllie

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OSPREY  
AVIATION



# **SOVIET ACES OF WORLD WAR 2**







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## Front Cover

Whilst supporting the final push towards Berlin in 1945, Lt Col S F Dolgushin of 156.IAP, 215 IAD, 8 IAK, claims yet another kill in his Lavochkin La-7 "White 93". Despite attaining high rank and scoring 28 personal kills, Dolgushin had a rather chequered career. During the mid-war years, whilst serving as a senior member of the La-5/La-5FN- equipped 32.Gv.IAP, Dolgushin (along with fellow ace V Bobkov) was transferred to another unit as a disciplinary measure following a fishing expedition in which one of the regiment's pilots had drowned-32. Gv. IAP's CO, Vasili Stalin (son of Joseph Stalin no less) was also removed from his post as a result of this incident (cover artwork by Iain Wyllie)

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# THE MAKING OF A FIGHTER ACE

**D**uring the 1930s, the exploits of Chkalov with his record breaking flights, the publicity given to the rescue of the *Chelyuskin* survivors (for which the Hero of the Soviet Union award was made for the very first time on 20 April 1934) and the examples set by epoch-making women aircrew like navigator (and later pilot) Marina Raskova, all served to inspire volunteers to join the most glamorous of the armed services in the Union of Soviet State Republics – the Air Forces. In a public climate that thrived upon the exploits of its aviation heroes, and with the political will to develop a powerful air force, military aviation in the USSR did not suffer from a lack of volunteers.

Further, the political doctrine of collective responsibility lay behind the development of a range of activities, societies and clubs for Soviet youth, who were channelled by the Kom-SoMol towards 'volunteering' for future military service. Understandably, with the high profile of aviation, many moved into the air force.

If the activities of the party and state authorities was the spawning ground for future Soviet fighter pilots, then the OsoAviaKhim was the nurturing environment in which the great fighter aces were to cut their teeth. The training of Soviet fighter pilots of the VVS (Soviet Air Force) RKKA from the 1930s through the conflicts in Spain, China, Mongolia, Finland to the Great Patriotic War (World War 2) was largely inspired by the massive effort of the OsoAviaKhim. Essentially a civilian operation, its formation could be traced back to 1925 when the ODVF (Society of Friends of the Air Fleet) amalgamated with the DobroKhim (Voluntary Society for Chemical Warfare) to become the AviaKhim. This was followed in 1927 by a further merger with the OSO (Society for Co-operation with Defence) to become the OsoAviaKhim.

This Red Air Force propaganda poster dates from 1937/38, and features the I-16. The Polikarpov fighter was christened the 'Rata' ('Rat') by the Nationalist Air Force in Spain during that country's civil war, and the description stuck and was duly adopted by the Luftwaffe in World War 2





The new organisation took eager young air-minded men and women and turned them into skilled aviation specialists, including aircrew. By the outset of the Great Patriotic War (GP War), the OsoAviaKhim had helped at least 120,000 pilots obtain their civilian pilot's licence, which was roughly equivalent to today's Private Pilot's Licence (PPL) in the UK.

This vast number of civilian-trained pilots provided a numerically strong reserve of pilots for the Soviet Air Forces. However, in terms of quality, most pilots coming from the OsoAviaKhim were ill-prepared for military aviation and combat flying. It was true that some had managed to log several thousand hours of flying time as instructors, but in the main, the OsoAviaKhim pilot training programme provided the VVS with large quantities of pilots insufficiently prepared to quickly match the skilled *Jagdflieger* of the Luftwaffe.

Pilots posted in to fighter regiments in 1941 could expect very little guidance in combat techniques or aerial gunnery, the operational focus being placed instead on formation flying - the harsh lessons of Spain and Finland were largely ignored. Operational training was therefore woefully inadequate in light of what was soon to be unleashed on the VVS from the west, and this situation did not improve until successful fighter leaders gained the opportunity to impart their personal knowledge of fighter combat to their tactically innocent colleagues in 1942.

## THE FIRST ACES

Reeling from the decimation inflicted by the German *Blitzkrieg* which commenced on 22 June 1941, those Soviet fighter pilots that managed to survive the horrendous losses through a combination of sheer luck and raw skill soon began to work up good scores - there was certainly no shortage of Luftwaffe targets that first bloody summer on the Eastern Front. These successes provided the only 'good' war news for the oppressed and anxious Soviet public, and the highest scoring pilots were quickly identified in political circles by those who saw the massive potential to boost public morale through the creation of heroes. In December 1941 the term 'ace' was officially used for the first time to describe pilots with three or more confirmed combat kills, these men usually being given the opportunity to describe their achievements in the form of written articles by ghost writers published in Party papers like *Pravda*. Aces were also permitted to adorn their aircraft with personal markings

By the end of 1942 Gen T T Khryukin raised the score pilots had to achieve to earn ace status to at least ten enemy aircraft destroyed. Those who succeeded in matching the new criterion became associated with the highest military decoration that the USSR could bestow, the Gold Star of the Hero of the Soviet Union (HSU), which was automatically awarded to any pilot after he or she had downed ten aircraft.

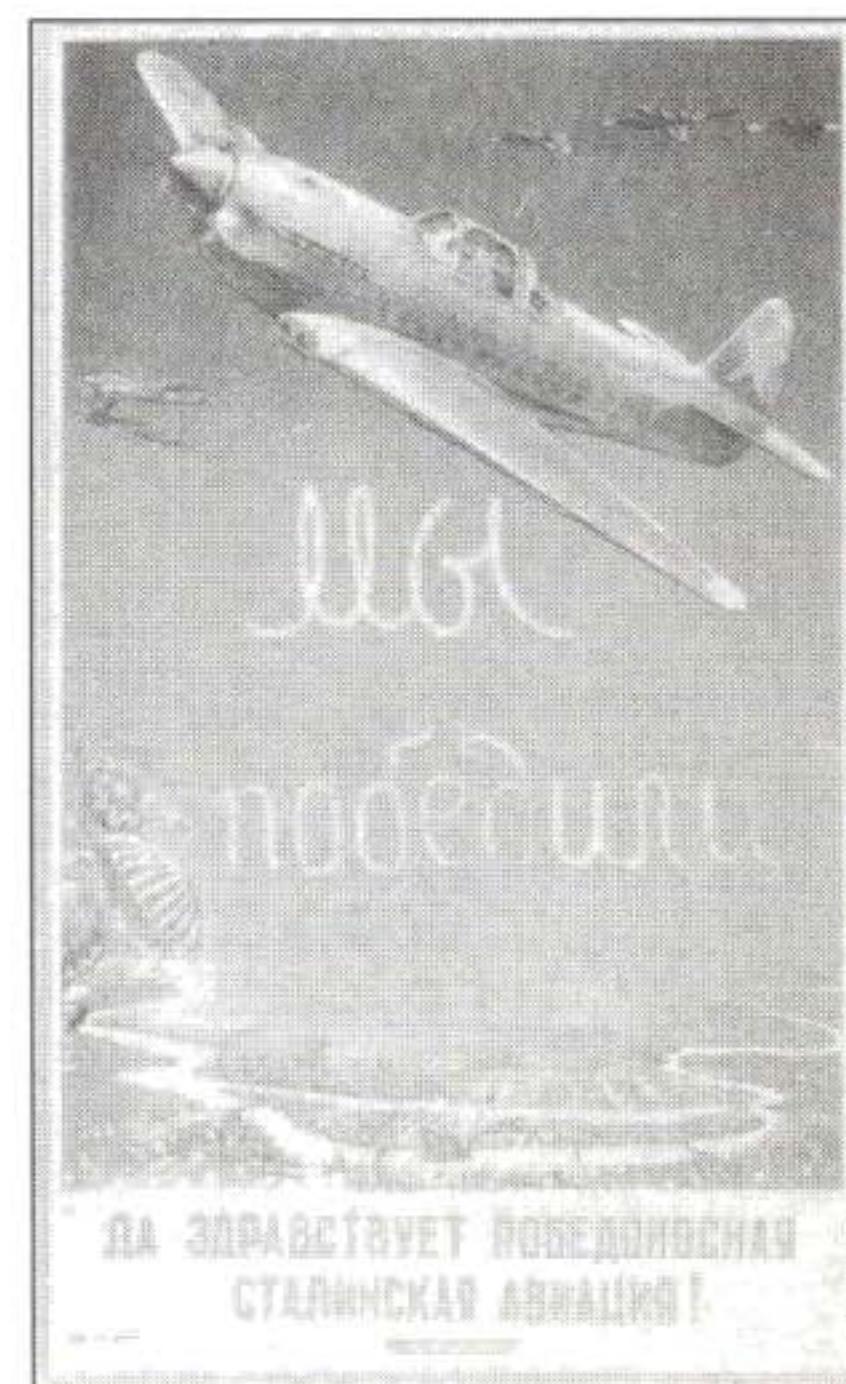
Posters on display urged the populace to follow the example of the 'aces', with recipients of the Gold Star often being individually named. Top 'aces' like Pokryshkin, Rechkalov and Kozhedub soon became household names, and their exploits have since merged into folklore.

A typical ace of the early war period would have inevitably been a young KomSoMol member who had learned to fly in an OsoAviaKhim aeroclub in the late 1930s. He would have then graduated to a military training school as a VVS pilot just after the outbreak of war, eventually becoming



This 1942 vintage propaganda poster extols the potency of Stalin's 'Falcons' - in this case MiG-3s ripping into a Luftwaffe 'Vulture'. In reality the MiG-3 proved to be largely unsuccessful when used as a fighter against the *Jagdwaffe*, and it was eventually relegated to tactical reconnaissance duties following its participation in the defence of Moscow

This 1945 period poster glorifies the 'heavenly' virtues of the Yak stable of fighters





an instructor before finally entering the fray in the spring of 1943. Examples of such aces include Ivan Kozhedub (the highest scoring Allied pilot of World War 2 with 62 kills), Kirill Yevstigeyev, who was credited with 53 kills, and Vladimir Lavrinyenkov who downed 23 enemy aircraft. Most, but not all, would be Party members.

Those former cadet pilots fortunate enough to end up in a leading fighter regiment, and who displayed good innate abilities and received guidance from an experienced and capable 'teacher', usually went on to amass a reasonable score by the conclusion of the war.

## COMBAT CLAIMS

In the study of the methods by which combat claims were recognised by higher authorities, the VVS provides a particularly fascinating and unique example. Claim submission by Soviet fighter pilots was comparable with their counterparts in other Allied and Axis air forces, but what really differed was the formal recognition that was given to the higher achieving combat pilots. Indeed, this acknowledgement of success was not only enjoyed by fighter pilots, whose exploits were easily identified by the Soviet public, but also by airmen and women involved in other forms of operational flying like ground attack, reconnaissance and bombing.

Commanders of squadrons and regiments whose pilots had achieved designated operational targets were also rewarded, as were technical personnel and groundcrews who, regardless of their 'trade', were eligible for awards based on the serviceability record of the aircraft they worked on.

Returning to combat claim submissions, and their recognition by the VVS, Soviet ace Col Vladimir A Orekhov, who was credited with 19 personal and 3 group kills, described the process in an interview conducted by Sergey Kul'baka in Minsk in 1995:

'After the mission, pilots gathered together and everyone spoke about how many aircraft they had shot down personally, and about those shot down by comrades that they had individually observed. The squadron

Although numerous Soviet pilots achieved ace status in the 1-16 during the early years of World War 2, some of the first aviators to down five or more aircraft with the Polikarpov fighter were Spaniards flying with the Republican forces during the Spanish Civil War. One of the most successful was ten-victory ace Capt José Maria Bravo Fernández, commander of the 3rd *Escuadrilla* of the 21st *Grupo de Caza*. He is seen here (at right) showing his groundcrewman the damage caused to his 1-16 *Tip 10* (serialled CM-193) by a Nationalist fighter during a recent sortie. The *Tip 10* was equipped with two synchronised ShKAS machine guns in the nose and a further pair mounted in the wings. The later *Tip 17* replaced the nose guns with a 20 mm SHVAK cannon, and this variant first saw service against the Japanese in the Khalkin-Gol conflict. Capt José Maria Bravo Fernández joined the Soviet Air Force after the Republicans were defeated. He later retired as a colonel and returned to live in Spain







This photo shows a Baltic Fleet I-16, in peaceful pre-war days. The first I-16s reached VVS squadrons in 1935, and soon claimed the lives of pilots inexperienced in handling the nimble monoplane – their previous mounts, the more sedate Polikarpov I-5 biplane and Tupolev I-7 sesqui-plane, were for the most part vice-less. However, with the eradication of some of the handling vagaries of the I-16 by the manufacturer, VVS pilots soon felt at home in the stubby fighter. The latter's reputation amongst frontline flyers was further improved thanks to memorable aerobatic displays performed by test pilots Chkalov, Stefanovski and Suprun at VVS airfields in standard squadron aircraft

adjutant wrote down these facts. This document was named the "Combat Report of Fulfilled Mission". It had to be filled out after every mission, and contained data concerning the results of the mission, and pilots who claimed kills. At the end of the day all such reports were collected in the regiment headquarters, and the regiment's own combat report was then completed.

'The kills were usually confirmed by the commander of the regiment. To get a confirmation one of the following "proofs" had to be available:

- 1) confirmation from at least two other pilots who took part in the fight
- 2) confirmation from ground troops
- 3) confirmation from partisans
- 4) verification on the seized territory

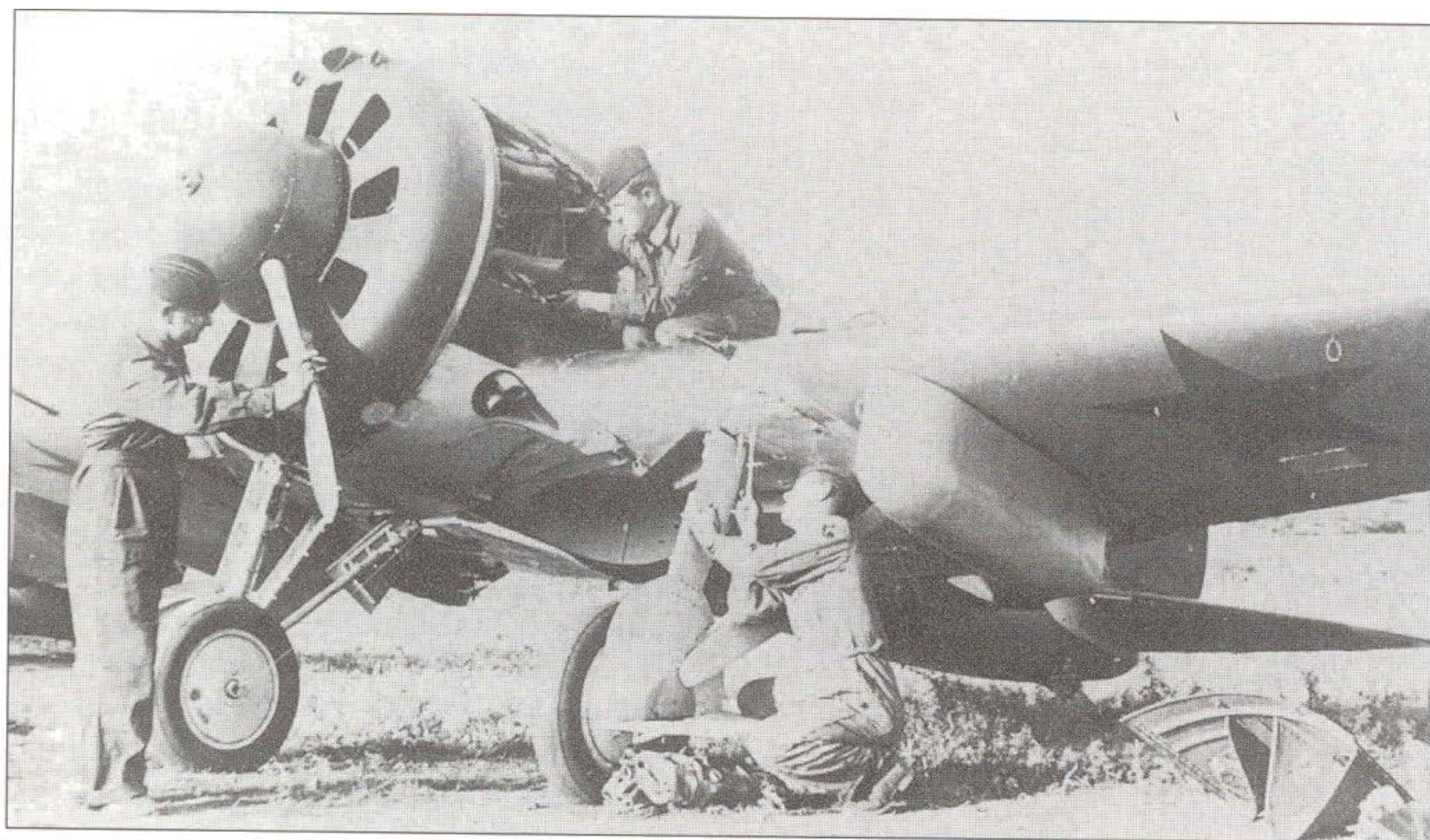
'These forms of verification were equal, but sometimes – especially if the fight took place over enemy territory, and there were only two fighters involved – the last two "proofs" were obligatory.

'A confirmed kill was written into the pilot's flying log book, and this served as the official recognition of the victory. Confirmation took place on the same day, if there were enough witnesses, or after some weeks or even months if confirmation from partisans on the ground was needed. At the beginning of the war the process of verification was much simpler because the Red Army was in retreat, so confirmation by other pilots was considered to be enough. The practice of dividing claims between "personal" kills and "in group" victories depended on the traditions of the particular regiment. In 32. Gv.IAP (Guards Fighter Air Regiment), all the kills were "personal", and every aircraft shot down "belonged" solely to the pilot that brought it down.'

From this quote it can be deduced that the process of claim submission and verification was not especially contentious, pilots simply requiring evidence from a corroborating source in order to support their claims – as was the case with most other wartime combatants. Certainly this was the situation during the GP War, although scores accrued by Soviet pilots during the earlier 'Winter War' with Finland, as well as those that saw action in Spain and China during the late 1930s, are less easily substantiated due to the paucity of readily available records from these conflicts.

The problems posed by the lack of documentation from the Spanish Civil War are slightly eased by the fact that Republican units tended to accredit combat claims on a 'group' basis, rather than to an individual – thus reflecting the political ethos of collective ownership. However, in both the Nomonhan Incident on the Chinese/Mongolian border and the 'Winter War' with Finland, over-claiming by VVS pilots was rife. Indeed, kill accreditation in the latter conflict was so unrealistically high that it could be labelled outlandish, particularly when compared with the accurate records kept by the Finns pertaining to their own losses.





VVS groundcrews were eligible for awards which emphasised their technical proficiency and productivity. Like their flying colleagues, these men (and women) also received citations and medals in recognition of good work. Such awards helped foster a strong bond between fighter pilots and the groundcrews who serviced their aircraft. This undoubtedly posed shot shows personnel working out in the open on an I-16

When evaluating claims from the GP War, it became clear to the VVS high command that air-to-air kills needed to be verified by relevant intelligence reports, as well as by regimental commanders. Where air-to-ground attacks had occurred, then signed statements from the commander of the land forces in the vicinity near to where the action had taken place were essential. Finally, following ground strafing by fighter aircraft on enemy aerodromes, the success, or otherwise, of the sortie had to be supported by reconnaissance and/or intelligence reports.

In the case of 'taran' (the deliberate air-to-air ramming of an enemy aircraft), the claim needed to be supported by a written statement detailing the location of the likely crash site, which duly had to be confirmed by land commanders or by the regimental commander.

## REWARDS

It was in the system of recognition and rewards during the GP War that Soviet fighter pilots differed from their counterparts in other air forces (with the exception of the Italian Aeronautica Nazionale Repubblicana, which belatedly introduced a financial incentive after its formation in late 1943). On 19 August 1941 Joseph Stalin issued Order No 0299 – official instructions regarding the rules used to govern the issuance of awards to aircrew of the Red Air Force in return for distinguished conduct.

Stalin's order from the Kremlin went as follows;

'I am issuing an order to introduce regulations in awarding the airmen for excellent effort, and to the commander and commissars of the aviation divisions to recommend these aircrew members for awards in accordance with this order.' His order system for fighter pilots can be essentially broken down out into the following parts;

### 1) *Air-to-Air Combat*

For every enemy aircraft shot down in air-to-air combat, a sum of 1000 roubles would be paid.

In addition to these financial rewards, the pilot would be recom-





**Production of the I-153 'Chaika' ('Gull') commenced in 1939. The fighter was first tested in combat against the Japanese Nakajima Ki-27 over Khalkin-Gol, and although skilled I-153 pilots could usually escape the clutches of the agile enemy fighter, less experienced airmen fell as easy prey. As a result of combat in the Far East, the 'Chaika' was criticised by the VVS for lacking sufficient protective armour for both the pilot and the engine – many I-153s fell victim to accurate ground fire**

**Two I-16s patrol the vast plains of the Russian steppe just prior to the unleashing of Operation Barbarossa**



mended for a 'government' award for shooting down three aircraft. A second 'government' award would automatically follow for downing a further trio of aircraft, before the pilot would finally be eligible for the higher award of the HSU after the destruction of his (or her) tenth kill. So, by the time a pilot had achieved this benchmark, he (or she) would have received 10,000 roubles and the USSR's highest military award.

The award of the HSU brought with it immediate public recognition, and for those 'heroes' who survived the war it brought protected prosperity from a grateful nation – for all its faults, the communist regime in the USSR looked after its heroes far better than most other Allied countries!

#### *2) Fighter aircraft involved on ground attack missions*

For a total of five ground attack sorties against enemy land forces the pilot would be awarded 1500 roubles, and for fifteen sorties 2000 Roubles would be paid, plus the recommendation for a 'government' award. For 25 sorties, a sum of 3000 roubles was on offer, as well as a second 'government' award. Finally, for anyone who managed to survive 40 sorties,

or more, 5000 roubles was paid and the coveted HSU title bestowed upon the deserving recipient.

#### *3) Fighter aircraft involved in the attack of enemy aerodromes*

For four successful sorties in which aircraft were destroyed at an aerodrome, the fighter pilot would receive 1500 roubles.

For ten day or five night attacks, 2000 roubles and a 'government' award was presented. For 20 day or 10 night sorties, 3000 roubles and a second 'government' award was on offer, whilst a reward of 5000 rou-



bles and the title HSU was deemed appropriate for 35 day or 20 night sorties. Only missions deemed to have been successful through post-sortie debriefs counted towards awards.

At the time these 'bounties' were first granted in 1941/1942, 1000 roubles really did not buy a lot – a couple of good meals in a Moscow restaurant would have easily accounted for a fair chunk of this prize. A more effective (and no doubt more commonplace) way of spending the cash would have seen the aircrew bartering for goods, thus ensuring an improved quality of existence. It is known that Soviet aircrew were particularly malnourished and given the food supplement known as KOLA.

Fighter squadrons constantly moved bases, living in the most primitive of conditions in often the worst weather conditions imaginable. Food nourishments became essential, and for the successful fighter pilot, any additional money enabling him or her to purchase a fulfilling meal was welcome, even if it was earned in the most dangerous way.

### IMPROVED TACTICS

The influence of the 'Old Sweats' on combat tactics following the debacle of the early months of the GP War slowly began to be felt as the VVS entered its second year of war with the Luftwaffe. Experienced pilots sought to remedy the wholly inadequate combat training by influencing instruction within operational units, and in late 1941/early 1942 leaders like Safanov and Savitsky gained reputations for teaching junior pilots.

Perhaps the finest example of them all, however, was triple HSU Aleksandr Pokryshkin, the third-highest scoring ace of the Red Air Force having been in combat since the first day of the German invasion. When instructing newly arrived pilots on combat tactics, he would fire hypothetical tactical questions at his pilots, and they would be required to work out the answers for themselves. Some 40 years later he recalled:

'In our free time I used to go through with our young pilots the actions fought by our fighter regiment, giving them concrete, basic, situations to think about, thus developing their tactical awareness and teaching them to analyse their own mistakes by themselves. Our dugout was often called "the classroom", "the air school" or even "the academy". Its walls were hung with diagrams, sketches and drawings, and there were models of both our aircraft and those of the enemy on the table. I should mention to that we prepared variations of previous combat missions, taking into account the different ways of engaging enemy fighters and bombers.'

Nonetheless, not all great VVS aces had Pokryshkin's ability to impart their experience and knowledge to new pilots. It is said that whilst Pokryshkin was a fine tactician and tutor, his wingman and long-term colleague in 16.Gv.IAP, Gregori Rechkalov (the second-highest scoring Soviet fighter pilot of the war), was far more of an individualist. He was not concerned about group tactics, but more about increasing his own personal score.



The correct loading of ammunition into magazines was crucial if pilots were not to experience gun jamming in combat

An I-16 *Tip 10* of the Naval Air Forces is guided by a groundcrewman to its camouflaged dispersal area following the completion of a combat sortie. The I-16 was a familiar sight within Naval fighter regiments during the first years of the GP War as a vast number of Polikarpov fighters had been received from the VVS as the later force phased them out of service. The Naval air arm comprised four separate Air Forces, each of which was attached to a Naval Fleet – all four remained under the control of Lt Gen S F Zhavoronkov throughout World War 2





At the beginning of the GP War, Soviet fighter pilots flew slow, poorly-armed aircraft, and employed static and defensive tactics designed to provide maximum support to the ground forces. The tight, horizontal, three-aircraft formation, known as the 'zveno' was the dominant combat formation flown, and obsolescent I-15 and I-152 biplanes and I-16 monoplanes became easy prey for the German Bf 109s.

A defensive circling manoeuvre known as the 'krug samlotev' was used to provide mutual cover between VVS pilots, exploiting the virtues of the agile I-16 and I-153 fighters to the full. As Soviet fighter pilots quickly gained experience, so tactics altered to reflect the need for more aggressive counter-attacks to stem the Luftwaffe's domination of the Soviet skies.

Aside from poor tactics, VVS fighter pilots were also hampered by a lack of familiarity with their aircraft. For example, during the first 18 months of the GP War operational training on-type was limited to only an hour or two on the Yak 1 or LaGG-3, and pilots with ten hours on-type prior to gaining operational status were in the minority. Losses of new pilots on squadrons were unsurprisingly high, placing a great stress on the reserves of experienced men and women that survived this initial carnage.

This situation could not be allowed to last, so, running in parallel with the individual ad hoc teachings of those seasoned veterans at the front, considerable efforts were made by the VVS Air Staff formerly to improve overall combat efficiency. The Chief Administration for Operational Training, which came under the Chief of Air Staff, directed the formation of a unit staffed exclusively by outstanding fighter pilots who were then instructed to work with individual fighter divisions, or corps, in key sectors with a view to improving combat performance.

In February 1943 the group worked with the 256.IAD, attached to 15.VA, on the Bryansk Front. The following month the group was switched to 3.IAK, attached to 4.VA, in preparation for the Kuban air battles in the North Caucasus area. By May the unit had moved on to 2.IAK, attached to 5.VA, where they concentrated on ironing out the many problems associated with the introduction of the La-5 fighter to the frontline – they had to work swiftly as the unit was needed to play a pivotal part in the forthcoming Battle of Kursk, which erupted in July.

A manual of fighter combat tactics based on the group's previous 11 months' experience was duly produced at the end of 1943 in readiness for the air battles of the following year. At the training schools, the flying curriculum began to reflect the sense of urgency pervading frontline regiments, and aerobatic and gunnery training received greater emphasis.

The cornerstone on which these new tactics were based was the adoption of modern flight formations, Soviet pilots at last catching up with the other national air forces by flying in pairs. Pokryshkin, with the special permission of his regimental commander, was one of those who pioneered this formation in the VVS. The ace maintained to his death in 1985 that he was not unduly influenced by German fighter tactics.

On 14 September 1942 an order was issued to fighter divisions to establish pairs, or 'hunters', to patrol close to enemy aerodromes, and to pick off aircraft taking off or landing. Earlier that same summer the high speed vertical dive from height to attack the enemy had been used in action for the first time following an order issued on 17 June instructing VVS pilots to use height to advantage when engaging the Luftwaffe.





During the Battle of Kharkov in the summer of 1942, the ‘etazherka’ (‘stack’ or ‘shelf’) formation was born, this tactic seeing pairs of aircraft staggered in height and spacing – 16.Gv.IAP was the first to use this new technique. In the following passage, Pokryshkin describes the first time that he employed ‘etazherka’ over the Kuban during the spring of 1943;

‘The regimental commander ordered me to lead a sortie of six fighters to clear the air space in which our bombers were operating. The group was composed of young pilots, so I also wanted the sortie to be an object lesson for them tactically. Having formed our “stack” of three pairs, we “combed through” the area where our bombers were at high speed. The pilots in my group kept a tight formation, following my every move. Me 109s appeared. “Let them be” I warned over the radio. I wanted every action to be as understandable as possible for the youngsters. Having let the Me 109s go past – they presented no threat to our bombers, which were still outside their zone of effective fire – I suddenly attacked the number one aircraft that comprised one of the leading enemy pairs with a “falcon blow” (a “falcon blow”, christened “sokoliny udar” in Russian, was a surprise attack from a steep dive).

‘His number two, seeing his leader’s fighter burst into blue flames, deemed it prudent to retire. One of our pilots made an attempt to go after him, which, at first sight, seemed a legitimate desire. However, he soon remembered that only in extreme necessity, and only on my signal, did a number two pilot have the right to initiate combat, and he returned to his place. His task in this instance was to cover his number one, observe and evaluate the situation in the air, and be prepared for any attack.

‘This combat discipline enabled our lesson to continue. A group of enemy fighters took up the pursuit of our bombers as they were drawing away from the target and closing in on us. It was impossible to wait as we had done before. I had to give the order “attack” over the radio. We dived down and the enemy broke. I brought down a number two and our second pair accounted for his number one. The object lesson had worked.

**This flightline photo of 120.IAP PVO MiG-3s was taken on the day (7 March 1942) that the unit was awarded Guards status for its participation in the defence of Moscow – it duly became 12.Gv.IAP as a result of the decoration. The MiG-3’s ability at high altitude made it a useful tactical reconnaissance aircraft, but at medium to low level it was no match for the Bf 109E/F**



'It was important for our fliers not to miss a single moment of the dynamically changing picture of battle, which had for them a psychological meaning as well – a successful combat not only strengthened their faith in the power of our weaponry, but also created a confidence that the enemy could be successfully engaged. And for us leaders too it became apparent from the behaviour of the new pilots who would make number one and who would be better left for the time being as a number two.'

Other combat manoeuvres were also developed. Pokryshkin again:

'When we escorted bombers, our regiment practised a technique known as "nozhnitsy" ("scissors"). This essentially meant that a pair (or pairs) of fighters escorting bombers would alternate in flying towards and then away from each other so as not to lose speed, and thus giving each other mutual cover in the process. At the same time the pilots could keep a wide area of airspace in view. If you drew the flight pattern diagrammatically, it would look like a chain made up of figures of eight.

'When patrolling to give cover for troops, or carrying out sweeps ahead of our bombers, the entire group of fighters used a pendulum-like flight pattern known as "kacheli" ("the swing"). It was this application of new formations and new techniques of air combat which brought us victory.'

Perhaps the most desperate combat tactic employed by any air arm in the European war was the 'taran' ramming attack, initially adopted by the VVS in the dark days of 1941/42. Although this form of attack seemed to inspire admiration from the Soviet public, it did not always receive support for its use as a legitimate combat tactic by many leading fighter pilots.

Within the VVS, there were three main approaches to carrying out a 'taran' attack, these being:

- 1) To attack from the rear, probing the Soviet aircraft's propeller into the control surfaces of the enemy aircraft, which, with damage to rudder and/or elevator, would duly lose airworthiness and crash to the ground.
- 2) To ram a wing into the control surface of the enemy aircraft or, at low level, to tip the wing into the wing of the opponent so that he lost control.
- 3) To directly fly the aircraft into the enemy – this final tactic was used only as an extreme, and final, resort.

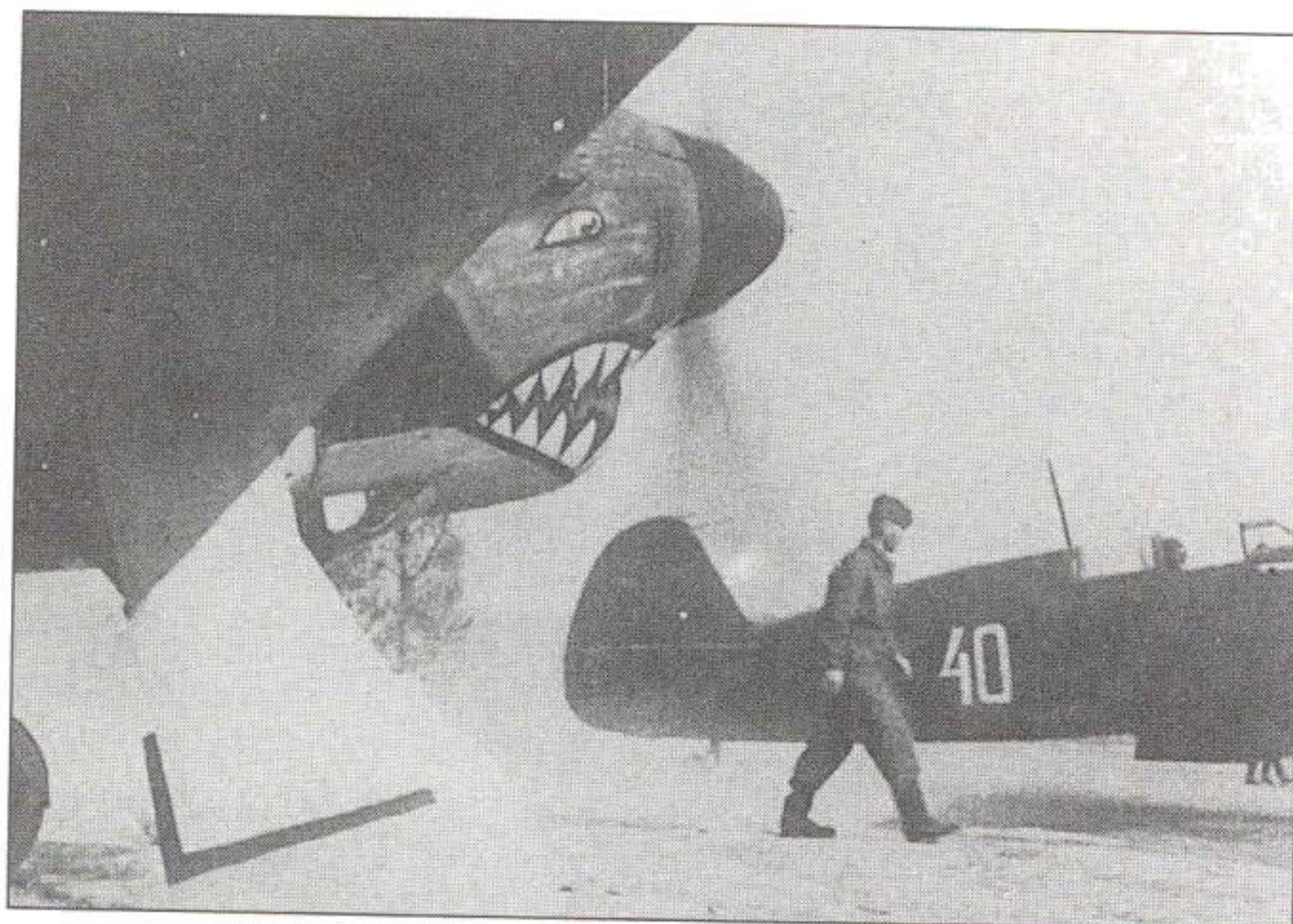
During the GP War, no less than 561 'taran' attacks were officially recorded as having been made by Soviet fighter pilots. Such tactics accounted for 272 German bombers, 312 fighters (both Luftwaffe and

Finnish Air Force), 48 reconnaissance aeroplanes and 3 transport aircraft. One 'taran' was also claimed in 1945 by a VVS pilot operating against the Japanese. On 11 occasions, VVS pilots were recorded as being involved in 'taran' attacks against the Finnish Air Force, 6 Soviet fighter pilots dying in these actions. The first act of 'taran' occurred shortly after the start of Operation *Barbarossa* when, on 22 June 1941, Lt I I Ivanov lost his life after he rammed a He 111 with his I-16 – he was posthu-

With its propeller unscathed and undercarriage lowered, it is likely that this camouflaged MiG-3 was just one of the thousands of VVS aircraft destroyed on the ground by the Luftwaffe bombing onslaught unleashed in the first hours of *Barbarossa*

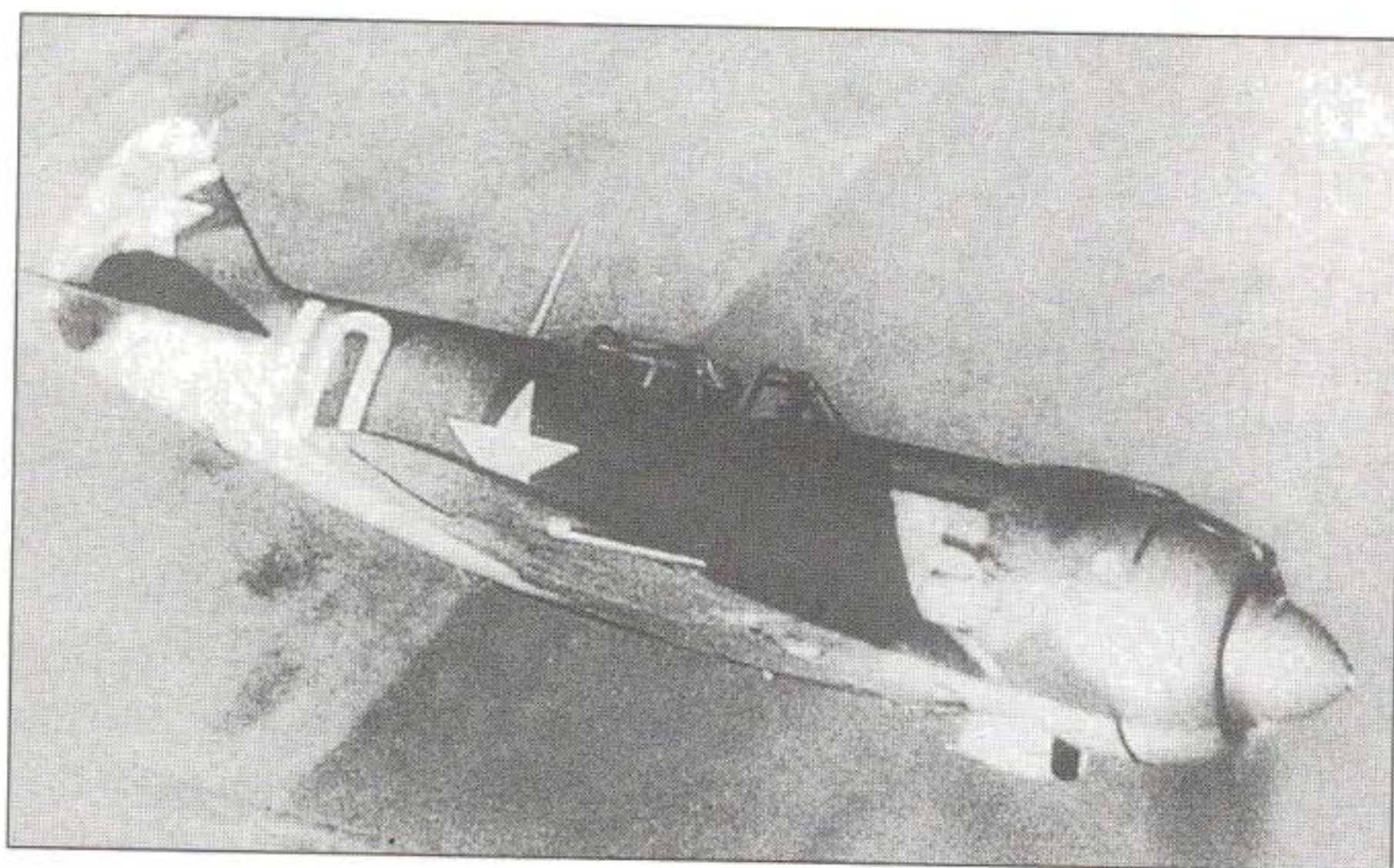






A rare example of early nose art on VVS aircraft is shown in this shot of a shark-mouthed LaGG-3 being run up prior to departing on a patrol over the frontline in late 1942

The La-5FN was one of the most effective fighters employed by the VVS during the GP War, some 9920 aircraft being built by Lavochkin between late 1942 and late 1944



mously awarded the HSU for his ultimate sacrifice. The top scoring 'taran' pilot of the GP War was HSU winner Lt Boris Kobzan of 184.IAP, who attained an incredible four kills through the employment of this method, whilst fellow HSU Aleksandr Khlobystov of 147.IAP made three successful attacks.

By 1942 the Luftwaffe finally recognised that VVS pilots seemed to be seeking to ram their aircraft, this alarming tactic being alluded to in a document compiled by Air Command 3 on 2 October 1942:

'The opinion on parts of the Eastern Front seems to be that Russian fighters are starting attempts to ram our aircraft in order to make them crash. This view has up to now not been confirmed, either through the questioning of prisoners of war nor through the known Russian orders. It must be the case of inadequate experience or training. It has been shown that keeping calm in combat situations is the best solution. It is recommended that gunners hold their fire until the enemy is quite close.'

As mentioned earlier, 'taran' attacks proved popular with the Soviet public, who appreciated the aggressive and daring exploits of the likes of Victor Talalikhin of the 177.IAP PVO – on 6 August 1941, whilst flying an I-16 on a night patrol over Moscow, Talalikhin attacked a He 111 at approximately 15,000 ft, and despite being wounded by the gunner of the bomber, he survived the collision whilst the German crew did not. Nevertheless, several senior fighter leaders frowned upon its use, finding 'taran' an unnecessary risk. For example, Pokryshkin stated after the war:

'Personally, I was no adherent of ramming. In most cases it involved not only the destruction of the enemy aircraft, but also the loss of ours too, and not infrequently its pilot. If my memory serves me correctly, there was a special order issued by the Commander in Chief, Soviet Air Forces, Gen A A Novikov, in the autumn of 1944 that instructed us to explain to all flying personnel that Soviet fighters had powerful, up-to-

date, armament, which surpassed in performance all enemy fighters currently in service, and thus making "taran" unnecessary. Ramming is one of the most complicated modes of attack, demanding great effort of will and the very highest moral and psychological qualities, and must be used only in exceptional circumstances, and as a last resort. Personally, I never once had to ram an enemy aircraft because I always had ammunition and my guns functioned perfectly.'



# EVOLUTION OF VVS FIGHTER AVIATION 1941-45

**A**t 03.30 hours on the morning of Sunday, 22 June 1941, 10 Soviet forward area airfields were attacked by 30 Luftwaffe aircraft. These first raids by Do 17Zs, Ju 88s and He 111s took the VVS completely by surprise, and heralded the start of the heaviest *Blitzkrieg* attack the world had ever seen. The warning signs had been clear since the early months of 1941, for the German build-up had started in the winter of 1940 and Luftwaffe reconnaissance flights over the Soviet Union had commenced in February 1941.

In his memoirs, Aleksandr Pokryshkin describes his increasing frustration at not being able to counter these recce flights, which he felt insulted the Soviet Air Force. Repeated warnings of an impending invasion had been given to Joseph Stalin by both the American and British governments, the latter issuing its final word of caution (by Sir Stafford Cripps) on 21 June 1941. Stalin read only political interference into these warnings, with the end result that the Soviet Union was ill-prepared for the onslaught that began just 24 hours later.

By the end of the first day no less than 66 Soviet airfields had been hit, upon which lay 75 per cent of the aircraft of the Soviet Air Force. VVS fighter defence to meet the incoming waves of Luftwaffe aircraft, which included 480 German fighters, was limited not only in numerical terms, but also by the sheer combat effectiveness of the pilots thrown into battle. The decimation suffered by the VVS during the first 24 hours was a portent of things to come.

By dusk on that first fateful day of Operation *Barbarossa*, Soviet admitted losses were 1136 aircraft,

This German photo claims to have captured the last moments of an I-153 as it flies through a terrific bombardment. The original caption stated that the aircraft exploded just a few seconds later





of which only 336 had been downed during aerial combat – the bulk were destroyed on the ground. This figure had risen to 4017 aircraft by the end of the first week. The Luftwaffe controlled the air, and now looked forward to supporting the German ground armies as they marched eastward.

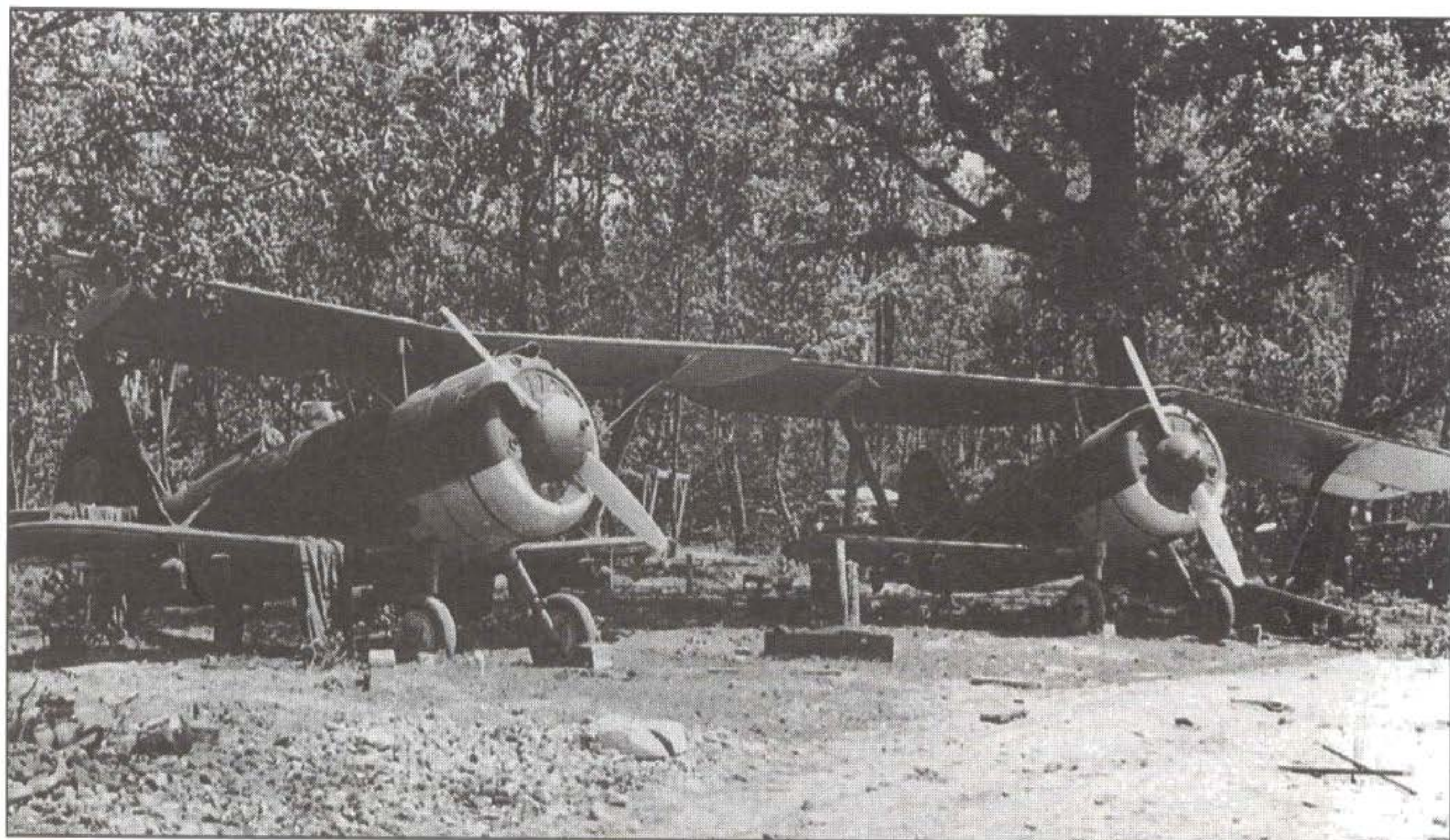
Faced with such catastrophic news emanating from the front, Soviet politicians in Moscow decided to focus on the few successes recorded by the VVS in order to try and boost public morale. Soviet fighter pilots had claimed 244 aircraft destroyed during the first 24 hours of the German *Blitzkrieg*, yet the admitted losses by the Luftwaffe amounted to just 59 aircraft, a figure which had risen to 150 by the end of the first week.

During the initial waves of German attacks on the 22nd, 12.IAP at Boushev, near Stanislavov, lost 36 of its 66 I-153 biplanes fighters. However, many of the survivors made it into the air to confront the Ju 88s from KG 51, duly claiming eight bombers destroyed for the loss of three I-153s. The same *Kampfgeschwader* also raided the airfield where 149.IAP was based, and despite losing 21 of its MiG-3s, the unit managed to scramble a small number of fighters and rapidly claim the destruction of a further 8 Ju 88s. On each occasion, Luftwaffe admitted losses were not far short of Soviet claims, but this pattern was not repeated elsewhere.

Examples of overclaiming on this day include a pilot named Kalabushkin from 123.IAP, who claimed two Bf 109s, two Ju 88s and a He 111, whilst I I Drozdov of 127.IAP reported destroying five 'fascist' bombers during the course of four sorties flown near Brest – several others claimed multiple kills of enemy aircraft.

There were also 15 separate reports of Soviet pilots deliberately ramming Luftwaffe aircraft, the first documented 'taran' occurring at 04.25 hours – just 55 minutes after the Luftwaffe had commenced its bombing raids. The pilot involved in this action, I I Ivanov of 46.IAP, was killed when his I-16 hit his undisclosed opponent. He was posthumously awarded the HSU for his ultimate act of bravery. No less than eight 'taran' attacks were made on the first day of the GP War alone, this number

Taken just one day after the start of Operation *Barbarossa*, this German propaganda photo shows two obsolescent I-152s that fell into the hands of the Wehrmacht as it advanced into the USSR. Although the aircraft on the left appears to have been spared any damage during the capture of the anonymous airfield, the same cannot be said for its squadronmate







The full horror of war is graphically illustrated by the burning remains of a VVS fighter, and its pilot. This photo was taken 24 hours after the invasion had commenced

including the kill scored by Lt D V Kokorev of 124.IAP, who rammed a Bf 110 over the Western Military District and survived to file his report.

Ultimately, however, any consolation derived by the Soviet leadership from these often hollow claims was intangible in the face of the military catastrophe that had ensued following the commencement of *Barbarossa*.

One of the pilots involved in the the carnage of the first 24 hours of war in the east was Aleksandr Pokryshkin, who was serving a senior lieutenant in the MiG-3-equipped 55.IAP, which had been temporarily located near the Romanian border in Moldavia. His first combat action resulted in him firing at a Soviet bomber and crippling the aircraft, before realising his mistake too late. This was an ignominious start to what became a glorious operational career, Pokryshkin eventually opening his scoring against the Germans the following day.

### — SOVIET AIR POWER ON 22 JUNE 1941 —

Even in the wake of greater access to Russian wartime documentation over the past five years, it is still difficult to assess the extent of Soviet air power on the eve of *Barbarossa*. In 1940, the USSR boasted the world's largest air force. However, in terms of fighters, some 75 per cent of them were outdated I-15, I-152 and I-153 biplanes and I-16 monoplanes.

The prototypes of these fighters had first flown back in the mid-1930s, and despite gaining many successes over Spain and China, the I-16 (which was the 'pick of the bunch' in terms of performance) was significantly inferior to the Luftwaffe's Bf 109E by mid-1941. The 'brave new world' of Soviet fighters in the MiG-3, Yak-1 and LaGG-3 had yet to be issued to frontline units in any great numerical strength, although by 22 June 1941 some 2030 of these types had been constructed.

By September 1941 Soviet aviation losses had reached an estimated 7500 aircraft. Despite such staggering numbers, considerable success had been claimed by Soviet fighter pilots – especially those operating over the Northern Front. The leading ace at the time was Lt P A Brinko of the Baltic Fleet, who had claimed 15 aircraft destroyed (including four Finnish Air Force fighters) within the first ten weeks of *Barbarossa* commencing. After being involved in near-constant action since the invasion, he was finally shot down and killed on 14 September.





A colleague of Brinko's from the defence of the Hanko peninsula was Capt A K Antonyenko, who, as deputy commander of 13.IAP, claimed 11 of his regiment's 34 kills before his death in action on 25 July 1941. Both pilots were posthumously awarded the HSU.

In the fighting over the central (and later northern) fronts, three of 29.IAP's pilots claimed 38 of the 50 enemy aircraft credited to the regiment as destroyed – many of these were for group rather than personal kills. This trio of ace pilots included Jnr Lt N Z Muravitsky, who claimed 12 victories, 9 of which were group kills, and he is also reported to have performed a 'taran' attack on 3 September. The other successful pilots of 29.IAP were Jnr Lt A V Popov with 14 kills and Lt N Morozov with 12, the former being killed on 3 September when he ploughed into Wehrmacht tanks during a sortie supporting Soviet infantry.

The first weeks following *Barbarossa* graphically illustrated not only the technical inferiority of VVS aircraft, but also the woefully inadequate training of its pilots. Both combined to expose the inadequacies of an organisation ruthlessly stripped of its best commanders during Stalin's purges of the late 1930s. Replacement aircraft and spares were soon at a premium as factories closed their assembly lines in preparation for relocation beyond the Ural Mountains – away from Hitler's immediate grasp.

This hardship soon manifested itself in a 'backs to the wall' mentality as the German forces closed on Moscow in their seemingly unstoppable march eastwards. The VVS were determined not to repeat their embarrassing performances of the first days of war in any battle for the capital. By late July 1941, Moscow was under critical threat as Smolensk fell and the German army strode through to the western perimeter of the city. Stalingrad to the north came under siege and Kiev to the south-west of Moscow fell, as did much of the Ukraine to the south.

**A VVS airman lies dead by the propeller of his LaGG-3, the victim of a surprise attack by marauding Luftwaffe bombers on the first day of *Barbarossa*. The majority of Soviet fighter pilots killed or captured in the first 48 hours of the invasion never actually got airborne**



Hitler stalled from making an immediate onslaught on Moscow, however, so as to give his armies time to consolidate their positions at Stalin-grad and in the Ukraine. This delay enabled the Soviets to organise the defence of the city, but also brought the dawn of the 'rasputitsa' (the rainy season), which beckoned the cruel winter a step closer. With the impending change in the weather, German forces would be isolated from access to the fundamentals of human life – warmth, shelter and food, and for military operations, supplies of equipment.

Under these conditions, the Soviet Union was in effect far better equipped for a defensive war than the Germans an offensive operation, despite the undisputed superiority of the latter's aircraft. Operation *Typhoon*, the German attack on Moscow, commenced on 30 September 1941.

Col Gen P F Zhigarev, commander of the VVS, held in his grasp the knowledge that his aircraft and pilots could operate from well established stations in and around Moscow. These airfields included the Central Aerodrome, as well as Khimki, Fili, Tushino and Vnukogo. In addition, Zhigarev's had at his disposal 6.IAK PVO (6 Air Defence Fighter Corps) of the Moscow Military Air Defence zone – this unit came to play a significant role in the Defence of Moscow. By contrast, following the first month of aerial and ground attack by the German forces, the 2nd Air Fleet of the Luftwaffe found the inclement weather conditions becoming increasingly worrying.

The advent of harsh winter conditions by mid-November rendered makeshift Luftwaffe airbases often inoperable. Groundcrews found their skin freezing to the metal surfaces of the aircraft they were servicing and repairing, whilst tools had to be heated with blow torches in order to allow them to be used. Liquid-cooled aeroplane engines also failed to start due to the extreme cold – Luftwaffe operations were being throttled by the weather rather than the VVS.

Unlike the Luftwaffe, Soviet air force operations increased in these con-

**A *Blitzkrieg* attack immediately following in the wake of the initial *Barbarossa* bombing raids accounted for the I-16 and I-153 seen in this German photo**





ditions, the latter flying some 15,840 sorties in the three weeks from 15 November to 5 December – almost five times the volume of Luftwaffe activities over the same period. As the battle for Moscow continued, so the VVS began to wrest control of the skies from the Germans. Under the skilled command of Gen S I Rudenko, the VVS counter-offensive in the north-west sector towards Rzher gained impetus, and Soviet fighters claimed 16 enemy aircraft destroyed.

The activities of 6.IAK PVO became pivotal in the fighter defence of Moscow, and no less than 23 of its pilots were awarded the Gold Star of the HSU during the Battle for Moscow. The unit was commanded by Col I D Klimov until November 1941, when Col A I Mitenkov took charge. During the final two months of the year it claimed the destruction of 250 Luftwaffe aircraft in aerial combat. Further, during the five days of 9-14 December, 6.IAK PVO changed roles from fighter to ground attack, and duly harried and strafed the ground troops of the retreating German air armies, west of Moscow – by that stage, however, the corps had already distinguished itself in action.

Included in its number was Lt A N Katrich of 120.IAP PVO, who made the first successful high altitude 'taran'. Overall, 6.IAK PVO had proven to other Soviet fighter units that their opponents were not as invincible as they had first appeared back in the summer.

## STALINGRAD

The battle for Stalingrad was really the catalyst for the start of VVS supremacy, with new organisational structures, new fighter aircraft equipped with radio and increasingly combat-skilled pilots creating the foundation for the change in Soviet fortune. Stalingrad preceded the successful Battle over the Kuban River in the spring 1943, followed soon after by the decisive Battle for Kursk.

There were two critical stages in the battle for Stalingrad, the first of which centred around the defense of the city. This was fought from July to the early winter months of 1942, and found the 102.IAD PVO, under the command of P S Stepanov, equipped with around 80 fighter types, almost all of which were obsolescent I-15s or the agile, but underpowered and outgunned, I-16. Stepanov appealed to VVS Commander Novikov (who was responsible for air force planning and operations) and to the Soviet Supreme High Command for the deployment of a fighter regiment equipped with Yak-1s to help stem the tide of Luftwaffe attacks on the city.

As Stepanov's supreme commander, Gen A A Novikov was a pioneer of Soviet military aviation, having earlier been personally responsible for creating a more co-ordinated relationship between the frontal air forces and the troops on the ground. he had achieved this through the introduc-



A captured I-152 is examined by a Luftwaffe officer, who points out the hole made by shrapnel, or perhaps a machine gun bullet, to the cameraman



Although the MiG-3 was one of the newer types in service at the start of the German invasion (having first been delivered to the VVS in 1940), it too suffered heavily during *Barbarossa*. This particular aircraft was quickly knocked out of action in the first wave of strafing attacks that preceded the invasion. With the capture of the MiG's airfield just hours later, the forlorn fighter became the object of keen interest for the crew of a recently arrived Ju 88

tion of the air armies, which had replaced the previously unwieldy VVS command structure. Fighter regiments had traditionally been used in a haphazard and uncoordinated way, resulting in poor operational efficiency.

Thanks to his grasp on modern aerial warfare, Novikov was readily responsive to Stepanov's plea for fighter support, and he duly ordered what has since been described as a 'crack' fighter regiment from Moscow to Stalingrad equipped with far better Yak-1s, -7bs and -9s.

VVS fighter losses were high during these early weeks and months as inexperienced fighter pilots were brought into to fly the new aircraft. Rudenko took stock of this and ordered his fighter regiments to refrain from engaging enemy fighters. A new VVS tactic was born known as the 'zasada', or 'ambush', which saw Soviet fighter pilots instructed to hunt and attack bombers and recce aircraft instead.

The traditional tactic of 'taran' was also effectively employed, and during five days in September, there were three such ramming attacks made – Yak-1 pilot I M Chumbarev of 237.IAD destroyed a Fw 189, V N Chenskiye of 283.IAD downed an undisclosed aircraft and L I Binov of 291.IAD was credited with a Bf 110. All three VVS pilots survived these ramming attacks.

The second stage of the Battle for Stalingrad commenced with the Soviet counter-offensive on 19 November 1942. Having attempted to stifle the air operations of the Luftwaffe during the defensive phase of the battle, the VVS went on the attack as the weather worsened on the Eastern Front. Fighter regiments began to assert themselves in force over the frontline whilst the Luftwaffe struggled to come to terms with the bitter cold. 16., 17. and 8.VAs, led by Generals Rudenko, S A Krasovsky and T T Khrukin respectively, made a slow start to the offensive due to the inclement weather, which had also severely affected the number of sorties flown by VVS regiments.







Captured I-153s in various states of disrepair are huddled together on the corner of a captured field. Virtually all captured Soviet aircraft were unceremoniously scrapped by the Germans within weeks of the invasion

Rudenko's command included 220. and 283.IAD amongst its divisions, these two units being equipped with 125 fighters of which only 9 were outdated LaGG-3s. Over the next few weeks victories over the Luftwaffe were shared by the two VVS divisions, each claiming 33 kills for admitted losses of 35 fighters in total.

The German airlift of essential supplies to its beleaguered troops forced the Luftwaffe to commit large numbers of ponderous transport aircraft along the 200-mile corridor to Stalingrad. VVS fighter pilots soon learned that 'hunting' along the flight path within the corridor itself almost certainly guaranteed success, and they were further aided in their task by the provision of advance warning of incoming aircraft through the use of ground radar. The vulnerable Ju 52s, He 111s, Ju 90s, He 177s, Fw 200s and Ju 290s, whose crews included experienced instructors, were clinically 'cut to ribbons'.

As an example of the carnage reaped by VVS fighters during the ill-fated airlift, on 30 November 1942 a regiment from 283.IAD, led by Col Kitayev, attacked 17 Ju 52s and 4 escorting Bf 109s, shooting down 5 of the transports and 1 escorting fighter. Due to their sheer weight in numbers, Ju 52s generally took the full impact of the VVS fighter attacks during the air blockade, and by the end of the Battle of Stalingrad, an estimated 676 had been lost – around 63 per cent of the total Ju 52 strength committed to the campaign. Even the Il-2 *Stormovik* ground attack aircraft got in on the act, claiming a number of Ju 52s destroyed in aerial battles.

On 2 February the German 6th Army surrendered, and it was clear that after all the initial disappointments of the first 18 months of the GP War, the VVS was beginning to demonstrate the value of Novikov's new organisational structure, the effectiveness of the new Soviet fighters and the increasing efficiency of its pilots. During the eight weeks of the Soviet air blockade, the VVS claimed 162 German fighters, 227 bombers and 676 transport aircraft destroyed.



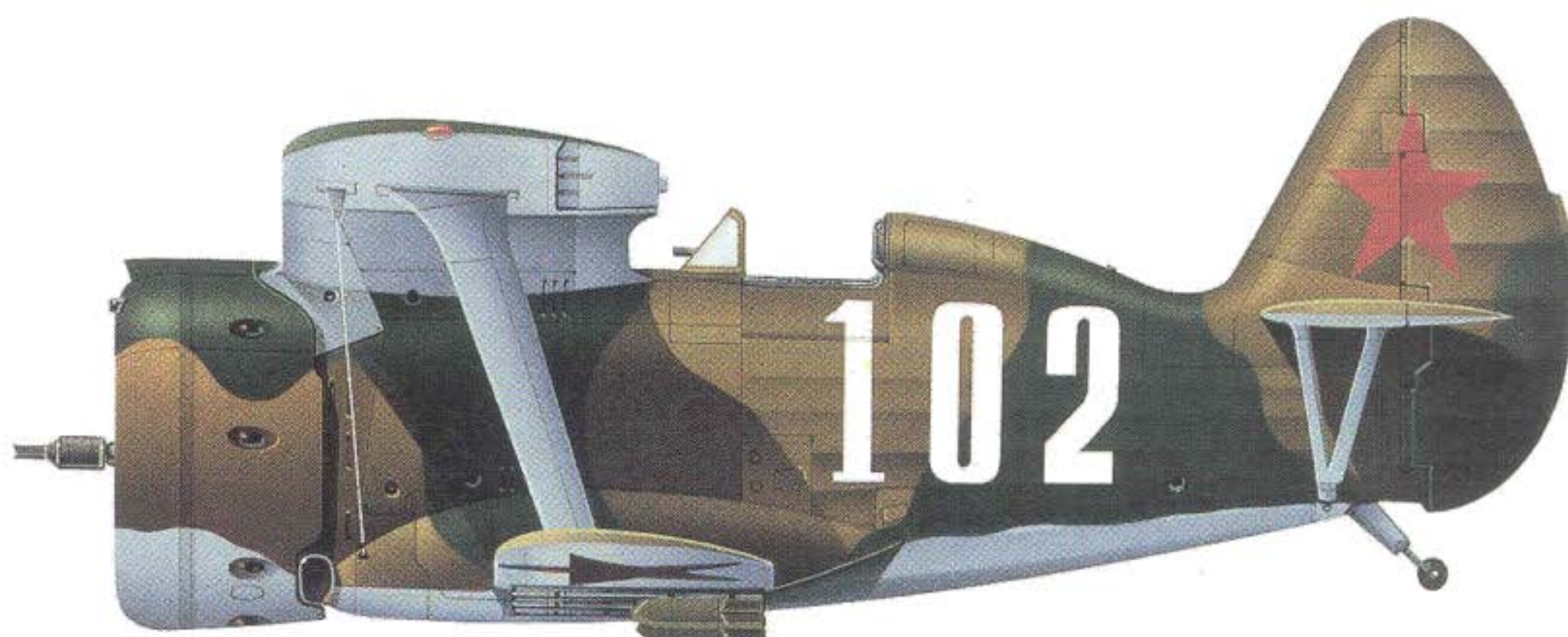
## COLOUR PLATES



**1**  
***I-153 'White 50' flown by Capt A G Baturin, 71.IAP, KBF, Lavansaari, Gulf of Finland, Summer 1942.***

A nine-kill ace, Capt Baturin received the Gold Star of the Hero of the Soviet Union on 23 October 1942. His *I-153* carried a red star

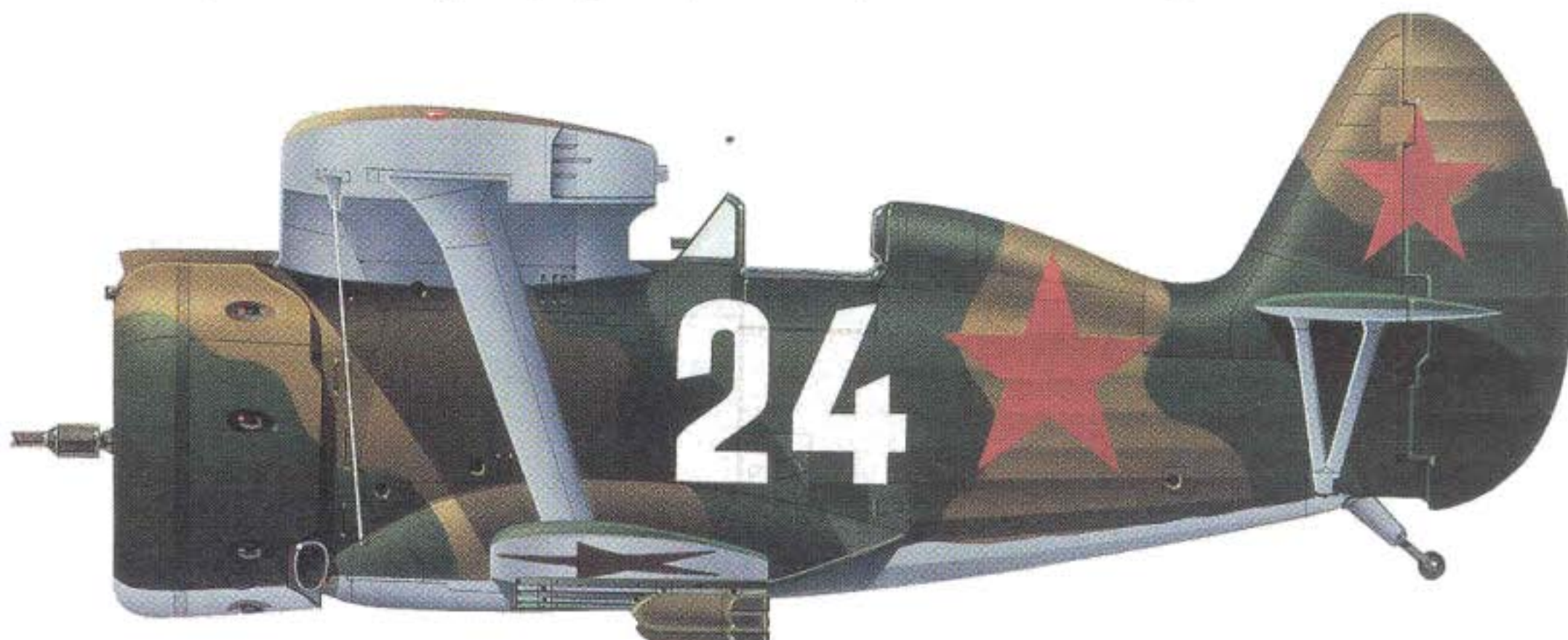
on the fuselage but not on the tail, and was camouflaged in standard green and brown upper surfaces and light blue undersides.



**2**  
***I-153 'White 102' flown by Maj P I Biskup, Commanding Officer of 71.IAP, KBF, Lavansaari, Gulf of Finland, August 1942.***

71.IAP's *I-153*s were equipped with underwing racks to carry RS-82 rockets. Unguided projectiles were first tested by the VVS in Khalkin-Gol by *I-16* fighters of 22.IAP, before being employed by *I-153*

regiments to attack ground targets during the 1939 Winter War with Finland. 71.IAP was eventually awarded Guards status, becoming 10.Gv.IAP, VVS, KBF on 31 May 1943.

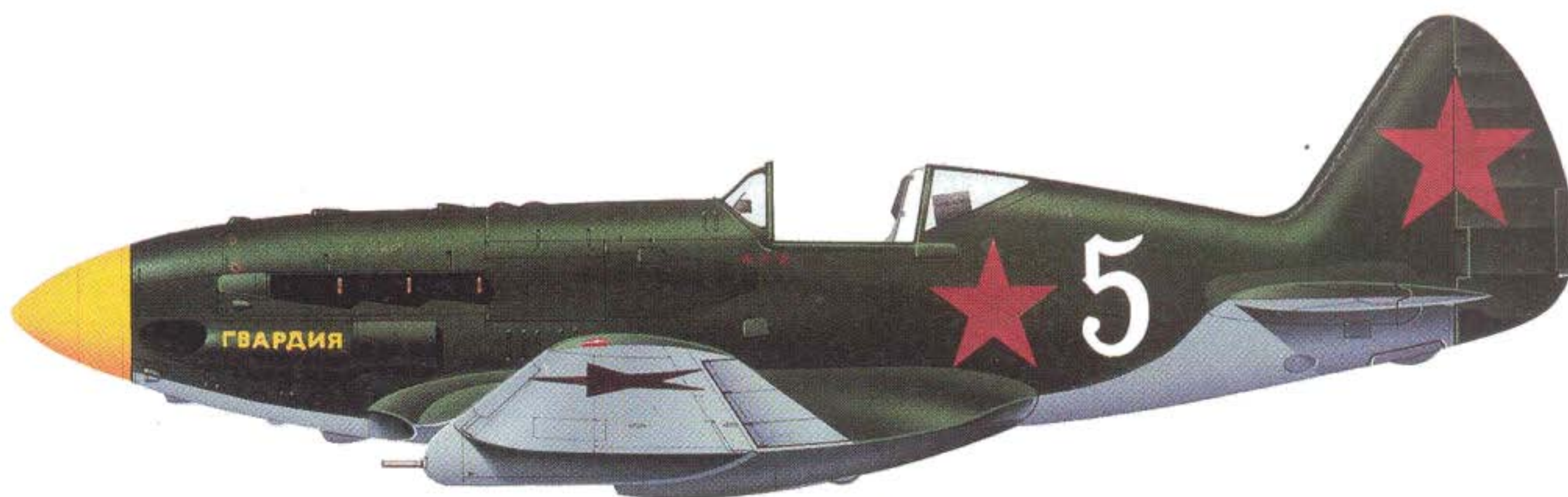


**3**  
***I-153 'White 24' flown by Capt K V Solovyov of 71.IAP, KBF, Lavansaari, Gulf of Finland, August 1942.***

Like Maj Biskup's aircraft, Solovyov's *I-153* is equipped with RS-82 rockets. It displays the red star on both its fuselage and tail, whilst the number '24' is located on the former only. Solovyov achieved ace status by gaining exactly five

personal victories, for which he received the Golden Star of the HSU on 23 October 1942. His mortal glory was to be short-lived, however, for he was killed in action just 48 hours after Christmas Day 1942.



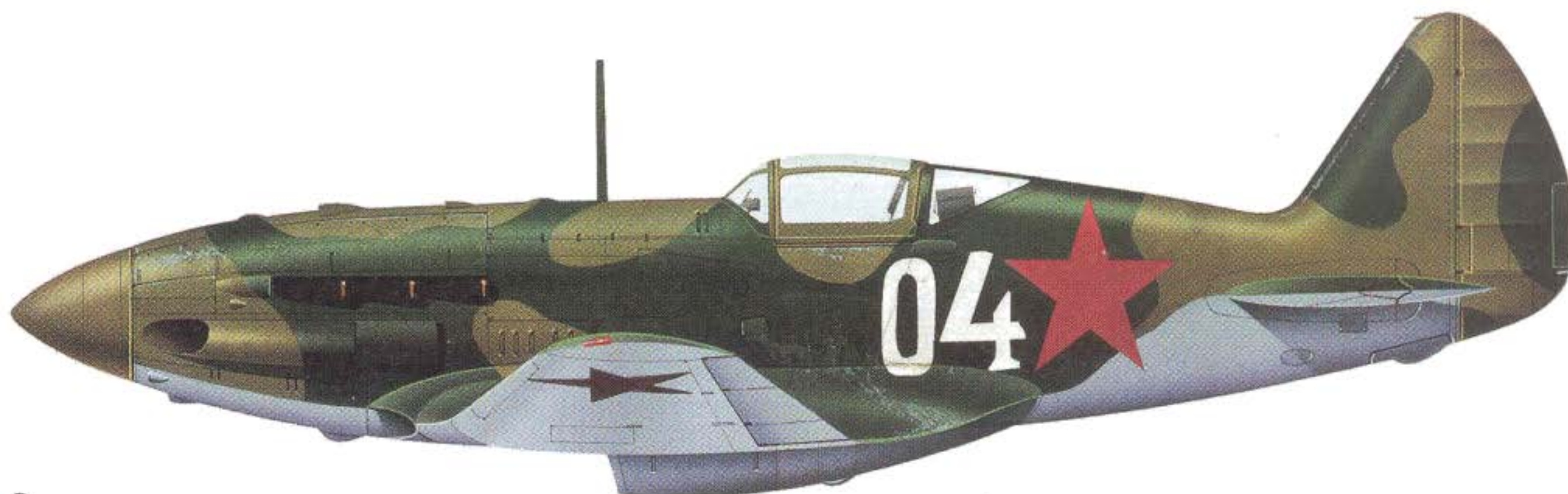


7

**MiG-3 'White 5' flown by A I Pokryshkin of 16.Gv.IAP, March 1942**

Undoubtably the most influential VVS fighter tactician of the GP War, Aleksandr Pokryshkin flew the *MiG-3* to good effect throughout the early stages of *Barbarossa*. This particular aircraft was an early-production model lacking an

aerial mast and gun fairings above the engine. The cockpit canopy has also been removed, and camouflage comprising dark-green upper surfaces and light blue undersides applied. Note the underwing gun pack.



8

**MiG-3 'White 04' flown by Capt S Polyakov of 7.IAP, Stalingrad Front, Summer 1941.**

This *MiG-3* appears to have been a mid-series production model that had both the early gun arrangement but also an aerial mast. Polyakov's '04' had fuselage stars

only, plus an off-white numeral. Camouflage shown is dark green with tan upper surfaces and light blue undersides.



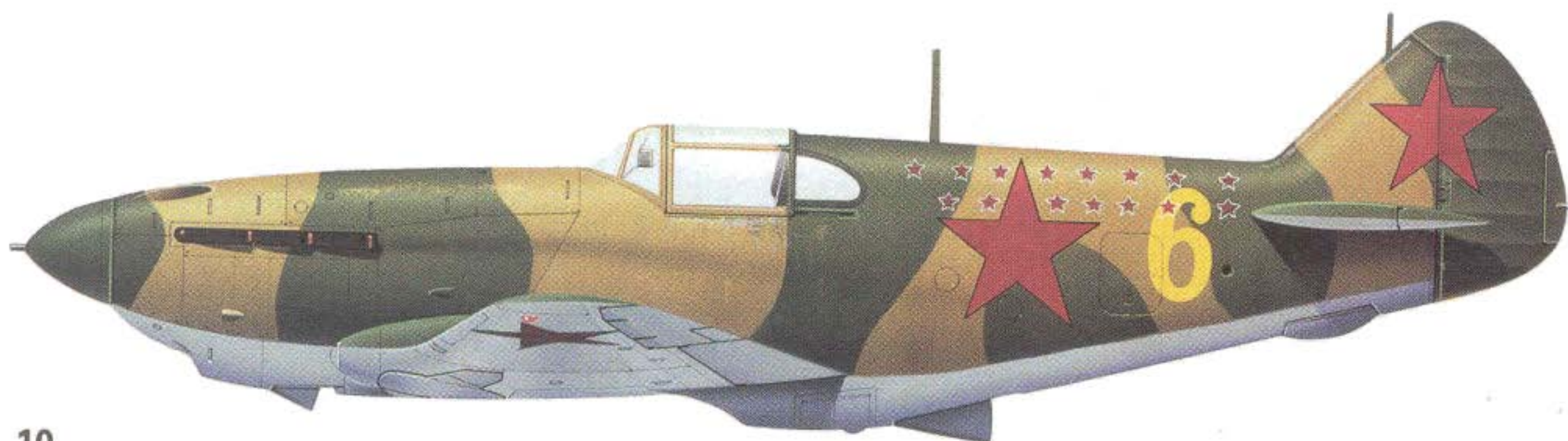
9

**MiG-3 'Black 7' flown by A V Shlopov, 6.IAP, 6 IAK PVO, Moscow, Winter 1941/42.**

The markings displayed on this aircraft comprised a red star on the fuselage, a red spinner and black numeral on the fin, plus a black arrow along the fuselage with the

inscription 'For Stalin!'. The all-white winter finish to the upper surfaces was balanced by light blue undersides.





10

**LaGG-3 'Yellow 6' flown by G A Grigor'yev, 178.IAP, 6 IAK PVO Moscow, November/December 1941.**

Grigor'yev has been credited with at least 11 personal and 2 group kills, whilst his *LaGG-3* shows 15 stars, indicating that he has perhaps been credited with less kills than he actually

achieved. Grigor'yev's aircraft appears to be a mid-production model, showing three individual exhaust stubs and no gun fairing bulge above the engine, plus a re-designed rudder.

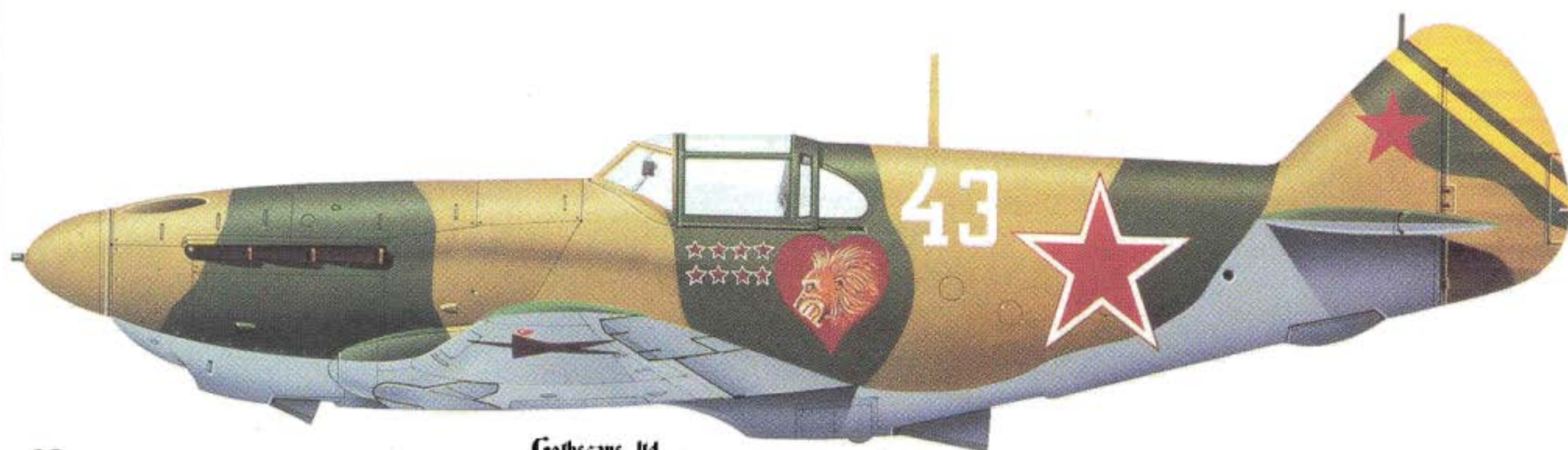


11

**LaGG-3 'Red 30' flown by Capt S I Lvov, 3.Gv.IAP, Red Banner Baltic Fleet Air Force, Winter 1943**

Lvov is another of those VVS aces who you would not normally see featured as his personal score was just six kills. However, he was clearly a 'team player', for he was credited with a further 22 group kills, thus placing him within the top 120 VVS fighter aces of the GP War. Lvov's *LaGG-3* is a mid production model 35th Series, which was

camouflaged with a heavily stained and weathered overall winter white finish on the upper surfaces and light blue undersides. Markings show a red fuselage numeral, red stars on the fuselage and tail – the latter only displays half the star, as the remaining portion has disappeared along with the fighter's original rudder.



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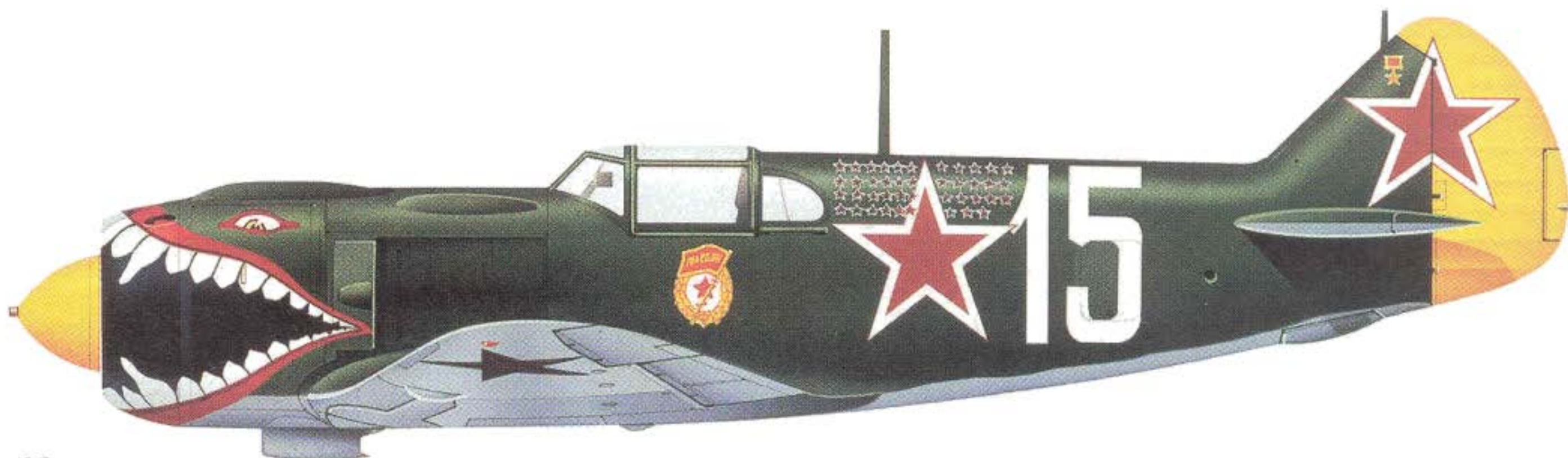
12

**LaGG-3 'White 43' flown by Lt Y Shchipov, 9.IAP, Black Sea Fleet Air Force, Black Sea, Spring 1944**

Shchipov's *LaGG-3* was a late production model denoted by its additional rear view glazing panel on the canopy frame. His aircraft has a white outlined red star on the fuselage and second national marking on the tailfin. A yellow unit marking lay across the fin and rudder, and a

white numeral is painted on the fuselage. Shchipov's personal marking consisted of a lion's head on a heart, and eight kills were shown below the cockpit. Camouflage is dark green and tan upper surfaces with light blue undersides.





13

**La-5 'White 15' flown by Capt G D Kostylev, 3.Gv.IAP, VVS, KBF, Leningrad, 1945.**

With a total of 46 combat kills, including 43 personal victories, Kostylev ranks high amongst any list of VVS aces, and certainly within the top 25. His kills were claimed during 418 sorties, having encountered the enemy on 118 of them. Kostylev was duly awarded the HSU, and in this profile his

La-5 sports 42 kill markings, a small Gold Star and ribbon on the tailfin and the Guards emblem below the cockpit. Other markings include an elaborate 'shark's mouth', yellow spinner and rudder and white bordered Red Stars on the fuselage and tail.



14

**La-5 'White 75' flown by I N Kozhedub of 240.IAP, 302 IAD, 5 VA, Leningrad Front, early 1944.**

The highest scoring Allied ace of World War 2 with 62 personal kills, Ivan Kozhedub flew a standard La-5 with 240.IAP (note that this was *not* a Guards regiment) which had red stars on the fuselage and tail, the white

number 75 and the inscription 'Sqn Valery Chkalov' in honour of the famous pre-war Soviet pilot. Camouflage was dark green and black upper surfaces and light blue undersides.



15

**La-5FN 'White 15' flown by Capt P Ya Likholetov, 159.IAP, Leningrad, Summer 1944**

Likholetov gained a total of 30 enemy kills, and whilst most lists credit him with 25 personal and 5 group victories, a recent table published in Russia states that he scored 30 personal kills but no group victories. Likholetov's La-5FN was a standard model, with white bordered red stars on the fuse-

lage and tail, a white '15' on the fuselage and white spinner and rudder. The inscription 'For Vasek and Zhora' was in yellow, and FN is stencilled on the cowling. Camouflage appears to be the standard two-tone blue-grey on the upper surface with light blue undersides.



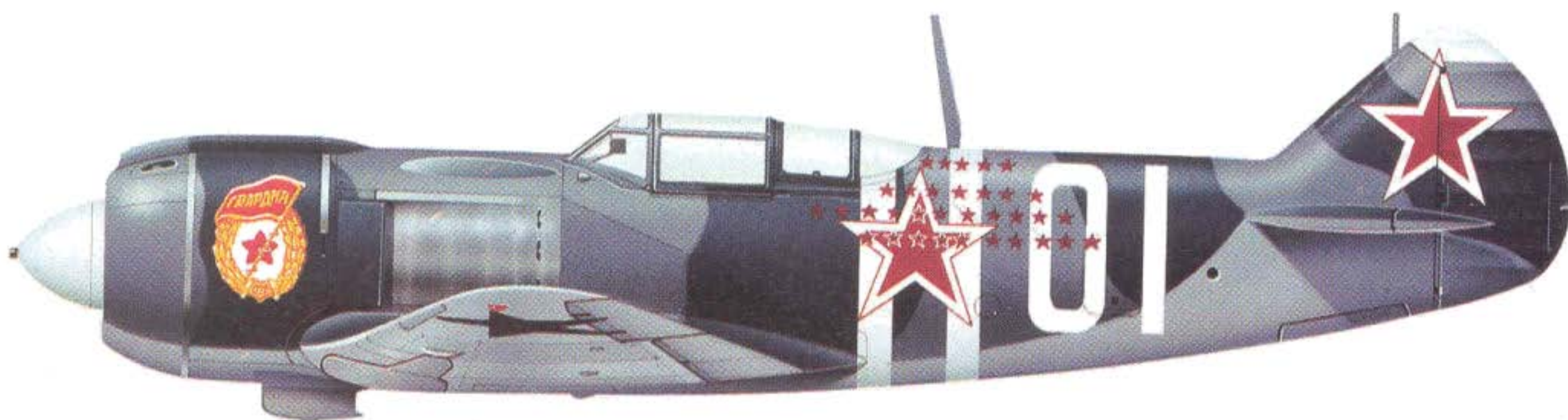


16

**La-5FN 'White 93' flown by Snr Lt V Orekhov, 32.Gv.IAP, 3 Gv.IAD, 1 Gv.IAK, Kursk, July 1943**

Vladimir Orekhov had been awarded the Gold Star of the Hero of the Soviet Union only weeks before the great Battle of Kursk, having achieved 11 kills mostly with Yaks, although his first claims back in 1941 were scored with the irksome LaGG-3. In the hands of an experienced combat pilot like Orekhov, the superb La-5FN was a potent gun platform, and

the former went on to amass a further 10 kills by the end of the war. His La-5FN was marked with white bordered stars on the fuselage and tail, a white '93' on the fuselage, white diagonal stripes across the fin and tail, a red spinner and cowling ring, 14 small red stars indicating victory markings below the cockpit sill and, finally, the FN stencil on the cowling.

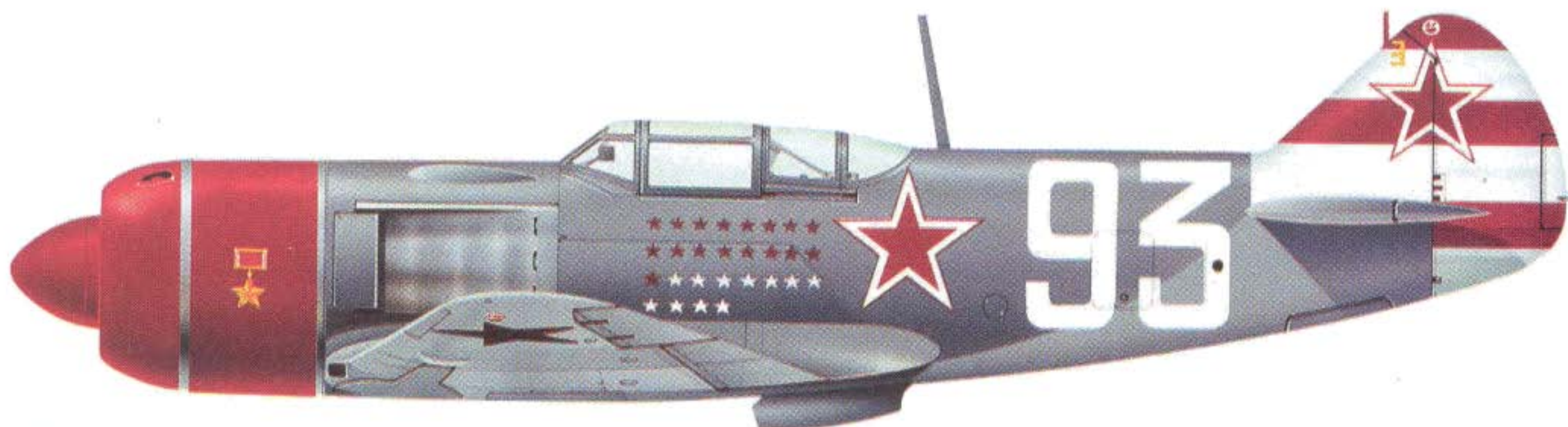


17

**La-5FN 'White 01' flown Capt V I Popkov of 5.Gv.IAP, 11 Gv.IAD, 2 Gv.Shak, 1st Ukrainian Front, 1943.**

Popkov was a leading VVS ace of the GP War, his 41 personal and 1 group combat kills acquired from 513 operational sorties placing him 30th in the list of Red Air Force aces. A double HSU recipient, his La-5FN was camouflaged with standard two-tone grey on the upper surfaces and light

blue undersides. Of interest from a markings perspective were the two white bands around the fuselage immediately aft of the cockpit, plus the 33 small red star victory credits over the bands and aircraft number. A large Guards badge can be seen on the engine cowling.



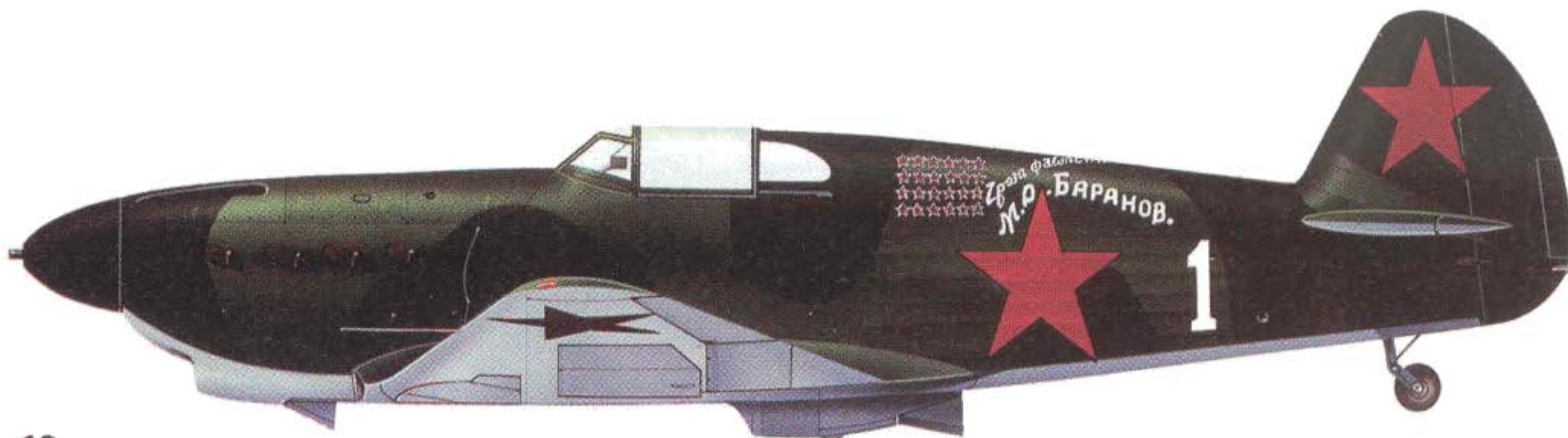
18

**La-7 'White 93' flown by Lt Col S F Dolgushin, 156.IAP, 215 IAD, 8 IAK, Germany, 1945**

Dolgushin falls just outside the top 100 VVS aces of the GP War, and his aircraft is further illustrated in action on the front cover of this volume. Like Kozhedub, Dolgushin flew a stan-

dard La-7 camouflaged in blue-grey overall on the upper surfaces and light blue undersides. All 28 of his combat kills are marked on this aircraft, as is the Golden Star of the HSU.



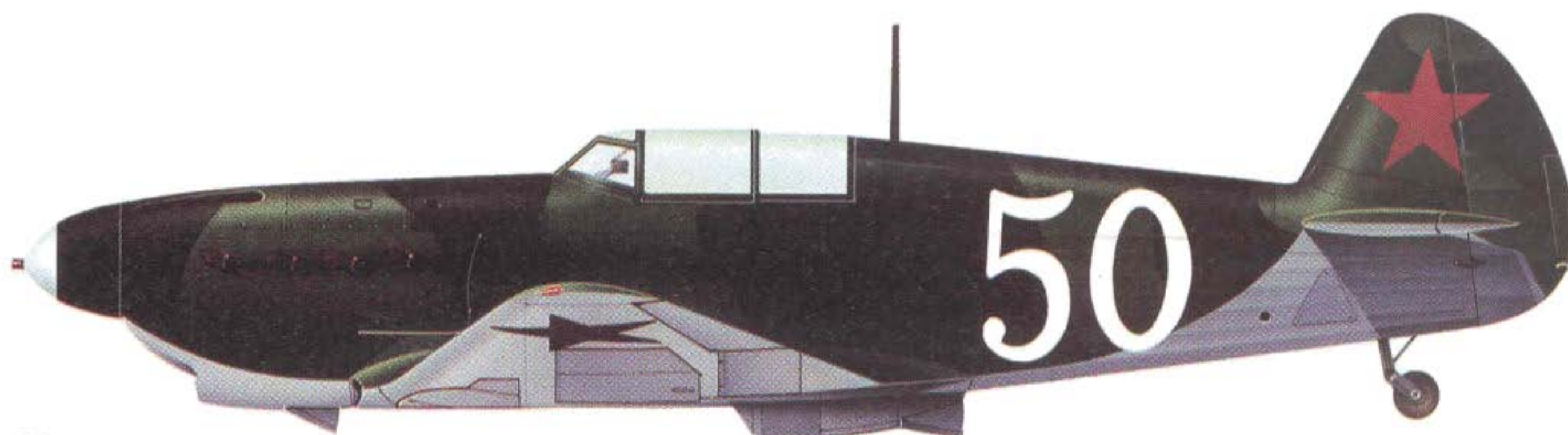


19

**Yak-1 'White 1' flown by Snr Lt M D Baranov, 183.IAP, Summer 1942.**

Mikhail Baranov has been propelled to prominence recently by Russian historians as his combined personal and group score of 52 (24 personal and 28 group) moves him into the top dozen VVS aces of the GP War. This previously overlooked pilot was both a prolific aerial marksman and fearless pilot, as the action on 6 August 1942 clearly proves. Flying in support of the defence of the Don River, Baranov led his flight in to attack an incoming Luftwaffe force of both fighters and dive-bombers, and

during the ensuing melee, he shot down two *Bf*109s and one *Stuka* before ramming another fighter after having run out of ammunition. Forced to bale out Baranov was injured and duly hospitalised for a short while – he was finally killed in January 1943 flying another *Yak-1*. Notable features of Baranov's earlier *Yak* include the camouflage scheme of dark green and black upper surfaces and light blue undersides, and the white inscription above the fuselage star which reads 'Death to Fascists'.

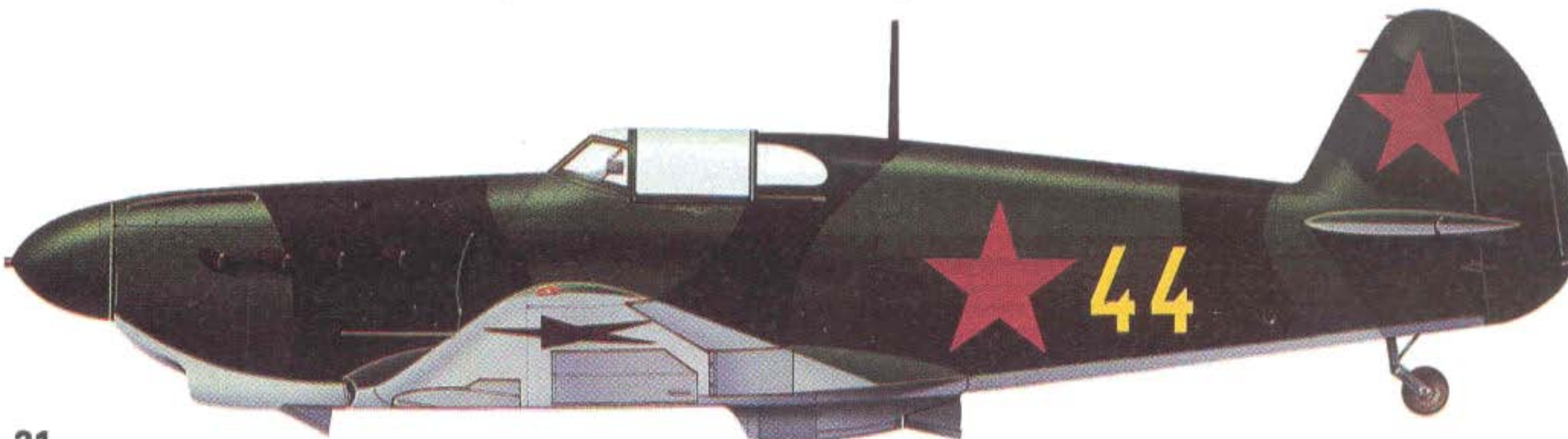


20

**Yak-1 'White 50' flown by Lt Col V F Golubov, 18.Gv.IAP, Khatlonki, Spring 1943.**

A 39-kill ace with the Golden Star of the Hero of the Soviet Union, Golubov had his *Yak-1* decorated with just a red star on the tail and a large white '50' on the fuselage. Again, an early Yak camouflage scheme of dark

green and black upper surfaces with light blue undersides is seen on this fighter. Attached to Golubov's 18.Gv.IAP at around this time was the French volunteer *Normandie Groupe*.



21

**21Yak-1 'Yellow 44' flown by Lilya Litvyak of 296.IAP, Stalingrad, Spring 1943.**

The most famous female fighter pilot of all time, Litvyak was with 296.IAP when it became 73.Gv.IAP in May 1943. It was also to be her final operational unit, as she was killed in combat whilst flying with the Guards regiment on 1 August 1943. Litvyak flew a standard *Yak-1*

(complete with aerial mast) marked with fuselage and tail stars and a yellow, rather than dirty white, '44'. Litvyak was 22 years old when she died, and had scored at least 11 personal and 3 group kills prior to her demise.



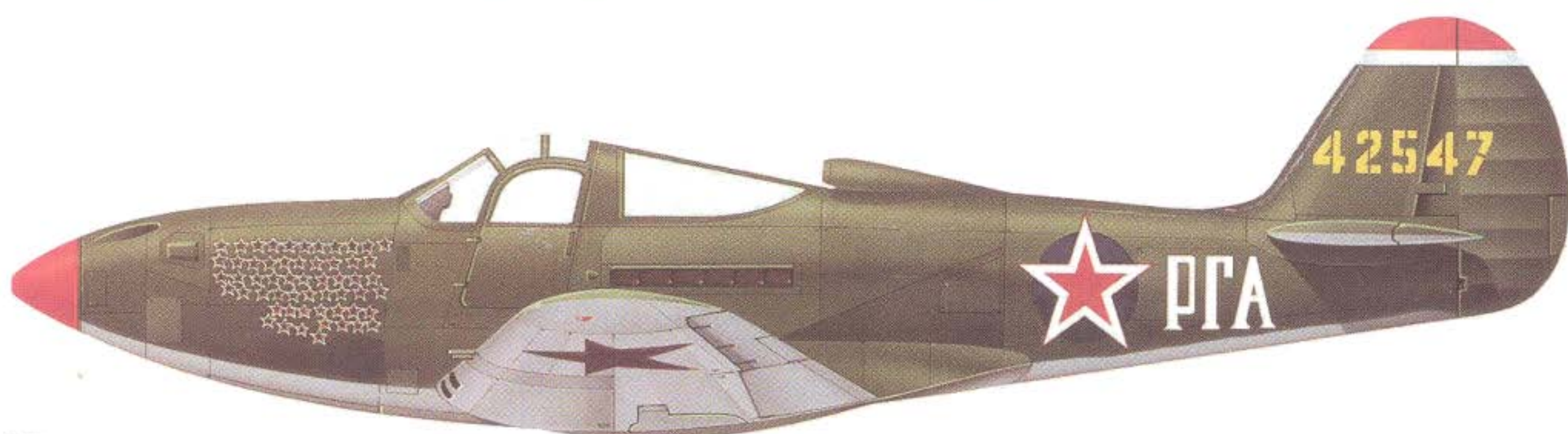


28

**Yak-3 'White 5' flown by R Sauvage, Normandie-Niemen Groupe, 303 IAD, 1 VA, German Baltic Coast, March 1945**

Roger Sauvage ranks as the fifth-highest scoring ace of the *Normandie-Niemen* regiment with 14 claimed kills, although at least a further 8 have been retrospectively confirmed in postwar years. Of special note is the tricolour spinner (blue, white and red) and the 14 kill markings displayed behind the cockpit. Interestingly, the latter took the

form of small German crosses in the custom of kill recording by pilots of the Western air forces – Soviet pilots refused to 'desecrate' their aircraft with enemy insignia, using small red stars instead. Camouflage was non-standard green and brown upper surfaces with light blue undersides.

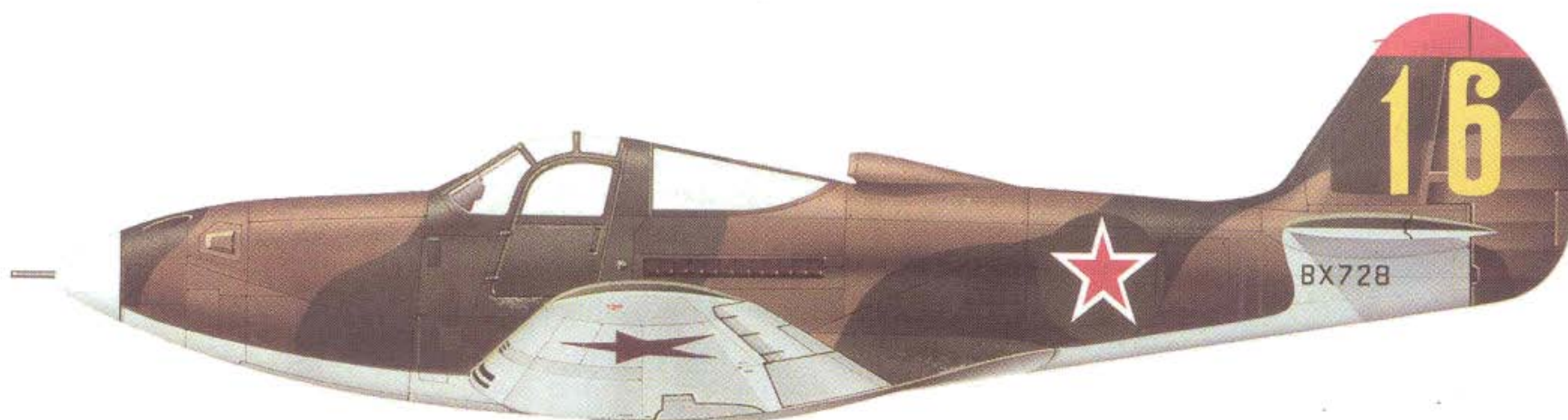


29

**P-39Q Airacobra 44-2547 flown by Capt G A Rechkalov, 16.Gv.IAP, 9 Gv.IAD, 5 VA, Ukrainian Front, Summer 1944**

Double HSU Grigori Rechkalov ranks as the second highest scoring Allied fighter ace of World War 2, being credited with 61 kills – 56 of these were personal victories. Rechkalov's strike rate was also excellent, having achieved his kills in only 122 recorded air combats. Like virtually all other American-built lend-lease aircraft supplied to the

VVS, this fighter has had the Soviet star superimposed on the former USAAF fuselage roundel. The P-39Q's remaining markings comprise a white 'RGA' on the aft fuselage, its USAAF serial on the tail in yellow, a red/white fin and rudder tip and 55 kill markings on the nose. Camouflage was the standard USAAF olive-drab and neutral grey.



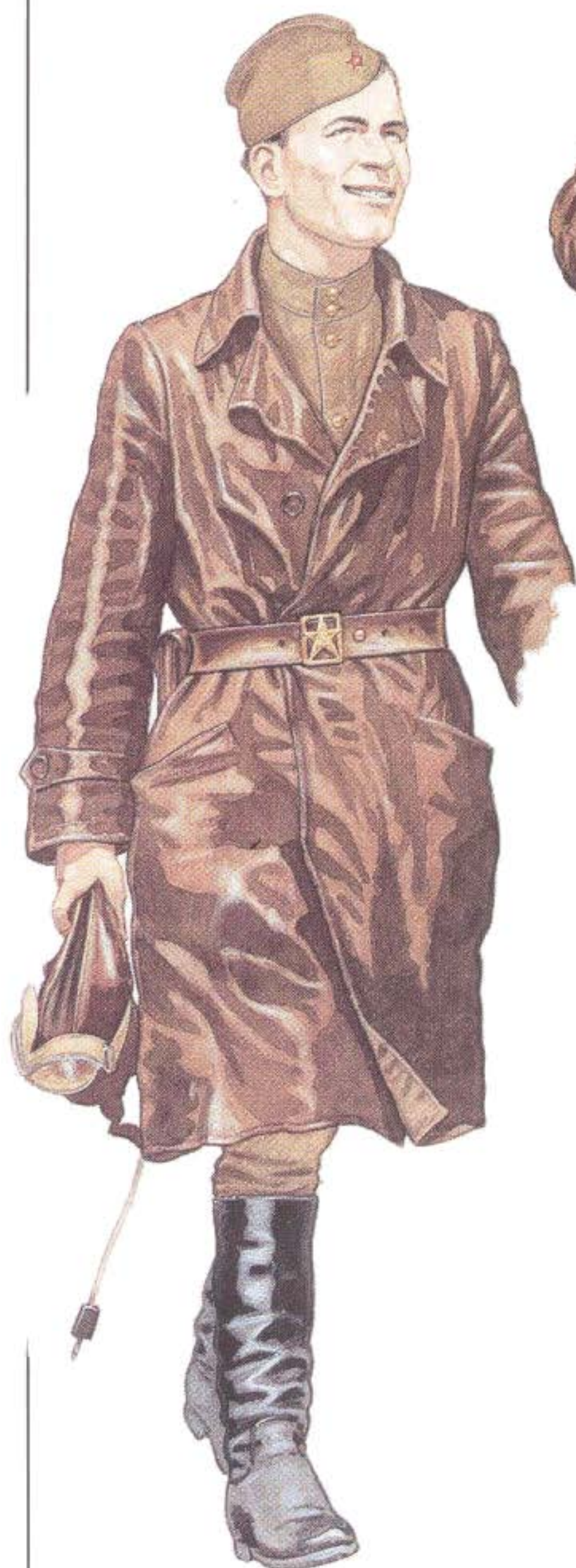
30

**P-400 Airacobra BX728 'Yellow 16' flown by Capt IV Bochkov, 19.Gv.IAP, East Karelia, 1942.**

Bochkov was one of the early VVS aces, quickly building a total score of 39 kills, which included 32 group victories. He was killed in action on 4 April 1943, and was posthumously awarded the HSU on the first day of the following month. Bochkov's P-400 (the designation of 'repossessed'

Airacobras from the original RAF order) was camouflaged with standard RAF green-dark earth pattern on its upper surfaces and sky blue undersides. The smallish red star is superimposed on an overpainted RAF fuselage roundel, with a yellow '16' on the tail and a red tipped fin and rudder.





1  
Capt P J Likholetov of 159.IAP is seen in the summer of 1944 wearing a leather flying coat over his Red Army field uniform, of which the 'Gymastorka' (short blouse) is visible. His officer pattern belt has a side buckle, and on his head he is wearing a 'Pilotka' cap. In his hand, Likholetov holds a late pattern flying helmet and matching goggles.



2  
Capt Boris F Safonov of 72.IAP within Northern Fleet Air Force, is seen clothed in an early-issue (there were several patterns) full length leather flying coat in September 1941 – essential wear when flying in an open-cockpit I-16. Safonov has a pre-war pattern fleece-lined flying helmet and goggles, plus an officers' pattern belt complete with a holster for his Tokarev 7.62 'T.T.' pistol. His outfit is completed by fleece-lined gloves, officer pattern boots and a 'single-seater' style parachute, all worn over his standard Soviet VVS service dress. On the collar of Safonov's tunic can be seen the rank patches of a captain in the VVS.



3  
Capt AV Alelyukhin of 9.Gv.IAP in September 1943. He is wearing a two-piece leather flying suit, an early pattern helmet and officer-pattern boots all over his field uniform, together with heavy gloves and a 'single-seater' parachute.

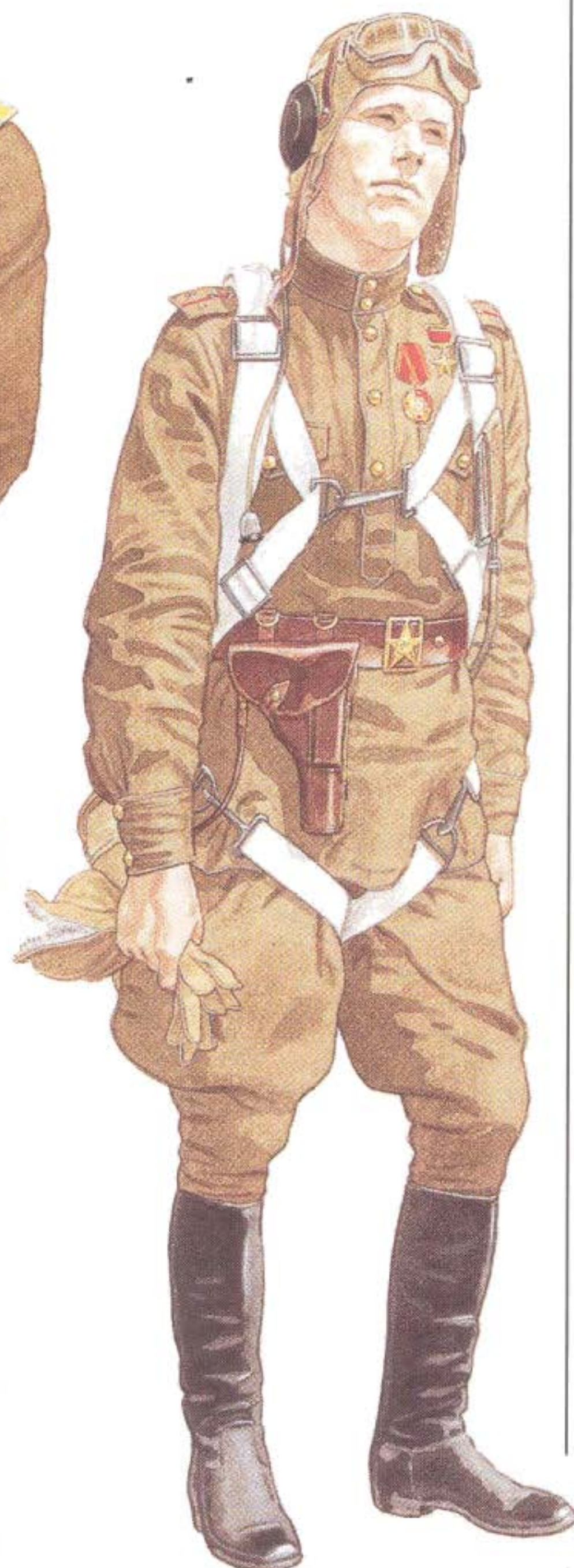




4  
Capt N A Zelenov of the 'Aviatsiya Voenno-morskogo flota' (VVS, VMF – Naval Air Forces) is seen in a black one-piece overall unique to naval pilots of this period. His helmet is early-style VVS issue, whilst his boots, gauntlets and belt are also standard air force fare circa. Zelenov became an ace flying P-40Ks in defence of northern Soviet ports in 1942/43.



5  
Capt P I Chepinoga of 508.IAP in November 1944. He is wearing a service cap piped and banded with the branch colour of the VVS, and also adorned with standard Red Army officer cap badges. Chepinoga's service dress includes a 'Gymna-storka' blouse and breeches with officer's boots – he is holding his fur-lined flying helmet. The ace also sports shoulderboard insignia (branch colour, five stars and the winged propeller badge), which replaced collar tabs after 1942. Chepinoga's decorations include a Golden Star of the HSU, Order of Suvarov, Order of Lenin and Order of the Red Banner.



6  
Capt I N Kozhedub of 176.Gv.IAP is seen in August 1944. His uniform details are essentially the same as for Chepinoga, with the exception that his shoulderboards are 'field' grade rather than the more formal 'parade' variety. Kozhedub wears a late pattern flying helmet, and is carrying gauntlets – his belt also boasts a Tokarev 7.62 mm T.T. pistol attached to it. His decorations include a single Gold Star of the HSU (he received his second later that year) and Order of Lenin.



## BATTLE OF THE KUBAN RIVER

The 563-mile long Kuban River, running through the North Caucasus, was bordered on either side by critical Soviet oil fields, as well as significant deposits of raw materials such as copper, iron and gas. The Kuban was crucial to the Soviet war effort from both strategic and psychological standpoints, and as a result was also a prize highly coveted by the invading German armies. It duly became the backdrop for a bitterly contested series of air battles.

From the start, the opposition provided by the Luftwaffe was ominous, for the 4th Air Fleet (sent in to secure aerial supremacy) included *Gruppe* from both JGs 51 and 54. Both units were equipped with a mix of the latest versions of the Bf 109, the G-2/-4, as well as the Fw 190.

Their VVS fighter opponents could muster around 270 fighters out of a total number of about 1000 aircraft of all types devoted to the defence of the Kuban. The VVS relied predominantly on lend-lease fighters throughout this campaign, the most popular with Soviet pilots being the Bell P-39 Airacobra. Although the P-39 had met with little success when in both USAAF and RAF service earlier in the war, VVS units flew the Bell fighter with great élan during the battle. Amongst the most successful exponents were Pokryshkin and his wingman Rechkalov, who served in 16.Gv.IAP – the former claimed 20 kills during the battle.

The first phase of the campaign saw German Ju 87s bomb the Myskhako beachhead with little resistance on 17 April 1943, but within three days VVS fighters were rushed to the area to try and stem the dive-bombers. In the following week Soviet fighter pilots claimed 182 Luftwaffe aircraft destroyed, but at a considerable cost. Nevertheless, Soviet resistance was so stiff that the Wehrmacht was forced to abandon their offensive to take the Myskhako bridgehead.

The second phase of the battle was fought around the village of Krymskaya, which was of high strategic value due to its position north-west of Novorossish, and close to a key railway junction. Outnumbered now by the VVS force, the Luftwaffe lost on average 17 fighters a day up to 10 May – in total, some 368 German aircraft of all types were claimed by the VVS. The aerial skirmishes were far from one-sided, however, Luftwaffe fighter pilots exacting a heavy toll on their Soviet counterparts, who were frequently flying four to five sorties per day.

By 9/10 May, the Luftwaffe had regained aerial control over Krymskaya. There followed a two-week lull before the Soviet offensive began in earnest on 26 May, with 4.VA bearing the brunt of the aerial fighting over what was christened, the 'Blue Line Sector' – the central section of the Kuban bridgehead. Reputations were made in the Kuban, and pilots other than Pokryshkin and Rechkalov came to prominence. Amongst this number were the brothers Dmitry and Boris Glinka, with 21 and 10 kills respectively, the former having achieved 10 of his victories in only 15 sorties.

By the end of June the Germans had been comprehensively defeated, and on 7 July Gen Novikov formally announced that the VVS had control of the skies over the Kuban.





This photo of an anonymous *Normandie-Niemen* pilot was almost certainly taken at the end of the war, just prior to the French pilots flying their Yak-3s home from the USSR

## BATTLE OF KURSK

The third, and final, phase of the German summer offensive commenced with Operation *Citadel* on 5 July 1943, the target being the Ukrainian city of Kursk. This battle was the final demonstration of just how far the VVS had come in developing combat awareness and discipline. During the Soviet counter-offensive from July through to the early autumn, several new Soviet aces had begun to emerge, the most notable of these being Lt K A Yestigneyev of 240.IAP, who claimed 12 kills in only 9 sorties and ended the war with 56 victories and two HSUs.

The four major battles for Moscow, Stalingrad, the Kuban and Kursk had seen the VVS RKKA transformed from a poorly resourced and under-skilled fighter arm, to a well organised and efficiently run operation, with experienced pilots flying modern aircraft which matched the best that the Luftwaffe could provide. The turning point in VVS fortunes having been reached, it was now up to the Red Army to push the German forces out of 'motherland' and press on to Berlin.

## NORMANDIE NIEMEN GROUPE

Just a few days after Operation *Barbarossa*, the French Vichy government formally broke off relations with the USSR. In response, the Free French in exile in Britain offered to send a division of ground troops and a fighter group to the Eastern Front. Eventually only the fighter *Groupe GC Normandie* was transferred, which was subsequently expanded to become (by October 1944) the *Normandie Niemen Groupe*.

The first French pilots to volunteer to fight in the USSR gathered at a barracks in the English Midlands in August 1942, before travelling to Scotland to board the troopship *Highland Princess*, bound for Lagos, in Nigeria. They were then taken across Africa by ex-civilian Ju 52s to Rayak, where they met up with a group who had travelled from the Middle-East. On 18 November, they arrived in Tehran and by the end of the month, three Soviet transport aircraft had arrived to take the 61 Frenchmen to Gurjev, circumventing the besieged Stalingrad on the way.

Although the unit was declared operational soon after its arrival, it was not until the spring of 1943 that the regiment scored its first aerial victories. Equipped with the excellent Yak-1 fighter, *GC Normandie* gained its premier kills on 5 April 1943 whilst flying from Polotriani-Zavod, southwest of Moscow. The French suffered their first losses just eight days later, however, when three pilots failed to return from an engagement with Fw 190s – three of the latter were claimed destroyed. These first losses hit the French hard. Commandant Maj J Tulasne realised that his unit had to quickly get back into combat and the regiment was duly attached to Maj Goulobov's 18.Gv.IAP, where morale improved as it became more involved in the fighting. In May the unit commenced low-level ground attacks and lost another pilot, but reinforcements arrived soon after – this was just as well as *GC Normandie* was down to only ten pilots.

The regiment was then attached to 303.IAD under the command of Spanish Civil War, Mongolia and Manchuria veteran, Gen Zakharov. Combat continued apace during the Battle for Orel, and from 10-14 July the regiment flew 112 operational sorties from their base at Khatonki,





claiming 17 victories for the loss of 6 pilots, including Maj Tulasne – he was killed when the nine Yak-1s he was leading as escorts for Il-2 *Sturmoviks* were bounced by a force of 30 Fw 190s. Tulasne had been a popular leader, and legend has it that he regularly slept in a log-roofed shelter on the airfield just 20 yards from his aircraft. Maj Tulasne was replaced by Maj P Pouyade.

In August 1943 the regiment transferred to Smolensk in order to participate in the battle to retake Yelnya. During the battle the French groundcrew was transferred back to the Middle East and replaced by over 700 VVS personnel, led by Capt Agavelian. During the fighting over Smolensk nine French pilots lost their lives. In total, *GC Normandie's* first campaign claimed 72 aerial victories for the loss of 23 pilots.

The *Normandie* Fighter Air Regiment became a full fighter *Groupe* with four squadrons of Yak-9s soon after the fighting over Smolensk. During the previous winter, the regiment had received a visit from Free French leader Gen Charles De Gaulle, and with new pilots arriving from the Middle-East and France (the latter discreetly via Spain), the four squadrons with the *Groupe* were christened 'Rouen', 'Le Havre', 'Cherbourg' and 'Caen'.

With the commencement of the great Soviet summer offensive in June 1944, the *Groupe* scored its first combat victories but also suffered its first losses in the Borissov region. On 15 July the regiment was posted forward to Mikountani, in Lithuania, as the Soviet summer offensive pushed the German armies back some 400 kms to the west.

During the move to Lithuania the French pilots had carried their Russian crewchiefs in the fuselages of the Yak-9s, but a double tragedy occurred en route when Lt Maurice de Seynes tried to land his mechanically crippled fighter, rather than bale out, which would have meant certain death for his Russian passenger who was riding in the aircraft tucked in just behind the pilot's seat. The fighter ploughed into the ground during the forced-landing, and the pair were subsequently found dead in the wreckage. De Seyne's unselfish action became legendary along the entire front, tightening the bond between the French pilots and their VVS allies.

With its Cross of Lorraine clearly visible on its tail, this Yak-3 was one of a number used to great effect by the French in the last year of the war. *Normandie-Niemen* pilots greatly preferred the Yak-3 to either the Yak-1 or later Yak-9, and at the end of the war they were permitted to keep their Yak-3s by a grateful Soviet Union. They duly flew them home to France on 21 June 1945





By the end of July the *Groupe* had received the order to move to Alitus on the banks of the river Niemen, where they took delivery of their first Yak-3s, which they quickly discovered were far more manoeuvrable than their battle-weary Yak-1s. During the early days of August the four squadrons were involved in intense combat. They also celebrated the liberation of Paris and received the accolade 'Niemen' by direct order of Stalin – granted in response to the unit's exertions in covering Soviet ground troops crossing the Niemen.

From mid-September ground attack operations tapered off, being replaced instead by *Frie Jagd* (free-hunting) sweeps out of Antonous. After a long spell of frontline flying, the longest-serving pilots within the *Groupe* were offered leave, but mindful of the forthcoming Soviet offensive against Königsberg (the state capital of East Prussia), all French pilots refused to a man to take their leave entitlement.

On 16 October the French-manned unit claimed 29 Luftwaffe aircraft destroyed, and by the end of that week, which had seen bitter fighting both in the air and on the ground, the *Groupe* had been credited with the destruction of 92 machines from 480 sorties – all without any losses! By the time the offensive ground to a halt on 28 October only a handful of Yak-3s remained airworthy. The following month Lt Roland de la Poype became the first of four French fighter pilots to be decorated with the top Soviet military award, the Gold Star of the Hero of the Soviet Union.

Gen de Gaulle made a state visit to Stalin in Moscow at this time, which coincided with the VVS transferring the *Normandie-Niemen Groupe* to the single forward landing ground captured by the Soviet forces on German soil, Gross-Kalweitschen. Blanketed in thick snow, the airfield was

**This superb flightline shot of Normandie-Niemen regiment Yak-3s was taken soon after the unit re-equipped with the new Yakovlev fighter in late July 1944. Note the aircraft above the airfield caught in the throes of a victory roll**



closed to all air traffic which meant that de Gaulle was unable to visit, so the *Groupe* was transferred to Moscow by special train on a journey that lasted two days. They paraded outside the French embassy before de Gaulle firstly decorated Soviet airmen with Free French service medals and then attached the 'Cross of Lorraine' to the *Groupe*'s standard.

The third campaign involving the French unit lasted from January to May 1945, and for the most part saw them flying sorties over East Prussia and along the German Baltic coast. At the end of April, with the war finally over, the unit was ordered to return to Moscow. Once back in the Soviet capital, the *Groupe* was told that they would be allowed to keep their Yak-3s in recognition of their contribution to winning the GP War.

The combat veterans were duly flown back to France in mid-June, finally entering French airspace on the 21st of that month – at 18.16 hours they flew at low-level along the Champs-Élysées. Just 24 minutes later the *Groupe* touched down at le Bourget to be met by the French *Ministre de l'Air* and the Soviet Ambassador to France. They were home!

A total of 95 pilots had flown with the *Normandie-Niemen* regiment, 42 of whom lost their lives in combat, or were posted missing. Overall, the unit's pilots flew 5240 individual operational sorties, and fought with enemy aircraft on 869 occasions, claiming 273 aerial victories as a result.

### OTHER NATIONALS

The Soviet Union saw the political need to recruit foreign nationals and create national air forces which would remain under VVS control throughout the GP War. With a political eye cast over the future map of Europe in the wake of the defeat of Germany, the Soviet Union's recruitment of fervent and patriotic young pilots for the final invasions of Poland, Czechoslovakia, Romania, Hungary and Bulgaria made eminent sense both in the short and potentially longer term.

In July 1944, as the Red Army began its inexorable push towards Poland, fighter and bomber aircrew from the latter country were welcomed into Soviet VVS units in order to fly in combat alongside their Soviet comrades. Soon new Polish-only units were formed by the VVS. By the end of the war, Polish squadrons had flown over 5000 sorties against German occupied territory.

Czechoslovakian pilots also started flying in VVS squadrons in 1944, before being brought together within a Czech fighter air regiment in July of that same year. This was then expanded into the Czech 1st Mixed Air Division, and thrust into the frontline over their homeland. Similarly, Romanian pilots were also formed into a national Air Division by the Soviets. The 1st Romanian Air Corps was attached to the 2nd Ukrainian Front to support the Soviet advance on the Romanian capital of Bucharest and into Transylvania.

In Yugoslavia, Gen Tito's partisans were supported through the establishment of a special VVS unit which included the 236th Fighter Air Division, along with the 10th Guards Ground-Attack Air Division. Prior to the final push to liberate the Balkans from German occupation, the Yugoslavian-manned 1st Fighter Air Regiment was formed. A substantial number of Bulgarian fighter pilots were also recruited in September 1944 to fight with the 17th Air Army, providing support to the 3rd Ukrainian Front's invasion of Bulgaria.



# FIGHTER AIRCRAFT AND THEIR ACES

As detailed earlier in this volume, the VVS was slow to adapt to the demands of aerial warfare during World War 2. The combined legacy of outdated fighter strategy, tactically inferior training opportunities for pilots, aged aircraft and Stalin's purges, which had extinguished the lives of many fine senior air force leaders and designers, placed the Soviet Union at a massive disadvantage firstly against the numerically inferior fighter force of Finland, and subsequently during the early months of the GP War. The road to achievement was tortuous, being shaped by politicians in the Kremlin who were essentially blind to the requirements of modern tactical air fighting.

The decision by the State Defence Committee to the transfer of all war industries beyond the Ural Mountains (way outside the range of German bombers) soon after the commencement of *Barbarossa* was to be the saviour of the embattled VVS. This massive undertaking involved over 10,000 workers, who were not only relocated, but were also forced to endure considerable hardship in their efforts to establish new production sites in record time. By 1942 these factories had begun churning out new fighter types including the Yak-1 and the LaGG-3, rather than the MiG-3, which had not proven to be a success at lower altitudes.

The harsh lessons of 1941/42 were quickly learnt by Soviet military and political leaders alike, and they rapidly turned to their most gifted designers to produce some of the best piston-engined fighters of their generation. By the last years of the war aircraft such as the La-7 and Yak-9 demonstrated the effectiveness of Soviet fighter design, and in the hands of skilled combat veterans, such aircraft proved to be deadly opponents for the Luftwaffe's Bf 109s and Fw 190s.

## BIPLANE FIGHTERS

At the core of Soviet fighter aviation throughout the 1930s and into the first two years of the 1940s was the large fleet of agile, manoeuvrable, but increasingly outclassed, I-15 and I-15bis (I-T52), biplane fighters, designed by the legendary Nikolai N Polikarpov. The ultimate biplane fighter from this design bureau was Aleksei Ya Shcherbakov's I-153. The first production I-153s reached the frontline in the early spring of 1939.

This ex-Republican I-15 'Chato' ('Snub-Nose') survived the civil war to operate with the newly-created Spanish Air Force, who assigned it to Fighter Regiment 32 at San Javier





Four years prior to the that, the Soviets had achieved a major 'first' by introducing the world's first monoplane single-seat fighter into the front-line. The aircraft in question was the portly Polikarpov I-16, which quickly went on to win its 'battle spurs' during fighting both over Spain and Mongolia. When flown by a skilled and experienced pilot, the I-16 could match any fighter encountered over Mongolia in a turning dog-fight, but the former lost out both in terms of outright speed and fire-power to the 'Nate' and the 'Claude', making it increasingly vulnerable to attack.

The same conclusions had been drawn in Spain where, initially at least, Republican I-15 *Chaika* had performed well against Nationalist Heinkel He 51 and Fiat CR.32/.42 biplanes. However, the introduction of Luftwaffe-flown Bf 109Ds as part of the *Condor Legion* caused a rapid re-thinking of Soviet fighter design. The most immediate result of this was the re-equipment of 40 I-15s in 1938 with the improved armament of two 12.7 mm BS machine guns in place of the almost useless quartet of 7.62 mm weapons previously fitted.

Soviet pilots were not only hamstrung by obsolescent aircraft, however, for their combat strategy was also well out of date by the start of *Barbarossa*. Fighter tactics employed by the VVS in the early months of the GP War had initially been formulated as far back as 1932 by the air forces high command, and these were fanatically adhered to until well into 1942. This doctrine basically espoused the need for a twin-pronged fighter force consisting of both monoplanes (I-16s) and biplanes (I-15s, I-152s and -153s), which would together engage enemy formations. The monoplanes, envisaged as high speed attackers, would either meet the enemy aircraft head-on harry them as they tried to escape. In direct contrast, the slower, but far more manoeuvrable, biplane fighters (which also

A handful of the 141 Soviet pilots and 2000 groundcrew posted to Spain in 1936 pose for the camera soon after their arrival. Commander of the air contingent was Yakov Smushkevich, who was to go on and make his reputation during the Civil War. On 28 May 1939 Smushkevich led a group of battle-hardened Spanish war veterans to Khalkin-Gol, and by September, had successfully pushed the Japanese out of the area. Stalin thought that Smushkevich was the ideal leader for the VVS during the so-called Winter War (the invasion of Finland), which commenced on 30 November 1939. However, his force suffered disastrous losses, and in April 1940 Smushkevich was replaced and duly executed on 28 October 1941 – yet another victim of Stalin's insatiable purges





ble time. One of the design bureau (OKBs) established brought together the gifted minds of A L Lavochkin, M I Gudkov and V P Gorbunov in September 1938 to build aircraft under the former's name. The first fighter designed by this team was designated the I-22 (LaGG-1 in VVS service), and a drastically improved version of this (known by Lavochkin as the I-301) led to the development of the LaGG-3.

### LaGG-3

Although ostensibly working for the same bureau, Lavochkin, Gudnov and Gorbunov do not appear to have had an especially cohesive relationship at any point in their careers, and from the autumn of 1940 they were geographically distant from each other. However, each was individually responsible for independently engineering various marks of LaGG-3 between 1941-44.

Although the fighter had commenced series production in January 1941 in four production sites, its principle 'home' was at Gor'ky (now Nizhny Novgorod), where Semyon Alexeyevich Lavochkin was based. The original order issued by the Soviet government in late 1940 was for 805 LaGG-3s to be delivered for operational usage by 1 July 1941, but due to production delays only 322 airframes found their way to the VVS RKKA by the outbreak of the GP War.

Of plastic-impregnated wood (known as *delta drevesina*) construction, and skinned with stressed bakelite plywood, the LaGG-3 was initially powered by a single 1100-hp Klimov M-105P 12 cylinder liquid-cooled engine and armed with three 12.7 mm Berezin UBS machine guns and two 7.62 mm weapons. Early aircraft suffered from amateurish construction techniques which, combined with inherent design deficiencies such as a poor power-to-weight ratio and heavy ailerons and elevators, made the aircraft vulnerable in combat to both the Bf 109 and the Fw 190.

Lavochkin duly incurred Stalin's wrath when initial combat reports returned from the front condemning his new fighter, and it was not until the LaGG-3 airframe was equipped with the 1700 hp Shvetsov M-82 radial engine in late 1942 (the new fighter was designated the La-5) that Stalin began to favour the bureau once again. The problems endured by the VVS with early LaGG-3s stemmed not only from the aircraft itself, but also from the inadequate conversion training syllabus devised by the air force to convert novice pilots onto type. Individuals could expect to receive just 20 hours of operational conversion training for the LaGG-3 in 1941 prior to being posted to an operational regiment. As if this was



LaGG-3 'White 24' (a 66th Series machine) belongs to 9.IAP, VVS, ChF (Black Sea Fleet), who operated around Novorossiysk during the spring of 1944. The 66th Series was the last production version of the type, and it introduced considerable aerodynamic improvements over earlier versions. Further identifying features common to this version were four exhaust stubs and a small antenna mast. A 9.IAP LaGG-3 could usually be distinguished by its yellow-tipped tail fin and white striped propeller blades, as perfectly illustrated by this aircraft



This ex-524.IAP, VVS, LaGG-3 (35th Series) was captured by the Finns after its pilot had made a successful forced-landing on 14 September 1942 near Numoila. Although the fighter was damaged in the crash, the FAF soon had it repaired and repainted as LG-3. The Finns made significant use of captured Soviet aircraft due to their own acute shortage of fighters and bombers, often returning them to action against the Red Army. In fact, Wt Off E Koshinen claimed the destruction of a VVS LaGG-3 whilst at the controls of captured LaGG-3 LG-1 on 16 February 1944



not bad enough, the LaGG-3 was often incorrectly maintained by front-line units, whose groundcrew struggled to come to terms with the temperamental Klimov engine. Indeed, morale was so low within units equipped with the fighter that it was whispered amongst air- and ground-crew alike that the type designation LaGG stood for 'Lakirovany Garantirovanny Grob', which translates into 'Varnished Guaranteed Coffin!'

HSU N Skoromokhov briefly remembered his early encounters with the Bf 109 whilst flying LaGG-3s with 31.IAP:

'Whilst the LaGG-3 had a similar armament to the Bf 109, it was slower, heavier and much less manoeuvrable.'

Despite relatively few LaGG-3s being in VVS service at the time of the German invasion, within a matter of six months the type was being widely used on all operational fronts. Indeed, over the Kalinin Front the LaGG-3 comprised almost half the total Soviet fighter force.

Some heavy losses were suffered by LaGG-3s during 1941, although as pilots gained greater experience with the aircraft so the kill/loss ratios on type improved for the VVS. Better construction techniques also meant that fighters were being produced more rapidly by the New Year, and by mid-1942 an estimated 11.5 per cent of the VVS RKKA fighter force was

comprised of LaGG-3s.

Notable aces who gained their 'battle spurs' with the fighter included double HSU V I Popkov, who was to eventually achieve 41 aerial victories, and Capt G A Grigor'yev of 178.IAP, who downed 15 enemy aircraft with the LaGG-3 during the defence of Moscow in 1941/42. Capt S I Lvov of 3 Gv.IAP, KBF, was awarded the HSU on 24 July 1943, having gained 6 personal and 22 shared kills with the LaGG-3, whilst Capt V P Mironov also became a HSU with 21 personal victories.



Enjoying a brief respite from the near constant combat patrols, VVS pilots queue up for a hot meal served virtually under the nose of a LaGG-3 in mid-1943

## La-5

The improvement made to the LaGG-3 by the introduction of the M-82 radial engine was so great that it quickly won over previously sceptical pilots who had had to endure combat in the 'Lakirovany Garantirovanny





The La-5FN (coded 'White 15') providing the backdrop for this shot was the personal mount of HSU recipient Capt P Ya Likhovetev, who scored 25 personal and 5 group kills during his operational career. The inscription on its fuselage reads 'for Vasyok ('Basil') and Zhora ('George')'. Following in the wake of Pokryshkin's impromptu 'tutorials' with his junior pilots, a senior officer with 159.IAP holds a seminar at an airfield near Leningrad during the summer of 1944

Grob'. Initially dubbed the the LaG-5 or LaGG-3M-82, the La-5 had been tested in operational conditions over Stalingrad by a specially-formed trials regiment in September 1942. Pilots from the unit quickly ascertained that the handling characteristics of the new fighter were considerably better than those associated with the much-maligned LaGG-3, and the aircraft duly became the pick of the mid-war Soviet fighters. Along with the Yak-7B, the La-5FN was largely responsible for instilling in VVS fighter pilots a greater sense of self-confidence.

Some of the key VVS aces of the GP War flew the La-5 to great effect, including the most famous of all Soviet women fighter pilots, Lilya Litvyak of 437.IAP – she later moved on to Yak-1s with 287.IAD. Two HSU recipients, P I Likhovetov, with 25 personal and 5 group kills, and Nikolai Zotov, with 28 and 10 respectively, both flew La-5s with 159.IAP. Ivan Kozhedub, the highest scoring Allied fighter pilot of World War 2 with 62 kills, also flew the La-5 and La-5FN before moving onto La-7s. Another high-scoring La-5FN pilot was double HSU Capt Vitali Popkov, who achieved the bulk of his 41 personal kills and at least 1 unit victory with the La-5.

Although perhaps not the most successful pilot to see combat in the La-5 in terms of aerial victories, Yevgeni Yakovlevich ('Ye Ya') Savitsky, ended up as the most senior within the air force when he was made Marshal of Aviation in 1961. This was quite a rise for a man who had spent his childhood in NKVD orphanages, joined the VVS in his teens and attained the rank of general by the time he was 30. During the GP War Savitsky had flown the I-16, LaGG-3, La-5, Yak-1 and Spitfire, accruing a tally of at least 22 personal and 3 group kills by the end of the conflict. That the La-5F was still an effective fighter right up to the last year of the war was proven by Maj P S Kutakhov of 19 Gv.IAP, who scored many of his 14 individual and 28 shared victories in the type over the Karelian Front in 1944/45.

La-5 'White 66' of 159.IAP is seen in Karelia during the summer of 1944. The inscription on its fuselage both praises the great pre-war aviator Valeri Chkalov and acknowledges that the Lavochkin was donated to the VVS by the Kolkhoz workers of Gorki







A factory-fresh La-7 is seen on display in Moscow in early 1945

### La-7

Basically an aerodynamically refined version of the La-5, the La-7 was first flight tested in late 1943 and then issued for service trials early the following year. By May 1944 it had started to equip VVS fighter regiments, where its top speed of 423 mph, improved climbing performance and greater range made it the favoured mount amongst leading Soviet aces and Guards regiments alike. The fiercely independent Maj Sultan Amet-Khan (a former Hurricane ace who would eventually finish the war with 30 individual and 19 shared kills) used the fighter to great effect, as did Ivan Kozhedub, who shot down his last kill of the war – the Me 262A of 1./KG(J) 54's Unteroffizier Kurt Lange – over Frankfurt-am-Oder whilst flying a La-7.

### MiG-3

As the first fighter successfully to reach frontline service from the now famous Mikoyan-Gurevich design bureau, the MiG-3 was a very demanding machine to fly well in peacetime, let alone in combat. One of those pilots who was thrust into war strapped into a MiG-3 was Aleksandr Pokryshkin, who succinctly described the fighter in the following quote:

'I liked it at once. It could be compared with a frisky, fiery, horse – in experienced hands it was to run like an arrow, but if you lost control you finished up beneath its hooves.'

Pokryshkin's mount on 22 June 1941 was one of the 1289 examples of the type which had been delivered to the VVS by the time of the invasion. Indeed, it was the most prolific of the three new generation fighters at the outbreak of war, and from forming just 10 per cent of the frontline force in mid-1941, this figure had risen to 41.2 per cent by year end.



Essentially a hastily improved MiG-1, the MiG-3 had been the result of design work carried out by former Polikarpov design team members Artem I Mikoyan and Mikhail Y Gurevich at the OKB (Experimental Design Bureau). Whilst Mikoyan and Gurevich were the chief designers, other specialists involved on the project included designers Brunov, Andriyanov and Seletsky, as well as the aerodynamicist Matyuk. Following a January 1939 meeting at the Kremlin (presided over by Stalin) in which new specifications for fighter aircraft were issued, a new OKB was formed to be headed by A I Mikoyan in GAZ No 1 at Vnukovo aerodrome in Moscow.

Initially designated the I-200, prototypes of the MiG-1 were flown by a fleet of test pilots including A N Yekatorov, S P Suprun, P M Stefanovsky and A G Kochetkov – although the former was killed following an engine failure in one of the early MiGs, the remaining test pilots survived the somewhat fraught testing of the MiG-1 to join their colleagues at the Scientific and Research Institute of the Air Force (NII VVS) within the MiG-3-equipped 401. and 402. IAPs. Indeed, Stefan Suprun and Pyotr Stefanovsky would eventually become commanding officers of these regiments, which were directly subordinated to the Soviet Supreme Command (VGK) – Suprun was soon shot down near Tolochino, by Vitebsk, and was replaced as CO by K K Kokkinaki. From 30 June to the end of October 1941, 401.IAP claimed some 54 enemy aircraft shot down with the MiG-3, after which the regiment was disbanded.

The first MiG-3 victory of the GP War was a Dornier Do 215 claimed by Lt D Kokorev on the opening morning of *Barbarossa*, followed shortly after by a Henschel Hs 126 observation aircraft which fell to the guns of Lt Mironov. Later that same day MiG-3 pilot Capt Karmanov claimed three kills over Kishinyev, in Moldavia – all three pilots hailed from the short-lived 401.IAP.

Pyotr Stefanovsky's 402.IAP lasted far longer than Suprun's regiment. In the thick of fighting from early July, initial successes fell to Capt Afanasi Grigor'yevich Proshkov, who shot down a Do 215 in Veliki Luki, and Lt M S Chenosov, who claimed the destruction of a Bf 110 over Nevel.

In mid-July Stepanovsky was withdrawn from 402.IAP and appointed to command the fighter component of the air defence of the Western Sec-

tor of Moscow, which consisted of ten fighter regiments – two of these were based at Tushino aerodrome with MiG-3 fighters. Many legendary VVS pilots 'cut their teeth' in this fighter component, including future NII test pilot Mark Gal-lai, who would later fly the first Me 262 to fall into Soviet hands.

During the defence of Moscow the MiG-3 was also used as a night-fighter. Although no longer led by Stefanovsky, 402.IAP continued to play a significant role in fighter combat both by day and night, and

**MiG-3 pilots applaud a speech on combat tactics given by Aleksandr Pokryshkin, whilst in the background one of their number prepares to go off and put the ace's teachings to the test against the Luftwaffe**







The distinctive shape of a quartet of MiG-3s lined up at dusk. Many VVS fighters were lost in the opening bombing raids of *Barbarossa* because regiments were caught with their aircraft parked in this 'parade ground' fashion

This official Ministry of Information photograph depicts Yak-7Bs of 3.IAK, sporting their winged-star emblems, during the early days of the Battle of the Kuban River in April 1943. The original caption attached to the back of the print reads, 'A long row of warplanes – Gift of the Collective Farmers of the Autonomous Soviet Socialist Republic of Bashkirian to the Red Air Force'

by early August the regiment had been attached to 57.Composite Air Division. As part of this force it took part in operations over Stara Russa and Novgorod, before participating the action over the North-Western Front during the hostile winter of 1941/42. The final days of the MiG-3 era found 402.IAP attacking the enemy bridgehead in the Taman peninsula in early 1942.

With their war-weary mounts now beginning to show serious signs of obsolescence in the face of new Luftwaffe fighters, the regiment relinquished their MiG-3s in the late spring of 1942 and re-equipped with other types. 402.IAP would go on to fight over Magnushev, Stargard and Pila, before finishing the war flying patrols over Berlin with Yak-9s – by which point its pilots had claimed over 800 victories.

It turned out that the somewhat ubiquitous MiG-3 could operate in any of the climatic extremes found in the USSR, from the temperate steppes of south-western Ukraine to the polar 'wasteland' surrounding the strategic port of Murmansk. Although MiG-3s had been finally withdrawn from frontline units by early 1944, the type remained in service until the end of the war with Defence (PVO) fighter regiments.

An aircraft with both capability and vices, the MiG-3 provoked the following comment from Aleksandr Pokryshkin:

'Its designers rarely succeeded in matching both the fighter's flight characteristics with its firepower . . . the operational advantages of the MiG-3 seemed to be overshadowed by its certain defects. However, these advantages could undoubtedly be exploited by a pilot who was able to find them.'

## Yak-3

Developed from the critically important Yak-1, A S Yakovlev's Yak-3 made its debut in frontline service over Kursk just as the former type was being phased out of production following the delivery of the 8721st aircraft. Building on the success of the Yak-1, the -3 would achieve huge popularity amongst Soviet pilots due to its crisp handling, impressive manoeuvrability, high top speed (407 mph at 10,170 ft) and potent armament.

As described earlier in this volume, the Yak-3 was employed to deadly effect by the *Normandie-Niemen Groupe*, whilst Soviet pilots of the calibre of double HSU recipient Maj S D Lugansky (who gained most of his 37 personal and 6 group victories with the Yak-3 over Stalingrad and then





Ukrainian Front) and third-ranking ace Pokryshkin also enjoyed successful spells with the Yakovlev fighter.

As with the La-5, the Yak-3 enabled Soviet pilots to feel confident even in combat against superior numbers, as was graphically demonstrated on 17 July 1944 when a group of just eight Yak-3s flew headlong into a formation of sixty enemy aircraft, including its fighter escort. In the subsequent melee, the Luftwaffe lost three Ju 87s and four Bf 109Gs without reply.

The total production of the Yak-3 numbered some 4848 aircraft by the time the last one left the factory in early 1946.

### Yak-9

Introduced to VVS operations in late 1943, the Yak-9 served as both a frontline fighter and fighter-bomber. With the latter role firmly in mind, Yakovlev designers installed large calibre guns to enable the aircraft to undertake anti-armour, anti-shipping and anti-bomber roles. Designated the Yak-9T (T for 'tyazhely', or 'heavy') series, these variants included aircraft fitted with 23, 37 and 45 mm cannon firing anti-tank projectiles. The more standard Yak-9 was favourably compared by its pilots with both the Bf 109G and the recently arrived Fw 190A-3/A-4 in performance terms. The total production for all Yak-9 variants was around the 16,700 mark, and by mid-1944 this prolifically-constructed aircraft outnumbered



Lt L K Vastolkin of 8.IAP, VVS, ChF, waves to the camera prior to taking-off on a combat sortie in his Yak-1. This regiment operated in the Sevastopol area during the spring of 1942

### Gothscans Ltd

This brightly marked Yak-9, with pilot V T Gugridze in the cockpit, was photographed during the summer of 1944 in Byelorussia. The inscription translates to 'For Brother Shota', whilst the faint writing on the arrow says 'To the West'







Forced landings were commonplace near to the frontline, as pilots found that they could not coax their damaged aircraft back home. This Yak-9 has been put down rather too close for comfort for the residents of the farmhouse in the background. Such an event almost always invited considerable attention from the local populace when the aircraft came down in a residential area

bered the combined total figure of all other Soviet fighters then serving in frontline VVS regiments!

Top Yak aces included Ivan I Kleschchev who, having initially fought in the Khalkin-Gol conflict, was awarded a HSU in May 1942 whilst serving as CO of 521.IAP on the Kalinin front – he scored gained 6 personal and 13 group kills during this time. The following month he was posted to command the newly-formed 434.IAP firstly in Moscow, and then to the west of Stalingrad, where he again saw action in the Yak-1. These were eventually replaced by Yak-7s and then Yak-9s, Kleschchev using these fighters to raise his score to 16 individual and 32 group kills before he was shot down and injured.

Another high-scoring Yakovlev pilot was M D Baranov, who had achieved at least 24 victories with his Yak-1 before he was killed in a flying accident on 17 January 1943. Towards the end of the war Yak-9 pilot L I Sivko of 812.IAP shot down the first Me 262 to fall victim to the VVS on 22 March 1945. He was then in turn targeted by a second Messerschmitt jet fighter and swiftly shot down and killed – possibly by Franz Schall, one of the leading Me 262 jet aces of the war.

## STALIN'S INFLUENCE

Joseph Stalin, as supreme Commander in Chief of the Red Army, oversaw, and to a large extent controlled, the activities of the Stavka (the Supreme Headquarters). He was keenly interested in the conduct of aerial war, and would actively involve himself with senior air force commanders and aircraft designers. For such individuals, Stalin's personal involvement was both intimidating and inhibiting, for all knew of his ruthless and murderous potential, which had been amply demonstrated during the purges of the late 1930s.

Leading fighter aircraft designer Aleksandr Yakovlev felt the full force of Stalin's informed interest and, indeed, judgment during a famous meeting in the latter's office near to the Stavka, within the walls of the Kremlin.

Yakovlev recalled in his postwar memoirs being summoned along with P V Dement'yev, who was then in charge of aviation production, to Stalin's office. Upon their entry into the latter's 'inner sanctum', they were confronted by a piece of cracked Yak-9 wing fabric draped on the table in the office. Following a quietly ominous beginning, Stalin pointed to the fabric and asked them whether they had any knowledge of the problem that had afflicted it. Before they could answer, he read to them a



field report which stated that the wing coverings of the Yak-9 were peeling off due to the stress of combat.

Yakovlev and Dement'yev duly acknowledged that they were aware of the problem, which had arisen because of the employment of inferior glues and dyes in production plants, and that they were presently attempting to find solutions. Stalin fired still more questions, receiving increasingly anxious replies until he finally exploded and accused them of providing support for Hitler by producing aircraft that would break up in operational circumstances. Yakovlev and Dement'yev were mortified by this verbal attack, and genuinely concerned for their physical well-being. Dement'yev promised Stalin that he would correct the problem within two weeks, and luckily for them both he managed to do just that!

## LEND-LEASE AEROPLANES

Aside from the multifarious fighter types of Soviet origin employed by the VVS during the GP War, aircraft from the United States and Great Britain were also supplied in large quantities to the USSR chiefly under lend-lease arrangements. Some 9438 fighters were supplied from the USA mainly via the Alaskan-Siberian Ferry route, the most prolific of these being the Bell P-39 Airacobra, which was flown with great flair and success by Pokryshkin and Rechkalov.

Indeed, fighters accounted for around 72 per cent of all military types supplied. The principal British types were the Spitfire (mostly MK VBs) and the Hurricane, the latter being the first lend-lease aircraft of them all to arrive in the Soviet Union – some 2952

Hawker fighters were eventually despatched to the USSR.

One of the pilots sent to the Soviet Union to help with the transfer of aircraft to the VVS was Eric 'Ginger' Carter, who was then serving as a Hurricane pilot No 81 Sqn. His unit had been seconded to the hastily-formed No 151 Wing, which was based at Vayenga, near Murmansk, upon its arrival in the USSR. He recalled:

'Some 39 of us were sent out by Churchill two weeks after they (the USSR) had "come in on our side". We went out on a luxury liner *Llanstephen Castle*, which had been converted for use as a troop carrier. We assembled as Archangel and were sent up to defend Murmansk, at the entrance to the White Sea. Had the Germans been able to isolate this strategic port, no outside help would have reached Russia from the UK.'

Whilst the majority of No 151 Wing left for Murmansk, a small team remained in Archangel tasked with assembling the 15 crated Hurricanes. They quickly discovered that assembly tool kits had not been provided for the crated Hurricanes – of particular concern were the missing airscrew spanners.

Contact was made with Maj-Gen A A Kuznetsov, Commander of the Northern Fleet Air Force, and he duly ordered that a team of Soviet tech-

**16.Gv.IAP pilots flock around their commander, Aleksandr Pokryshkin, soon after his return from yet another successful sortie. It is possible that this photo was taken during July/August 1944 when Pokryshkin learned that he was to receive the HSU for the third time, thus becoming the first VVS pilot to receive this accolade**





nicians be tasked with constructing improvised tools, many of which were made overnight from drawings on envelopes.

'We primarily engaged Bf 109s during our time in Russia, and we tended to fly in pairs when on escort duties in order to protect the tail of the leader. We shot down 16 enemy aircraft and were paid £240 for this feat by Stalin, which was of course a lot of money in those days – it could have bought two detached houses back then! The CO, Isherwood (Wg Cdr H N G Ramsbottom-Isherwood), wouldn't let us have it, passing it on instead to the RAF Benevolent Fund, as he reasoned we would be shooting each other down in order to get the bounty!

'It would be fair to say that we shot down a lot more than the 16 enemy aircraft both Nos 81 and 134 Sqns were credited with. It was the case that Russian anti-aircraft batteries would put in claims even though they might have been way off course with their shooting. We were instructed not to pursue a claim so that we did not compete with our Russian colleagues, and thus did not offend Stalin, who was, in any case, not keen to publicise our involvement. This was not the case with the Russian pilots who we taught to fly the Hurricane. We seemed to get on well together – we had to!

In practice, whilst both Nos 81 and 134 Sqns escorted Russian bombers on many of the missions undertaken during the early autumn months of 1941, the main task of training VVS pilots fell to the latter unit – therefore, the lion's share of the combat claims made by RAF pilots during this period were filed by No 81 Sqn pilots.

## VVS HURRICANES

The 72nd Regiment of the Russian Naval Air Fleet, Northern Fleet Air Force (72.IAP VVS, SF), was one of the units in northern Russia which fell under the command of Maj-Gen A A Kuznetsov. The 72nd Regiment was picked out as the first unit to be trained to fly the British fighter, and Kuznetsov played an important role in ensuring that the RAF were treated with respect and diplomacy, which duly set the tone for the collaboration between the his personnel and the RAF. The first VVS pilot to



The Ministry of Information caption for this photo reads, 'Shoulder to Shoulder: British Air Technician Freeman trains Soviet pilot V Maksimovich to fly a Hurricane'



The pilot seen posing second from the left in this group photo is Grigori Rechkalov, the second highest scoring Allied ace of World War 2 – his P-39 serves as a suitable backdrop to the shot. Rechkalov flew with Pokryshkin's 16.Gv.IAP, and despite a chequered history in terms of his relationships with senior officers, he proved to be an outstanding combat pilot. He scored 56 personal victories and a further 5 shared during the course of 609 sorties, engaging the enemy on 122 occasions. He was awarded the Gold Star of the HSU on two occasions, the first on 24 May 1943 and the second on 1 July 1944

Kozhedub commenced flying jet-powered fighters in 1948, and by April 1951 he was undertaking operational sorties in MiG-15 fighters over Korea. He went on to become a Colonel-General of Aviation in 1974 and was promoted to air marshal on 7 August 1985 – ten years earlier, Kozhedub's politically fervent memoirs *Vernost'otchizne* (*Faithfulness to the Fatherland*) had been published in Russia. Air Marshal Ivan Kozhedub finally died in August 1991 aged 71.

## GRIGORI RECHKALOV

Just behind Kozhedub in the list of Soviet aces is Grigori Rechkalov, an outstanding fighter pilot who came into conflict with his divisional commander, Aleksandr Pokryshkin. Like Kozhedub, Rechkalov had come into operational flying comparatively late in the war, yet managed to build-up an enormous score.

He had begun his operational career with 216.IAD of the 4.VA on the North Caucasian Front during the Battle over the Kuban in the early summer of 1943, before being transferred to 9.IAD over the 2nd Ukrainian Front. During this time Rechkalov had occasionally flown as wingman to 16.Gv.IAP ace A I Pokryshkin.

Accusations have persisted since the end of the war that Rechkalov was more concerned with building his own score than protecting the interests of the squadron as a whole. His critics cite an episode in May 1944 when Rechkalov was commander of 16.Gv.IAP. With his regiment in action over Prut, he was reported for having failed to provide his pilots with leadership, being more interested in pursuing his personal battle with the Luftwaffe instead. Upon the unit's return to base, it was discovered that three of Rechkalov's pilots had been shot down, and a furious Pokryshkin went directly to the corps commander, Gen Utin, to lodge an official complaint. Having secured the latter's backing, Pokryshkin then dis-







This unusual shot of the much photographed Aleksandr Pokryshkin shows him at the wheel of a lend-lease Willys Jeep. It appears that he had driven out to inspect the smouldering remains of one of his 59 aerial victories, which can be seen in the background

missed Rechkalov from his post as CO of 16.Gv.IAP, replacing him with another well-known ace, Boris Glinka.

Despite his apparent failings as a leader, Grigori Rechkalov was nevertheless both a superb aerial shot and an extremely skilled pilot of the P-39Q Airacobra, and by war's end his total had reached 61 combat victories – 56 personal and 5 group – from the 122 air battles in which he fought. Rechkalov was awarded the HSU on two occasions. In postwar years, he graduated from the Air Forces Academy in 1951 and by 1959 had become a Major-General of Aviation.

### — ALEKSANDR IVANOVICH POKRYSHKIN —

Aleksandr Ivanovich Pokryshkin, is possibly the Soviet fighter pilot most easily recognised. Something of an enigma, he was a highly intelligent and outstanding fighter pilot, possessing a brilliant mind for tactics and astute leadership qualities. Pokryshkin was both loyal and outspoken, attributes which won him great respect from fellow pilots and the Soviet public at large, but enmity from political leaders, including Joseph Stalin.

Born on 6 March 1913 in Novonikolaevsk (now Novosibirsk), Pokryshkin joined the Soviet Army in 1932. The following year he graduated from the Perm Air School for aviation technicians and, after a spell as a mechanic, a chance meeting with the great Soviet fighter pilot Suprun led to his attendance for flying training – Pokryshkin duly graduated from Kacha Air Force Pilots' School in 1939. During an operational career which saw him complete over 600 sorties, Pokryshkin took part in 156 air battles and was credited with 59 personal victories, although Ivanov Sultanov's (1993) Soviet-based account of VVS air aces credits him with 6 group kills in his final tally.



Pokryshkin's first operational mount was the MiG-3, and he later went on to fly lend-lease P-39 Airacobras with conspicuous success during the air war over the Kuban in 1943. His first taste of action was on the opening day of Operation *Barbarossa*, and he continued to serve throughout the GP War firstly as a deputy squadron leader, then squadron leader, assistant commander and eventually as commander of the 16.Gv.IAP. In May 1944 Pokryshkin was appointed to command 9.Gv.IAD, and he led the regiment in the massive air battles that became a feature of the fighting over both the Southern and Northern Caucasus Fronts, as well as on the 1st, 2nd, and 4th Ukrainian Fronts.

In 1948 'Sasha' Pokryshkin graduated from the Frunze Military Academy, followed some nine years later by a successful passing out from the General Staff Academy, whereupon he occupied several positions in the PVO (Air Defence Command). He went on to fill the position of Deputy Commander in Chief of the National Air Defence Forces in the late 1960s, and in 1972 he was promoted to air marshal rank. In November 1981 Pokryshkin finally 'retired' from the frontline force to become an inspector advisor attached to the Ministry of Defence General Inspectorate. Four years later, following a long illness, he passed away.

### — BORIS FROKTISTOVICH SAFONOV —

The first great Soviet fighter ace of the GP War was Boris Froktistovich Safonov, who later became the sole VVS fighter pilot to have a regiment named after him – an honour usually only afforded to great Soviet political leaders. The unit in question was 2.Gv.IAP, which had been Safonov's final command prior to his death in action on 30 May 1942.

Boris Safonov is of particular interest to enthusiasts of RAF history, for he was one of the key Soviet pilots to liaise with British personnel during the handover of the first Hurricanes to the VVS during the early autumn of 1941. He had joined the Soviet air force at the age of 18 in 1933, and following the completion of his *ab initio* flying training, he enrolled in the Kacha military flying training school. By June 1941 Safonov had risen to become a squadron commander in the I-16-equipped 72.SmAP (Composite Aviation Regiment).

During the autumn of 1941 the first of almost 3000 lend-lease Hurricanes were delivered to the VVS by the RAF's 151 Wing. Capt Safonov was duly chosen as one of four senior VVS Northern Fleet pilots to be taught to fly the Hurricane by RAF personnel at the aerodrome of Vayenga, near Murmansk. Remembered by surviving RAF pilots as a high profile figure, Safonov played a significant role in instructing Soviet pilots as they prepared for their first flights in the Hurricane. Having completed his spell as an instructor, Safonov returned to action early in 1942 as the commander of one of the very first Guards fighter regiments.

Even on his last sortie Safonov continued to add to his score, his squadronmates stating that he had destroyed three Ju 88s from I./KG 30 prior to his P-40 being hit by return fire from one of the Junkers bombers, forcing the VVS ace to ditch into the sea. Safonov, who had scored around 25 personal and 14 group kills, was never seen again. He subsequently became the first double HSU of the GP War, his second award being announced just two weeks after his death.

This posed portrait of Maj Boris Safonov of 2.Gv.IAP VVS,SF, sees him climbing out of the cockpit of a P-40 not long before he was killed in action. It was taken sometime after he had helped liaise with the RAF's No 151 Wing in the autumn of 1941, during which time he had become only the second VVS pilot to covert onto Hurricanes. A double HSU winner, Safonov was the first great Soviet fighter ace of the GP War, achieving around 25 personal kills before being killed in a P-40 on 30 May 1942





# APPENDICES

## VVS ORGANISATIONAL STRUCTURE DURING THE GP WAR

From 1941, a Fighter Regiment (IAP) comprised three squadrons, which provided it with a nominal strength of 40 aircraft. Each squadron was divided into flights, or 'zveno' – during the early days following Operation *Barbarossa*, 'zveno' referred to tight, defensive, formations of three or four aircraft. A Fighter Aviation Division (IAD) consisted of three fighter regiments, giving a nominal strength of 120 aircraft, plus a further 4 replacement airframes.

Until May 1942 an Aviation Army Corp (IAK) comprised two or three Aviation Divisions of between 250-375 fighter aircraft in total. However, following Gen Aleksandr Novikov's direct influence, this changed from May 1942 with the formation of independent Air Armies (VAs) in place of the Aviation Army Corps, and these were comprised of five or more Fighter Aviation Divisions. Direction of the VAs was usually subordinated to the Front commanders, and by 1944 an Air Army could consist of well over

1000 aircraft, including fighter, bomber, ground attack and reconnaissance divisions. Seventeen separate VAs were formed during the course of the war, and these included fighter divisions.

Additionally, in early 1942 some 40 fighter regiments were allocated to air defence duties, and these came to form a new air arm – the IA PVO. By 1945 almost 100 fighter regiments were performing air defence duties, and these subsequently proved to be the antecedent of the Soviet fighter force in the Cold War.

Aside from the VVS, the Naval Air Forces also contributed to the victory in the east. An independent air arm since 1938, its forces were divided into four distinct air forces under the command of Lt Gen S F Zhavoronkov during the GP War. They were the Red Banner Baltic Fleet (VVS, KBF), the Northern Fleet (VVS, SF), the Black Sea Fleet (VVS, ChF) and the Pacific Fleet (VVS, TOF).

### Lists of VVS Fighter Aces

As alluded to in chapter four, there are numerous inconsistencies in the lists of Soviet fighter aces produced during the postwar years. The most tables have been compiled by Sultanov (1993), Geust, Keskinen and Stenman (1993), von Hardesty (1982) and, most recently, Michleluc (1995). The

top dozen pilots from each list are presented here for comparison – note that the total number of enemy aircraft destroyed as ascribed to each pilot includes both his personal and group victories.

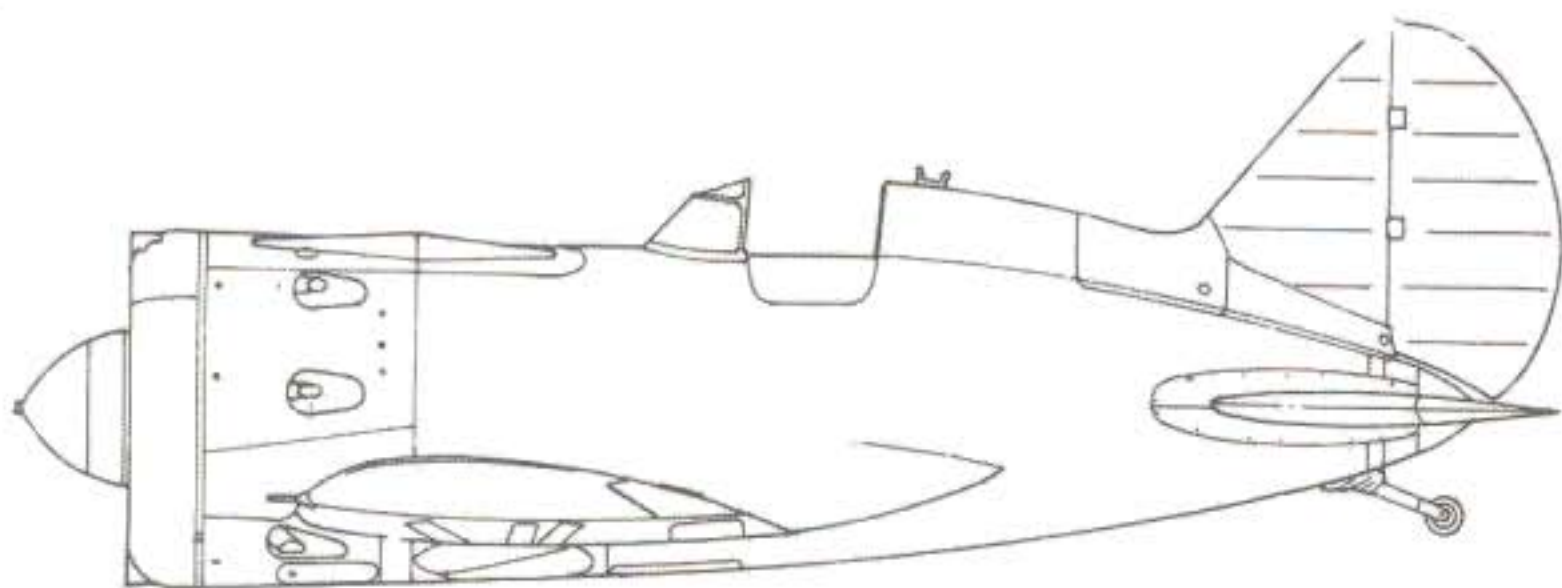
	von Hardesty		Geust et al		Sultanov		Michulec	
	P	G	P	G	P	G	P	G
Kozhedub	62	0	62	0	62	0	62	0
Rechkalov	58	0	56	5	61	0	56	5
Pokryshkin	59	0	59	0	53	6	59	0
Gulayev	53	0	57	4	53	4	57	0
Yevstigneyev	52	0	53	3	53	3	53	3
Shutt	Not listed		Not listed		55	0	Not listed	
Glinka D B	50	0	50	0	50	0	50	0
Skomorokhov	Not listed	46	8	46	8	46	8	Not listed
Alelykhin	?	40	17	40	17	58	0	Not listed
Koldunov	Not listed	46	0	46	0	46	1	Not listed
Serov	Not listed	47	0	29	12	47	0	Not listed

**Key**  
P – Personal e/a destroyed  
G – Group, shared destruction of e/a

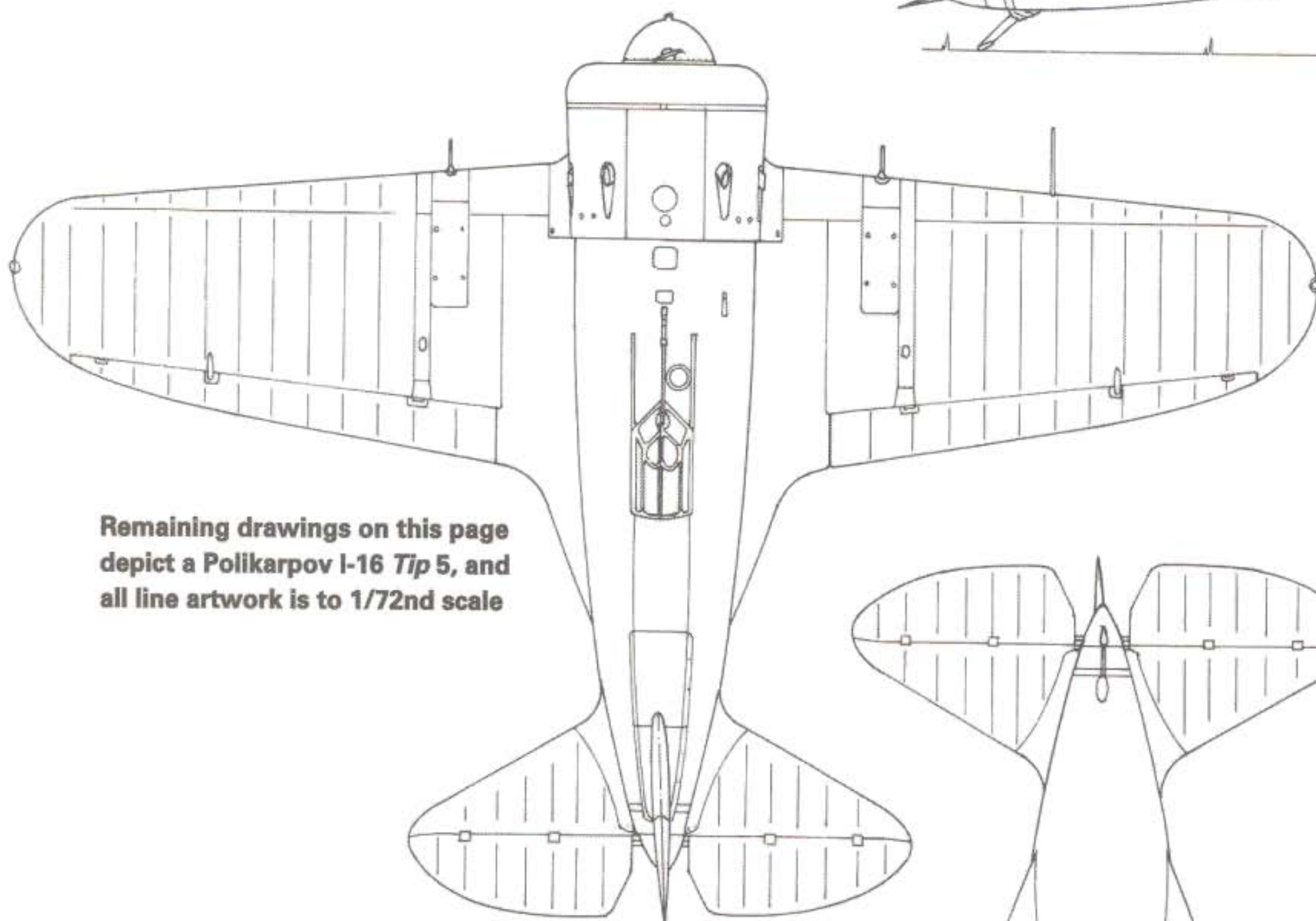
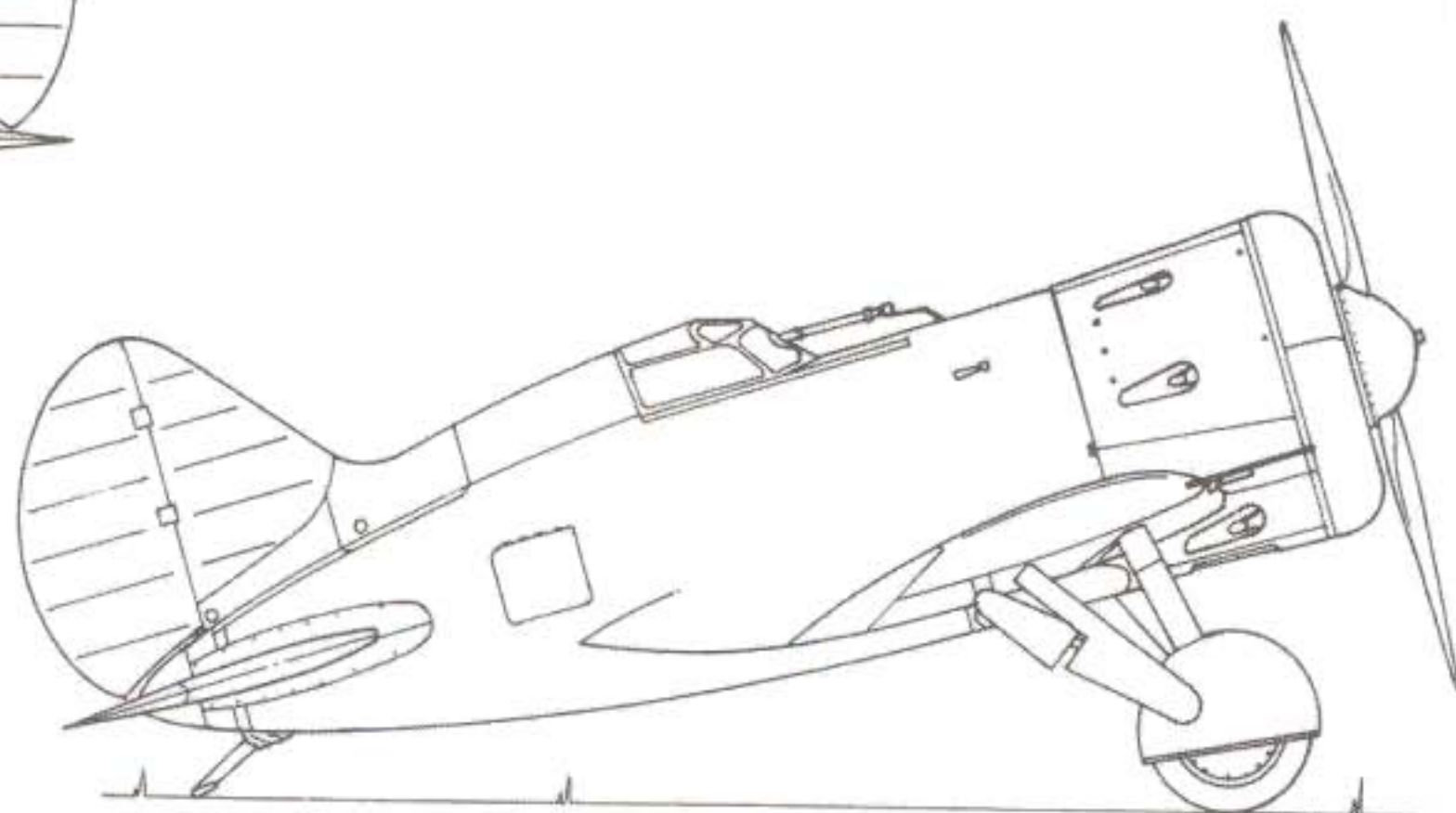
Michulec states that at least 310 Soviet pilots are accredited with 10 or more combat 'kills'. Sultanov concludes that there were 175 pilots with 25 or more combat victories,

plus a further 140 that achieved 20-24 combat kills. It is reasonable to anticipate even larger numbers of pilots falling in the 10-19 combat victories category.

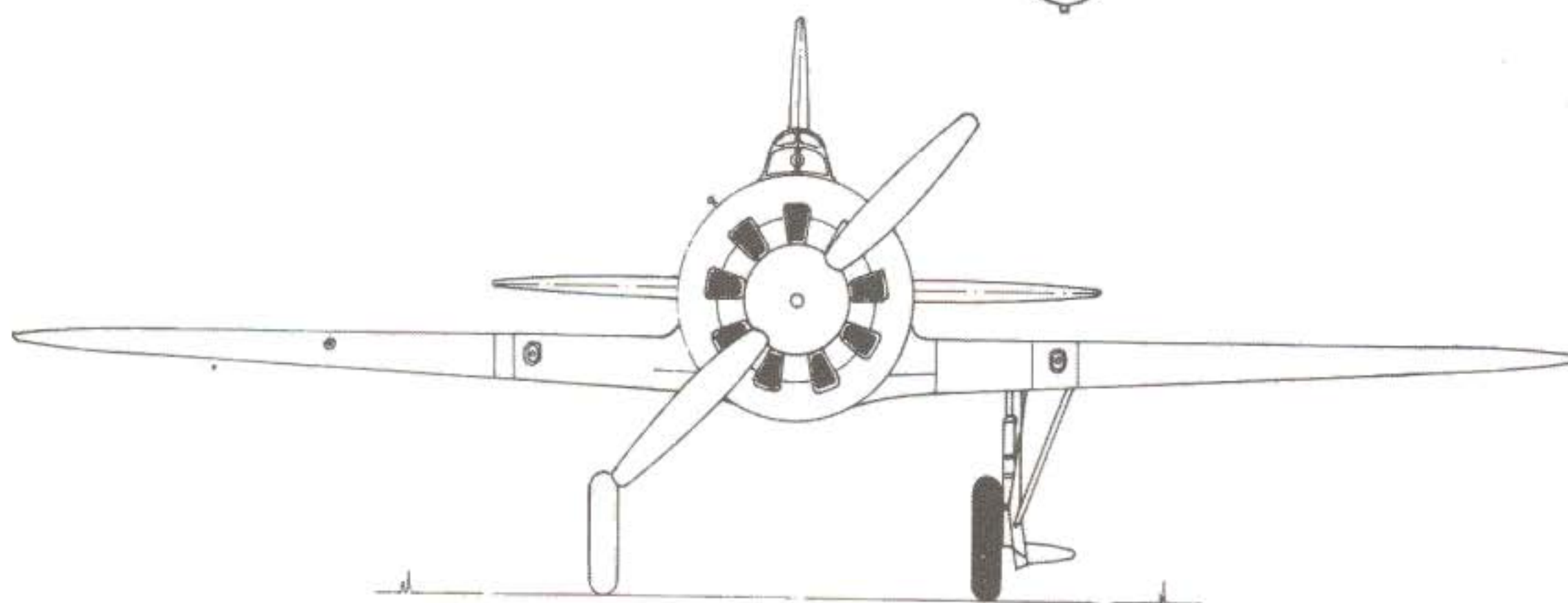
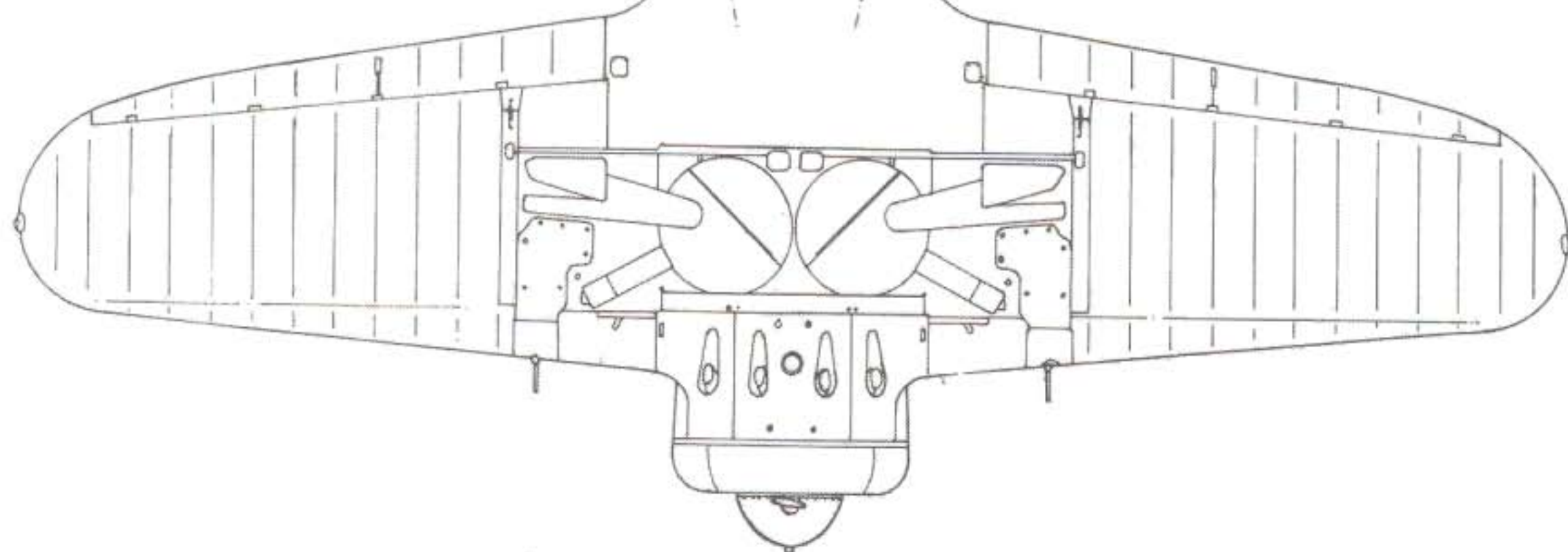
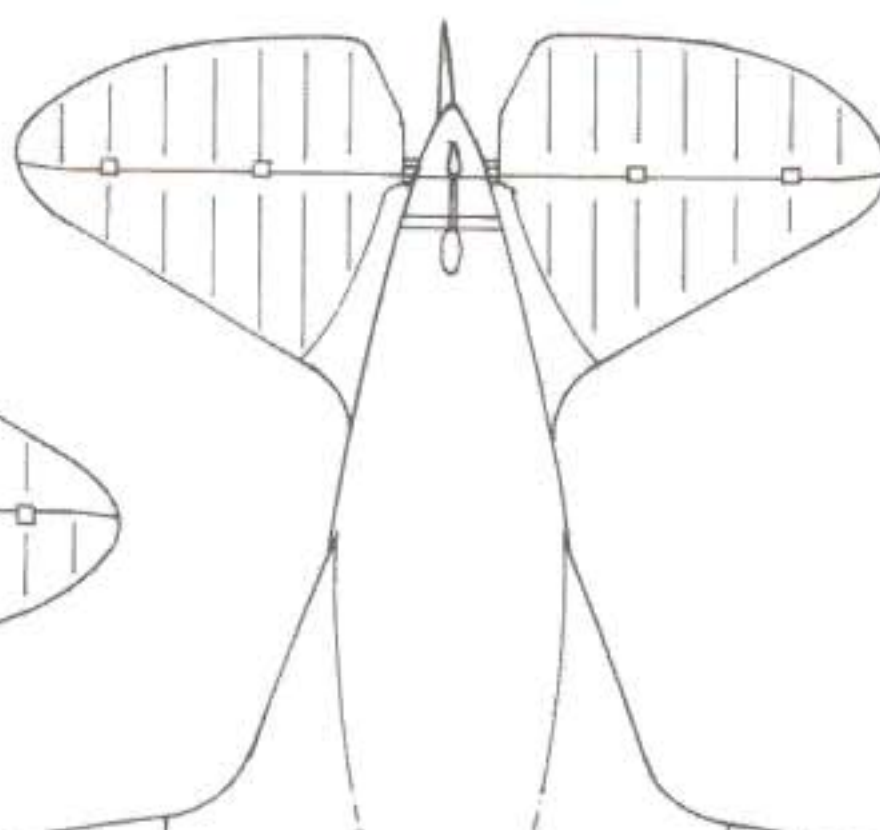




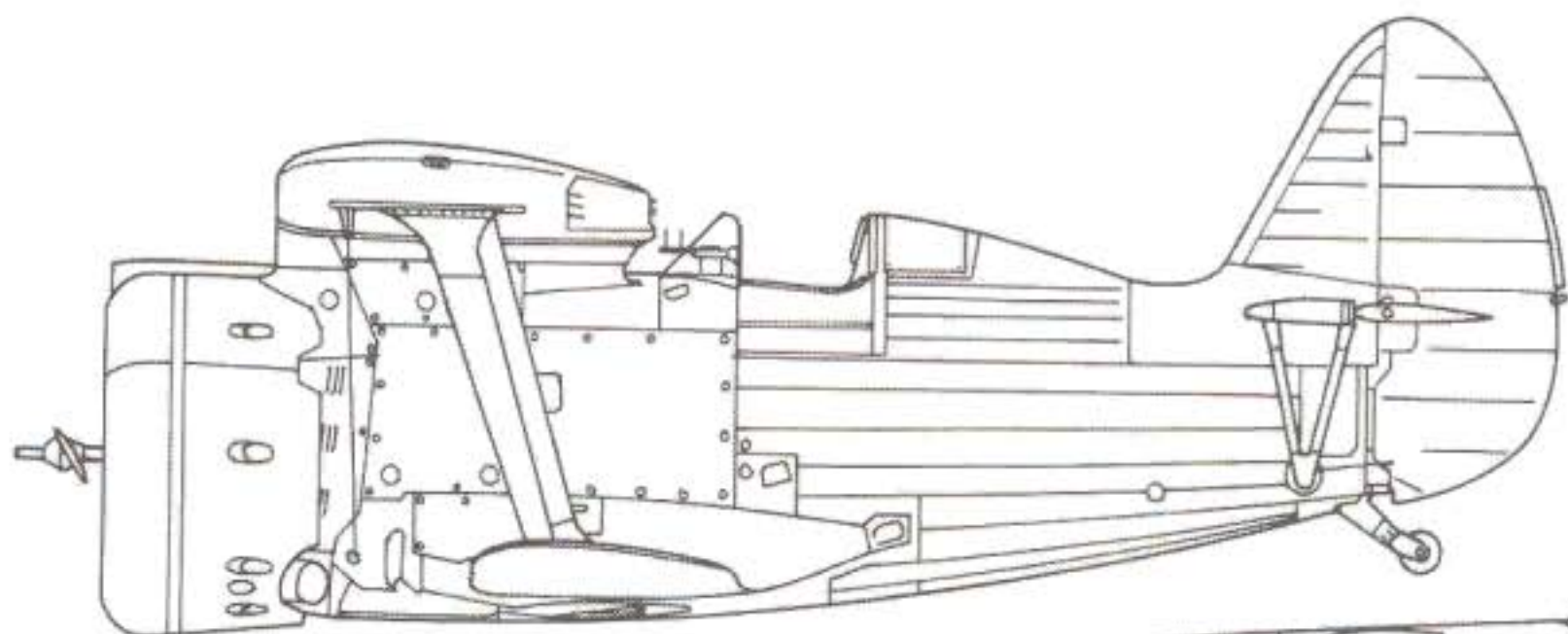
**Polikarpov I-16 *Tip 24***



**Remaining drawings on this page  
depict a Polikarpov I-16 *Tip 5*, and  
all line artwork is to 1/72nd scale**

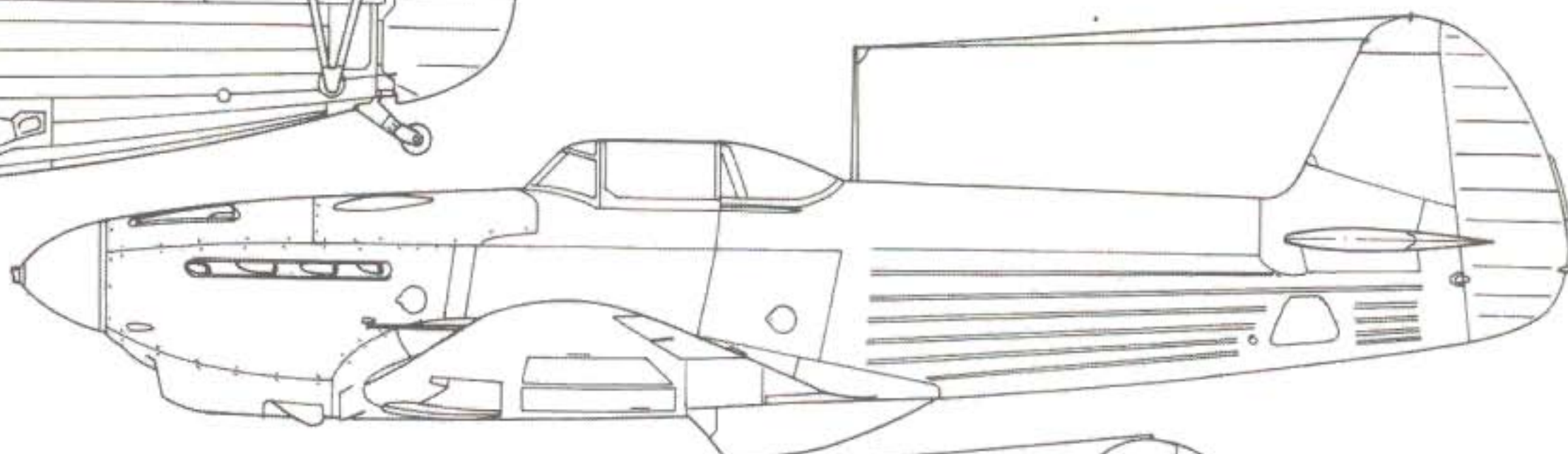




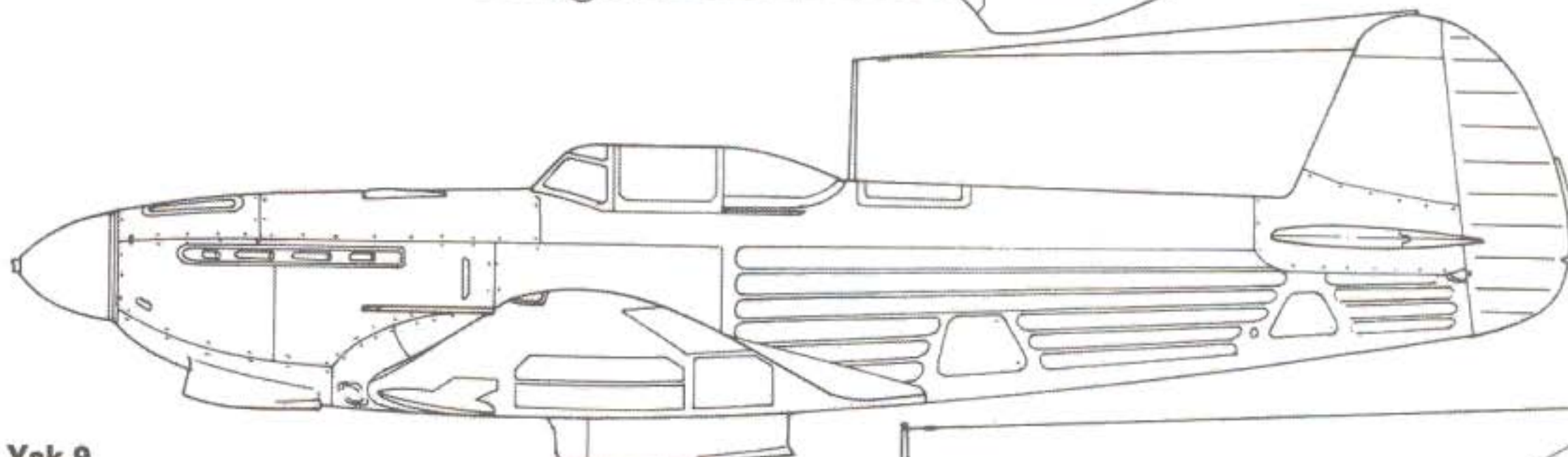


**Polikarpov I-153**

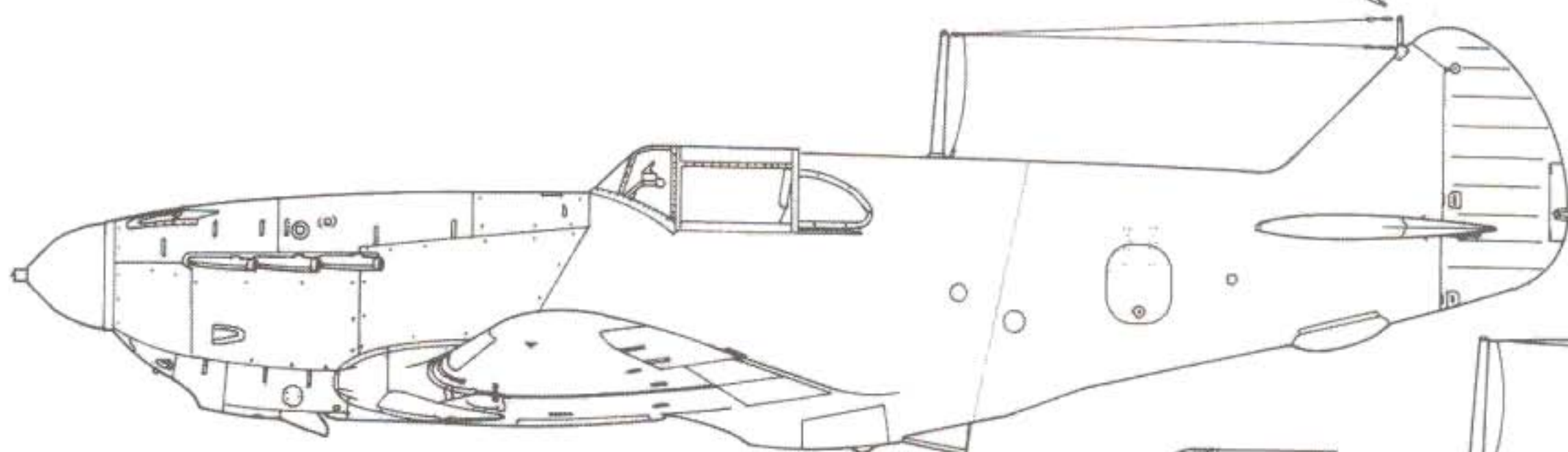
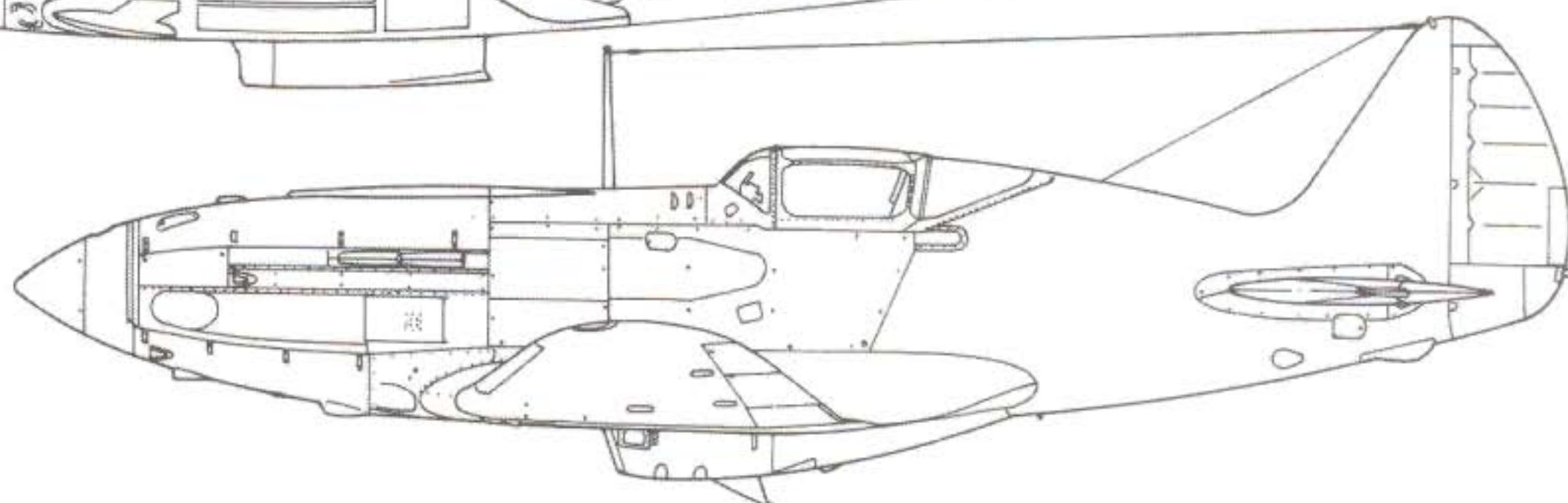
**Yakovlev Yak-1M**



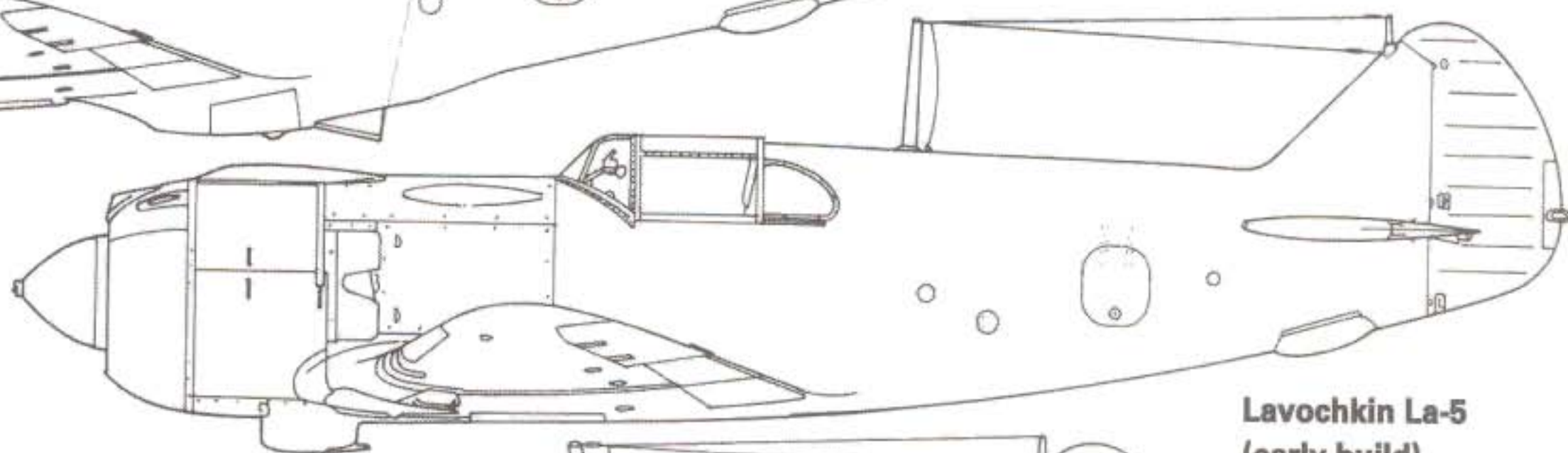
**Yakovlev Yak-9**



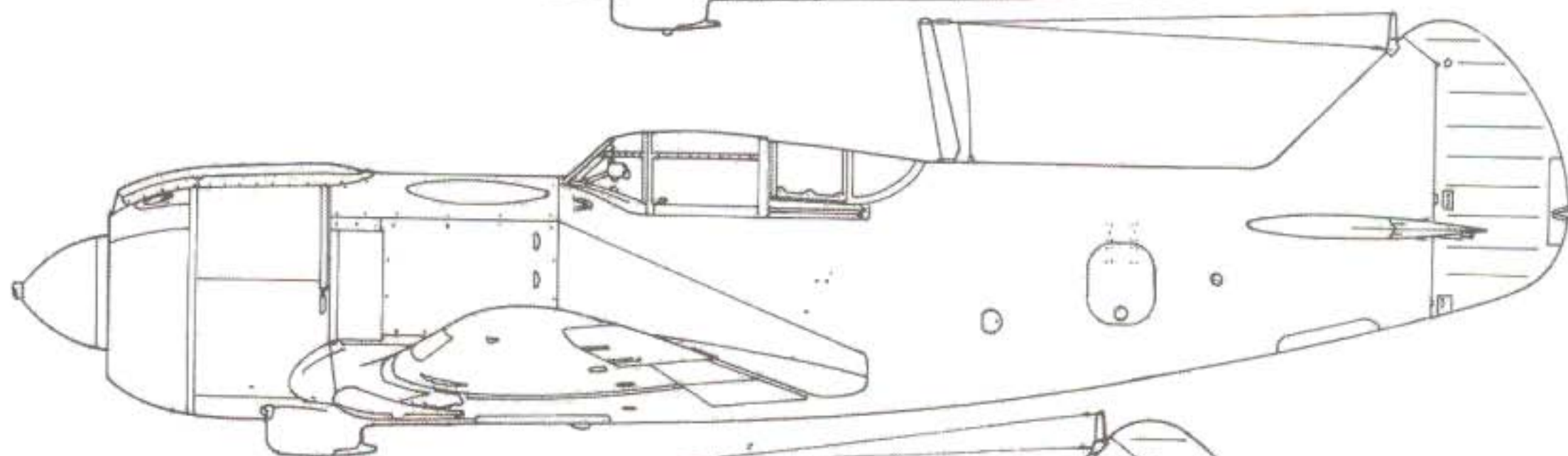
**Mikoyan-Gurevich MiG-3**



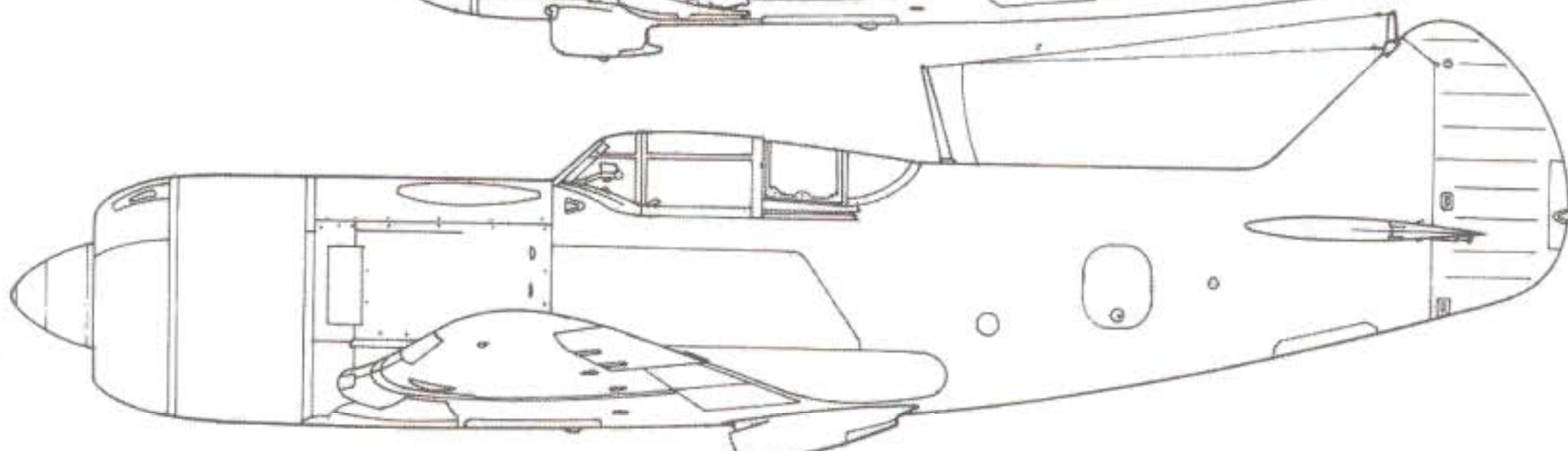
**Lavochkin LaGG-3**



**Lavochkin La-5  
(early build)**



**Lavochkin La-5FN**



**Lavochkin La-7**





No single volume in English has ever appeared in the West dealing with this intriguing subject area, but now that restrictions have relaxed in the former Soviet Union, records of the deeds of the elite pilots of the various Soviet Air Forces are coming to light. Although initially equipped with very poor aircraft, and robbed of effective leadership thanks as much to Stalin's purges in the late 1930s as to the efforts of the Luftwaffe, Soviet fighter pilots soon turned the tables through the

use of both lend-lease aircraft like the Hurricane, Spitfire, P-39 and P-40, and home-grown machines like the MiG-3, LaGG-3/5, Lavochkin La-5/7/9 and the Yak-1/3. Indeed, the later Yaks and Lavochkins were easily superior to the Bf 109 and Fw 190 at low-level – the favoured 'killing field' of pilots like Ivan Khozedub and Alexander Pokryshkin, both of whom finished with higher scores than the leading pilots in the West.



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