

Yakovlev
Yak-9**FlyPast**

Scrutinizes the history of...

The Yakovlev

Yak-9

Above
A squadron line-up
of Yakovlev Yak-9Ds
during World War
Two.

The Yak-9 was the ultimate single-seat fighter to emerge from the Yakovlev stable during World War Two. It was a lighter development of the Yak-7, which it closely resembled.

The Russian manufacturer's first fighter of the war was the Yak-1, and several others were derived from this, notably the -3 and the -7. The first of the Yak 'breed' was introduced in 1940, and the basic design was constantly upgraded and modified. Soviet naming conventions tend to give the impression that the 'family' of Yak fighters comprised entirely different aircraft, whereas they were essentially all the same design. The development between the Yak-1 and -9 is broadly comparable to that of the Messerschmitt Bf 109, from early marks to its ultimate incarnations.

Over 37,000 Yak fighters were built, but the most numerous single type was the Yak-9 with over 16,750 produced. Developed from the Yak-7DI prototype of early 1942, the Klimov-powered Yak-9 was faster and more nimble than any of its predecessors. The experience of taking on the Luftwaffe in skies over Russia led to several modifications to the new aircraft, notably an

increased fuel capacity and cut-down rear fuselage decking to give a better field of view from the cockpit. The -9 was also the first of the Yak fighters to feature a metal wing spar, all previous marks being fitted with wooden versions.

Family ties

The Yak-1 flew for the first time on January 13, 1940, and with World War Two already under way, it was rushed, perhaps prematurely, into production. The Yak-3 had a reduced wing span and a more powerful engine, making it a useful interceptor, but did not enter service until mid-1944. The Yak-7B was used extensively as a ground attack and low-level fighter in 1942 and 1943, but was quickly superseded by the Yak-9. The first of these flew in the summer of 1942, and fighter units began to receive production models in October of that year.

The -9 was therefore available in time for the crucial Battle of Stalingrad, which officially began in August 1942 and ended the following February. Although less well armed than the countering Bf 109s, the Yaks were extremely agile at low level and faster than their foes. They also proved versatile,

giving the Russian defenders many options – they performed well not only as fighters but in the anti-tank, light bomber and escort roles. Quickly getting to grips with the new machines, because they were broadly similar to the ones they had replaced, many Soviet pilots began to excel at dog-fighting, realising they could equal or better the performance of the Bf 109Gs and Focke-Wulf Fw 190As they frequently encountered.

Upgrades

The first of the Yak-9s were powered by versions of Klimov's M-105PF engine. Like their forerunners, they were rapidly modified – the Yak-9D model having extra fuel capacity, and with the -9DD able to take yet more fuel for long-range escort duties. Other variants included the -9B, a fighter-bomber with vertical tubes for four bombs behind the cockpit, the -9MPVO night-fighter, and the -9K which was a 'tank-buster' fitted with a 45mm cannon.

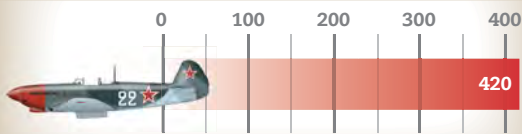
Later versions had the powerful M-107A engine, although problems with the unit's development meant the resulting Yak-9U did not enter service until the second half of 1944. It also featured a redesigned airframe

SPOT FACT Some were optimised for anti-
shipping, equipped with a 37mm cannon

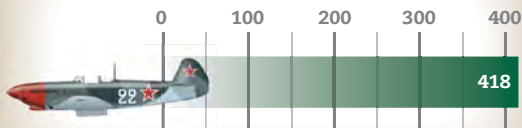
Origin & history

Yakovlev Yak-9U

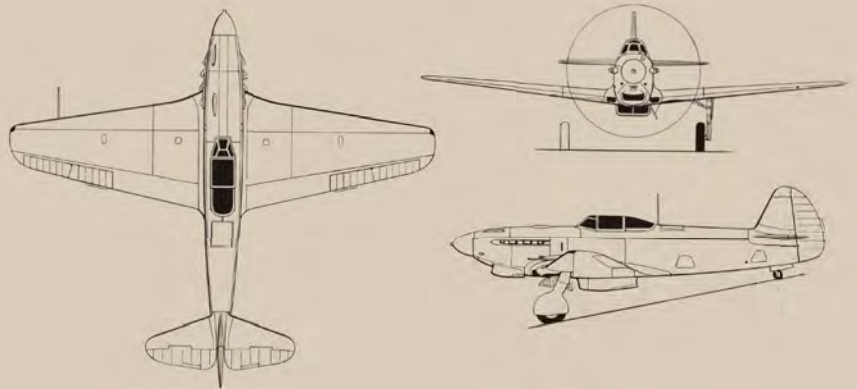
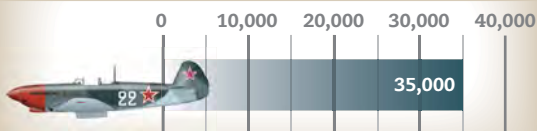
AT A GLANCE: RANGE (miles)



AT A GLANCE: SPEED (mph)



AT A GLANCE: CEILING (feet)



- Construction:** A total of 16,769 of all models were built, including around 3,900 Yak-9P/Us.
- Powerplant:** One 1,500hp (1,120kW) Klimov VK-107A V-12 liquid-cooled piston engine driving a three-bladed propeller.
- Dimension:** Span 31ft 11in (9.74m). Length 28ft 0in. Height 9ft 10in. Wing area 185sq ft (17.2sq m).
- Weight:** Empty 5,526lb (2,512kg). Loaded 7,049lb.
- Performance:** Max speed 418mph (672km/h) at 18,700ft (5,700m). Service ceiling 35,000ft. Max range 420 miles (675km). Some variants increased range to 746 miles.
- Armament:** Two 12.7mm UBS machine guns and one 20mm ShVAK cannon. Some had provision for 440lb (200kg) bomb load or extra cannon.
- Crew:** One.

Note: performance and weights varied according to role and configuration.

and further replacement of wooden components with metal.

The first unit to use the -9U was 163 IAP. Flying a total of 398 sorties between October 25 and December 25, 1944, its pilots claimed 27 enemy fighters shot down, with

just two losses. Under increasing pressure after the disastrous defeat at Stalingrad, German pilots frequently tried to avoid combat with the Yaks.

Production of the second generation of Yak-9s continued until 1948, and included the -9UV, a

tandem trainer. After the war, many were supplied to other communist nations, including China, Poland, Bulgaria and North Korea. The latter was still operating its Yaks in the opening stages of the Korean War in June 1950. ●

Below
This Yak-9PD was one of five prototypes built for high-altitude interception - 69 evaluation flights were carried out. BOTH VIA ALEXANDER MEDVED



4,528 ft per minute was the Yak-9U's initial rate of climb



Spotlight

Yakovlev Yak-9



Spitt

Aleksander Medved profiles Hero o

Top
The 728th Fighter Air Regiment began to receive up-to-date Yak-7Bs in March 1943.

Above
Squadron commander Capt Arseny Vorozheikin in 1941.

Right
Vorozheikin first flew the Polikarpov I-16, armed with two ShVAK cannons in combat.

One of the most famous Soviet aces, Arseny Vasilyevich Vorozheikin, was the most successful exponent of the Yakovlev fighter 'family'. His first taste of combat was not, as might be expected, against the invading Germans, but in the skies over Mongolia, fighting the Japanese. Hostilities between Imperial Japan and the USSR began in 1939 near the Khalkhyn Gol River (in English, Khalkha River) in Mongolia. Soviet high command sent several military units to bolster local forces, among them a squadron of Polikarpov I-16 'cannon fighters' that included Vorozheikin among its pilots.

On June 22, 1939, his unit was flying in close formation when it encountered a large group of Japanese aircraft. Vorozheikin attempted to attack the enemy from behind, manoeuvred to and fro, fired cannons

and machine guns, but with no success.

Remembering his first combat, he wrote: "In a swimming pool, a person who is diving for the first time closes his eyes reflexively. He can see nothing; his perception is limited to feeling. This is also true for a pilot during his first battle. He feels and grasps only the things he contacts with directly; but he does not go deeper, and has no idea of the overall situation."

In a later dogfight Vorozheikin was severely injured. His damaged fighter nosed-over during an emergency landing and he suffered a spinal injury and head wounds. Having recuperated he found he'd been declared unfit for flight. Returning to his unit, he managed to 'lose' this decommissioning certificate, and reported to his commander that he was ready for

duty. A week later he was flying again.

During the battle of Khalkhyn Gol, Vorozheikin flew more than 100 sorties in I-16s, taking part in 30 aerial combats – personally shooting down six enemy aircraft – and was awarded the Order of the Red Banner.

Between November 1939 and March 1940 the USSR invaded Finland and what became known as the Winter War broke out: Vorozheikin was involved in his second conflict.

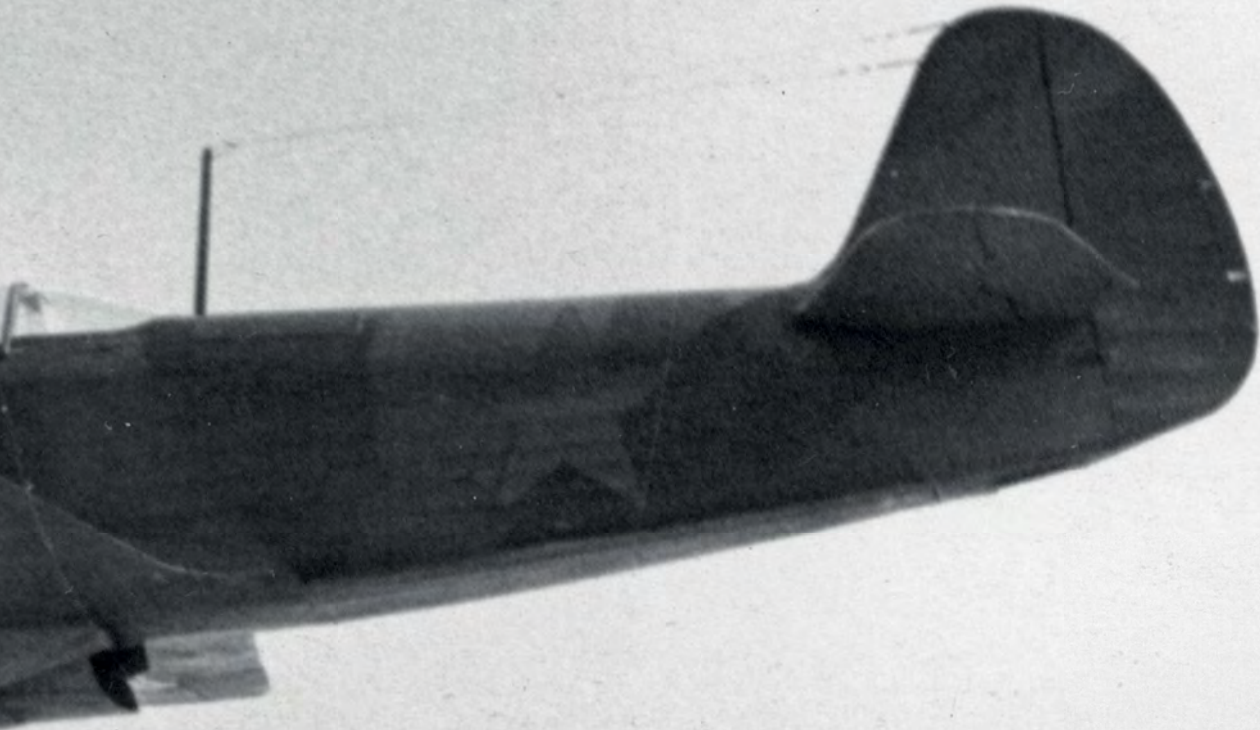
After a course at the Air Force Academy, the 28-year-old was appointed as a squadron leader in a fighter regiment based in Armenia during March 1941.

Third war

When Hitler unleashed Operation Barbarossa and invaded the Soviet Union on June 22, 1941, what the

SPOT FACT The type was introduced in October 1942

Men Behind the Yak-9



ing Fire

f the Soviet Union Arseny

Vorozheikin – master of the Yak-9



120 rounds could be fired through the hollow propeller shaft

SPOT FACT The Yak-9 had an all-round vision canopy and a lighter airframe than its predecessors

Right
As with many other Soviet fighter pilots, Vorozheikin preferred not to close the cockpit canopy on a combat mission.

Russians called the Great Patriotic War began. Vorozheikin's regiment was redeployed to the frontline – his third war in two years.

In the very first days, his unit encountered a group of nine Soviet Ilyushin DB-3 bombers and

Yak-9T's sting

In February 1944, the 728th Fighter Air Regiment received Yak-9Ts armed with a 37mm NS-37 cannon firing through the propeller spinner. The ammunition was wrapped around the cannon. This armament was supplemented with a pair of 12.7mm UBS synchronised machine guns.

Right
Capt Arseny Vorozheikin with a red-nosed Yak-9 in the autumn of 1943.



attacked them by mistake. The rearmost DB-3 was riddled with fire and several airmen were killed. Both squadron leaders, bomber and fighter unit alike, were demoted to lower ranks, removed from their posts and sent to the Air Force Academy for further training.

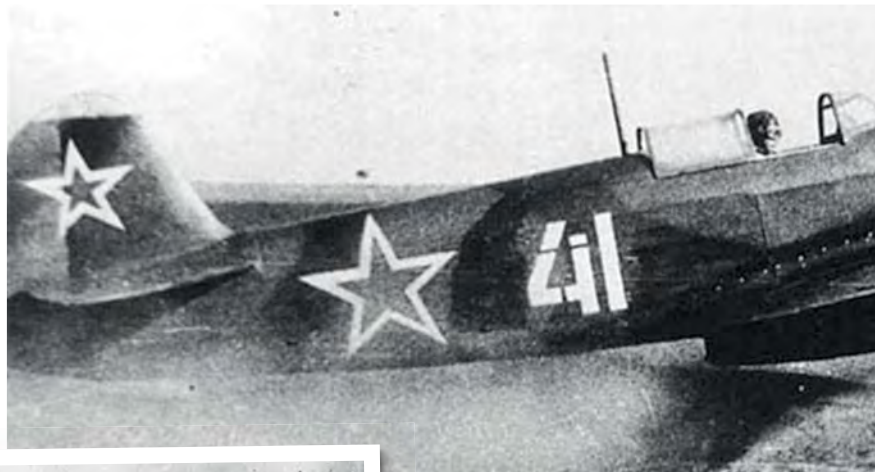
Returning to operations in the autumn of 1942, Vorozheikin was posted to the I-16-equipped 728th Fighter Regiment on the Kalinin Front. Nearly 100mph (160km/h) slower than a Messerschmitt Bf 109, the only way for the obsolete I-16s to protect themselves was to form a circle, each aircraft covering the tail of the one in front.

Vorozheikin described this tactic as follows: "Our circle resembled a rotating circular saw, with no possibility for anybody to get inside. Aircraft changed their positions and stretched out the formation to the required direction, squirting out machine gun fire and shells

"The Messerschmitts, like pikes, rushed about at extremely high speeds right at hand, but rebounded after a contact with the saw's teeth."

Rising score

In January 1943 the 728th was withdrawn from the front to convert



to Yak-7Bs – a much more modern fighter with a centrally mounted 20mm ShVAK cannon and two 1.7mm UBS machine guns. Low down and at medium altitudes it was slightly inferior to comparable Bf 109s but was very manoeuvrable and easily controllable. Flown by an experienced pilot the Yak-7B could successfully engage Bf 109G-6s and Fw 190A-4s.

By July 1943 the 728th was fighting at the Kursk salient, battling for the very life of the USSR. By then Vorozheikin had again become a squadron leader – with a reputation for considerable flying skills and accurate gunnery.

At the beginning of Operation Citadel, the German high command concentrated up to 70% of its Eastern Front aviation assets near Orel, Belgorod and Kharkov to break Soviet resistance. The 728th entered the intense combat on July 10.

Within four days Vorozheikin had destroyed two Junkers Ju 87D dive-bombers, a Bf 109G and, shared with his wingman, a Henschel Hs 126 short-range reconnaissance aircraft. The day ended with his Yak-7B damaged, and he managed a forced landing behind Soviet lines

On August 4, Vorozheikin managed to shoot down another quartet: three Ju 87s and a Bf 109. From July 20 to September 20, pilots of Vorozheikin's squadron took part in more than 100 air-to-air combats, destroying 70 enemy aircraft.

Straight down

During a dogfight near Kiev on November 3, Vorozheikin was involved in a bitter battle with a Fw 190, which he referred to as a 'Fokker' in his report: "The German instantly went down [vertically] over his right wing, with my squirt of fire passing to the left. That was indeed a pretty good dodge. I followed him immediately. The Fokker quickly left me behind. But – he cannot go deeper than the ground, can he?"

"A cloudy veil overcast my eyes. I was not able to see the enemy any more. Had he cheated me? Had he escaped? No; he again appeared before me. It was time to pull out from [the] dive..."

"I kept waiting and pulling; pulling and waiting. Finally, I felt the aircraft raise its nose. No impact. Danger past, I reduced the effort on the stick." Looking for his adversary, he spotted it skimming the ground, trailing fumes, concluding: "Then the Fokker turned a somersault, and went to pieces like glass."

By September 20, Vorozheikin had flown 78 combat sorties, taken part in 32 aerial battles, shot down 19 enemy aircraft and shared another. On February 4, 1944 he was awarded the title Hero of the Soviet Union and decorated with the Order of Lenin and the Gold Star.

Powerful voice

That same month, Vorozheikin had an opportunity to familiarise himself with the Yak-9T armed with a powerful 37mm NS-37 cannon. "As soon as the sky in the east began to



glow with dawning light, silence fell over the airfield. It was disturbed by a lone Yak.

“To attract our attention [Col Gerasimov] made a circle above the airfield; then he lowered the aircraft to the ground and smoothly raised the fighter’s nose. We heard an unusual, harsh, ear-splitting artillery salvo; then the second and the third one. Fire vortices separated from the aircraft. Several fireballs with tails like those of meteors were released and disappeared high in the sky.

“The unfamiliar roar and fire gave me the creeps, but instantly I understood that the colonel had arrived in a Yak with the new cannon and was making us familiar with its powerful voice, so that we might distinguish it from the enemy’s cannons.

“Pilots and technicians surrounded the fighter. I got into the cockpit. All instruments and control levers in it

that we might the enemy’s technicians surrounded the fighter. I got All instruments and control levers in it

were the same as in our aircraft. The only difference was a 37mm cannon instead of the 20mm one.

“I pointed at the fire control button and asked Gerasimov: ‘May I try?’ ‘Fire away!’ Then Gerasimov commanded: ‘Everybody away from the aircraft!’ Further, he explained: ‘When firing is done on the ground, it behaves like an unbroken horse – it flings and may kick.’

“I pushed the button. Flashes of fire sprung up before me. Roaring hit me in the ears. The aircraft started back due to strong recoil. Oh, my! It really flings. A chain of tailed motley fireballs ripped the blue of the sky and exploded somewhere far away.”

Big gun

On February 11, Vorozheikin had an opportunity to try the large-calibre gun in action: “The reconnaissance aircraft [a Ju 88] had turned round the airfield from the east, and was leaving at a high speed westward when

it ran directly against me. It was not my intention to engage it head-on; therefore, I made way for it willingly, so as to dispose of it from a better position.

“The 37mm cannon had been specially designed to deal with such aircraft. While I was choosing a position for attack, the Junkers managed to fly some 600 or 800 metres away. I had never shot to kill from such a distance. So I had to aim better.

“Bang! A fireball separated from the cannon in pursuit of the Junkers and disappeared immediately. The enemy aircraft jerked, with dust falling off it. So I hit it!

“But the dust soon dissipated and the Junkers continued flying, as if nothing had happened. It seemed that the projectile had just scratched it. But soon there appeared long smoke wisps trailing behind the Junkers, then came the ‘fireflies’. The smoke began to wreath and the ‘fireflies’ ➔

Above
A Yak-9 at a frontline airfield.

Below
Yak-9s began to arrive with frontline units in large numbers from the summer of 1943.



SPOT FACT *The Yak-9 was the first Soviet aircraft to shoot down a Messerschmitt Me 262 jet*



Above
Inspector pilot of the Department of Combat Training of the Frontline Aviation, twice Hero of Soviet Union - Maj Arseny Vorozheikin in 1944.

Right
Soviet pilots of the 728th Fighter Air Regiment. Left to right: S Lazarev, A Vorozheikin, M Sachkov and A Melashenko. Between them, they scored 115 combat victories.

were becoming stronger and glowed. Finally, the aircraft flared up.”

Futile resistance

Late the following month, Vorozheikin encountered a three-engined Ju 52 which was evacuating beleaguered soldiers. His first move was to force the pilots to land the Junkers in Soviet-held territory. “I saw the pilots and ordered them to land. I gave a warning squirt from the machine guns.

“Through the glass cockpit I saw them quite well, with their hands up, signalling ‘we surrender!’. The turret machine guns were turned away from us. That was quite reasonable; they understood that resistance was futile. [Wingman] Khokhlov and I equalized our speed with the prisoner aircraft and approached closer.

“For several seconds we were flying in formation. There were a lot of windows in the Junkers’ thick fuselage. From these, people were looking out peacefully. Those were the wounded. Transport aircraft were evacuating them from the Kamenets-Podolsky pocket.

“I was regarding the clear sky to see if there was any danger; then I turned my head to the Junkers again. At this instant, fire flashed from its windows. Several dozen assault rifles and turret guns lashed across my aircraft pointblank.

“A crashing sound was heard in the cockpit. Fragments of broken glass showered on my face. Stung by the enemy, I recoiled. I was mad at the enemy’s treachery. Well, then...

“The jumbo enemy appeared in my

aiming sight. At that moment the black crosses on its wings shone not in the least so peacefully. The seething hatred toward them had made me forget that I had the new gun. With rage and might, I pushed the weapon control button. The fighter gave a start. An explosion flashed. It was only then that I remembered about the new weapon.

“Fearing to collide with the exploded Junkers, I made a steep turn to leave. Still, some small debris flicked me. Fortunately, they only scratched the Yak’s wings.”

Thanks to his accumulating



experience and excellent firing skills, Vorozheikin fought with perfect efficiency. Nearly every encounter with the enemy brought him a new victory. Regiment Commander Maj V S Vasilyaka put his comrade forward for the title of Twice Hero of the Soviet Union.

The Order of the Presidium of the Supreme Soviet to decorate Vorozheikin with a second Golden Star medal was issued on August 19. The previous month he had been appointed a commander of the 32nd Fighter Regiment to supersede Maj I G Kolbasovsky, who had been killed in combat.

Inner strength

The Yak’s largely wooden airframe, its archaic truss-framed fuselage and fire-hazard wing fuel tanks should have discouraged its use as an air combat fighter, but in Vorozheikin’s memoirs we can find evidence of the Yak-9’s exceptional strength:

“Before my very eyes, an anti-aircraft projectile exploded in Khokhlov’s machine and enveloped it in debris and black smoke. From the black cloud of the explosion, the wing appeared. Then, the cockpit and the engine. The nose portion of the aircraft remained intact; even the wings did not collapse.

“The Yak’s tail became visible. It was sort of ‘tied’ to the aircraft and was flying behind the wing. I approached closer and found out that the missile had torn down half of the fuselage’s veneer skin and ‘disembowelled’ it. The tail was held in place by the remaining metal tubes – those were the spars, which seemed thin as threads.

“The cockpit was intact and so was the engine, with its rotating propeller glistening like silver. So, the engine is running; what about the pilot?”

“I saw the uncontrollable Yak, with his nose lowered, turn over and begin

falling down. But all of a sudden, like a wrestler lying down on his back, Khokhlov’s aircraft abruptly wriggled out and returned to normal level flight.”

Khokhlov managed to bring the severely damaged Yak-9 to base and land safely.

Fighter masterclass

In November 1944 Vorozheikin was appointed Chief Inspector for Frontline Aviation Combat Training. “I would like to pass on to these young boys everything that I know or can do. To become a good fighter pilot, one first and foremost needs the sense of duty and the ability to cope with several essential tasks.

“First, one should master piloting technique excellently. He who fails to learn how to do aerial stunts with perfection will be punished for that sooner or later. Piloting shall be practised until it becomes so automatic that you can do any stunt with your eyes closed.

“The second task is to learn to shoot masterfully, without a miss. In the air, one can gain a victory only in a battle. The entire tactics consist of coming closer to the enemy and eliminating him. You should shoot pointblank, and not just anywhere: you should choose the most vulnerable place



“On May 1, pilots of the 2nd Air Army prepared two red banners with the inscriptions ‘Victory’ and ‘Long Live May 1’. The leaders of two flights of nine released the banners over the Reichstag, the former parliament building in Berlin”

Above
A group of Yaks low over Berlin in May 1945.
ALL VIA AUTHOR

on the enemy’s aircraft, namely the cockpit or the engine.

“You should know how to use speed like a singer knows how to use his voice. Do not speed up the aircraft when it is not necessary, since high speed interferes with aiming and often brings an attack to naught.

“Third, what we should develop in ourselves is attentiveness and keen vision. A pilot is required to be active, daring and self-confident. Risky attacks are less dangerous than laxity or inactivity. He who does not make every effort to eliminate the enemy will fall prey to the enemy himself.

“And finally, you should remember that you cannot win a combat without strong discipline and good fellowship. What is the strongest point of fighter pilots? It is their unity. If any one of them violates it, the entire combat team may disintegrate like a chain does with even a single link broken.”

Jet finale

Despite his promotion, Vorozheikin kept taking part in air battles. In April 1945 he detected a four-engined Arado Ar 234 jet bomber over Berlin. Pierced by projectiles, the innovative German aircraft became enveloped in smoke and disappeared in clouds while plummeting down. The wreckage was never found and, for this reason, the victory was not added to the pilot’s score.

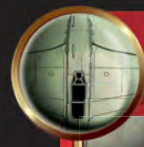
On May 1, pilots of the 2nd Air Army prepared two red banners with the inscriptions ‘Victory’ and ‘Long Live May 1’. The leaders of two flights of nine released the banners over the Reichstag, the former parliament building in Berlin. All 18 pilots who took part in the mission became recipients of Gold Stars – including Vorozheikin.

Arseny Vorozheikin flew more

than 300 missions and personally shot down 51 enemy aircraft in three wars. By the end of the war in Europe he was a fighter regiment and division commander, having graduated from the General Staff Academy and become a Major General for Aviation.

The pinnacle of his service career was the post of Deputy Commander for the Black Sea Fleet Air Force. Vorozheikin kept flying fighters, including the MiG-15 and MiG-17, before retiring in 1957.

Twice Hero of the Soviet Union, a recipient of the Order of Lenin, four Orders of the Red Banner, the Order of the Great Patriotic War 1st Class, the Order of Suvorov 3rd Class, the Order of Alexander Nevsky and six foreign orders, Major General for Aviation Arseny Vorozheikin died on May 23, 2001 and was buried in Moscow. ●



Spotlight

Yakovlev Yak-9



Red Star Defenders

Andrey Yurgenson artwork of a red-nosed Yak-9 flown by a Soviet ace

Artwork
Yakovlev Yak-9D
'White 22' of 728
IAP, flown by Capt
A V Vorozheikin
in 1944. **ANDREY**
YURGENSON-2016

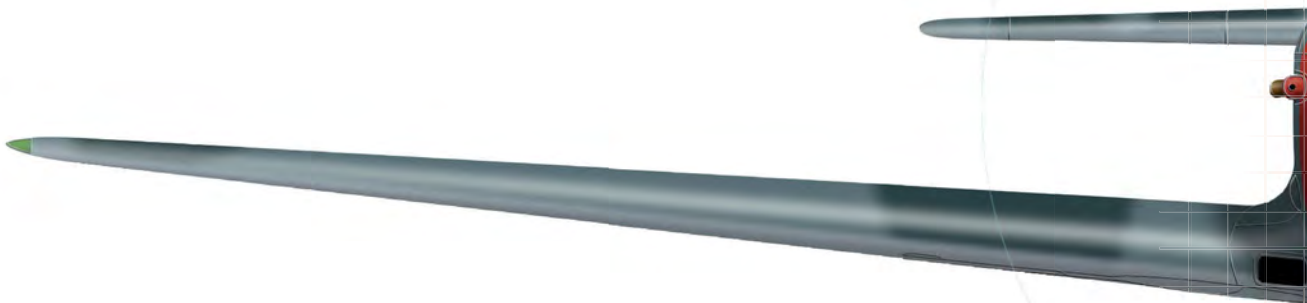
Arseniy Vasilyevich Vorozheikin was one of many Soviet pilots to find success flying both the Yakovlev Yak-7 and Yak-9. The similarity between the two fighters meant it was relatively easy for pilots to switch from one to the other.

A veteran of the Battle of Khalkin Gol, a 1939 border dispute with the Japanese, and of the subsequent Winter War against Finland, Vorozheikin was already a seasoned

ace. Assigned to 728 IAP, he and his comrades were initially hindered by having to fly obsolete Polikarpov I-16s. The first Yak-7s arrived in July 1943. Participating in the Battle of Kursk, his tally quickly began to mount. On August 4, he shot down three Junkers Ju 87s and a Messerschmitt Bf 109, and following the liberation of Kiev later that year he was made a Hero of the Soviet Union.

At the end of 1943, 728 IAP re-equipped with the Yak-9. The

actions over Kiev prompted the pilots to paint the noses of their aircraft red – this served as a red banner, mirroring those carried into action by ground forces. Vorozheikin's score continued to climb – in April 1944 he even managed to down a Ju 88 with the last remaining round in his fighter's cannon – and he ended the war with 46 victories (plus six previous 'kills'). Maj Gen Vorozheikin died on May 23, 2001, aged 88.



SPOT FACT Ace Arseniy Vorozheikin shot down an Arado Ar 234 jet while flying a Yak

Yak-9
in p



46 victories were scored by 866 IAP's Capt Aleksandr Koldunov



Spotlight

**Yakovlev
Yak-9**

Hamm



er Blow

The Yak-9 was never the most agile of fighters, but it played a vital role in repulsing German invaders, as **Aleksander Medved** explains.

By early 1943 two Soviet designers, Syemyen Alekseyvich Lavochkin and Aleksandr Sergeyevich Yakovlev had created two fighters that were deemed to be the best in their class within the Red Army Air Force. Both could successfully compete with the Focke-Wulf Fw 190A-4 and the Messerschmitt Bf 109G-2; they were respectively the La-5F and the Yak-9.

Despite its excellence, Soviet high command was in no haste to commit Yak-9s to action. This was possibly to take the enemy by surprise by using the new fighter in large quantities at a critical moment.

In February 1943 a single squadron of Yak-9s joined the 32nd Guards Fighter Aviation Regiment. Commanded by the Soviet leader's 22-year-old son Vasily Iosifovich Stalin, the unit was manned by highly proficient pilots with considerable combat experience and had ten Yak-9s on charge. Flying a Yak-9 on March 5, Vasily Stalin shot down a Bf 109. His Yak carried the legend *For Volodya!* on the fuselage, in memory of Vladimir Mikoyan, the son of Anastas Mikoyan, People's Commissar of Foreign Trade, who had been killed in action.

The build-up of Yak-9 units started in March when three fighter regiments completed conversion: the 32nd led by Maj I G Kolbasovsky of the 256th Fighter Division, the 91st under Maj G A Tsvetkov and the 163rd commanded by Maj I Y Fedotov of the 273rd Fighter Division. The 32nd and the 91st did not take part in any combat until the Battle of Kursk, which started in July.

In April, Maj V L Plotnikov's 347th Fighter Regiment, part of the 273rd Fighter Division also converted to the new fighter. All of the 273rd joined the 16th Air Army on the Central Front the following month. Finally, in May, the 518th Fighter

Below
Topping up a Yak from a ZIS-6 fuel truck.



SPOT FACT Hungary, China and Poland were among the nations that operated the Yak-9

Right
A gun camera image, showing a tail attack on an 'enemy' fighter, in this case a Yak-1, during a practice combat.

Below
By the middle of the Great Patriotic War, pilots were marking their 'kill' tally on the fuselages of their fighters.

Regiment, commanded by Maj Y K Okolelov, deployed close to the Kursk salient.

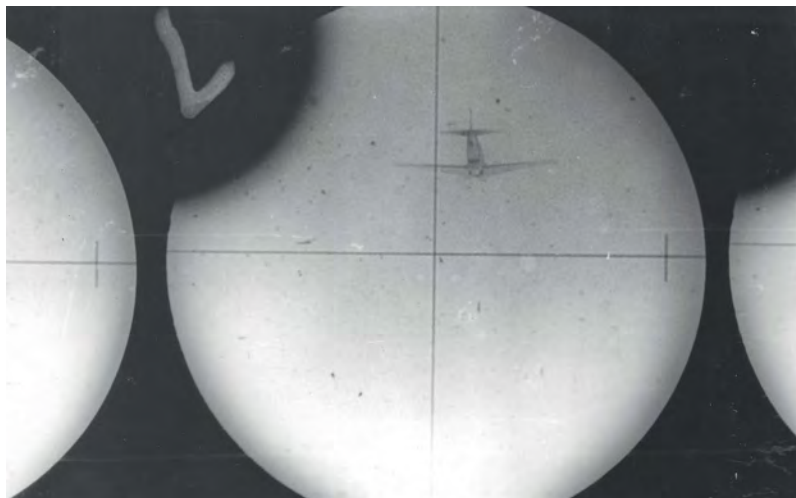
Battle for Kursk

According to Aleksandr Sergeyevich Yakovlev the Yak-9 was destined to play an important role in the forthcoming battle. He remembered his talk with the Soviet premier on February 8, 1943: "Stalin began talking of manufacturing the Yak-9 fighters with heavy 37mm cannon [Yak-9Ts]. This aircraft had passed state tests as a prototype. Stalin reprimanded us severely for not having launched mass manufacture... He also demanded that manufacture of the Yak-9D version, having a range of 1,400km, should be begun."

It was decided that the Yak-9T would be the first to become operational. Service tests were arranged within the 16th Air Army on the Central Front and the 273rd Fighter Division (157th, 163rd and 347th Fighter Regiments) under Col I E Fedorov received 34 Yak-9Ts.

On the very first day of the Yak-9T's operational evaluation, July 5, 1943, the Germans undertook their long-expected Operation Citadel in the Kursk salient. With massive strikes by large bomber groups, the Luftwaffe attempted to break through the Soviet ground force's defensive cover and for three days gained air supremacy.

On that morning, six Yak-9s and two Yak-7Bs of the 163rd Fighter Regiment



"...Lt Zelenin attacked six Bf 110s head-on and fired two 37mm rounds.... One of the shells hit the wing of one of the German twin-engine fighters, tearing it off"

were unexpectedly attacked near Maloarkhangelsk from behind and above by a large group of the Fw 190As. After 40 minutes of combat, five Soviet aircraft were shot down and three pilots killed. The Luftwaffe lost only a single Fw 190; its pilot baled out and was taken prisoner.

On the same day, ten Yak-9s of the 347th Fighter Regiment engaged several groups of Heinkel He 111s and Junkers Ju 87s, escorted by Messerschmitts. At the cost of five Yaks lost and one damaged, a Heinkel was shot down and a Bf 110 damaged.

Squirts of 37mm

Gradually the Red Army Air Force succeeded in recapturing the initiative and heavily armed Yak-9Ts showed themselves to advantage. Flying within a group on July 6, 1943, Lt I M Zelenin attacked six Bf 110s head-on and fired two 37mm rounds from a distance of 1,300 to 1,600ft (400 to 488m). One of the shells hit the wing of one German twin-engined fighter, tearing it off. The rest of the Bf 110s turned round and scattered into the clouds.

Later on that day, Lt Zelenin





for short-range flights were taken as guidelines in the 256th Fighter Division in particular. After the death of Maj Kolbasovsky on July 19 the unit was taken over by Maj A S Petrunin.

The regiment reported that during 11 days 219 combat sorties were flown and 19 group air battles were conducted. In three of these, the numbers of Luftwaffe to Soviet aircraft was 1:2, in two cases it was 1:3 and the others were fought in approximate equality at the start of the engagement.

According to the Soviet pilots,

successfully engaged a Junkers Ju 88 on a reconnaissance sortie. He fired several squirts of three to five rounds each from close range and the Ju 88 fell away into territory occupied by Soviet troops.

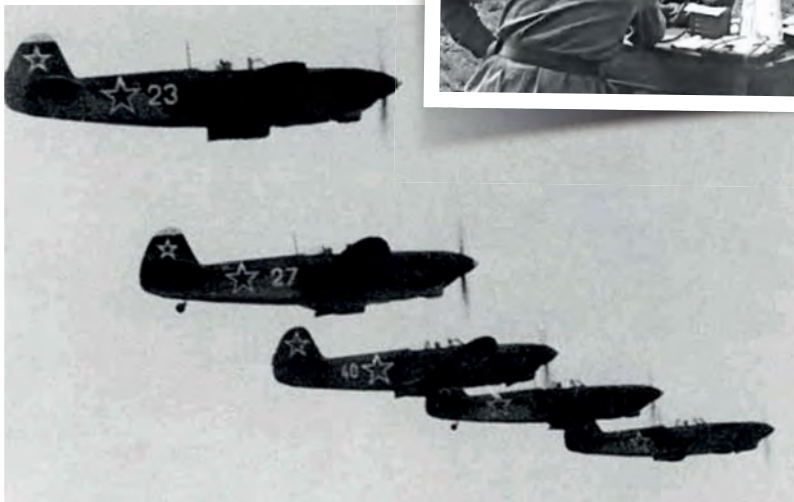
During his operational evaluation of the Yak-9T, Zelenin shot down seven enemy aircraft (three in one day) and provided recommendations in the test report: "The Yak-9T should be used primarily to fight the enemy's bombers, since the latter feature poor vertical manoeuvrability. It would be reasonable to have couples [pairs]



Above left
Head of the air regiment headquarters, Maj Khramov, setting a combat reconnaissance task for pilot Lt Sidorovsky.

Left
Fighter air regiments were usually equipped with two or three training Yak-9V two-seaters.

Below left
A mixed 'five' of Yak fighters: the two nearest and the fourth are Yak-9s, while the other two are Yak-1s.



consisting of the following two types: a Yak-9T for the lead and a lighter Yak-1 for the trail [Western 'wingman']. The latter will be used to ward off attacks delivered by enemy fighters."

Perfecting tactics

Opinions regarding the increased fuel capacity Yak-9D were more moderate. For example, the commander of the 18th Guards Fighter Regiment A E Golubov noted that during combat missions flown together with 'ordinary' Yaks, the -9Ds used up only 40% of their fuel reserves.

The report noted: "This testifies to the fact that operation of the Yak-9D in air units, which are equipped mostly with aircraft having lower fuel reserve, is not expedient. The Yak-9D, when flying mission sorties side-by-side with other aircraft having lower fuel reserve, carries its own fuel as an excessive load, and thus constitutes a source of greater vulnerability compared to ordinary aircraft..."

Lt Zelenin's recommendations on the Yak-9T as a lead for pairs or groups and Golubov's opinion that the Yak-9D's fuel reserve be reduced

they destroyed 46 enemy aircraft (including 25 Bf 109s) for the cost of ten Yak-9s and a Yak-7B. Non-combat losses included a Yak-9 and a Yak-7B. Nine pilots were killed.

Maj Petrunin described the actions of German fighters as follows: "For the escorting of bombers, they first send out a group of two to four aircraft, the so-called 'neutralisation' group, to offer battle with our fighters, thus distracting their attention from the bombers. For immediate escort, fighters were allocated in the ratio of 1:1 relative to bombers, and flew in couples or in fours.

"Having encountered our aircraft, the Bf 109s try to conduct vertical-manoeuving combat, whereas the Fw 190s prefer turning engagements. The Germans actively apply the tactics of being on the watch for our single aircraft and attacking them by surprise. For this purpose, they make use of clouds, sun, and time of day."

Increasing score

Another regiment of the 256th Fighter Division (Tsvetkov's 91st

SPOT FACT Soviet pilots regarded its performance as being equal to the Bf 109G and Fw 190A-3/A-4



Right
Soviet soldiers escorting a captive German pilot.

March 1945 - 256th Fighter Division performance

Fighter Regiment	32nd	91st	728th
Fighter type	Yak-3	Yak-3	Yak-9
Aircraft in service originally	35	43	42
Combat and non-combat losses	4	3	3
Combat losses against fighters	1	1	0
Combat losses to flak	1	0	2
Air-to-air victories	39	20	23
Ratio of enemy shot down to own losses	9.7	7	8

Note: The 256th Fighter Division took part in 56 air-to-air battles that month.

Fighter Regiment) was operational throughout the same 11 days of fighting above the Kursk salient; flying 337 missions and conducting 22 group air battles against an average of 2:1 Luftwaffe superiority.

Pilots claimed 35 victories including 18 Bf 109s shot down. The 91st's losses were noticeably smaller, five Yak-9s were destroyed, two did not return from their sorties and another two suffered accidents. Five pilots were either killed or missing and another five were injured.

A severe battle on July 12 took the life of assistant regiment commander Senior Lt A D Garbuz, and squadron leaders Capt I A Ivanenkov and Senior Lt L F Mikheyev were wounded.

Throughout July 1943 the 256th Fighter Division, which initially had 52 Yak-9s and 42 Yak-7Bs at its disposal, lost 17 Yak-9s and 11 Yak-7Bs in air-to-air combats. Another six Yaks were reported as non-combat losses and 11 were sent to repair shops. Among the top-scoring Yak-9 pilots of the 91st Fighter Regiment were Maj A S Romanenko (five victories) and Junior Lt N I Anatsky (seven).

Having flown 1,855 sorties in August, the 256th lost 25 Yaks in combat, and another two for non-combat reasons. Replenishments consisted solely of 30 Yak-7Bs so, as of September 1, the unit had only 11 serviceable and four non-serviceable Yak-9s available. The division report shows that during the month pilots

claimed 125 enemy aircraft destroyed and 19 damaged.

In September the intensity of battles for the 256th decreased considerably. Having lost only four of its aircraft, the division claimed 27 victories, ten of them confirmed by ground troops. The following month, significant success was achieved by the 728th Fighter Regiment's leader, Capt Vorozheikin, who reported five enemy machines shot down. Young pilot Junior Lt Lazarev supplemented his combat score with five. The remainder of the division's pilots added 22 victory claims to the total.

Mixing it

On November 6, 1943, seven Yak-9s led by Senior Lt Miokov conducted an extremely successful air-to-air battle with 27 Ju 87s flying under cover of six Fw 190s. According to Soviet pilot reports, they managed to destroy six 'Stukas' and an Fw 190 with no loss on their part. There were witnesses to this success. Rifle company commander Senior Lt Tikhonov and his soldiers handed over identification plates with serial numbers that had been removed from the mangled wreckage of a Junkers to pilots of the 91st Fighter Regiment.

During the same month Capt Vorozheikin scored more victories by downing an Fw 190 and a Ju 87. By early December, the number of the Yak-9s at the disposal of the 256th Fighter Division had been reduced

to nine, plus 42 Yak-7Bs and eight Yak-1s. By necessity, battles were conducted in mixed groups.

On December 13, Senior Lt Chizhikov of the 91st Fighter Regiment led a flight of four, consisting of two Yak-9s, a Yak-7B, and a Yak-1. The group was patrolling above the Soviet positions when a couple of Bf 109s attempted to surprise them from under the clouds. Senior Lt Chizhikov and his trail repelled one of the Messerschmitts, pursued him and shot him down. Lt Lukyanov carried out a head-on attack against the other. The German did not turn away; the fighters collided and both pilots were killed.

Taking revenge

During 1943 Yak-9s were, to a certain extent, distributed over the regiments of the 256th Fighter Division. From March 1944, however, only the 728th Fighter Regiment was equipped with the type, whereas Yak-7Bs were concentrated in the 32nd Fighter Regiment.

In late March, the 728th had a chance to take revenge for the humiliating raids on Soviet airfields in the beginning of Operation Barbarossa. In early 1944, a Wehrmacht force was trapped near Dunayevtsy in Ukraine and the Luftwaffe was trying to supply the troops by air.

Having detected several dozens of German transports on Zubuv airfield on March 30, Division Commander Col N S Gerasimov ordered that a group of Yaks from the 728th should be sent to the area. It did not take Soviet pilots long to find the enemy. Near Zubuv they detected several approaching Ju 52s and soon, four of the tri-motors were burning on the ground; one of them destroyed by Vorozheikin.

On the following day, the 728th had still better success as the Soviet fighters attacked the Ju 52s and He 111s brought into use as transports. Capt Vorozheikin downed two Junkers and a Heinkel during the day, while other pilots of the group destroyed six more 'Iron Annies'.

Later, the assistant commander of the 245th Fighter Division, Maj Chernov made a flight in a Polikarpov U-2 to observe the wreckage of several burnt-out Junkers.

In March, the 728th Fighter Regiment lost five Yak-9s in combat and another two in accidents. Five pilots were killed - two of them died during their first mission. The



regiment conducted 24 air-to-air battles and claimed the destruction of 34 enemy aircraft, among them nine Ju 87s, 12 Ju 52s, two He 111s, four Fw 189s and five Fw 190s.

Pilots commented on the highly efficient NS-37 37mm cannon on the Yak-9T. Capt Sachkov 'knocked out' a Bf 109 with only two rounds and a Ju 52 typically caught fire after one or two short bursts.

In early April 1944, Zubov was occupied by the Soviet 728th Fighter Regiment. The Germans quickly retaliated for the heavy losses suffered in late March. In broad daylight on April 4, 16 Bf 109s and an Fw 190 strafed the airfield and dropped bombs. Three Yak-9s were sent away for repair and another 13 aircraft were fixed on site. The enemy did not stop, making three more raids in April and during one of them, two Yak-9s were burnt-out on the ground.

The onslaught was such that the entire 728th had to move to Okop airfield. Throughout the month six pilots were killed and 20 aircraft were lost: nine were counted as irreparable losses, and 11 were sent to repair shops. On the positive side, the regiment received 35 brand new Yak-9s, included some of the very heavily armed Yak-9Bs.

Final battles

In June the 256th Fighter Division

began to gradually convert to the newest and extremely agile Yak-3s. However, Yak-9Ts and 'Ms remained the principal equipment with the 728th Fighter Regiment until the end of the war. While the Yak-9s were inferior to the Yak-3s in terms of manoeuvrability and speed, they were better suited for escorting bombers and ground attack.

In the autumn of 1944 and early spring of 1945 the intensity of air-to-air combats reduced considerably. For example, in November 1944 the 256th Fighter Division conducted no air battles and suffered no losses.

In February 1945 Soviet troops lay siege to the town of Breslau in German Silesia (present-day Wrocław in Poland) and the rate of activity rose. Throughout the month, the 256th conducted 38 air-to-air battles, claiming destruction of 42 enemy aircraft. All this for the loss of three Yak-3s to flak and a Yak-9 that failed to return. Almost all the Luftwaffe aircraft shot down were Bf 109s and Fw 190s.

Capable warrior

Why was it that the Yak-9 proved to be such a capable warrior despite several drawbacks? Both the Soviet commanders and pilots believed it to be somewhat inferior to German fighters in terms of maximum speed and (compared with the Bf 109) rate of climb. However, at low and

medium altitudes, due to superior horizontal manoeuvrability and excellent controls, the Yak-9 was often able to better the Luftwaffe fighters.

The Fw 190's superior fire power was neutralised by the Yak-9T. A direct hit from a single round of its cannon was quite enough to destroy any of the enemy's single-engine aircraft.

For escorting the Ilyushin Il-2 'Shturmovik' ground attack aircraft and Petlyakov Pe-2 bombers, the Yak-9D or 'Ms were preferable to the speedier Yak-3s and Yak-9Us (as well

Left
A Yak-9T fighter fitted with a 37mm cannon through the propeller spinner.



Above
Pilots of the 32nd Fighter Air Regiment. Note the tiger nose art.

as Lavochkin La-5FNs and La-7s) due to their greater endurance and an ability to hold position within a formation of slower bombers.

In the final battles, the quality of training of Soviet fighter pilots was at least equal to that of German beginners. This is confirmed by the attrition ratio, even taking into account inevitable overstatement.

Until the advent of the Yak-9U with the 1,650hp (1,230kW) Klimov VK-105 engine, the Yak-9 was always underpowered. This was not a great disadvantage as the Luftwaffe went on to the back foot while Yaks began to appear in larger numbers. An incredible 16,769 Yak-9s of all versions had been built when production ended in 1946. Through his fighter family Aleksandr Sergeevich Yakovlev had played a vital role in the defence of his homeland. ●

Below
As well as the characteristic barrel of an NS-37 cannon protruding from the propeller hub, the Yak-9T also had the cockpit positioned slightly further back on the fuselage. ALL VIA AUTHOR





Spotlight

Yak-9
Photo File

Yakovlev Yak-9

From the Archive

A trio of seldom seen images of the Yak fighter in World War Two service

The Yakovlev Yak-7D was a long-range prototype that was used in the development of the Yak-9. It was designed as a reconnaissance aircraft with increased range (hence the -D suffix, which stands for 'dalniy' - long range). ALL VIA ALEKSANDER MEDVED



Spotlight Next Month Hawker Tempest

Next month, our *Spotlight* will focus on one of the ultimate RAF fighters of World War Two, the Hawker Tempest. A development of the Typhoon, it was intended to address the older machine's drop in performance at high altitude. The Tempest ended up being one of the fastest propeller-driven aircraft of the war. We reflect on the history of this potent machine in our *December* issue, on sale in the UK on *November 1* – see page 120 for our latest money-saving subscription offers.



Powered by a Klimov VK-107A engine, the Yak-9U was the most advanced version of the fighter produced during World War Two.



Squadron 'Maly Theatre - for the Front' was equipped with Yak-9B fighter-bombers.