

SALUTING A LEGEND

Supermarine Spitfire IIa P8131 of 276 Squadron is loaded with a dinghy for dropping to stricken aircrew in the sea. KEY COLLECTION

Undoubtedly the Hawker Hurricane undertook the brunt of aerial combat in the Battle of Britain, but it is the Supermarine Spitfire that has – justifiably – become the more famous of the two RAF fighters. It proved to be a superb platform for development, and a game-changing fighting machine. Earning the respect of its enemies, it won a place in the hearts of those who flew them. It's a love that continues to endure. We present four articles – reflecting on some of the less well-known aspects of the fighter's service – and go flying with a recently restored Mk.IX.

36 HIGH AND MIGHTY

Further establishing its potential for development, modified Spitfires proved capable at both low and high level. Andrew Thomas presents an assessment of the Mk.VI and VII, interceptors designed for combat at extreme altitude.

44 WINGS ON THE BIG SCREEN

Inspired by the nation's undying passion for the aircraft, directors David Fairhead and Ant Palmer are creating a feature-length documentary. Including stunning aerial photography by John Dibbs, *Spitfire* is due to hit cinema screens in 2018. Steve Beebee reports.

48 IRON CROSS SPITFIRE

Capturing an intact Spitfire was a priority for Germany. Chris Goss explains what happened when one of the British fighters force-landed at a Luftwaffe airfield in France. A captured Mk.V was subsequently tested with a Daimler-Benz engine. This distinctive looking machine is illustrated by Andy Hay.

54 LEGEND REBORN

Following a thorough restoration at Biggin Hill, the Collings Foundation's Spitfire IX BR601 is flying again. Gordon Riley chronicles the machine's history and describes the process of returning it to the sky. The lens of John Dibbs captures this magnificent aircraft in its element.



HIGH FLYERS

ANDREW THOMAS ASSESSES THE SPITFIRE VI AND VII, INTERCEPTORS DESIGNED FOR COMBAT IN THE STRATOSPHERE

Below
Spitfire VI BR579 of 124 Squadron was the highest scoring individual Mk.VI.

P HARBISON

As early as 1940 Fighter Command's ACM Sir Hugh Dowding had identified a potential threat to Britain that its air defences could do nothing about: should the Luftwaffe develop bombers capable of attacking from stratospheric heights they would be immune to interception.

In the early summer that year, the Air Ministry issued Specification F4/40 for a high-altitude fighter capable of neutralising such a menace. The requirement sought a machine that could fly as high as possible, specifying 45,000ft (13,716m) as the minimum. Westland was awarded a contract and the result, the first Welkin, flew in November 1942 –

but the type never entered squadron service (see the panel on page 38).

Dowding's perception was well founded as Junkers had developed a variant of the Ju 86 for operation at extreme altitudes. It had a pressurised cabin for a crew of two, wingspan increased by around 10ft to 83ft 11in and two supercharged Jumo 207A-1 diesel engines. The Ju 86P could fly at 39,000ft and occasionally even higher, although payload was limited.

The 'P-1 was a bomber with a maximum payload of 2,205lb (1,000kg), while the 'P-2 carried three automatic cameras in the bomb bay for reconnaissance work. During service trials in August 1940 the Ju 86P completed at least one flight

over Britain and 40 were ordered by converting obsolescent Ju 86Ds.

The first were delivered to 4/Aufklärungsgruppe 33 (4th Staffel of reconnaissance group 33) in early 1941. The unit conducted operational trials – including unchallenged overflights of Britain – and from May began covert sorties over the Soviet Union in readiness for Operation 'Barbarossa', launched the following month.

INTERIM MK.VI

As an interim solution for high-flying interception duties, the Spitfire VI was quickly developed from the Mk V then entering service. Supermarine test pilot Jeffrey Quill flew the first





Above
Spitfire I X4942 was taken off the assembly line and converted into the prototype high-flying Mk.VI with distinctive pointed wingtip extensions.
KEY COLLECTION



Left centre
The bulbous nose of the Ju 86P contained a pressure cabin. VIA ALFRED PRICE



Left
Flt Lt Prince Emanuel Galitzine of the Sub Stratosphere Flight at Northolt. VIA ALFRED PRICE



Below left
Flt Lt Mike Kilburn, the most successful Mk.VI pilot, with 3½ victories. VIA P LISTEMANN

"UP AT HIGH ALTITUDE, THE FIGHTER BECAME VERY STIFF ON THE AILERONS AND ELEVATOR. THE CANOPY WAS FIXED BEFORE TAKE-OFF TO MAINTAIN PRESSURISATION AND THE GROUND CREW LITERALLY SCREWED YOU INTO THE COCKPIT"

one on June 26, 1941 and it was ordered into production.

The Mk.VI had an uprated Rolls-Royce Merlin 47, a four-bladed propeller and extended wingtips which increased the span by 3ft 7in. With its primitive pressurisation system, it was 180lb heavier than the Mk.V – not a popular solution.

Sqn Ldr Peter Brothers, who flew the variant with 602 Squadron in 1942, recalled: "Up at high altitude, the fighter became very stiff on the ailerons and elevator. The canopy was fixed before take-off to maintain pressurisation and the ground crew literally screwed you into the cockpit."

Luftwaffe high-altitude operations over Britain ceased in May 1942 to concentrate on the Russian front. Some Ju 86Ps were sent to the

Mediterranean – and how Spitfires countered them in that theatre was described in the August 2009 edition of *FlyPast*.

That spring, the Germans began testing the improved Ju 86R which, with Jumo 207B-3s with nitrous oxide (N₂O) injection and a wingspan of 104ft 11in (31.9m), could reach 47,000ft.

The Spitfire Mk.VI entered service in April when 616 Squadron at King's Cliffe, Northamptonshire, under Sqn Ldr Harry Brown, began re-equipping from Mk.Vs. Sweeps rather than high-altitude interception occupied 616, and during such an operation on July 18 Flt Lt Tony Gaze 'blooded' the Mk.VI by shooting down a Focke-Wulf Fw 190 of 5/Jagdgeschwader 26 from Ligescourt, France, flying a

WESTLAND'S BYPASSED WELKIN



The prototype Welkin, DG558, showing off its 70ft 4in span. KEY COLLECTION

To counter high-flying Luftwaffe bombers, Specification F4/40, issued in mid-1940, called for a single-seat fighter capable of operating at 45,000ft or more. Westland at Yeovil, Somerset, won the contract for a pair of prototypes, which were completed to a revised requirement, Specification F7/41.

Designed by W E W Petter - who had conceived the Lysander and the Whirlwind twin-engine fighter and went on to create the Canberra jet bomber for English Electric - the twin-engine fighter was named Welkin. The first of two prototypes took its maiden flight on November 1, 1942 and a production contract for 100 Mk.IIs was placed.

Up to mid-1944 all the production aircraft were built at Yeovil, the last 25 being completed without Rolls-Royce Merlin 70-series engines. None saw squadron service. As well as a handful of trials aircraft, two others, DX286 and DX289, flew with the Fighter Inception Unit at Wittering in mid-1944, later transferring to the co-located Air Fighting Development Unit.

daily recce at low level.

The second Spitfire VI unit, 124 Squadron, based at Martlesham Heath in Suffolk, also began operations in July. Both units were heavily engaged in covering the August 19 raid on Dieppe, when again the action was at lower levels, claiming five enemy aircraft destroyed between them for the loss of three Mk.VIs.

REVENGE ATTACKS

Under the command of Ofw Erich Sommer, a small trials unit, Höhenkampfkommando der Versuchsstelle für Höhenflieg (high-altitude bomber detachment) equipped with two grey-blue Ju 86Rs moved to Beauvais, north of Paris, in July 1942.

Although unarmed and not particularly fast, the Luftwaffe believed that, at 40,000ft, the Ju 86Rs could not be intercepted and, while limited to a small bomb load, could have a huge demoralising effect.

Operations began on the morning of August 24 with Aldershot and Southampton as the objectives. Flown by Hptm Horst Götz with Sommer as observer and commander, the first Junkers climbed steadily over France until, having reached 39,000ft, it turned for England.

Having misidentified the target, they dropped their single bomb on Camberley, Surrey, and departed unmolested after more than 30 minutes over southern England.



The second Ju 86R attacked shortly afterwards, again without effect.

The defences alerted, 15 Spitfire Vs scrambled, including 'Black' section of 308 (Polish) Squadron from Heston, Middlesex. As Sgts Marecki in EN800 and Osoba in P8746 were vectored towards Portsmouth at 20,000ft they spotted anti-aircraft bursts and a vapour trail well above 38,000ft. The pair continued climbing and pursued the unidentified aircraft as it flew towards Dieppe but were turned back by control when well over the Channel.

That evening a German propaganda broadcast said the first daylight revenge attacks on Britain had been completed and all aircraft had returned safely.

UNMOLESTED

More confident of their invulnerability, Götz and Sommer set out again for England the following day, August 25. They flew a lengthy course before releasing their bomb load on Stanstead Abbotts, north of London, before egressing safely despite nine Spitfire Vs being scrambled. Once again, the fighters could not close, despite trying everything to claw extra altitude, with some pilots identifying the intruder as a 'Do 217'.

On the morning of August 28, a Ju 86R, again flown by Götz and Sommer, climbed over France before heading for Bristol. At 09:20 they

released a single bomb, which hit the Broad Weir area of the city centre. Several buses were damaged and their fuel tanks ignited, resulting in the city's worst single incident of the war - almost 50 died and many others were horrifically injured.

The Junkers were back over England the next day, cruising unmolested



through the stratosphere. This time Fighter Command launched a pair of Spitfire VIs of 124 Squadron from Debden, Essex. They reached 37,000ft but could get no closer than three miles to the intruder flying serenely above them. Over the next ten days the Höhenkampfkommando flew nine more sorties over England, again without interception.



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STRATOSPHERE FLIGHT

With the Spitfire VI unable to reach the Ju 86s, and the definitive Spitfire HEVII still in development, the then-new Mk.IX offered substantial improvement. Fitted with a Merlin 61 with a two-stage supercharger, it could attain 40,000ft, albeit without cockpit pressurisation.

Under Project 'Windcap', Mk.V BS273, incorrectly painted as 'BF273', was converted to Mk.IX standard and modified for high-altitude work. To lighten it, just two 20mm Hispano cannons were fitted, with cockpit armour removed. The metal propeller was replaced with a lighter wooden type driven by a slightly lower reduction gear optimised for good performance at height. Some 450lb lighter, the modified Spitfire reached 45,000ft.

To operate the modified Spitfires against the Ju 86Ps, the High Altitude Flight formed at Northolt in August 1942 under Flt Lt Jim Nelson, an American former 'Eagle Squadron' pilot. In September, it was renamed the Sub Stratosphere Flight.

The flight also had a handful of Mk.VIs and one of the few high-altitude Mosquito XVs to see operational use, MP469. It also received the first Spitfire VII to be delivered to the RAF, on September 5.

Most of the inadequacies of the Mk.VI had been cured when the first Mk.VII, converted Mk.V AB450, appeared in April 1942. Like the Mk.VI, it had extended wingtips but featured the Merlin 61,

which could take it to 43,000ft.

The High Altitude Flight's six pilots had to be specially selected and underwent stringent medical examination and decompression training at Farnborough, Hampshire. They wore electrically heated flying suits to counter the extreme cold at altitude.

Among them was Plt Off Prince Emanuel Galitzine who was of Imperial Russian heritage and had previously served with 611 Squadron. He made his first flight in a modified Spitfire IX on September 10, taking it up to 43,000ft and noting that "she had plenty of power and was very lively".

CHASING CONTRAILS

On September 12, Göetz and Sommer once again left Beauvais and climbed before setting course for Bristol. On standby at Northolt was Galitzine who was scrambled in BS273 just before 09:30.

He was vectored southwest on an interception course as Göetz flew towards Portsmouth. After several course corrections, the Spitfire levelled at 40,000ft and Galitzine spotted the intruder contrailing over the Solent off to starboard and slightly higher. At a range of half-a-mile he identified the intruder as a Ju 86.

Years later, Göetz recalled: "To my horror I saw the Spitfire, a little above us and still climbing." He jettisoned the bomb load near Salisbury, turned on the full nitrous oxide injection to increase engine power, partially

depressurised the cabin to avoid a rapid decompression if they were hit and turned for home.

Galitzine followed the manoeuvre and, with performance in hand, got just above the bomber before diving slightly, closing to 150 yards (137m) astern and firing a short burst, hitting the starboard wing. But the port cannon jammed, causing the Spitfire to yaw to the right.

As BS273 passed through the condensation trail left by the Junkers the canopy misted up – by the time it had cleared, the Junkers was heading south toward the Channel. Putting the Spitfire into a tight right-hand turn, Galitzine closed on his quarry again. Again, yaw was induced when his only cannon fired and the fighter lost height.

He made two more attacks on the Ju 86 but after 45 minutes at full throttle, and now about 25 miles from the French coast, shortage of fuel made him break away to land at Tangmere. He noted in his logbook: "Sighted enemy aircraft over Southampton... Levelled with it at 43,000. Attacked and hit it. Port cannon stopped after 2 sec burst. Climbed to 44,000 and dived again three times. Useless with one cannon. Eventually lost it 25 miles from Cherbourg."

The Junkers landed early at Caen to check for damage, a single cannon hole being found in the wing. Göetz and Sommer returned to Beauvais but, no longer invulnerable, the Ju 86s did not venture over England again. ➔

Top left

Believed to be the Ju 86R of the Höhenkampfkommando involved in the combat of September 12, 1942.
VIA JOHN WEAL

Far left

Ofw Erich Sommer (left) and Hptm Horst Göetz, Ju 86R crew. VIA ALFRED PRICE

Left

Damage to the Sommer and Göetz Ju 86R, September 12, 1942.
VIA ALFRED PRICE

Below

Specially modified Spitfire IX BS273 (marked as BF273) of the Sub Stratosphere Flight at Northolt. RAF NORTHOLT



Right

The Mk.VII's distinctive wing shape can be seen on MD172 of 131 Squadron at Colerne in March 1944.

P V AYERST

Below right

In command of the Sub Stratosphere Flight was former US 'Eagle Squadron' pilot Flt Lt Jim Nelson, who went on to lead 124 Squadron in 1943. EAGLE ASSOCIATION

Right centre

Flt Lt Peter Ayerst of 124 Squadron. P V AYERST

FORTRESS ESCORTS

The two Spitfire VI squadrons, 124 and 616, continued on escort and sweep operations, 124 increasingly covering high-altitude raids by B-17 Fortresses of the US Eighth Air Force.

On December 12, 1942 a force of 90 B-17s set out to bomb the rail marshalling yards at Rouen. A dozen more staged a diversion against the



airfield at Abbeville-Drucat with 124 Squadron's Spitfire VIs, led by Sqn Ldr Tommy Balmforth, providing withdrawal cover.

Balmforth led his men to 28,000ft to meet the Fortresses. Mid-Channel, between Dieppe and Beachy Head, Fw 190s of II/JG 26 attacked the bombers, damaging several. One was Captain Robert J Nolan's 41-24539 *Jersey Bounce* of the 303rd Bomb Group's 358th Bomb Squadron, which was hit in the nose.

The Spitfires swiftly engaged and a series of dogfights began. Plt Off Johnnie Hull in BR598 gained an unusual victory as his chosen Fw 190 dived away to evade and flew into the sea before he could open fire.

Flying BR579, Flt Lt 'Slim' Kilburn, a 20-year-old Londoner of Irish extraction, described his combat:

"The squadron engaged ten-plus Fw 190s which were preparing to attack the Fortresses on their return journey. I fired a four-second burst from 350 yards dead astern at one of the last Fw 190s and the E/A [enemy aircraft] caught fire. I broke away and turned right round in time to see the E/A, still on fire, dive straight into the sea.

"In the ensuing dogfight I later engaged another Fw 190 which was on the tail of a Spitfire IX. I fired several short bursts with varying deflection in a quarter attack at 300 yards and then broke as there were other E/A about.

"My No.2 (Sgt Saphir) saw both the '190 and the Spitfire crash in the sea very close together. The E/A were camouflaged grey and green in the



same manner as our aircraft."

Hull had also noted an Fw 190, with a plume of smoke following it, dive vertically into the sea off to his right. Then a third spiralled in, about 300 yards to port. Balmforth was also credited with an Fw 190 destroyed.

RECCE MESSERSCHMITTS

On January 20, 1943 the Northolt-based Sub Stratosphere Flight was absorbed by 124 Squadron, Jim Nelson becoming its CO soon after.

Most operations were conducted at medium levels. Four pilots were lost on February 17, one of whom, Flt Lt Gerry Chalk, a pre-war county cricketer, had won a DFC as an air gunner in 1941. It was March before the unit became fully equipped with Mk.VIIs.

The first confirmed victory for a Spitfire VII came on May 15 when Fg Off Oliver Willis and Sgt Wibberley chased a high-level reconnaissance overflight. Willis recalled seeing "two parallel vapour trails climbing fast and approaching from the southwest. When the trails turned south, re-crossing the coast east of Plymouth at approximately 38,000ft, our aircraft, which had reached 39,000ft, turned to cut them off and shortened

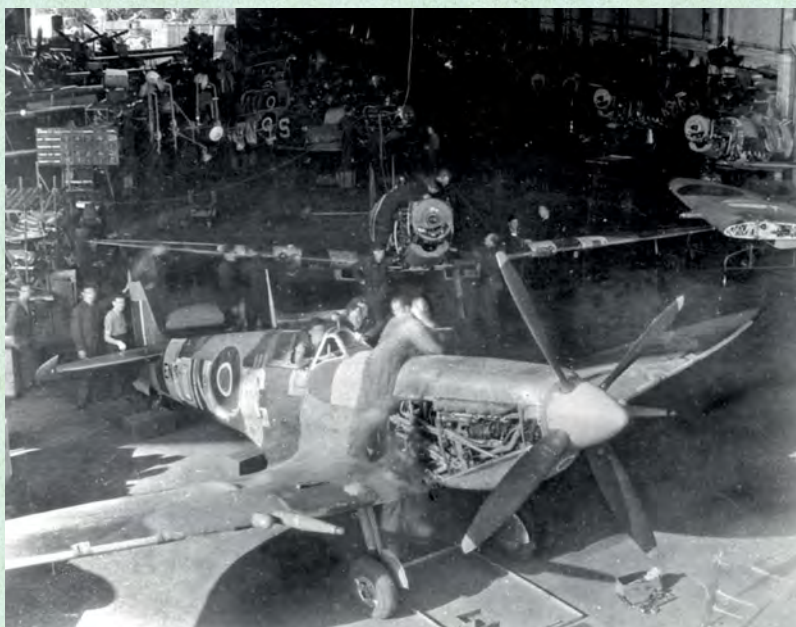


the range to six miles. On re-crossing the coast the enemy aircraft began to dive away very fast heading due south."

Willis then "fired two bursts of several seconds from dead astern from 400 yards closing to 300 yards and saw strikes on the fuselage and wing roots. Saw a parachute open several thousand feet below and pieces of aircraft hurtling down to the sea".

Thought to have been flying EN285, he had shot down Bf 109G-4 14906 of Aufklärungsgruppe 123, piloted by Lt Wilhelm Marcks, who was killed.

More high-flying reconnaissance Bf 109s of Aufklärungsgruppe 123 fell to 124 Squadron's Spitfire VIIs. W/O Gareth Nowell shot down Bf 109G-4 14910 flown by Fw Heinz Sieker over the English Channel on June 13 and took out an Fw 190 two weeks later. And on August 16, Fg Off Basil Brooks downed Lt Hans Jaschinski's Bf 109G-4 at 36,000ft off the Isle of Wight.



Left
Spitfire VII EN509 of 124 Squadron at Odiham, 1944. VIA C H THOMAS

Below left
Spitfire VII MB935 of 131 Squadron at Harrowbeer in March 1944 in light grey high-altitude colour scheme. C P RUDLAND

Below
The first Spitfire VII delivered to the Sub Stratosphere Flight at Northolt was BS142, on 5 September 5, 1942. VIA P ARNOLD



Early on September 9, Fg Off Phillips and Plt Off Barritt, patrolling over the Isle of Wight, were vectored to a recce Bf 109 approaching from Cherbourg at 31,000ft. They soon spotted condensation trails and gave chase; Phillips saw hits on the port wing roots and cockpit before the '109 flipped over and spun down into the sea.

Two days later, 616 Squadron, under Sqn Ldr Les Watts, flew its

first Spitfire VII sorties and joined 124 Squadron in high-cover escort of medium bombers raiding airfields in France.

EXHAUSTING SORTIES

In February 1944 at Colerne, Wiltshire, 131 Squadron began converting to Spitfire VIIIs. Their light grey and azure blue colours contrasted with the more conventional camouflage of 124 and 616 Squadrons.

Flt Lt Don Nicholson, a 131 Squadron pilot, remarked: "I liked the Mk.VII, it was a good aeroplane. The highest I ever took one was to 39,000ft; it could have continued climbing, but I had no reason to go any higher. However, by now there was little extreme high-altitude 'trade'. We chased them on one or two occasions but by the time we reached their level they had gone."

During the spring, 131 and 616 had moved to the South West and 124 to Bradwell Bay in Essex to cover the Thames Estuary.

In late April, Flt Lt Peter Ayerst arrived on 124 Squadron to command 'B' Flight. He said of the Mk.VII: "I

enjoyed flying at high altitude. We had a new Merlin 64 engine fitted with a two-speed, two-stage supercharger, so enabling a far better performance at height. But the incessant high-altitude sorties over the Channel were exhausting."

In early June, 131 Squadron provided top cover to the mass of shipping assembling in Lyme Bay and off Portland. On the 6th, D-Day, Ayerst noted in his logbook: "Spit VII EN497 patrolled Gravelines-Le Treport for 1 hour 35 mins D-Day – very quiet!"

During the evening of June 12, two 124 Squadron Spitfire VIIIs, flown by Ayerst and Fg Off 'Jesse' Hibbert, scrambled from Bradwell Bay after an intruder had been detected at almost 30,000ft. Ayerst noted: "We were scrambled high over the Channel and I recall the weather was pretty 'thick'. In the cloud we finally spotted this 'Jerry' '109, probably on a recce as it was just after the invasion. Anyhow we managed to get closer to him, probably helped by the special light grey camouflage our 'Spits' had..."

"Anyhow, I managed to get in several squirts at him that hit all over his wing before he disappeared into the murk. We floundered about for a bit following directions from control before my No.2 spotted him and put in some further bursts and down he went and he baled out."

This sortie was an exception, however, as most were conducted at low level. Owing to the stresses low-level flying placed on the Spitfire VIIIs' wings, on June 17 Flt Lt Cliff Rudland and Fg Off Ken Parry of 131 Squadron flew a comparative trial with two aircraft, one with the pointed 'high-altitude' wingtips and the other with the more standard tips.

The test showed the latter were better, and over the next few days all the aircraft were changed. Those with the distinctive pointed tips saw little use after that, and the days of specialised high-altitude Spitfires were over. ●

