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Spitfires

Part 2

Early War

FIRST BLOOD to the AUXILIARIES

The Royal Auxiliary Air Force was formed in 1924, organized in squadrons drawn from the "gentlemen" (of the upper class) of a specific city or geographic area. Most squadrons adopted the name of the city or area where they were organized, hence monikers such as 603 "City of Edinburgh" Squadron. Members were expected to pay for their own flying training - a not inconsiderable expense even in the 1920s and '30s. The Auxiliaries were intended to provide a nucleus of trained pilots in the event of a war - a war that very few in the RAF expected to come until very shortly before it actually did. Fortunately, Lord Trenchard's plan was prescient, and the squadrons performed exactly as he envisioned once the war started in September of 1939.

On 16 October 1939 the Luftwaffe mounted its first air raid of the war against Britain - not on Dover, or Coventry, or London, but on Scotland. Ju88A-1s of KG 30 mounted a raid over the Firth of Forth, hoping to catch HMS Hood at anchor and sink her. To their surprise, Hood had docked overnight and was therefore off limits to the raiders due to strict orders that the Luftwaffe's bombs not fall on British soil. However, the cruisers HMS Southampton and HMS Edinburgh were anchored in the Firth and were attacked in separate waves.

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Flight Lieutenant "Patsy" Gifford poses next to a Spitfire of 603 Squadron

Defending Scotland's airspace were 602 and 603 Squadrons of the Royal Auxiliary Air Force. Sections on the ground were scrambled, and those already in the air were vectored to the intercept.

Flight Lieutenant "Patsy" Gifford of 603 Squadron, flying Spitfire Mk.I L1070 "A-apple", caught Oberleutnant Sigmund Storp's Ju88A-1 (4D+DH) as it was leaving the scene. Storp's Junkers had been damaged in a previous attack before Gifford's Red Section arrived. Just as Storp reached the coast Gifford emptied his guns into the aircraft and it fell into the sea. Gifford's shared claim for the Ju88 is considered by most historians to be the first confirmed kill for a Spitfire.

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L1070 had the name "STICKLEBACK" painted on the fuel tank cover just ahead of the windscreen, and we have reason to believe the name was carried during this entire period. Gifford made two more claims flying L1070: on 22 October he shared in the destruction of an He111 from 1(F)/122, and on the 28th he shared in the destruction of an He111 of Stab/KG 26 (1H+JA), the first German aircraft brought down on British soil.

The following month Gifford became the first Auxilary Officer given a regular RAF command when he was posted to 3 Squadron on Hurricanes. He took the squadron to France in May 1940, where he was shot down and killed on the 15th.

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He111 1H+JA for which Gifford shared credit.

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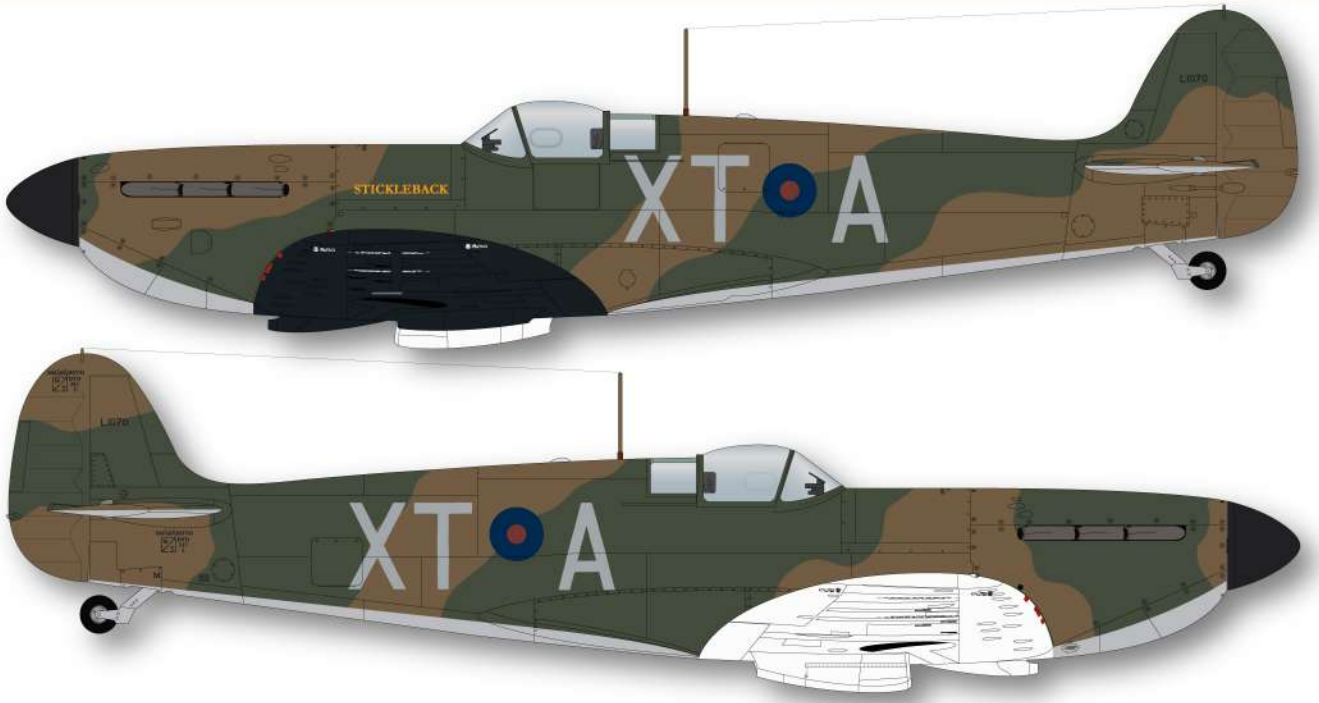
Spitfire Mk.I, L1070 "Stickleback"

Flight Lieutenant Patrick Gifford

603 "City of Edinburgh" Squadron, RAF Turnhouse

16 - 28 October 1939

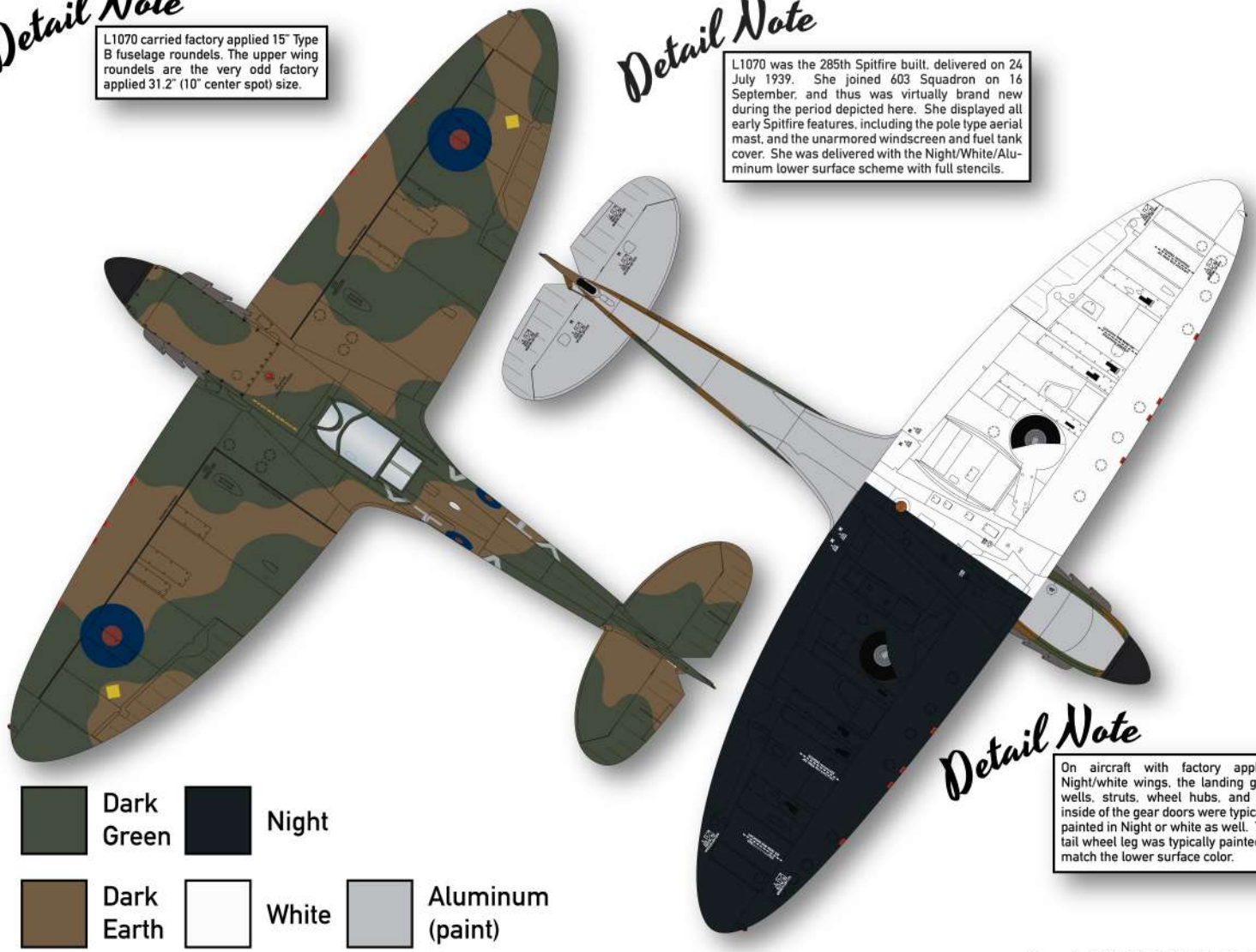


Detail Note

L1070 carried factory applied 15" Type B fuselage roundels. The upper wing roundels are the very odd factory applied 31.2" (10" center spot) size.

Detail Note

L1070 was the 285th Spitfire built, delivered on 24 July 1939. She joined 603 Squadron on 16 September, and thus was virtually brand new during the period depicted here. She displayed all early Spitfire features, including the pole type aerial mast, and the unarmored windscreen and fuel tank cover. She was delivered with the Night/White/Aluminum lower surface scheme with full stencils.



Detail Note

On aircraft with factory applied Night/white wings, the landing gear wells, struts, wheel hubs, and the inside of the gear doors were typically painted in Night or white as well. The tail wheel leg was typically painted to match the lower surface color.

Dark Green

Night

Dark Earth

White

Aluminum (paint)

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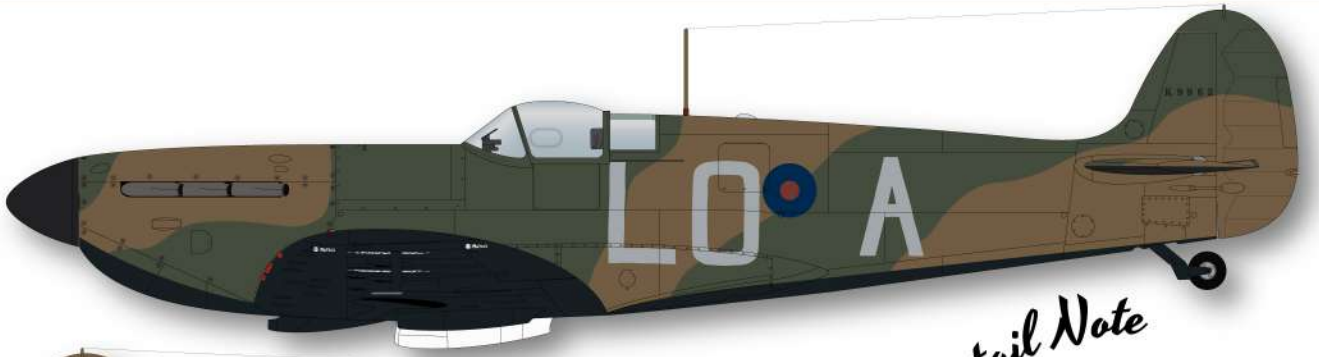
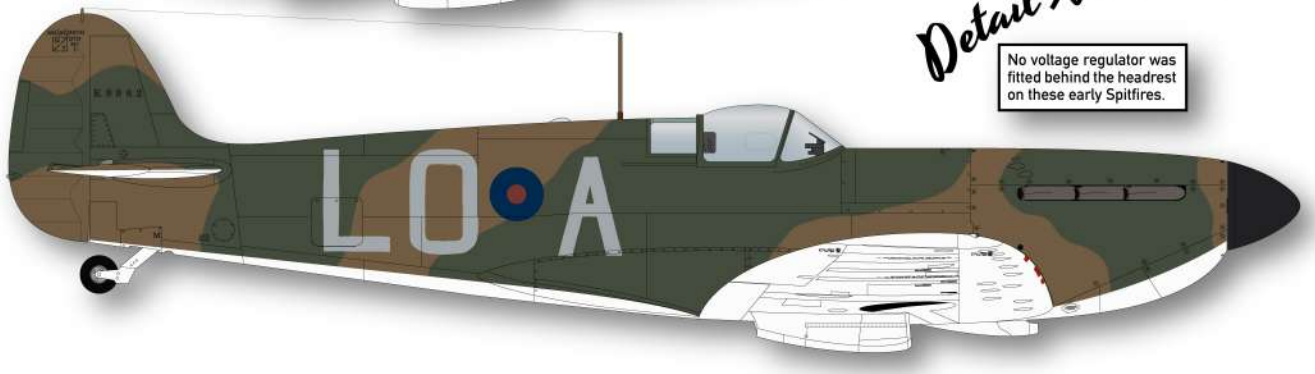
Spitfire Mk.I, K9962

Squadron Leader Andrew Farquhar
602 "City of Glasgow" Squadron, RAF Drem
16 October 1939



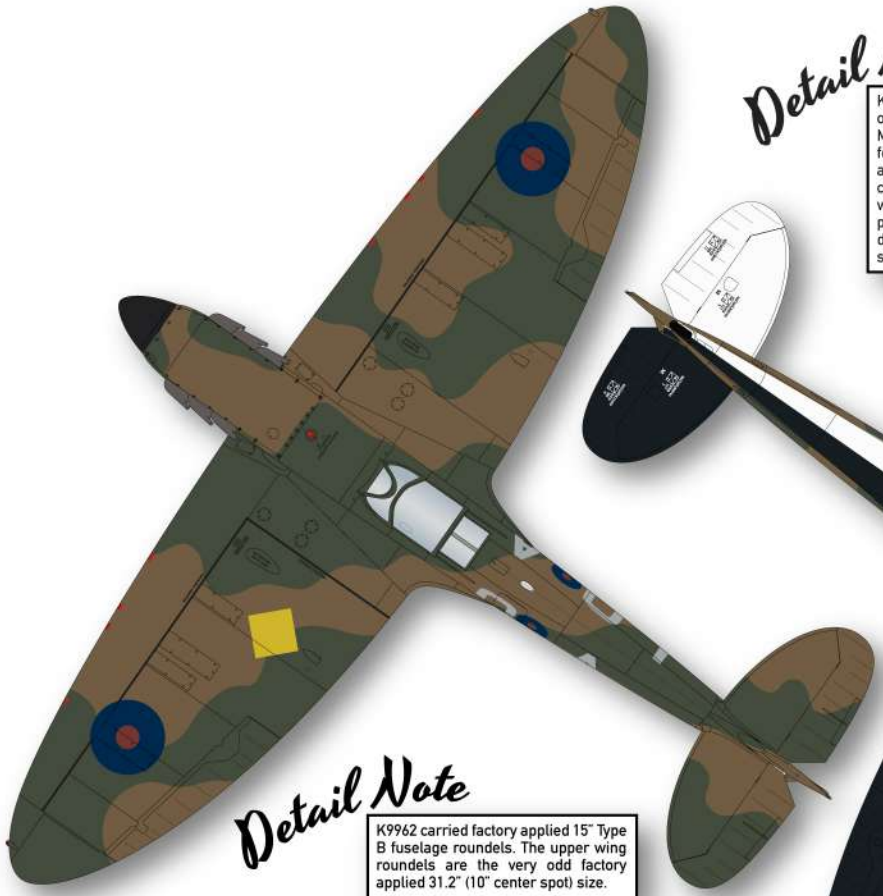


Detail Note

No voltage regulator was fitted behind the headrest on these early Spitfires.

Detail Note

K9962 was the 175th Spitfire built, delivered on 4 May 1939. She joined 602 Squadron on 8 May 1939. She displayed all early Spitfire features, including the pole type aerial mast, and the unarmored windscreen and fuel tank cover. Spitfires after K9961 left the factory with the de Havilland 3-bladed, two-position prop and the more pointed spinner. She was delivered with the Night/White lower surface scheme with full stencils.



Detail Note

K9962 carried factory applied 15" Type B fuselage roundels. The upper wing roundels are the very odd factory applied 31.2" (10" center spot) size.

Detail Note

On aircraft with factory applied Night/white wings, the landing gear wells, struts, wheel hubs, and the inside of the gear doors were typically painted in Night or white as well. The tail wheel leg was typically painted to match the lower surface color.

Dark Green | Dark Earth | White | Night

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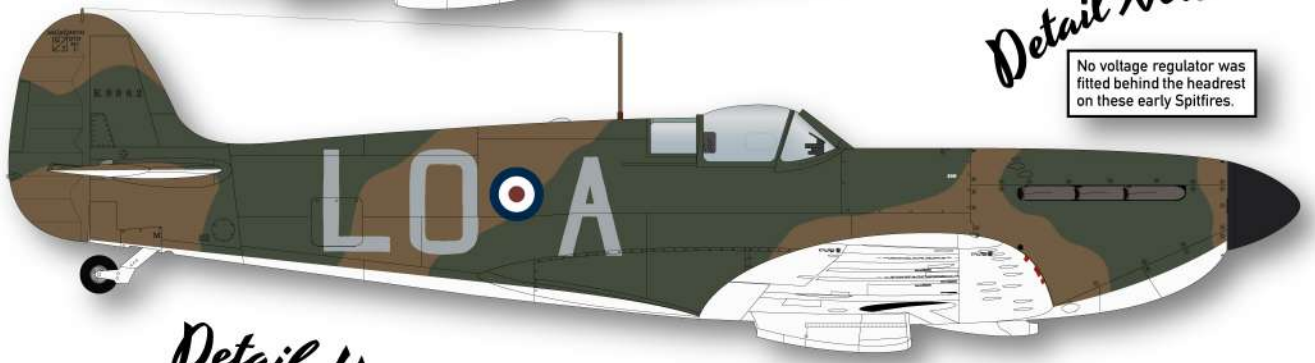
Spitfire Mk.I, K9962

Squadron Leader Andrew Farquhar
602 "City of Glasgow" Squadron, RAF Drem
9 & 22 February 1940



Detail Note

No voltage regulator was fitted behind the headrest on these early Spitfires.

Detail Note

In early 1940, 602 Squadron was involved in testing 100 octane fuel imported from the United States. The aircraft carried a small white "100" on either side of the cowling, and may have had all or part of the fuel filler data near the filler cap overpainted.

Detail Note

K9962 was the 175th Spitfire built, delivered on 4 May 1939. She joined 602 Squadron on 8 May 1939. By early 1940 she had been fitted with the armored windscreen and fuel tank cover, but otherwise appeared much as before. She was delivered with the Night/White lower surface scheme with full stencils.

Detail Note

The overpainting of the factory applied 15" Type B roundels to make them into 15" Type As appears to be unique to 602 Squadron. The upper wing roundels are the very odd factory applied 31.2" (10" center spot) size.

Detail Note

On aircraft with factory applied Night/white wings, the landing gear wells, struts, wheel hubs, and the inside of the gear doors were typically painted in Night or white as well. The tail wheel leg was typically painted to match the lower surface color.

Dark Green | Dark Earth | White | Night

Squadron Leader Andrew Farquhar

Battle of Britain London Monument - W/Cdr. A D Farquhar

S/L Farquhar cycles past a 602 Squadron Spitfire at RAF Drem

Squadron Leader Andrew Douglas Farquhar also opened his score book on 16 October 1939. He made 2 claims that day: an He111 damaged and a Ju88 of KG30 (shared) destroyed, all while flying his regular mount K9962 LO-A.

Farquhar continued to score in K9962 bringing down an He111 of 5/KG26 (1H + EN) on 9 February 1940, which he forced to land. He then landed his Spitfire close by and captured the Heinkel intact. On the 22nd he attempted to repeat this feat when he forced another He111, coded T5+OH, to land, but ground looped K9962 when he attempted to land along side it. The German crew removed their wounded before setting fire to their aircraft, and then helped Farquhar out of the damaged K9962.

By February of 1940 K9662 sported an armored windscreen and a small 100 painted on either side of the fuel tank cover denoting 100 octane fuel and the smallest of A type roundels on the fuselage.

Farquhar's K9962 in the hangar at Drem. Note the un-armored windscreen and the Night painted left hand wheel hub, strut, and innner gear door.

Via Alistair MacLean

Spitfire Mk.I, K9962

Squadron Leader Andrew Farquhar
602 "City of Glasgow" Squadron, RAF Drem
16 October 1939 & February 1940

MARCH 7, 1940 FLIGHT 213

SERVICE AVIATION

Royal Air Force Awards and Announcements

RECOGNITION : A scene in the operations room of a Hurricane squadron in France. In the group may be recognised at least two pilots who have brought down Dorniers and on the wall some old *Flight* identification charts. It is to be hoped that by this time the squadron has acquired copies of our newest chart.

A D.F.C.—

THE Air Ministry announces:—

The King has been graciously pleased to approve of the undermentioned award in recognition of gallantry displayed in flying operations against the enemy:—

Awarded the Distinguished Flying Cross

Sqn. Ldr. Andrew Douglas Farquhar, Auxiliary Air Force.

During February, 1940, this officer engaged an enemy aircraft while on patrol. Though he expended only a small amount of ammunition, the accuracy of his shooting appears to have put both engines of the enemy aircraft out of action, and it effected a forced landing. Sqn. Ldr. Farquhar also very actively engaged enemy aircraft in October, 1939, and has led his squadron with magnificent dash and courage on several occasions.

The action for which he received the Cross was the bringing down of a Heinkel bomber at North Berwick earlier this month. While on patrol in a Spitfire he sighted an enemy aircraft, followed it into a cloud, and, sighting it again in a clear patch, gave a burst with his machine guns.

On October 16, this officer was also in action—in the German raid on the Firth of Forth, when he chased one of the raiders over the roofs of Edinburgh. He was also the leader of the Squadron that shot down the first enemy raider to fall on British soil, the Heinkel that came down on the Lammermuir Hills, near Dalkeith, on October 28.

It was the same squadron that brought down the Heinkel that crashed near St. Abb's Head, Berwickshire, last Thursday week. Sqn. Ldr. Farquhar, in his Spitfire, followed the enemy pilot down and landed his own aircraft not far from the Heinkel. He was too late, however, to prevent the German airmen from destroying their aircrait, which was already on fire.

Andrew Douglas Farquhar, a Glasgow stockbrocker, joined the Royal Auxilliary Air Force in 1927. By January 1939 he was in command of 602 Squadron and led them into their first air battle of the war on 16 October. That day Farquhar clamied a third of an He111 damaged and half a Heinkel destroyed in action over the Firth of Forth. Along with 603 Squadron's claims, these were the first Luftwaffe bombers shot down by the RAF. Farquhar would not score again until 9 February 1940 when damaged an He111H-1, coded 1H+EN, belongining to 5/KG 26 that signaled surrender by lowering its undercarriage. The Heinkel was then forced to land and captured. On the 22nd Farquhar, along with P/O Victor Proudman, shot down another Heinkel as detailed below. Farquhar flew Spitfire K9962 in all of the afore mentioned sorties.

The final paragraph of this piece in Flight, 7 March 1940 gives but a hint of what Sqdn Ldr Farquhar did on 22 February. He and his squadron mate, P/O George Proudman shot down an He111P-2 reconnaissance aircraft of 1(F).ObdL based in Norway, forcing it to crash land at Lumsdaine, East Coldingham, near St Abbs Head, East Lothian. The German crew then set fire to the aircraft. Farquhar, wanting to try to preserve this valuable prize, tried to land next to the Heinkel but overturned his kite and had to be rescued by Fw Sprigarth.

German crew:

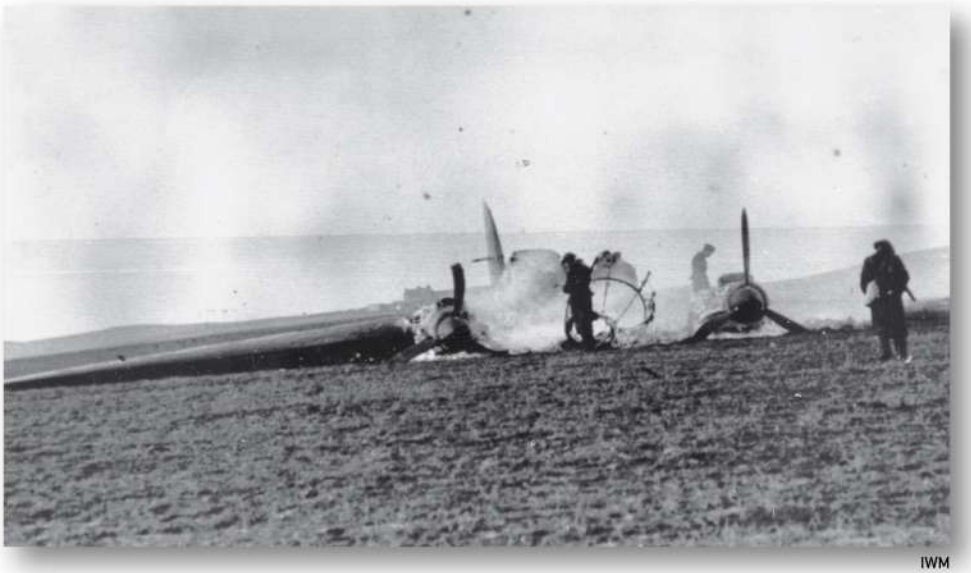
Lt R.E. Grote POW	Uffz Berger POW
Fw Sprigarth POW	Uffz Bachman (injured) POW

At the time, the Melrose newspaper 'The Argus' reported on 24 February 1940 - "After a Spitfire pilot brought down a Heinkel bomber yesterday he landed close in and took the crew of four Germans prisoner.' The village postman reported - "I saw a big black machine flying from the sea. It was very low and the Spitfire was almost on top of it. Then I heard a burst of fire and the bomber crashed." A farm worker followed on- "Three Germans climbed out of the bomber and lifted out another man who seemed badly injured. They carried him across the field. They then went back and got in again. They weren't inside long. They jumped out and smoke and flames shot up."

"As this happened the Spitfire landed and the pilot clambered out and raced toward the Heinkel a few seconds late. Flames were rising 30ft from the bomber. The British pilot guarded the Germans until troops arrived and then helped them carry thier wounded comrade to a farm close by."

On February 29th, Flight magazine reported: "...persued by the Spitfires and with one engine out of action, the German pilot decided to make for land. He crashed his aircraft a mile inland near St Abbs Head. The crew succeeded in setting it on fire. One of the Spitfires descended in an unsuccessful attempt to prevent the Germans destroying their aircraft. One German airman said- "...we were shot down by one of your Spitfires. It shot at our tail and back. The machine gunner, a corporal, in our Heinkel was hit twice in one leg. We were not struck. We were shot at several times and we had to come down about 1 o'clock. The Spitfire came down too."

However, another Spitfire pilot based at Drem wrote to his brother. This is his account of what actually happened: "The only thing of interest that has happened up here is that awful show when the Heinkel landed at St. Abbs Head. Of course you must have read about it. The 'dashing' pilot landed near the machine and tried to prevent the Jerries firing it - of all the crass stupidity. I have never seen such a miserable attempt at being a hero or something. It was the CO of 602 squadron! A squadron leader!!! My, my. The field was like a minature mountian and of course he went ass over tit and landed flat on his back and was firmly stuck in the cockpit upside down! The Germans, being decent chaps, lifted what was left of the tail and got him out, thus saving his life - or if not that, from a nasty headache. Actually, the Heinkel was nicely set alight, whilst the wretched S/L was on the wrong end of a revolver, trying to bluff a bullet headed German to hand it over! The scream of it all is that the 'ace British Spitfire pilot' had not got even a peashooter with him!! A silly man. The King is coming to see us all tomorrow and I expect he will get a DFC or something; I know what he really wants!"



IWM

The still-smouldering wreckage of He111P-2 T5+OH of 1(F).ObdL rests in the field where Farquhar landed his Spitfire. The North Sea is visible in the background. We have been unable to locate any other photos of He111s of this unit. If any reader has any leads on these elusive reconnaissance aircraft we would be most interested to hear from you!

Spitfire Mk.I, K9962

Squadron Leader Andrew Farquhar
602 "City of Glasgow" Squadron, RAF Drem
16 October 1939 & February 1940

IWM

He111H-1 1H+HN, WNr 8653 of 5/KG.26 which Farquhar and his wingman damaged and forced down on 9 February 1940. Virtually undamaged, it was given Air Ministry serial number AW177 and used to develop and refine tactics against the He111.

IWM

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Spitfire Mk.I, K9977

Pilot Officer Archie McKellar
602 "City of Glasgow" Squadron, RAF Drem
28 October 1939

Detail Note

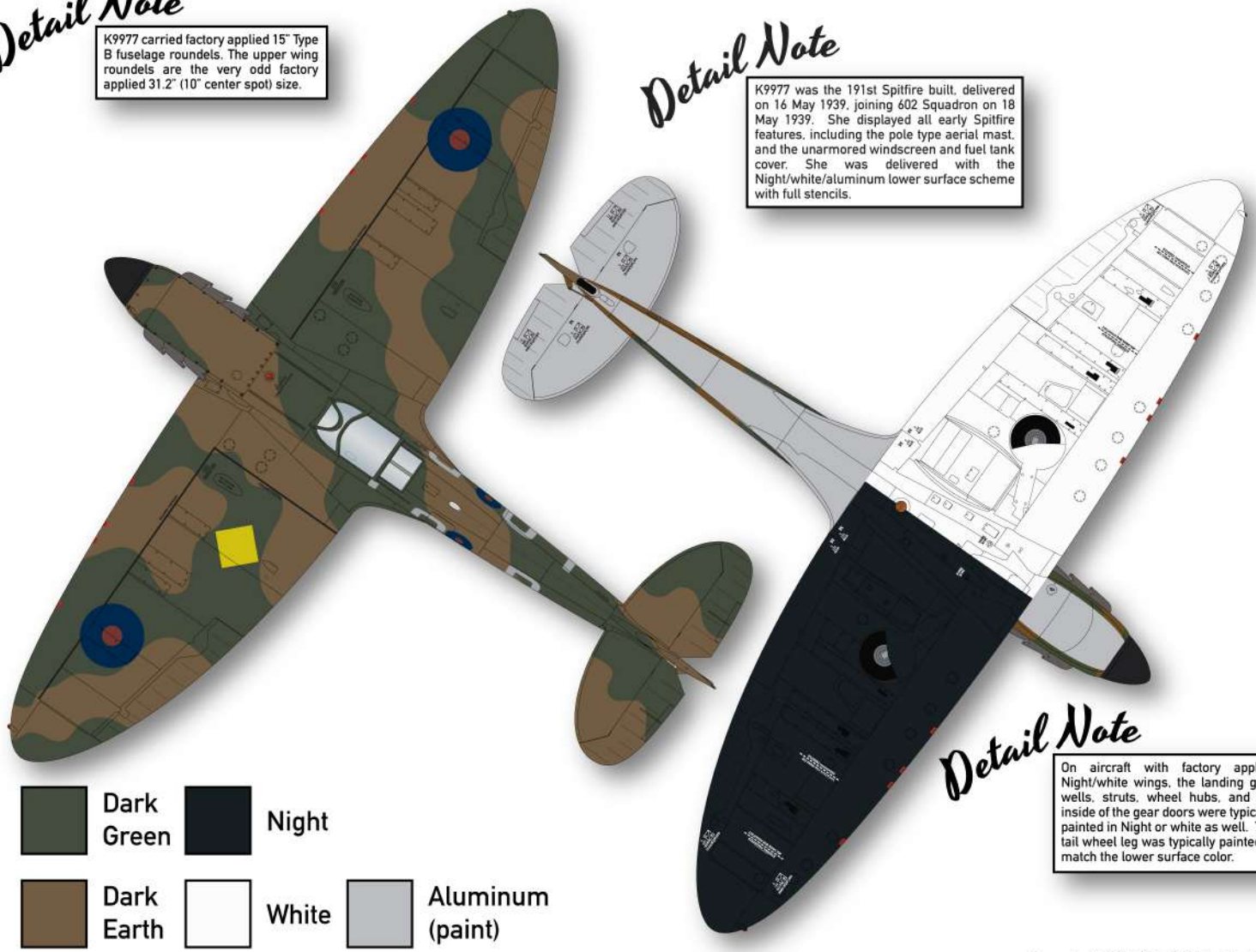
No voltage regulator was fitted behind the headrest on these early Spitfires.

Detail Note

K9977 carried factory applied 15" Type B fuselage roundels. The upper wing roundels are the very odd factory applied 31.2" (10" center spot) size.

Detail Note

K9977 was the 191st Spitfire built, delivered on 16 May 1939, joining 602 Squadron on 18 May 1939. She displayed all early Spitfire features, including the pole type aerial mast, and the unarmored windscreen and fuel tank cover. She was delivered with the Night/white/aluminum lower surface scheme with full stencils.



Detail Note

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Dark Green
Night
Dark Earth
White
Aluminum (paint)

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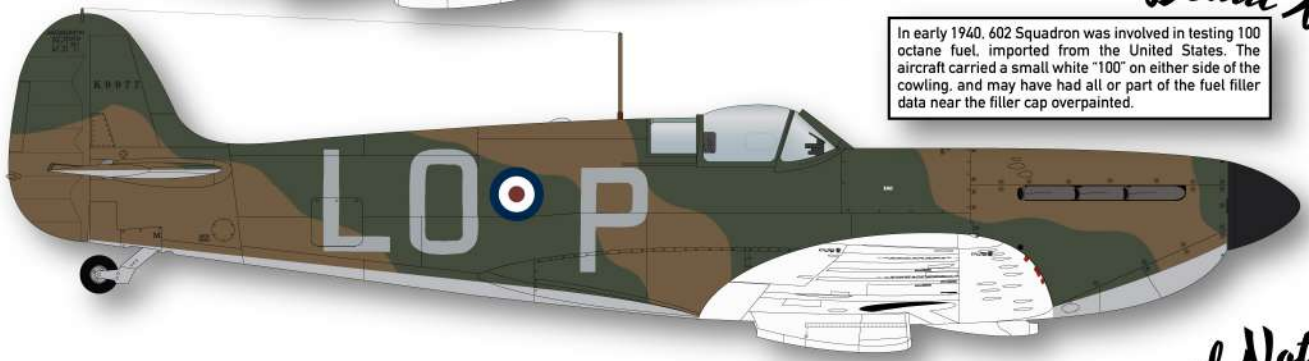
Spitfire Mk.I, K9977 "Hawkeye"

Pilot Officer Thomas Ritchie
602 "CIty of Glasgow" Squadron, RAF Drem
December 1939

The photograph of the Native American artwork isn't clear enough to discern specific details, so our artwork is a reconstruction based on what we can see. He may or may not have had colors in the headband, so we have provided him both ways. Use the decal of your choice.



Detail Note

In early 1940, 602 Squadron was involved in testing 100 octane fuel, imported from the United States. The aircraft carried a small white "100" on either side of the cowling, and may have had all or part of the fuel filler data near the filler cap overpainted.

Detail Note

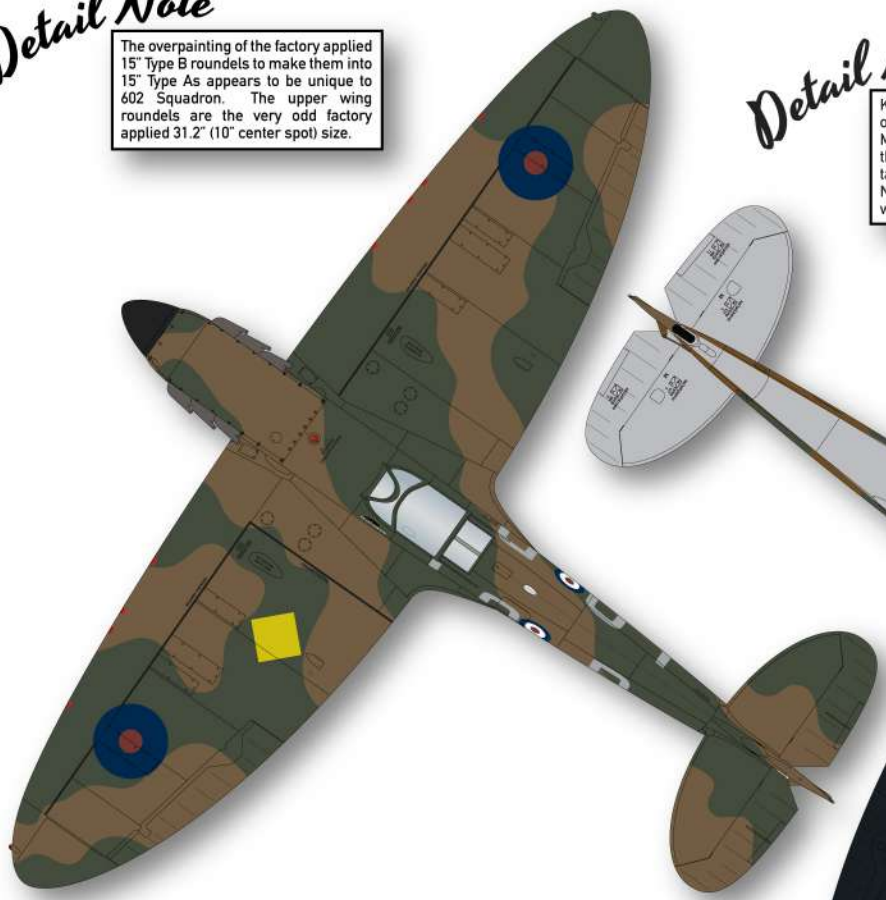
The overpainting of the factory applied 15" Type B roundels to make them into 15" Type As appears to be unique to 602 Squadron. The upper wing roundels are the very odd factory applied 31.2" (10" center spot) size.

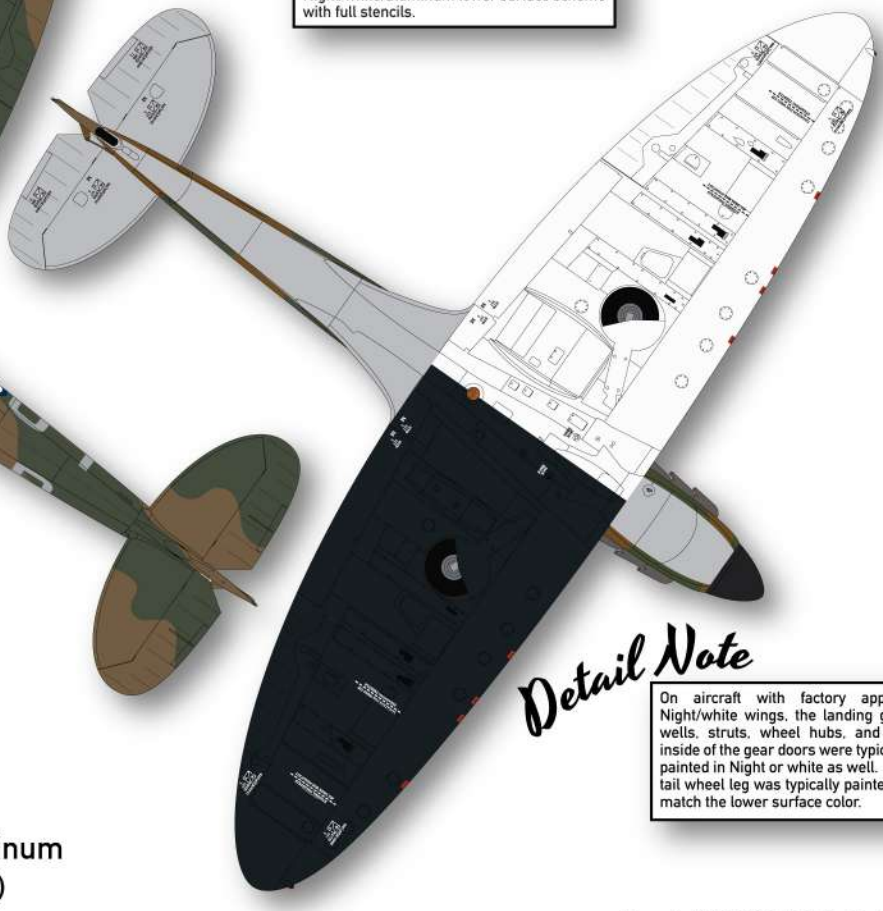
Detail Note

K9977 was the 191st Spitfire built, delivered on 16 May 1939, joining 602 Squadron on 18 May. By early 1940 she had been fitted with the armored windscreen and fuselage fuel tank cover. She was delivered with the Night/white/aluminum lower surface scheme with full stencils.

Detail Note

No voltage regulator was fitted behind the headrest on these early Spitfires.





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Dark Green
Night
Dark Earth
White
Aluminum (paint)

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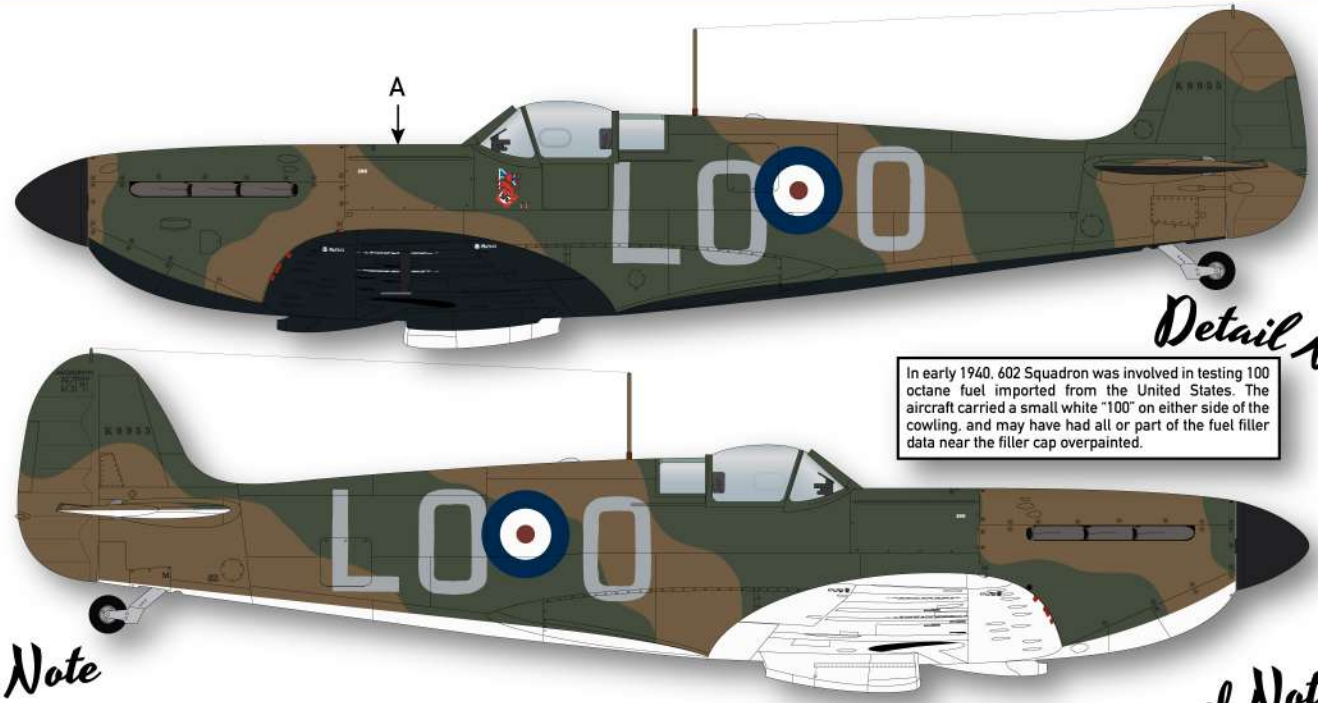
Spitfire Mk.I, K9955

Flying Officer Archie McKellar

602 "City of Glasgow" Squadron, RAF Drem

March 1940



Detail Note

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Detail Note

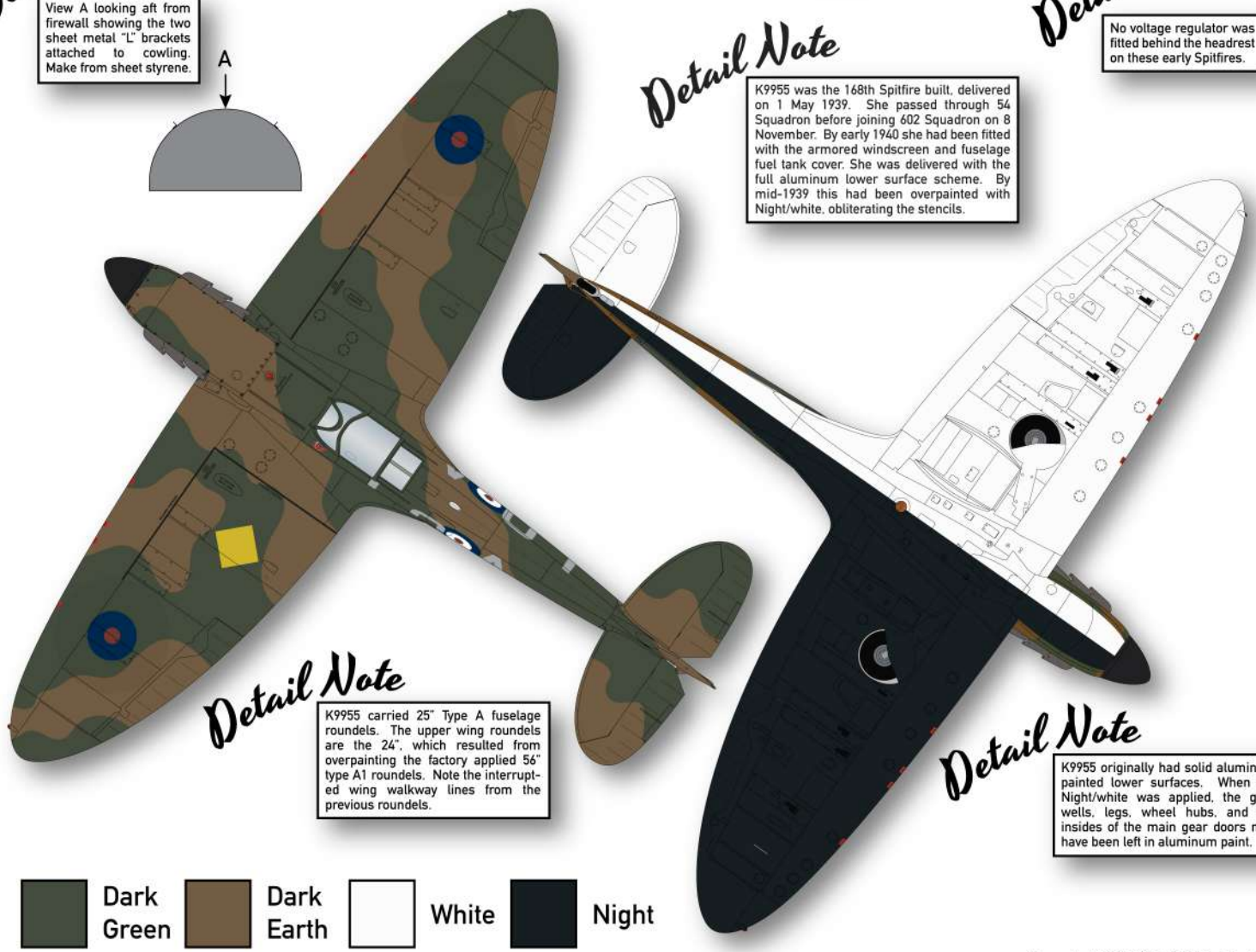
View A looking aft from firewall showing the two sheet metal "L" brackets attached to cowling. Make from sheet styrene.

Detail Note

No voltage regulator was fitted behind the headrest on these early Spitfires.

Detail Note

K9955 was the 168th Spitfire built, delivered on 1 May 1939. She passed through 54 Squadron before joining 602 Squadron on 8 November. By early 1940 she had been fitted with the armored windscreen and fuselage fuel tank cover. She was delivered with the full aluminum lower surface scheme. By mid-1939 this had been overpainted with Night/white, obliterating the stencils.



Detail Note

K9955 carried 25" Type A fuselage roundels. The upper wing roundels are the 24", which resulted from overpainting the factory applied 56" type A1 roundels. Note the interrupted wing walkway lines from the previous roundels.

Detail Note

K9955 originally had solid aluminum painted lower surfaces. When the Night/white was applied, the gear wells, legs, wheel hubs, and the insides of the main gear doors may have been left in aluminum paint.

Dark Green | Dark Earth | White | Night

Pilot Officers Archie McKellar & Thomas Ritchie

Gifford's last claim is shared with P/O Archie McKellar of 602 Squadron, who was flying K9977 LO-P according to the squadron's Operational Record Book.

Later in 1939 McKellar gave up K9977 as his favored Spitfire and it became the regular mount of P/O Thomas Ritchie. At this time it had Native American in full headdress and the name "Hawkeye" painted under the windscreen. Sgt Brian Bailey was killed in K9977 when he let a wingtip hit the ground on 30 December 1939.

Meanwhile, McKellar had taken on K9955 as his favored Spitfire and it was photographed at RAF Drem in March 1940. Artwork under the windscreen includes an Scottish flag and lion rampant, with two small Nazi flags denoting McKellar's claims of October 16th (a shared Ju88 from KG30) and the shared He111 from the 28th.

A 603 Squadron portrait, with Archie McKellar standing third from right.

A quartet of 'erks' giving K9955 some loving care at Drem. Note the color of the landing gear legs, wheel hubs, the inner surfaces of the gear doors, and the sliver of the left main gear bay that is visible - all appear to be painted silver. Also note the antenna mast, the external armored windscreen, and the sheet metal L shaped blinker brackets on the cowling. The aircraft was less than a year old when this photo was taken, yet she appears somewhat scruffy. The Scottish rains undoubtedly made for muddy conditions at Drem, accounting for the splattered appearance of the gear door. Also note the difference in tone between the black spinner and prop blades, and the Night lower cowling.

McKellar showing off his two victories and the nose art with the Scottish lion motif on K9955.

Photos this page: Fündekals collection

A MIRACLE of DELIVERANCE

The "Phoney War" ended on 10 May 1940 when Hitler's armies rolled into France and Belgium. The Luftwaffe was able to provide air superiority over the battlefield as Guderian's Panzers raced toward the Channel. By the last week of May thousands of soldiers found themselves stranded on the beaches of Dunkirk awaiting annihilation from the ground and from the air. Many of them wondered "where is the RAF"? Fighter Command was in fact fighting desperately to keep the Luftwaffe from the kill zone, though out of sight of the troops on the beach. Their efforts were instrumental in making possible the most successful military evacuation in history, but the RAF's fighter tactics were inferior to those of the Luftwaffe. Still, what the RAF was not aware of immediately after Dunkirk was that while Luftwaffe pilots were at least mindful of and respected the Hurricane - they actually feared the Spitfire.

Two views of N3194 after Bushell had set fire to her to prevent her from falling into German hands. It would not be his last act of defiance toward the Third Reich.

South African Roger Bushell studied law in England before joining the RAF. He was given command of 92 Squadron in October 1939 and promoted to Squadron Leader in January 1940.

His law background made him an obvious choice as an assistant in the successful defense of pilots John Freeborn and Paddy Byrne who were court martialled for a fatal friendly fire incident known as "The Battle of Barking Creek".

On 23 May 1940 Bushell led 92 Squadron on two patrols over Calais, Boulogne and Durkirk. During the second patrol Bushell damaged one Me110 before he was shot down by another (possibly flown by Günther Specht, Adjutant of I./ZG 26).

Bushell managed to crash land Spitfire N3194 GR-Z but was unable to avoid capture. As a POW Bushell was always thinking of escape. In June 1941 during one of his escape attempts Bushell made it as far as the Swiss border before being recaptured. He was eventually placed in Stalag Luft III where he became known as "Big X", and was the mastermind behind the "Great Escape". He was one of the 50 escapees who were murdered by the Germans on the direct order of Adolf Hitler.

Bushell was immortalized in the 1963 film epic "The Great Escape" by Richard Attenborough, fictionalized as Squadron Leader Roger Bartlett.

Photos this page: Fündekals collection

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Spitfire Mk.I, N3194

Squadron Leader Roger Bushell
92 Squadron, Croydon Airport
23 May 1940

Detail Note

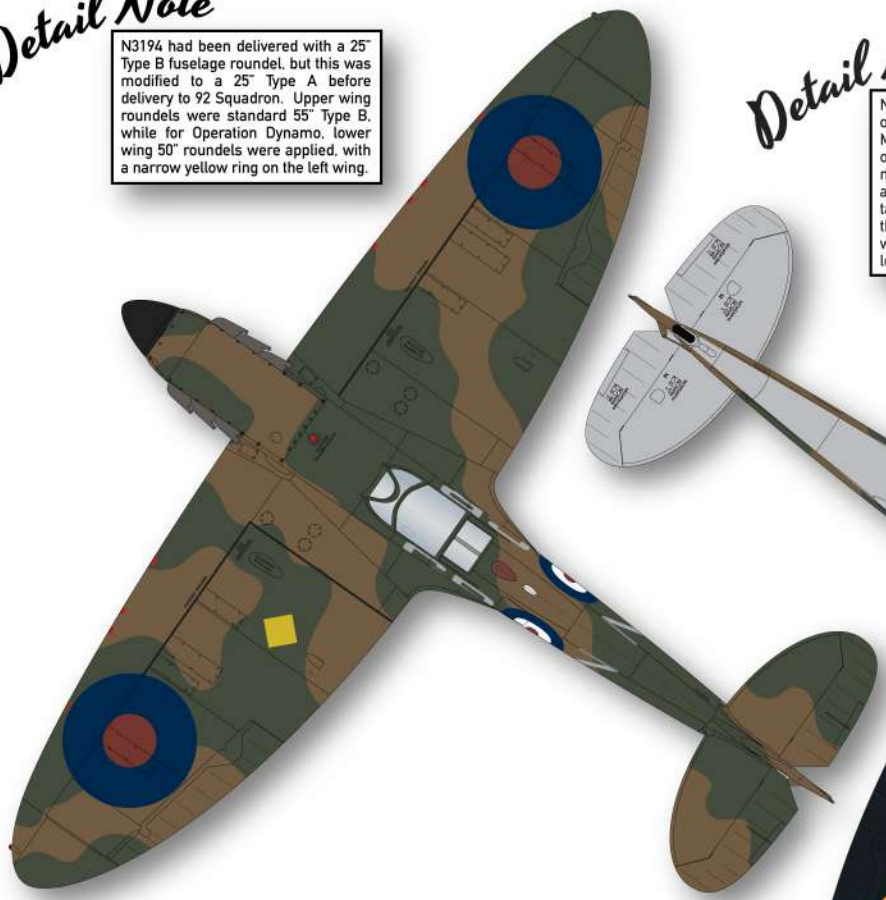
It is possible, though difficult to say for certain, that N3194 carried reverse color fin flashes. This was a not uncommon occurrence in the chaos of changing Fighter Command markings orders in early 1940.

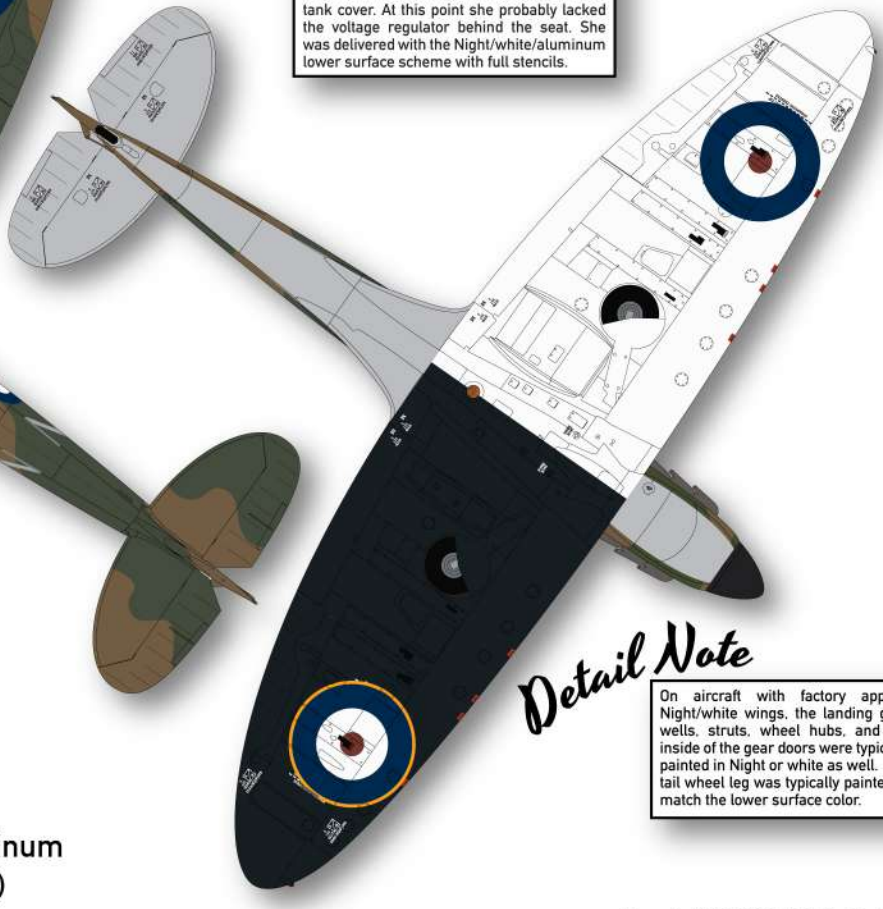
Detail Note

N3194 had been delivered with a 25" Type B fuselage roundel, but this was modified to a 25" Type A before delivery to 92 Squadron. Upper wing roundels were standard 55" Type B, while for Operation Dynamo, lower wing 50" roundels were applied, with a narrow yellow ring on the left wing.

Detail Note

N3194 was the 435th Spitfire built, delivered on 25 November 1939, passing through 27 Maintenance Unit before joining 92 Squadron on 30 March 1940. She was a very standard mid-production Mk.I with the later style antenna mast, armored windscreen and fuel tank cover. At this point she probably lacked the voltage regulator behind the seat. She was delivered with the Night/white/aluminum lower surface scheme with full stencils.





Detail Note

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Dark Green
Night
Dark Earth
White
Aluminum (paint)

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Spitfire Mk.I, N3249

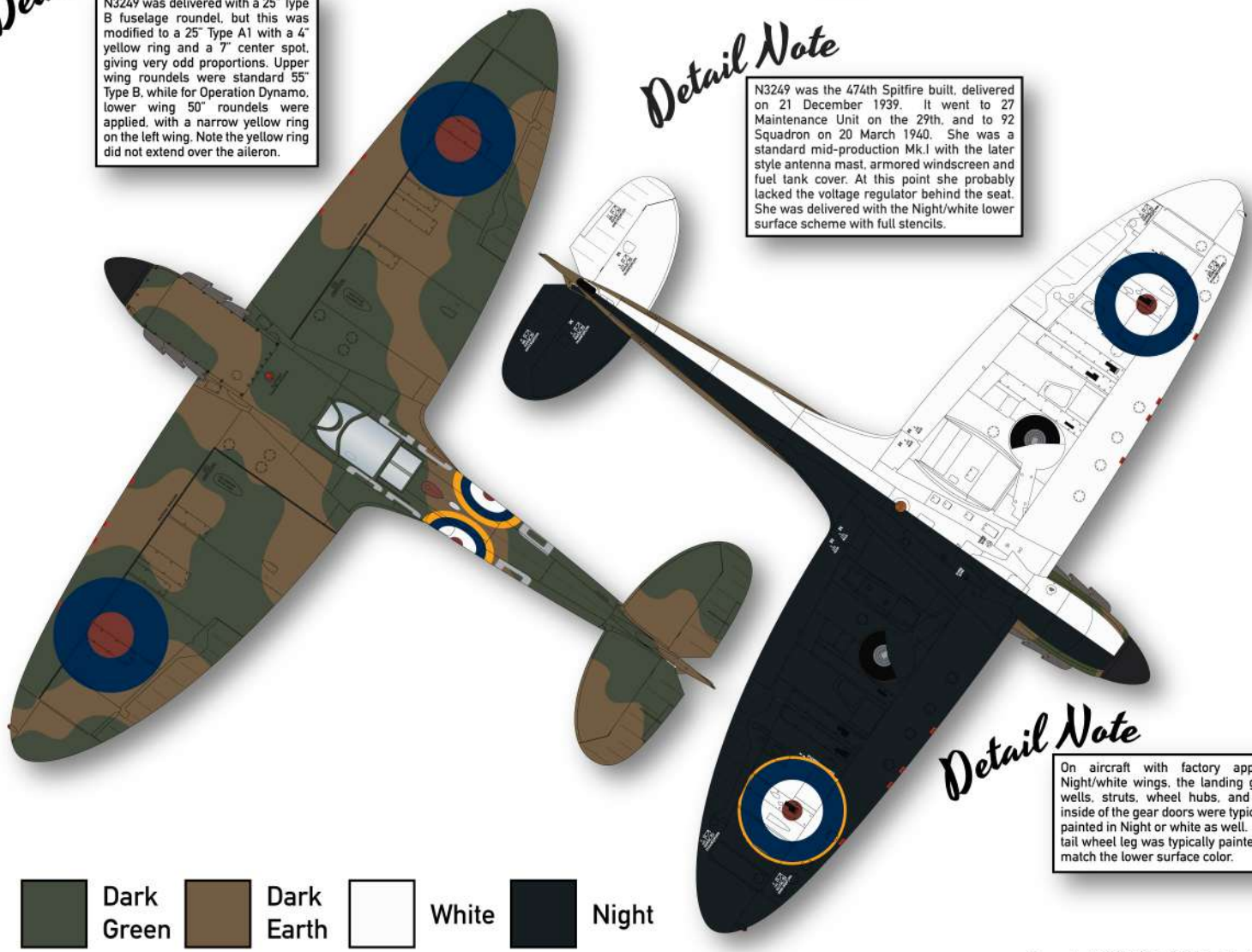
Pilot Officer Desmond Williams
92 Squadron, Croydon Airport
2 June 1940

Detail Note

N3249 was delivered with a 25" Type B fuselage roundel, but this was modified to a 25" Type A1 with a 4" yellow ring and a 7" center spot, giving very odd proportions. Upper wing roundels were standard 55" Type B, while for Operation Dynamo, lower wing 50" roundels were applied, with a narrow yellow ring on the left wing. Note the yellow ring did not extend over the aileron.

Detail Note

N3249 was the 474th Spitfire built, delivered on 21 December 1939. It went to 27 Maintenance Unit on the 29th, and to 92 Squadron on 20 March 1940. She was a standard mid-production Mk.I with the later style antenna mast, armored windscreen and fuel tank cover. At this point she probably lacked the voltage regulator behind the seat. She was delivered with the Night/white lower surface scheme with full stencils.



Detail Note

On aircraft with factory applied Night/white wings, the landing gear wells, struts, wheel hubs, and the inside of the gear doors were typically painted in Night or white as well. The tail wheel leg was typically painted to match the lower surface color.

Dark Green | Dark Earth | White | Night

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Spitfire Mk.I, P9374

Pilot Officer Desmond Williams
92 Squadron, Croydon Airport
23 May 1940

Detail Note

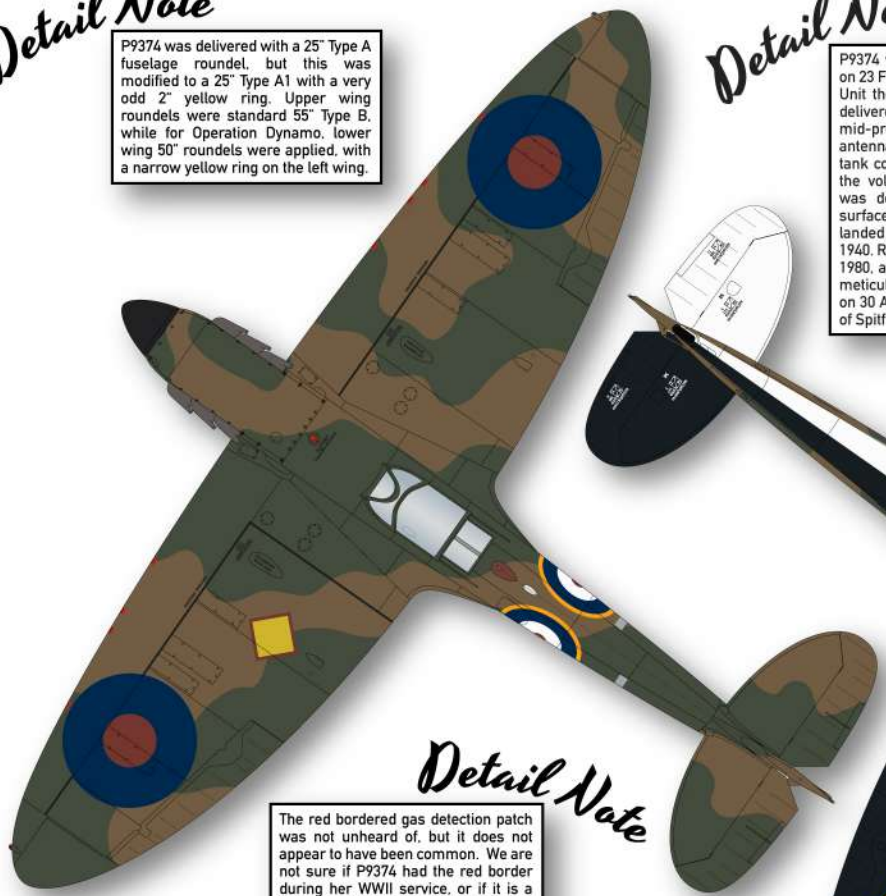
For reasons unknown, P9374 never received her "GR" squadron codes prior to her loss on 24 May 1940. At the time of her loss she had 32.05 hours on the clock, so she would have been virtually pristine in appearance.

Detail Note

P9374 was delivered with a 25" Type A fuselage roundel, but this was modified to a 25" Type A1 with a very odd 2" yellow ring. Upper wing roundels were standard 55" Type B, while for Operation Dynamo, lower wing 50" roundels were applied, with a narrow yellow ring on the left wing.

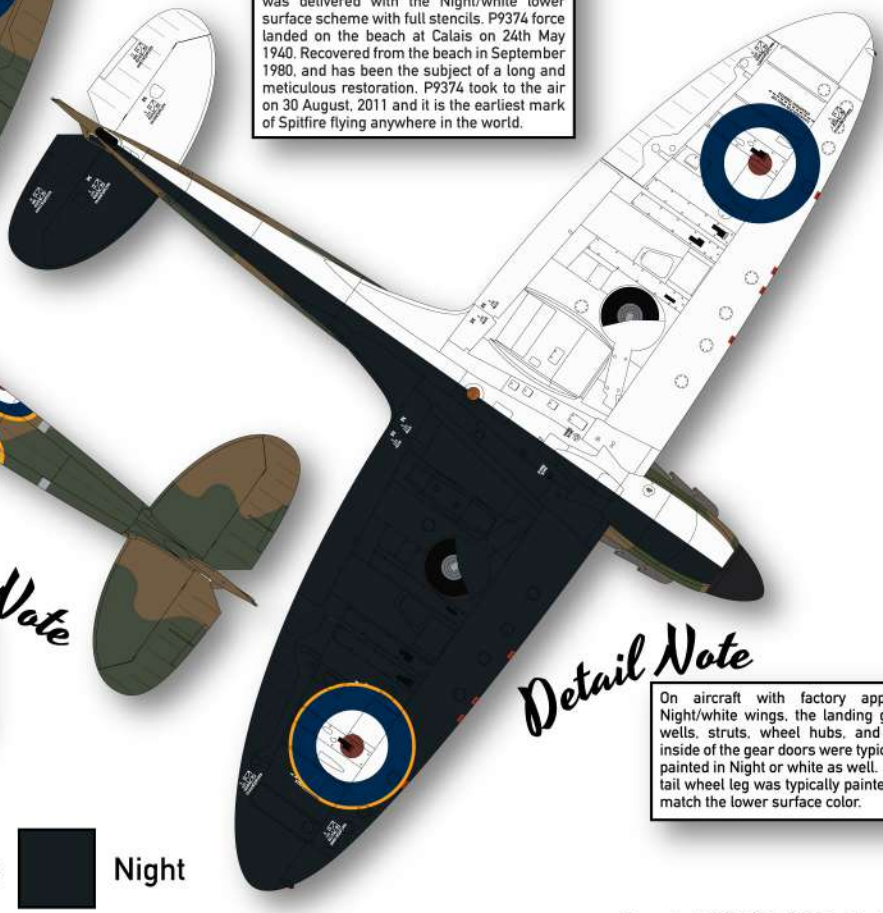
Detail Note

P9374 was the 557th Spitfire built, delivered on 23 February 1940. It went to 9 Maintenance Unit the next day, and on 6 March she was delivered to 92 Squadron. She was a standard mid-production Mk.I with the later style antenna mast, armored windscreen and fuel tank cover. At this point she probably lacked the voltage regulator behind the seat. She was delivered with the Night/white lower surface scheme with full stencils. P9374 force landed on the beach at Calais on 24th May 1940. Recovered from the beach in September 1980, and has been the subject of a long and meticulous restoration. P9374 took to the air on 30 August, 2011 and it is the earliest mark of Spitfire flying anywhere in the world.



Detail Note

The red bordered gas detection patch was not unheard of, but it does not appear to have been common. We are not sure if P9374 had the red border during her WWII service, or if it is a feature of her modern restoration.



Detail Note

On aircraft with factory applied Night/white wings, the landing gear wells, struts, wheel hubs, and the inside of the gear doors were typically painted in Night or white as well. The tail wheel leg was typically painted to match the lower surface color.

Dark Green | Dark Earth | White | Night

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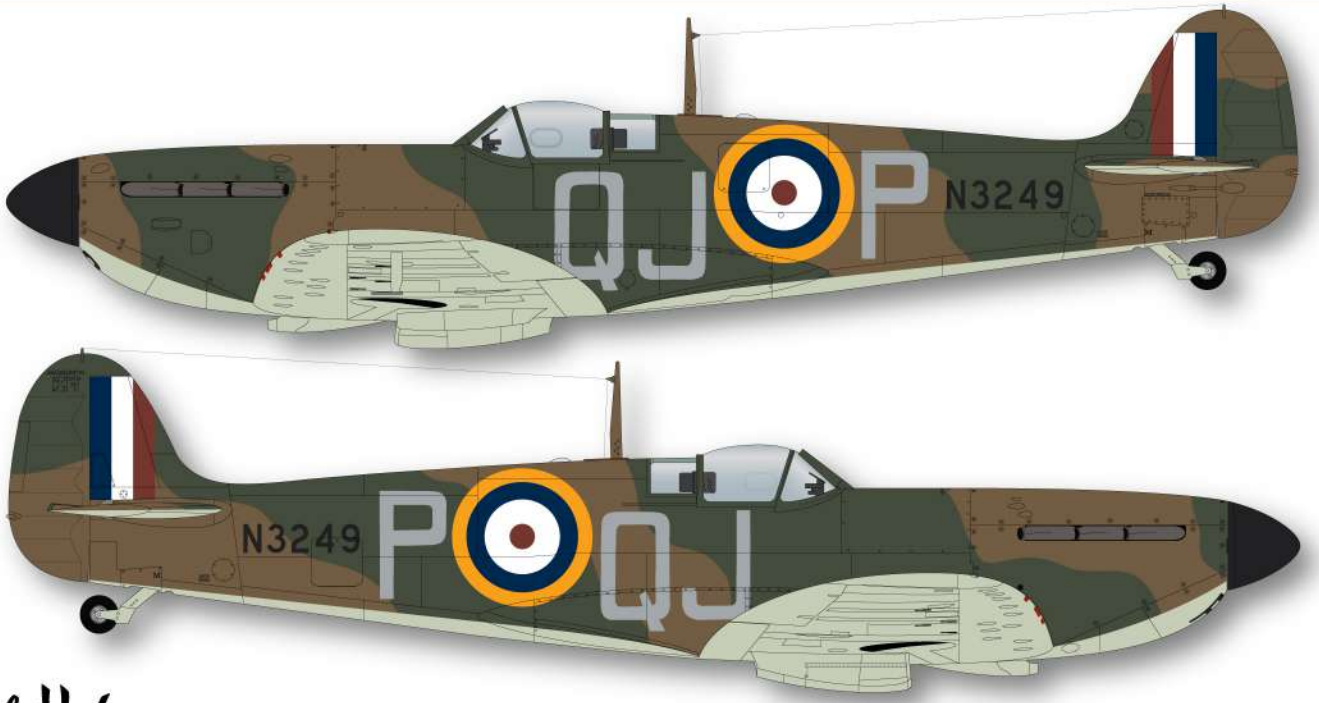
Spitfire Mk.I, N3249

Pilot Officer Desmond Williams
92 Squadron, Croydon Airport
14 August 1940

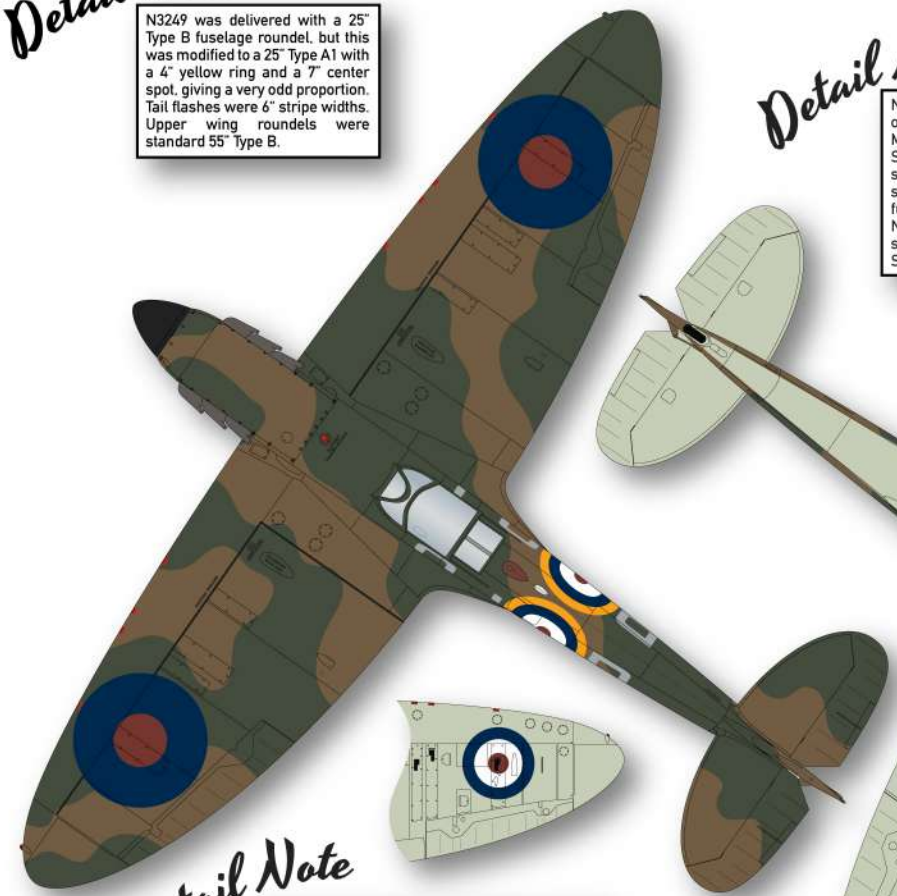


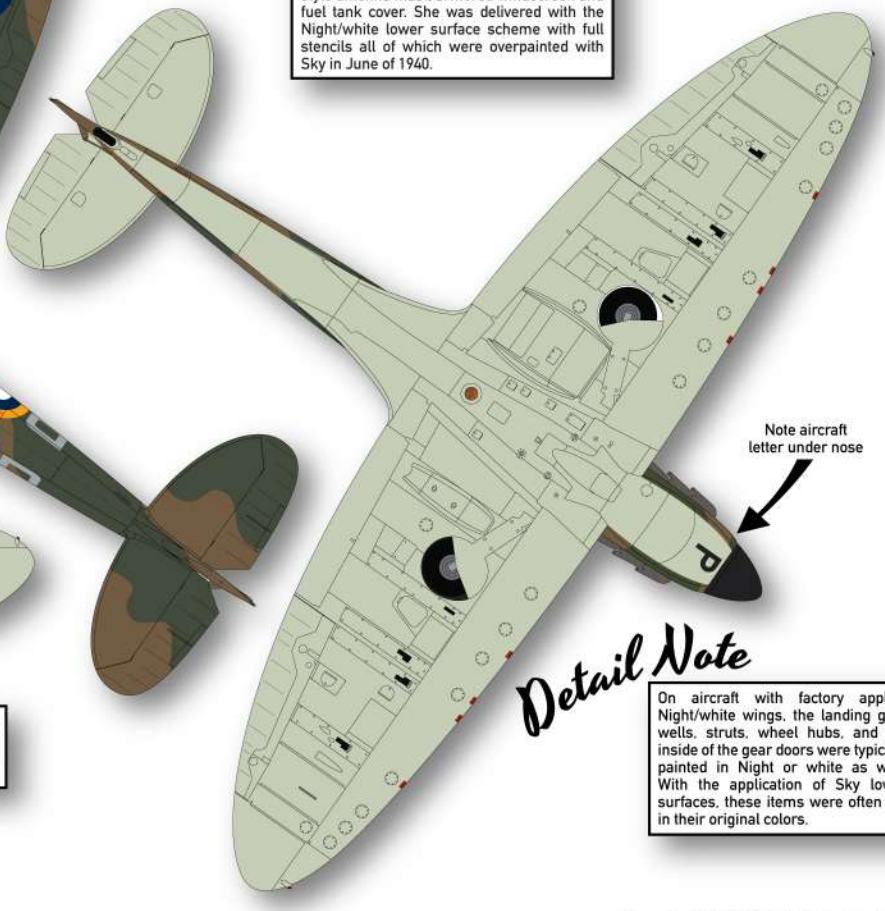
Detail Note

N3249 was delivered with a 25" Type B fuselage roundel, but this was modified to a 25" Type A1 with a 4" yellow ring and a 7" center spot, giving a very odd proportion. Tail flashes were 6" stripe widths. Upper wing roundels were standard 55" Type B.

Detail Note

N3249 was the 474th Spitfire built, delivered on 21 December 1939. It went to 27 Maintenance Unit on the 29th, and to 92 Squadron on 20 March 1940. She was a standard mid-production Mk.I with the later style antenna mast, armored windscreen and fuel tank cover. She was delivered with the Night/white lower surface scheme with full stencils all of which were overpainted with Sky in June of 1940.





Detail Note

N3249 sustained Cat. 2 damage on 31 August 1940. When she was photographed after her "prang" she was sporting these oddly proportioned Type A roundels on the lower wings.

Detail Note

On aircraft with factory applied Night/white wings, the landing gear wells, struts, wheel hubs, and the inside of the gear doors were typically painted in Night or white as well. With the application of Sky lower surfaces, these items were often left in their original colors.

Dark Green | Dark Earth | Sky

Pilot Officer Desmond Williams

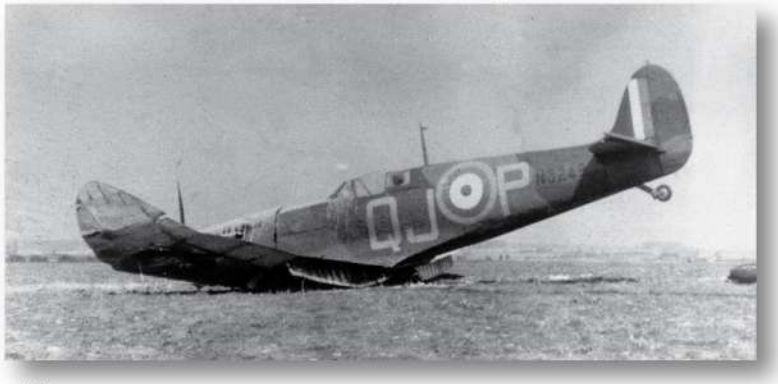
Although Spitfire Mk.I N3249 is sometimes associated with Bob Stanford Tuck (he did fly it once, on 24 May 1940 according to the ORB and claimed two Do17s destroyed) it was actually flown most often by Pilot Officer Desmond Gordon Williams. Williams flew N3249 GR-P on the first patrol of Calais-Boulogne-Dunkirk on 23 May, but for the afternoon patrol he switched to P9374 'J' and claimed an Me110 destroyed and two more damaged.

Williams flew N3249 most of June and into July. He was flying N3249 (now coded QJ-P) on 10 July when he claimed an He111 destroyed, albeit unconfirmed. On 14 August Williams and N3249 claimed an He111 destroyed and an He111 shared probable.

By early October his score had reached 5 and 1 shared destroyed, 1 and 1 shared unconfirmed, 2 probables, and 6 damaged. On 10 October Williams was killed when his Spitfire collided with another aircraft while attacking a Do17. He was 20 years old when he died.

P9374 being slowly consumed by the sands of the Calais beach where she came down on 24 May 1940, flown by Flying Officer Peter Cazenove. She remained buried in the sand until she was recovered in 1980, and eventually underwent a complete restoration to flying status. She made her second "first flight" on 9 September 2011.

N3249 is seen here at the far end of the lineup above, and at left on the day she was pranged in late August 1940. In both cases she wears the revised "QJ" squadron codes.



Photos this page: Fündekals collection

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Spitfire Mk.I, K9953

Flight Lieutenant A.G. "Sailor" Malan
74 Squadron, RAF Leconfield
27 May 1940

Detail Note

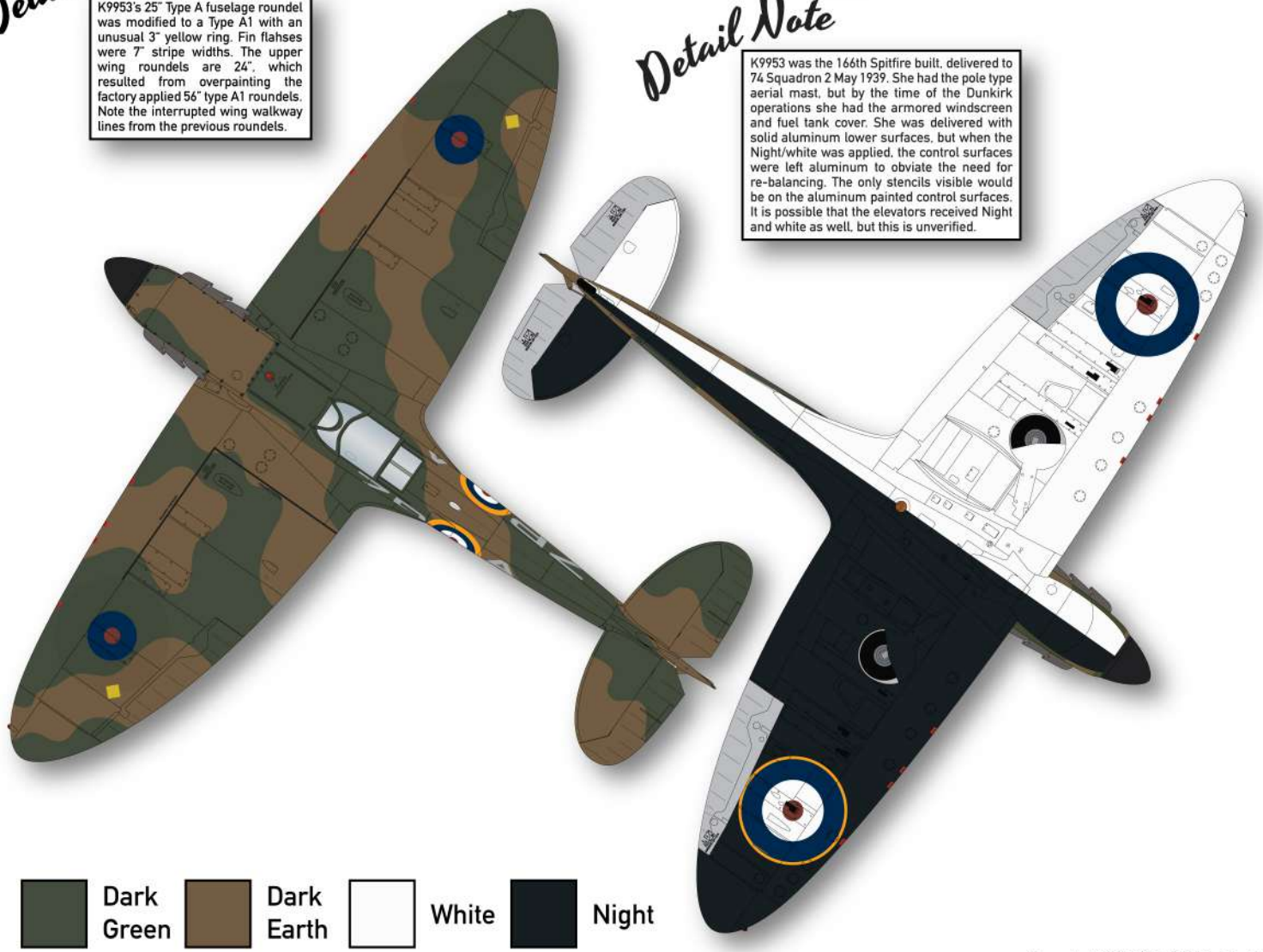
No voltage regulator was fitted behind the headrest on these early Spitfires.

Detail Note

K9953's 25" Type A fuselage roundel was modified to a Type A1 with an unusual 3" yellow ring. Fin flahses were 7" stripe widths. The upper wing roundels are 24", which resulted from overpainting the factory applied 56" type A1 roundels. Note the interrupted wing walkway lines from the previous roundels.

Detail Note

K9953 was the 166th Spitfire built, delivered to 74 Squadron 2 May 1939. She had the pole type aerial mast, but by the time of the Dunkirk operations she had the armored windscreen and fuel tank cover. She was delivered with solid aluminum lower surfaces, but when the Night/white was applied, the control surfaces were left aluminum to obviate the need for re-balancing. The only stencils visible would be on the aluminum painted control surfaces. It is possible that the elevators received Night and white as well, but this is unverified.



Dark Green | Dark Earth | White | Night

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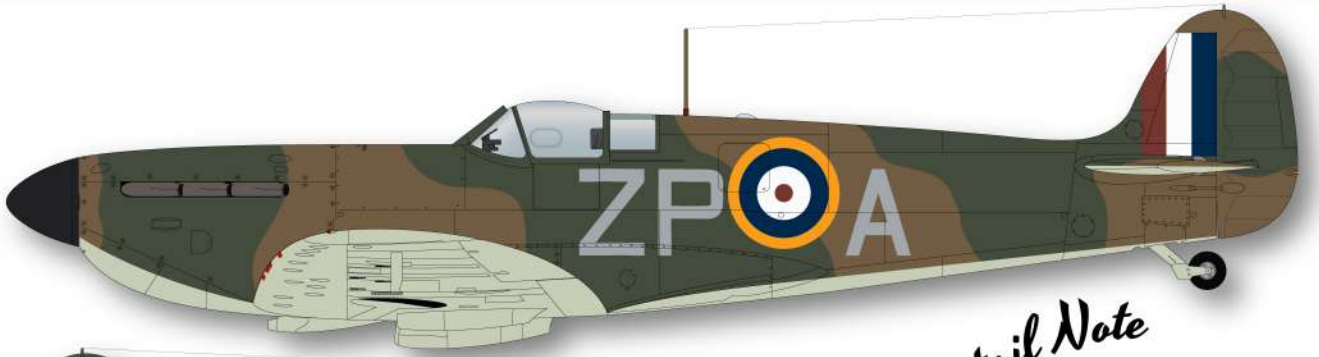
Spitfire Mk.I, K9953

Flight Lieutenant A.G. "Sailor" Malan
74 Squadron, RAF Rochford
18 - 19 June 1940



Detail Note

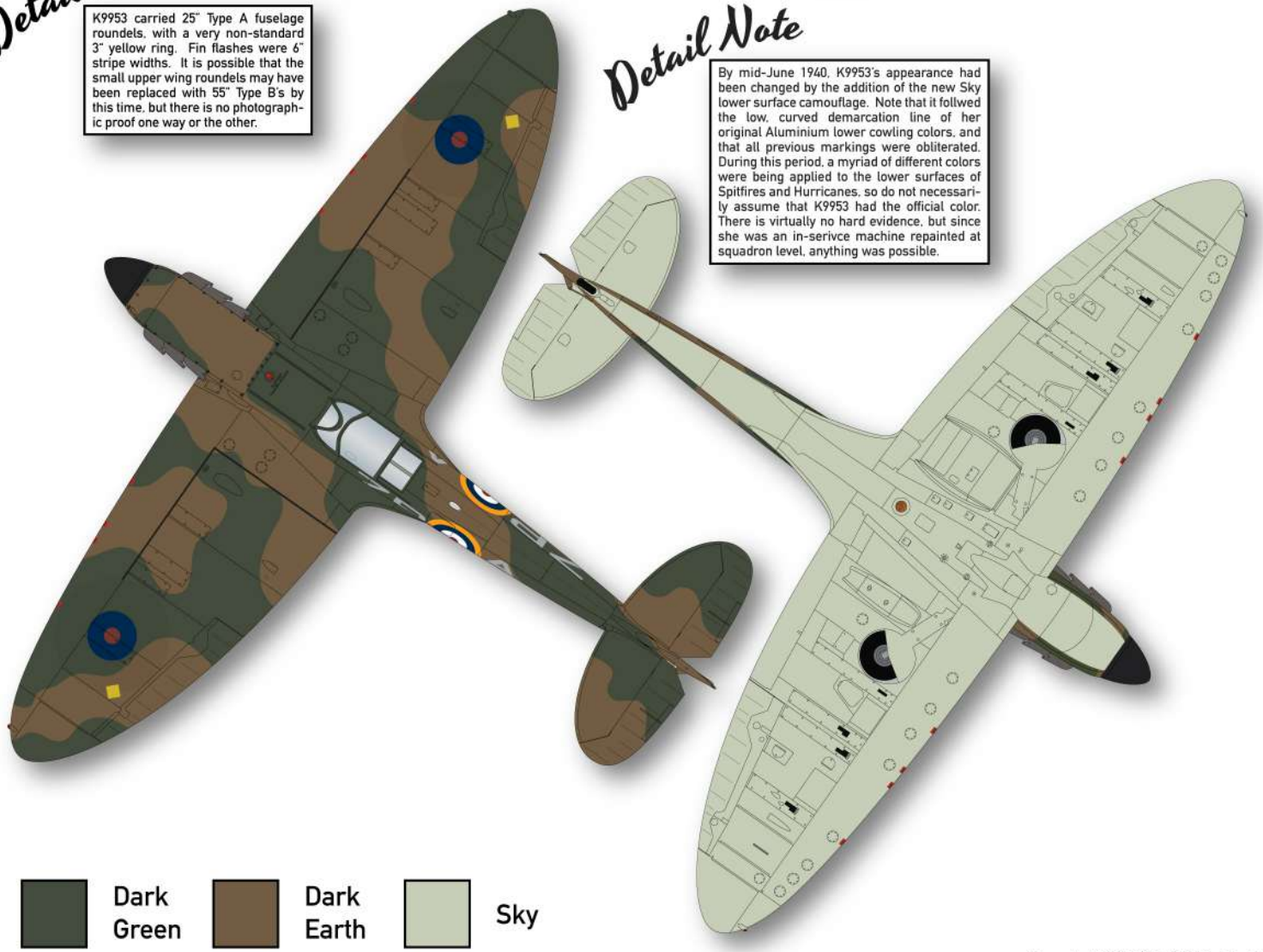
No voltage regulator was fitted behind the headrest on these early Spitfires.

Detail Note

K9953 carried 25" Type A fuselage roundels, with a very non-standard 3" yellow ring. Fin flashes were 6" stripe widths. It is possible that the small upper wing roundels may have been replaced with 55" Type B's by this time, but there is no photographic proof one way or the other.

Detail Note

By mid-June 1940, K9953's appearance had been changed by the addition of the new Sky lower surface camouflage. Note that it follwed the low, curved demarcation line of her original Aluminium lower cowling colors, and that all previous markings were obliterated. During this period, a myriad of different colors were being applied to the lower surfaces of Spitfires and Hurricanes, so do not necessarily assume that K9953 had the official color. There is virtually no hard evidence, but since she was an in-serivce machine repainted at squadron level, anything was possible.



Dark Green

Dark Earth

Sky

Flight Lieutenant "Sailor" Malan

Adolph "Sailor" Malan was already an experienced fighter pilot by the time 74 Squadron was covering the evacuation from Dunkirk. On 21 May 1940 he claimed an He111 destroyed (unconfirmed), a Ju88 destroyed, and another damaged. The following day he shared in the destruction of a Ju88 with three other pilots. On 24 May he claimed an He111 destroyed and shared in the destruction of a Do17 with five pilots.

We would like to be able to tell you that Malan was flying this or that Spitfire on the dates mentioned, but for whatever reason his name does not appear in the Operational Record Book (ORB) for those days, although we know he was flying the missions. There are appendices attached to 74 Squadron's history that confirm his claims, but actual mention in the ORB for missions flown and in what aircraft is sadly missing.

What is confirmed by the ORB is that on 27 May Malan was flying K9953 when he shot down a Bf109E, damaged 2 Do17s, and shared in the destruction of third Do17 (unconfirmed). Also confirmed by the ORB is that on the night of 18/19 June Malan shot down 2 He111s, again at the controls of K9953. We speculate that the claims for 21-24 May were also made with K9953 ZP-A.

Oddly, "Spitfire - The History" shows K9953 has having been transferred to 92 Squadron in April 1940, but this is not supported by evidence in 74 Squadron's ORB for June.

Malan finished the war with 27 confirmed, 7 shared, 2 unconfirmed, 1 shared unconfirmed, 3 probables, and 16 damaged.

Malan in the classic Spitfire pilot "hero" pose, later in the war

Malan posees next to K9953. Note the sheen of the camouflage paint.

Photos this page: Fündekals collection

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Spitfire Mk.I, P9443

Flight Lieutenant Douglas Bader
222 Squadron, RAF Hornchurch
1 June 1940

Detail Note

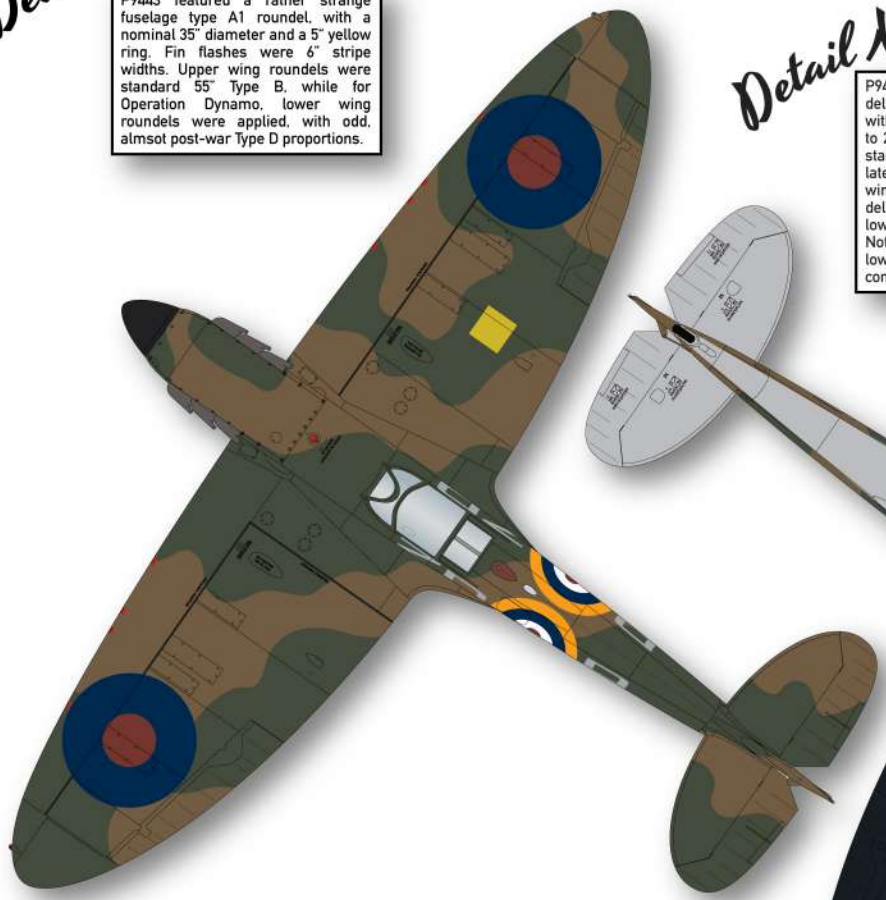
Note the red stripe under the nose. We believe this may have signified a flight commander's aircraft, but no further details have emerged.

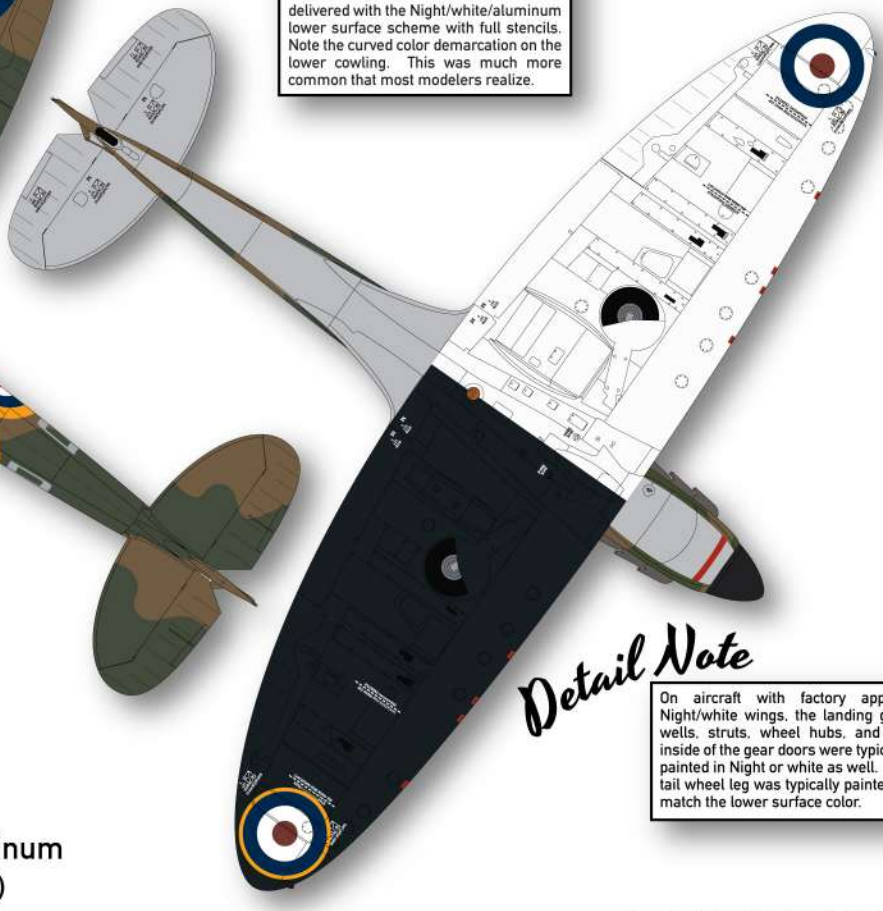
Detail Note

P9443 featured a rather strange fuselage type A1 roundel, with a nominal 35" diameter and a 5" yellow ring. Fin flashes were 6" stripe widths. Upper wing roundels were standard 55" Type B, while for Operation Dynamo, lower wing roundels were applied, with odd, almsot post-war Type D proportions.

Detail Note

P9443 was the 606th Spitfire built, delivered on 1 April 1940. She spent time with 6 Maintenance Unit before delivery to 222 Squadron on 4 June. She was a standard mid-production Mk.I with the later style antenna mast, armored windscreen and fuel tank cover. She was delivered with the Night/white/aluminum lower surface scheme with full stencils. Note the curved color demarcation on the lower cowling. This was much more common that most modelers realize.





Detail Note

On aircraft with factory applied Night/white wings, the landing gear wells, struts, wheel hubs, and the inside of the gear doors were typically painted in Night or white as well. The tail wheel leg was typically painted to match the lower surface color.

Dark Green
Night
Dark Earth
White
Aluminum (paint)

Flight Lieutenant Douglas Bader

Douglas Bader entered the RAF College at Cranwell as a cadet in 1928, completing the two-year course in July 1930. He was commissioned as a pilot officer into No. 23 Squadron RAF based at Kenley, flying Gloster Gamecocks. He lost both lower legs in a flying accident in 1931, and was mustered out of the RAF.

After several failed attempts, the double-amputee Douglas Bader rejoined the RAF after the outbreak of WWII. Following a refresher course he was posted to 19 Squadron initially and then to 222 Squadron as a flight leader in March 1940. On the first day of June Bader bagged his fist Bf109E over Dunkirk, and an He111 shared probable. Later that month Bader was given command of 242 Squadron flying Hurricanes and stayed with 242 throughout the Battle of Britain. A picture of Bader and what is believed to be his 222 Squadron Spitfire P9443 ZD-D can be found on pg.66 of Dilip Sarkar's "Group Captain Sir Douglas Bader: An Inspiration in Photographs".

Fündekals collection

Flight Lieutenant Douglas Bader

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Spitfire Mk.I, K9907

Squadron Leader "Des" Cooke
65 Squadron, RAF Kirton in Lindsey
26 - 28 May 1940

Detail Note

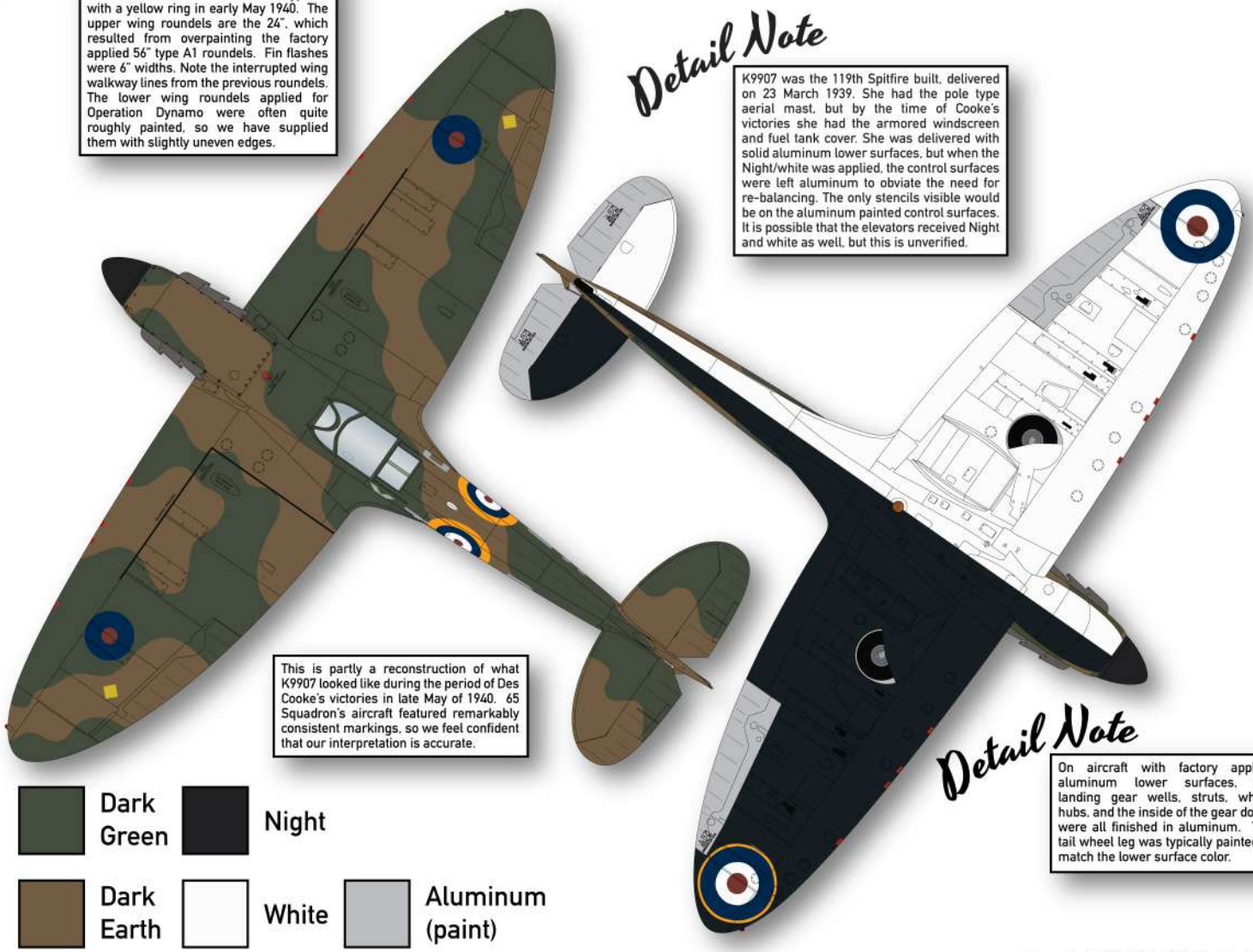
No voltage regulator was fitted behind the headrest on these early Spitfires.

Detail Note

K9907 carried 25" Type A fuselage roundels that were modified to 35" Type A1 with a yellow ring in early May 1940. The upper wing roundels are the 24", which resulted from overpainting the factory applied 56" type A1 roundels. Fin flashes were 6" widths. Note the interrupted wing walkway lines from the previous roundels. The lower wing roundels applied for Operation Dynamo were often quite roughly painted, so we have supplied them with slightly uneven edges.

Detail Note

K9907 was the 119th Spitfire built, delivered on 23 March 1939. She had the pole type aerial mast, but by the time of Cooke's victories she had the armored windscreen and fuel tank cover. She was delivered with solid aluminum lower surfaces, but when the Night/white was applied, the control surfaces were left aluminum to obviate the need for re-balancing. The only stencils visible would be on the aluminum painted control surfaces. It is possible that the elevators received Night and white as well, but this is unverified.



This is partly a reconstruction of what K9907 looked like during the period of Des Cooke's victories in late May of 1940. 65 Squadron's aircraft featured remarkably consistent markings, so we feel confident that our interpretation is accurate.

Detail Note

On aircraft with factory applied aluminum lower surfaces, the landing gear wells, struts, wheel hubs, and the inside of the gear doors were all finished in aluminum. The tail wheel leg was typically painted to match the lower surface color.

Dark Green

Night

Dark Earth

White

Aluminum (paint)

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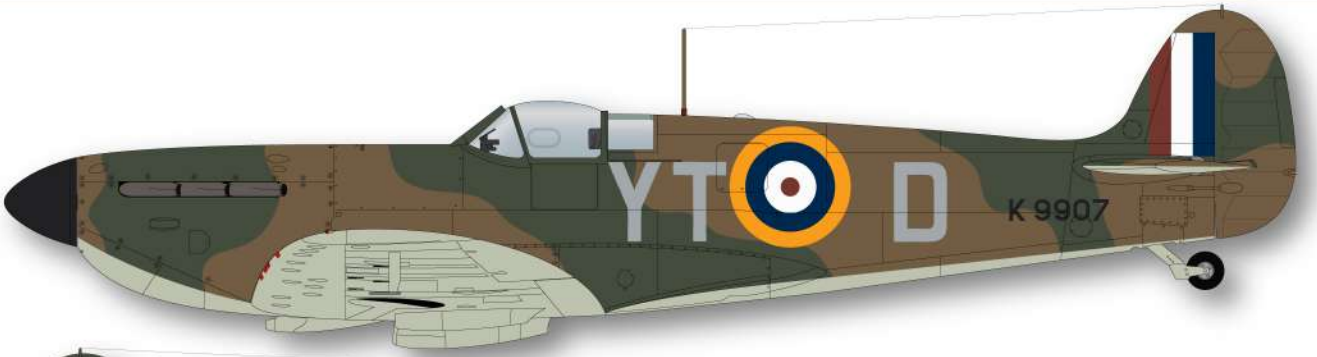
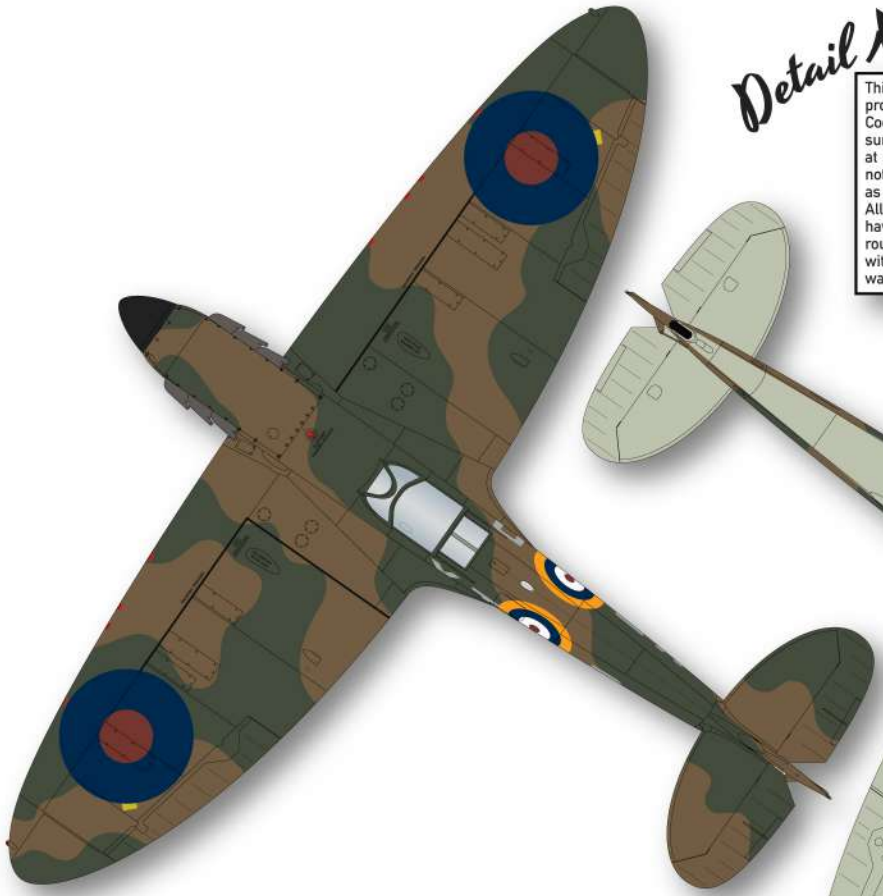
Spitfire Mk.I, K9907

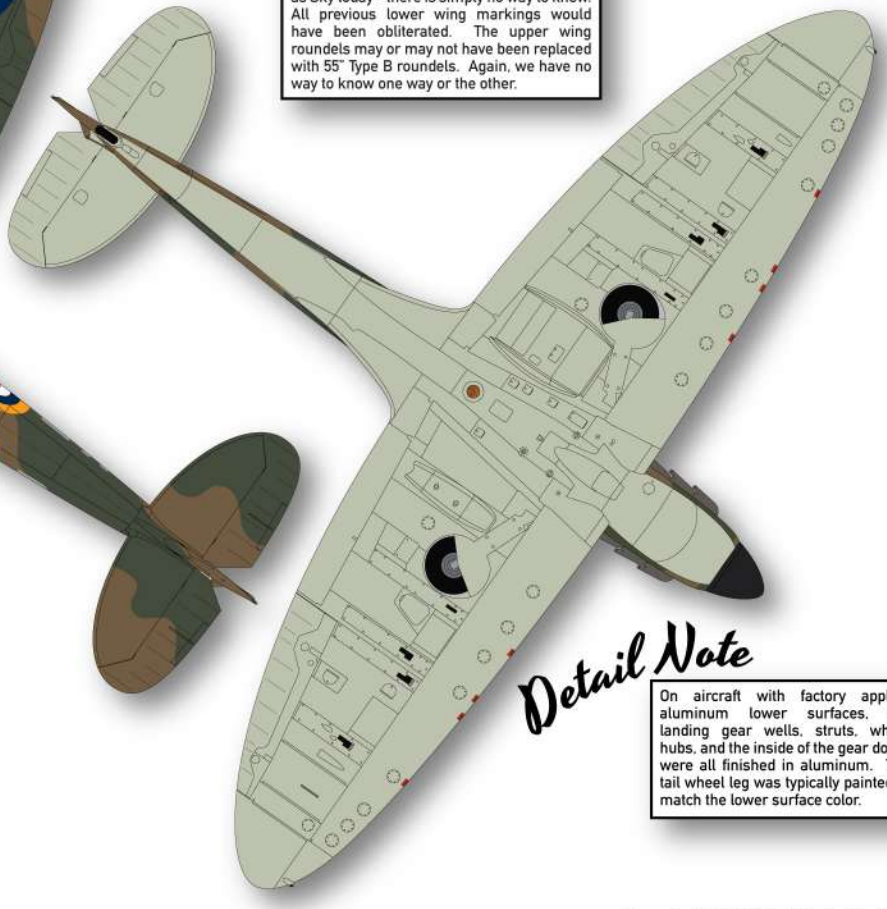
Squadron Leader "Des" Cooke
65 Squadron, RAF Hornchurch
8 July 1940



Detail Note

This is again a reconstruction of what K9907 probably looked like at the time of S/L Cooke's death in July of 1940. The Sky lower surface camouflage would have been applied at squadron level, so the color may or may not have matched what we commonly know as Sky today - there is simply no way to know. All previous lower wing markings would have been obliterated. The upper wing roundels may or may not have been replaced with 55" Type B roundels. Again, we have no way to know one way or the other.





Detail Note

On aircraft with factory applied aluminum lower surfaces, the landing gear wells, struts, wheel hubs, and the inside of the gear doors were all finished in aluminum. The tail wheel leg was typically painted to match the lower surface color.

Dark Green | Dark Earth | Sky

Squadron Leader "Des" Cooke

Squadron Leader DeLancey "Des" Cooke graduated from the RAF College at Cranwell in 1927. By 1937 he had reached the rank of Squadron Leader, and took command of 65 Squadron in October of that year. By the time the war started Cooke was already an "old man" by fighter pilot standards.

Cooke flew Spitfire K9907 YT-D exclusively in May 1940. On the 26th he claimed 2 Me110s destroyed (unconfirmed) near Calais and over Dunkirk. The following day he claimed a Do17 destroyed and shared in the destruction of another, and the day after that he destroyed a Do17 near Dunkirk. On 8 July 1940, S/L Cooke was shot down and killed by a Bf109 over Dover while flying K9907. This meant that 65 Squadron would be thrust into the coming Battle of Britain without their veteran Squadron Leader.

Cooke's death kept him from leading 65 Squadron into the Battle of Britain, however he did help shape the outcome of the Battle. A month earlier Cooke had asked De Havilland to fit a constant speed propeller to K9907 similar to the Rotol props that 54 Squadron had been experimenting with. This event led to widespread changes that tipped the balance in favor of Fighter Command. Because of Cooke's suggestion, the Spitfires (and Hurricanes and Defiants) that the Luftwaffe met over France would be radically different aircraft than the ones they would meet over England weeks later.

The only photo we (currently) have showing Des Cooke, who is seen standing at left wearing sunglasses.

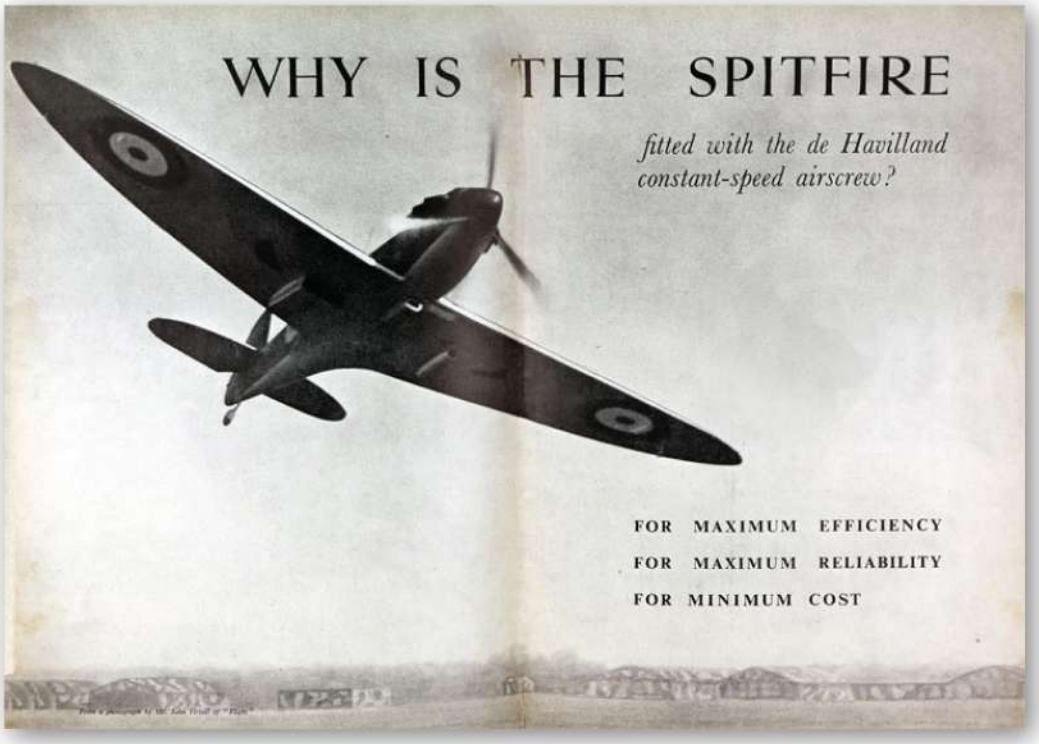
There has been some historical confusion over exactly what S/L Cooke's given name actually was. It has been almost universally assumed that "Des" was short for Desmond, and you see that name used almost everywhere. We have uncovered documentation however, that conclusively proves that his given name was actually DeLancey, after his father. Unhelpfully, his name inscribed on the Battle of Britain memorial wall is listed as "D. Cooke".

K9907 is seen parked in an earthen revetment (second aircraft) prior to the addition of the yellow ring on the fuselage roundels and the fin flashes, both of which happened in early May 1940. Also note the unique style and size (6") of the fuselage serials, which we have not seen on any other Spitfires. As-built, K9907 would have had a small serial on the vertical fin, which was overpainted at some point. Other items of note are the very small gas detection patches on the outer wings, and on K9911 YT-E in the foreground, the brackets for the night flying "blinkers" mounted on the fuel tank cover (not seen on K9907).

See information on the following pages - it turns out that K9907 may well be the single most historically significant Spitfire of the entire period!

Photos this page: Fündekals collection

The history you've probably never heard...



It never ceases to amaze us that even nearly 80 years on there is still significant history related to the Battle of Britain that is (or was to us at least) virtually unknown. Read on and we think you will find it fascinating too!

A constant-speed propeller, as opposed to a fixed-pitch, or two-pitch propeller, is a type variable-pitch propeller that automatically changes its blade pitch in order to maintain a chosen engine RPM. Without getting too technical, a constant-speed prop provides much better use of available engine power, and markedly improves climb performance, high speed performance, etc.

When the Spitifire and the Hurricane were designed, they were both fitted with a Watts fixed-pitch two-bladed wooden propeller. A fixed pitch prop can, obviously, not have its blade pitch changed, thus, it has to be a compromise between the best pitch for takeoff and climb performance, and the best pitch for cruise performance, while not being optimized for either. By 1938 both the Sptifire and the Hurricane were being fitted with a De Havilland three-bladed, two-pitch propeller. While this was a major improvement over the fixed pitch prop, it was still only a compromise at best. Fine pitch was used for takeoff and climb, and coarse pitch was used for most other portions of a mission. Again, not optimal for the widely varying conditions at which a fighter aircraft is required to excel.

De Havilland had designed the propeller fitted to the Sptifire and Hurricane to be able to accept a constant speed mechanism, and the Merlin engine was easily adapted to take the required governor and associated oil piping that allowed the control of the prop pitch possible. Fortunately for modelers, there is no external difference between the De Havilland two-pitch prop and the modified constant speed prop. In fact, only the mechanism inside the prop hub was different.

We cannot do better than to have you read the following article from Flight Magazine in December 1943. It covers the entire history of the fitting of the constant speed prop to the Spitfire during the summer of 1940.

Pitch Panic

How Hurried Changes from Two-pitch to Constant-speed Airscrews Were Made in Time for the Battle of Britain

NOT until now has it become possible to tell the story of how a small band of men, working sometimes 20 hours or more out of the 24, converted Hurricane and Spitfire Merlins for constant-speed airscrews. It is no exaggeration to say that but for their heroic efforts the Battle of Britain might have ended differently.

AS long ago as 1936 the De Havilland Co. had both Spitfire and Hurricane included in their programme for variable-pitch airscrews, but in those days the accent was on lightness where fighters were concerned, and as both types could leave the ground fairly well with fixed-pitch two-bladed wooden airscrews, the company was not instructed to provide v.p. until much later—in fact not until 1938, when pilots were beginning to say that they needed variable pitch for safety in night take-offs. The R.A.F. expansion was then going ahead strongly and two-pitch airscrews were specified for single-engined fighters because quantity deliveries of these could be given more quickly than of the constant-speed type. By the time Paris fell, De Havillands had delivered about 1,250 two-pitch airscrews for the Hurricane, 1,000 for the Spitfire and 325 for the Defiant. They were delivering constant-speed types then in quantity for Wellington Ic, Hampden, Beaufort, Beaufighter, Whirlwind, Stirling, Manchester, etc., but the single-engined fighters, the Blenheim and other types, were still being retained as two-pitch installations.

At the time of the Battle of France airscrew engineers and test pilots used to hear at the fighter stations that the Me 109s had a slightly greater ceiling than our fighters, though their manœuvrability high up was not so good as ours, and that they had an advantage in accelerating and power diving. Our two-pitch fighters had to throttle back in the dive to avoid over-revving. It was also clear that constant-speed control would give us a much improved climb for intercepting. Changing from fine to coarse pitch with the two-pitch control, as set for the Spitfire's rated altitude, was rather like changing from bottom to top gear in a small four-speed car. In many talks with hard-worked pilots during Dunkirk week and thereabouts all agreed that constant-speeding would be a considerable help, especially as it did not mean new airscrews, but only governor units, piping, etc.

First Spitfire Converted

On Sunday, June 9, when the Germans were pouring across the Marne, De Havillands had a 'phone call from an engineer officer asking whether they could convert one Spitfire as a sample. They said they could, quite easily, and sent one of their test pilots with an engineer to explain that the work involved would not take many hours, but that if they were likely to be called upon to make conversions in quantity they would have to be given authority to divert materials and labour from the contracts upon which they were fully engaged.

They at once set about the parts and pipe lines for the trial conversion. These were ready in about four days, and half a dozen picked D.H. airscrew installation engineers effected the conversion at an airfield during one night, while the Huns were rejoicing in Paris and Goering was regrouping for the attack on England.

A report dated June 20, from a D.H. test pilot, Mr. E. Lane-Burslem, stated that he had flown the converted Spitfire and so had Sqn. Ldr. Cooke, who commanded 65 Squadron, and a number of his pilots. They estimated that there was more than 7,000ft. of increase in ceiling, and the manœuvrability at height was much improved, not to mention the obvious advantages of reduced take-off run and increased rate of climb—in brief, the ability to use maximum efficiency at any altitude in all conditions.

Enthusiastic for other squadrons as well as his own, and backed up by his engineer officer Flt. Lt. McGrath, Sqn. Ldr. Cooke got in touch with the technical authorities and interest spread rapidly. Among the experienced operational pilots who were first to appreciate the advantages was Wing Cdr. H. Broadhurst.

Conversion in the Field

On Saturday, June 22nd, De Havillands were verbally instructed to convert in the field all Spitfires, Hurricanes and Defiants, with priority over other contracts, and the Spitfires had to be done first. Sqn. Ldr. Cooke, in his constant-speed Spitfire, led his two-pitch squadron into battle and the practical advantage was immediately apparent. Unfortunately, on his second sortie he was killed.

Minutes of a meeting held on June 22nd with the Senior Technical Officer of Fighter Command relate that de Havillands would start the conversion at twelve Spitfire stations on Tuesday, June 25th (less than a week after the first test flight) and could provide twelve men capable of supervising a station apiece; that the firm estimated that each squadron would take ten days to convert, and that all Spitfire squadrons could be completed by July 20th. The same minutes recorded that de Havillands had put in hand the production of 500 conversion sets, without contract cover, and that these would be coming out at the rate of 20 sets daily from June 24th, two days later. Supermarines were to be supplied with 20 sets per week from June 25th for aircraft coming off the production line; this would mean that two-thirds of the Spitfire production from that day onward would be "constant-speed." After completing the squadrons the D.H. engineers were to modify any Spitfires in storage at Maintenance Units (the word "any" had a grim significance!)

A small quantity of constant-speed units produced for the French Government, useless to them after the collapse, formed the nucleus for the job that began on June 25th, and bulk production duly followed without a break. The conversion called for this constant-speed unit; a small shaft drive to connect it to the engine; four external engine oil pipes; a complete cockpit control with conduit, and detail parts. The airscrews did not have to be changed, having been designed for constant-speeding, but each had to be dismantled to move the index pins so as to give full pitch range and shift the range bodily several degrees towards the coarse limit. As Rolls-Royce could not, consistent with other heavy demands, produce the quill shafts for driving the c.s. units, or the engine oil pipes, the data were given to de Havillands and the facilities of the Gipsy engine factory were pressed into service to make over 1,000 sets of these parts. Everybody in the D.H. organisation who could contribute anything was transferred to this job. Several outside suppliers were involved, and in particular it may be recalled that M.R.C., Ltd., the makers of the pilot's control, astonished at the demands made on them, co-operated magnificently. Many of the "inside" people did remarkable work; for instance, Mr. Ivor Jones, of de Havilland's Progress Department, who chased and controlled all the parts supplied.

Day and night air raids on England began about Monday, June 24th. The next day 13 D.H. engineers set forth in cars for twelve Spitfire stations. (Two went to one station.) Each was provided with about six conversion

PITCH PANIC

sets to be going on with. Their names were: W. E. Crease; J. B. Houston; S. C. Bentley; W. M. Bentley; B. J. de Sibour; A. Moser; C. A. Luke; A. Metz; W. Hook; T. Beavis; W. Pickford; S. J. Reed; A. J. Tribell.

At each station the D.H. man on arrival asked for a picked crew of N.C.O.s and fitters, converting the first aircraft himself and instructing the men at the same time. The second aircraft was then converted by the R.A.F. crew with his help, and the third with his supervision only. After that, if all was going well, he would proceed to the next station. Youthful engineers like de Sibour found themselves directing senior flight sergeants and quite big squads of fitters. Mr. Lane-Burslem flight-tested the first machine and instructed the R.A.F. pilots in the constant-speed operation, and then flew on to the next station.

Working 150 Hours a Week

The working times of the D.H. engineers during the ensuing weeks averaged about 105 to 110 hours (15 to 16 hours a day), with instances of 130 and up to 150 hours (19 to 21½ hours out of the 24). At some squadrons as many as four and five Spitfires were converted and test-flown in a day.

There was much improvisation at the stations. Home-made arbors were contrived for dismantling the airscrews and off-set spanners were made to get at nuts without having to remove the Merlin glycol header tanks.

Some of the squadrons which had borne the brunt at Dunkirk and were resting, in South Wales and elsewhere, flew their Spitfires across England in ones and twos to be converted, and some aircraft were flown for conversion to De Havilland's own factory.

The rush had its light moments. As all the initial production and conversion arrangements were made without contract cover of any kind, De Havillands had the authorities on one side pressing almost impossible promises out of them, while other branches were cautioning them that their action was irregular. A contracts clerk said, "We shall probably never get paid for this," and an engineer was heard to reply, "If it isn't done we may never live to be paid for anything." Even in March, 1943, the De Havilland contracts department were still being called upon for the routine evidence that certain aircraft had been converted.

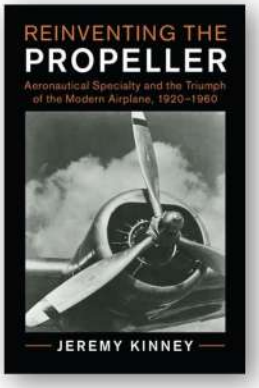
800 Sets in 44 Days

An entry dated Friday, August 2nd, records that by then, 44 days after the test flight of the first converted Spitfire, the production of conversion sets for all existing Spitfires (more than 800 sets, fulfilling the schedule of 20 a day) was complete, and they had therefore started producing for the Supermarine assembly line; De Havillands then had 400 Hurricane conversion sets in hand and expected to convert a total of 700, after which constant-speed airscrews would be embodied in the new aircraft.

The worst of the rush was over, six days before the *Luftwaffe's* mass attacks began, and a chance diary entry records that the company was already busy on another urgent job, of fitting airscrews to 24 Hurricanes to be sent at once to the Middle East! Another diary entry of that month which serves as a reminder of gloomy expectations records that De Havillands were doing 1,500 sets of bomb racks for Tiger Moths!

Those July raids had, fortunately, been little more than skirmishes. If only the German High Command had realised! The mass attacks on Channel ports and shipping which began the intended final assault upon Britain did not start until Thursday, August 8th—but all our Spitfires had constant-speed airscrews by then. By August 16th 1,051 Spitfires and Hurricanes had been converted—an average of 20.2 aircraft per day, over 52 days. In the eight days, August 8th to 15th, the German losses averaged 81 aircraft daily—four times our own losses. One of the highest officers of Fighter Command remarked to a D.H. engineer that but for the conversion job the figures might have been reversed.

In light of the last line of this article, it is arguable that were it not for the efforts of Des Cooke and De Havilland and the Herculean effort they put forth to modify Fighter Command's Spitfires and Hurricanes in the crucial summer of 1940, the outcome of the Battle of Britain, and indeed the course of the Second World War itself, might have been drastically different. Yet Squadron Leader Des Cooke remains virtually unknown, despite his pivotal role in this story. His mount, K9907, the first Spitfire to get a constant speed prop, may well qualify as the single most historically significant Spitfire Mk.I there is, given its role in this amazing story. We hope that our research will bring much-deserved attention to S/L Cooke's story, and that of the hundreds of other unsung heroes - the "erks" who put in the long hours in the dead of night to modify the Spitfires and Hurricanes that eventually achieved a spectacular victory for the RAF and Great Britain.



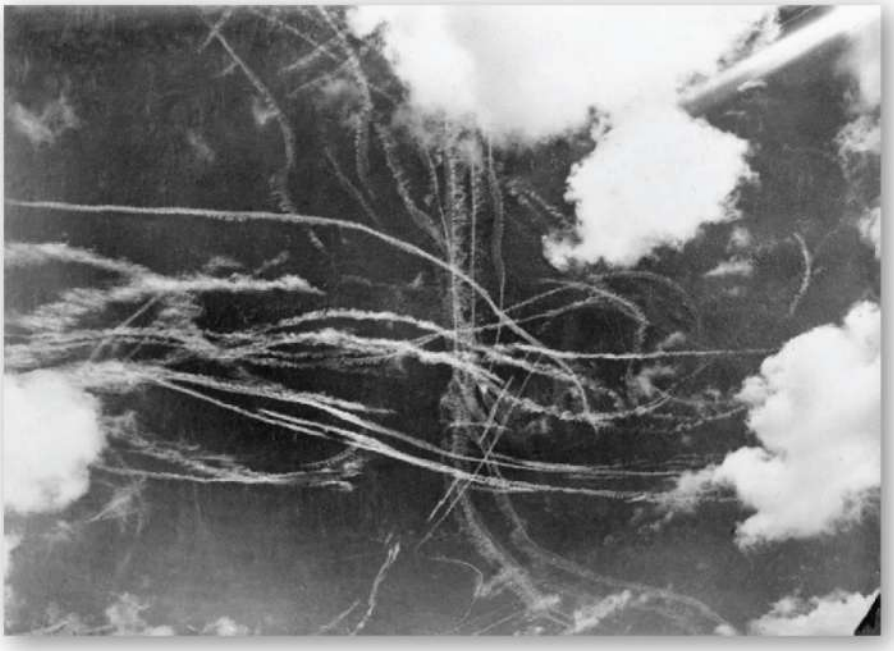
If you would like to read more on this fascinating, and little known subject area, we highly recommend this book by Jeremy Kinney. It provides an in-depth look at the history of the constant speed propeller and its contribution to the development of aviation in the 1920s onward.

ISBN 978-1107142862

THEIR FINEST HOUR...

A rooftop observer peering toward the southern horizon, with the dome of St. Paul's in the background. On most days in the summer of 1940, he would likely have seen unwelcome visitors approaching.

In the summer of 1940 it fell to the young men of Fighter Command to defend England and stop Göring's Luftwaffe from wresting command of the air from the RAF. While the RAF was certainly fighting for country, it first had to save itself. The initial phase of Hitler's plan was to destroy the RAF both on the ground and in the air. As Battle of Britain veteran Tom Neal put it, "The Battle of Britain to me was just a horrendously tough rugby match in which the penalty of losing was death...". Tactics aside, the real truth is that as soon as Fighter Command pilots left the ground a mêlée would ensue and pilots would find something with a cross on it and shoot at it ... a "tumult in the clouds" as Yeats once put it. Pilots died young or aged years overnight. There seemed to be no in between. By August, Fighter Command was near the brink...



A classic view of a dogfight swirling high overhead during the Battle of Britain. Throughout the summer of 1940, this was an almost daily sight over the southeast of England. The spring and summer of 1940 were noted for their extremely fine weather, and very few days were unsuitable for flying.

Photos this page: Fündekals collection

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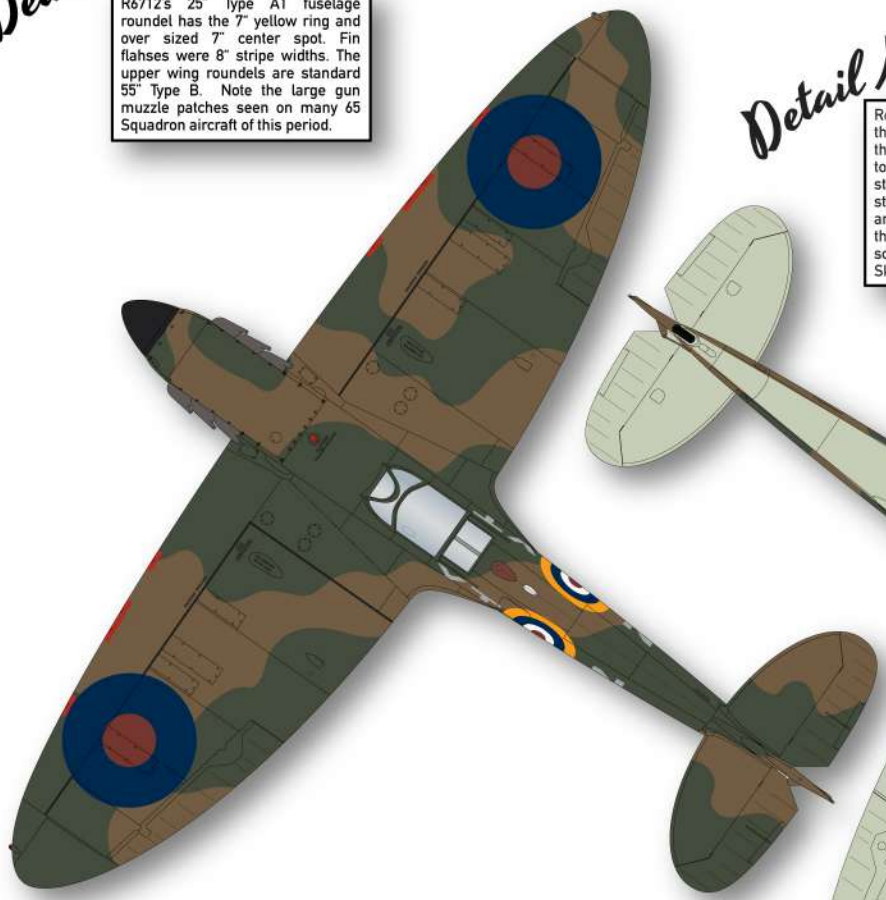
Spitfire Mk.I, R6712

Pilot Officer Kenneth Hart
65 Squadron, RAF Hornchurch
12 August 1940

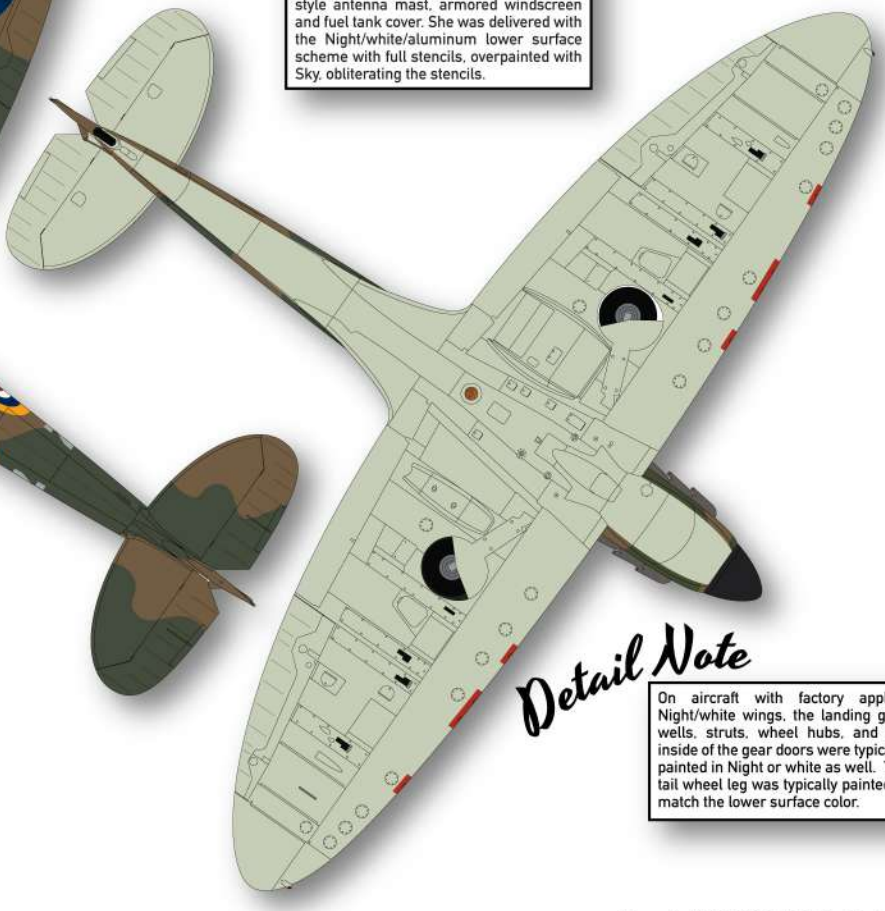
Detail Note

R6712's 25" Type A1 fuselage roundel has the 7" yellow ring and over sized 7" center spot. Fin flahses were 8" stripe widths. The upper wing roundels are standard 55" Type B. Note the large gun muzzle patches seen on many 65 Squadron aircraft of this period.



Detail Note

R6712 was the 766th Spitfire built, flying for the first time on 10 June 1940. She transited through 9 Maintenance Unit before delivery to 65 Squadron on 10 July 1940. She was a standard mid-production Mk.I with the later style antenna mast, armored windscreen and fuel tank cover. She was delivered with the Night/white/aluminum lower surface scheme with full stencils, overpainted with Sky, obliterating the stencils.



Detail Note

On aircraft with factory applied Night/white wings, the landing gear wells, struts, wheel hubs, and the inside of the gear doors were typically painted in Night or white as well. The tail wheel leg was typically painted to match the lower surface color.

Dark Green | Dark Earth | Sky

Pilot Officer Kenneth Hart

Pilot Officer Kenneth Hart scored his first victory in a Spitfire with 65 Squadron over Dunkirk. On 12 August 1940 Hart was flying Spitfire R6712, YT-N when he shot down a Bf109E. By 1941 he was flying Tomahawks with 250 Squadron in the Middle East where he became an ace. By 1944 he had become a Squadron Leader flying Bostons with 18 Squadron in Italy. He was killed in action on 28 December 1944.

In the photo below, R6712 is shown taking off from RAF Hornchurch's grass runway at the height of the Battle. Note her Night left hand inner gear door, gear strut, and wheel hub. The right side would have been white (see note on previous page). We cannot determine what the significance of the dark staining visible along the upper/lower camouflage demarcation line. It appears another code letter may have been overpainted and the "N" applied on top, but that does not explain the rest of the dark color visible, nor whether the opposite side looked simlar, but it is very unusual.

Flying Officer Hart is seen at the controls of a Spitfire Mk.I, possibly R6712.

A brace of 65 Squadron Spits getting airborne from Hornchurch in August 1940. In front is R6712 with Hart at the controls. Note the dark paint behind the "N" and along the bottom of the upper surface camouflage. We don't have a good explanation for it...

Photos this page: Fündekals collection

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Spitfire Mk.I, R6883

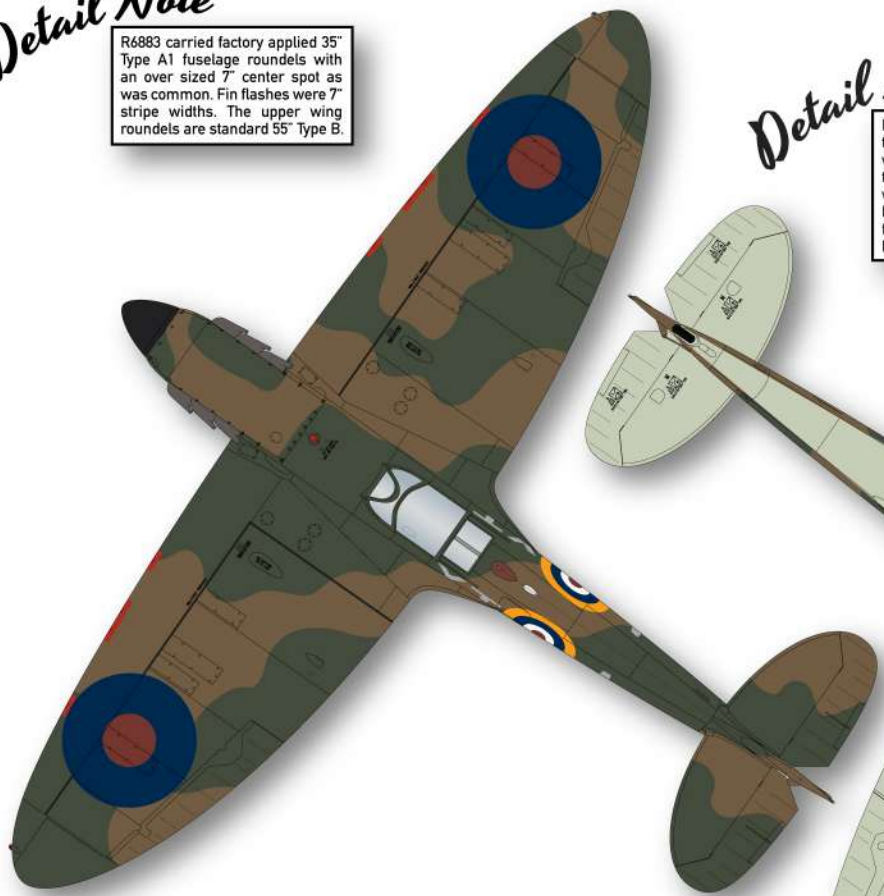
Flight Lieutenant Gordon Olive
65 Squadron, RAF Hornchurch
13 August 1940

Detail Note

By the time of R6883's delivery, the Sky lower surface camouflage had been brought up to the lower cowl panel joint line.

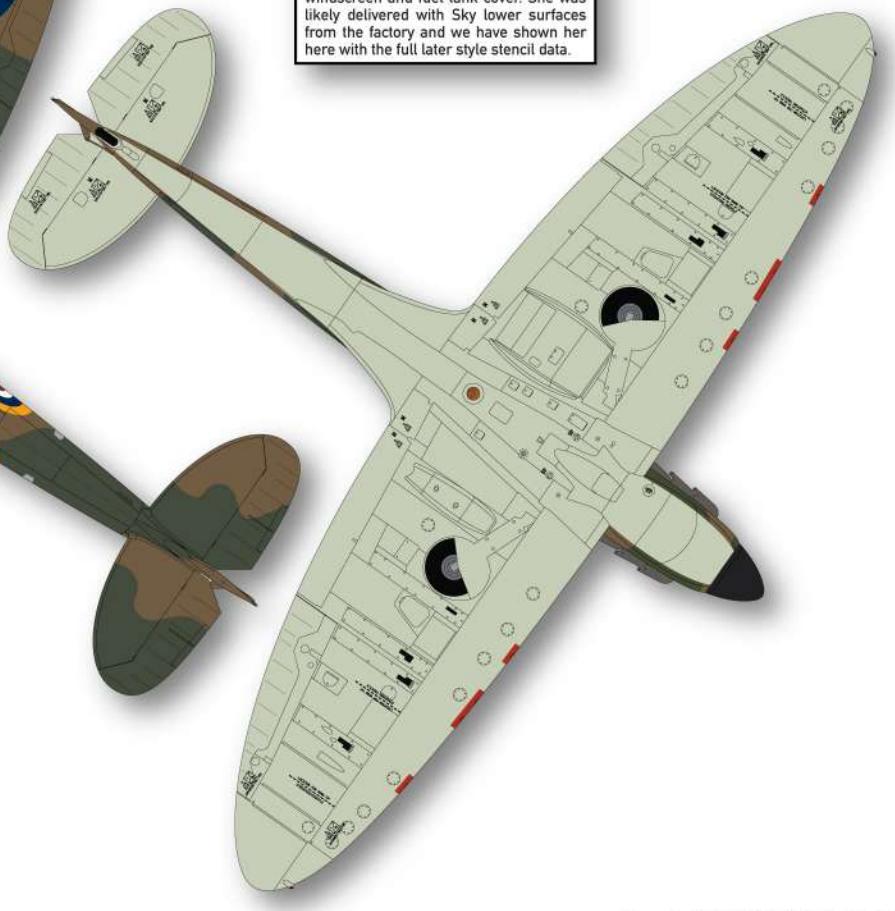
Detail Note

R6883 carried factory applied 35" Type A1 fuselage roundels with an over sized 7" center spot as was common. Fin flashes were 7" stripe widths. The upper wing roundels are standard 55" Type B.



Detail Note

R6883 was the 841st Spitfire built, taking to the air for the first time on 2 July 1940. She was a standard mid-production Mk.I with the later style antenna mast, armored windscreen and fuel tank cover. She was likely delivered with Sky lower surfaces from the factory and we have shown her here with the full later style stencil data.



Dark Green | Dark Earth | Sky

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Spitfire Mk.I, R6883

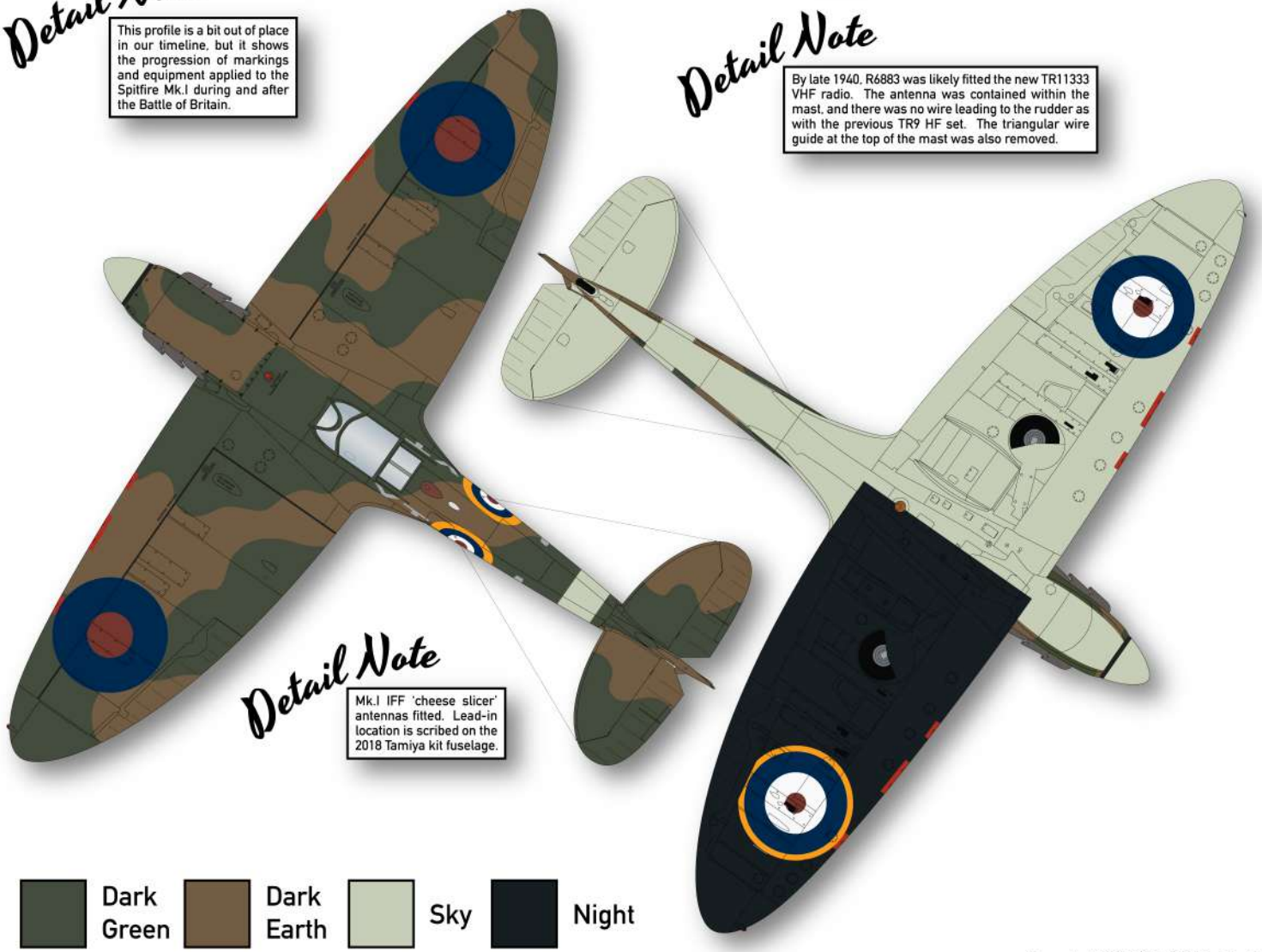
Flight Lieutenant Gordon Olive
65 Squadron, RAF Tangmere
8 December 1940

Detail Note

This profile is a bit out of place in our timeline, but it shows the progression of markings and equipment applied to the Spitfire Mk.I during and after the Battle of Britain.

Detail Note

By late 1940, R6883 was likely fitted the new TR11333 VHF radio. The antenna was contained within the mast, and there was no wire leading to the rudder as with the previous TR9 HF set. The triangular wire guide at the top of the mast was also removed.



Detail Note

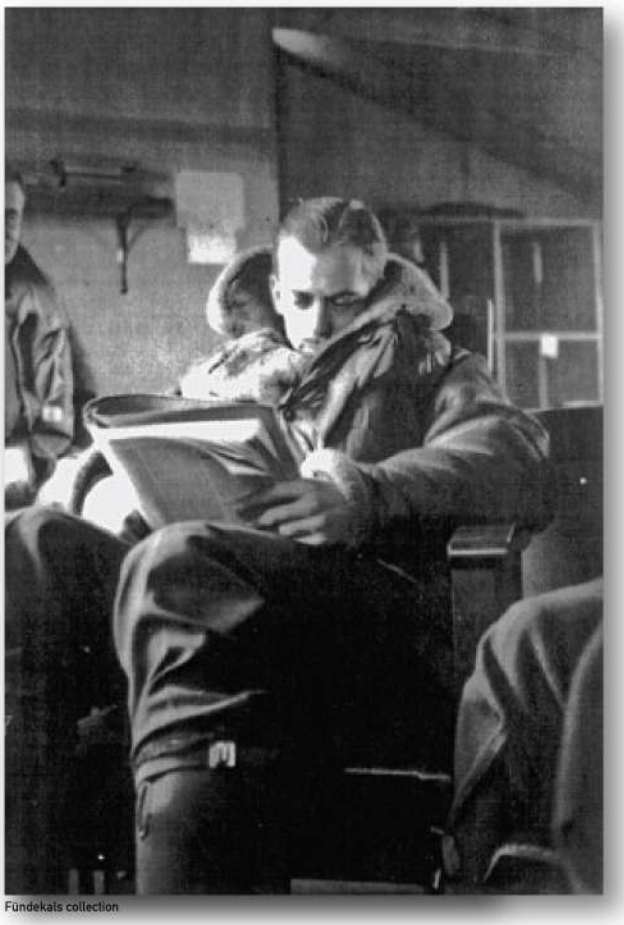
Mk.I IFF 'cheese slicer' antennas fitted. Lead-in location is scribed on the 2018 Tamiya kit fuselage.

Dark Green | Dark Earth | Sky | Night

Flight Lieutenant Gordon Olive

Australian-born Gordon Olive joined the RAAF in 1935 but transferred to the RAF in 1937. By 1940 he was a flight leader in 65 Squadron. Olive made 3 unconfirmed claims over Dunkirk and had a prolific month during the summer fighting. Between 20 July and 26 August F/L Olive claimed 3 Bf109s destroyed, 1 Bf110 destroyed, 4 probable Bf109Es, and a Ju88 damaged. On 13 August Olive shot down 2 Bf109Es and claimed a third probable while flying his regular Spitfire, R6883 YT-A, which he favored the last half of 1940. On 8 December Olive used R6883 to down a recce Bf110 near Portsmouth.

In a rather strange coincidence, Olive's aircraft, R6883, was lost in a mid-air collision with none other than "Sailor" Malan's K9953 while in service with 57 Operatoinal Training Unit on 7 October 1943!



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In an atmospheric setting, Gordon Olive relaxes between sorties in his full flying kit

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Spitfire Mk.I, R6775

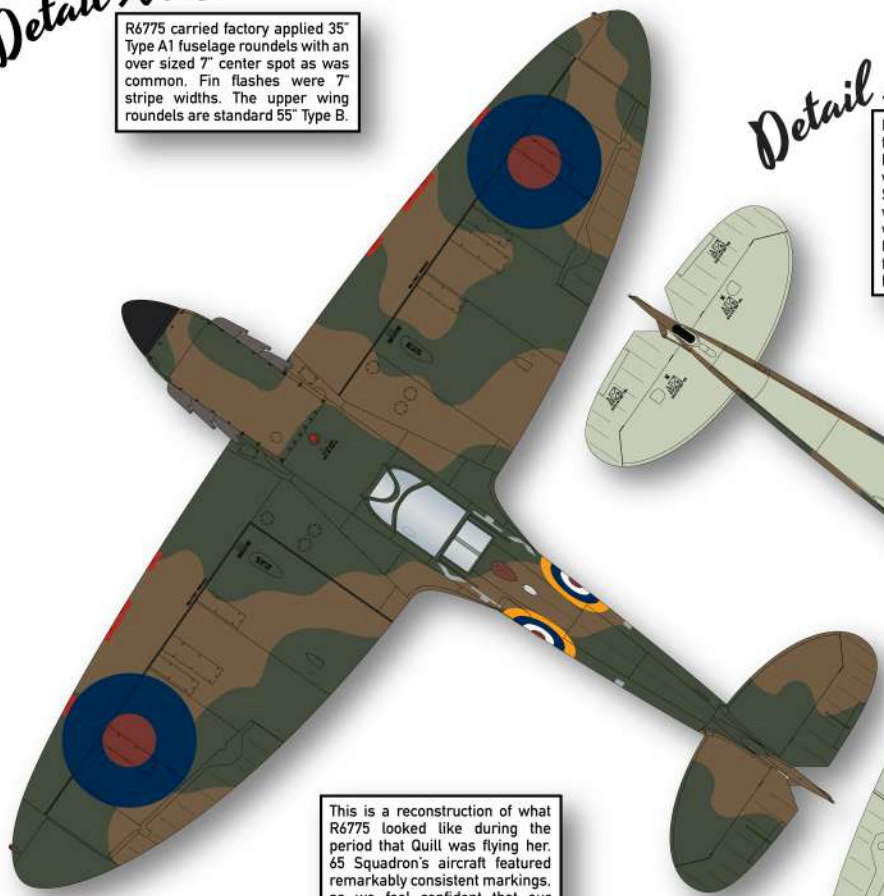
Flying Officer Jeffrey Quill
65 Squadron, RAF Hornchurch
16 August 1940

Detail Note

By the time of R6775's delivery, the Sky lower surface camouflage had been brought up to the lower cowl panel joint line.

Detail Note

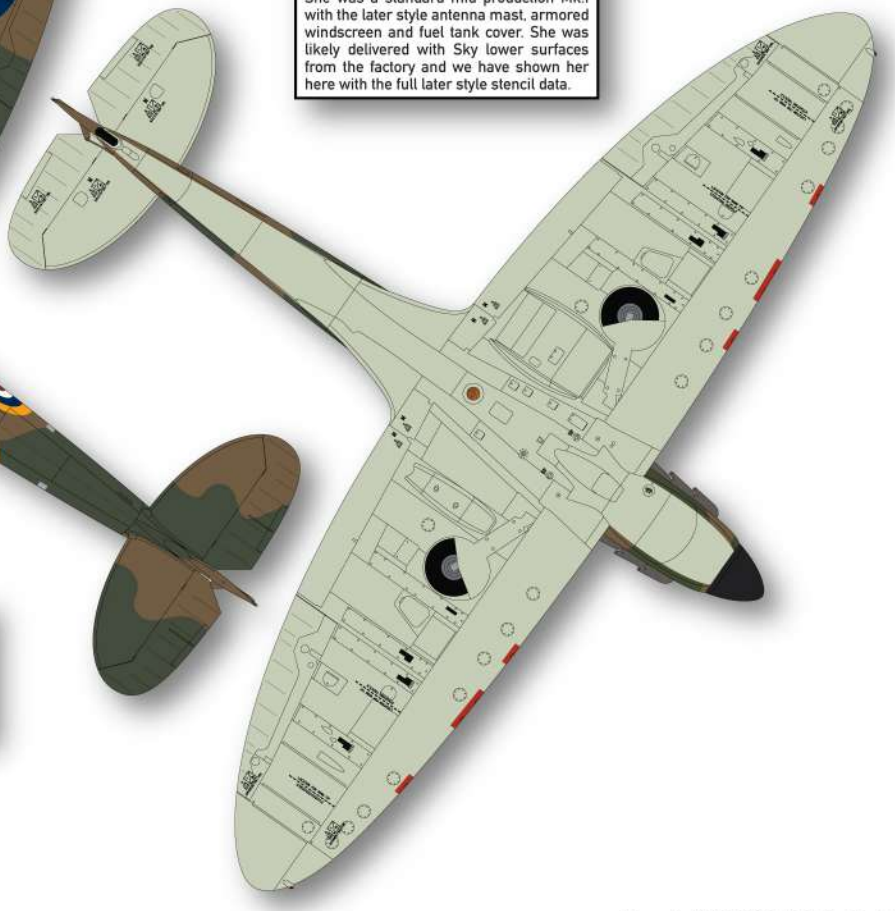
R6775 carried factory applied 35" Type A1 fuselage roundels with an over sized 7" center spot as was common. Fin flashes were 7" stripe widths. The upper wing roundels are standard 55" Type B.



This is a reconstruction of what R6775 looked like during the period that Quill was flying her. 65 Squadron's aircraft featured remarkably consistent markings, so we feel confident that our interpretation is accurate.

Detail Note

R6675 was the 802nd Spitfire built, flying for the first time on 20 June 1940. Passing briefly through 8 Maintenance Unit, she was issued to 65 Squadron on 12 July 1940. She was a standard mid-production Mk.I with the later style antenna mast, armored windscreen and fuel tank cover. She was likely delivered with Sky lower surfaces from the factory and we have shown her here with the full later style stencil data.



Dark Green | Dark Earth | Sky

Flying Officer Jeffrey Quill

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A youthful Jeffrey Quill at the controls of an early Spitfire - note the ring and bead sight

Jeffrey Quill joined the RAF at age 18 in 1931 as an acting Pilot Officer. After learning to fly fighters, in January of 1936 he was requested and was granted release to Vickers as a test pilot. In March 1936 Quill became the assistant to Supermarine chief test pilot Mutt Summers, and became only the second man in history to fly Supermarine's new fighter… the Spitfire.

Quill, still a member of the RAF Reserves, sought combat experience in Spitfires to better inform his test flying. He joined 65 Squadron in August 1940 and made three claims in five days. On 14 August he shared in the destruction of a Bf109. On 18 August he shared in the destruction of an He111 (probable). In between, on 16 August, Quill destroyed a Bf109E while flying Spitfire R6775 YT-J.

Quill returned to his civilian test pilot duties after a mere 19 days on operations. But the knowledge gained from his experience the Battle of Britain went into improving subsequent marks of the Spitfire for the rest of the war. Quill remained in aircraft development after the war and he was involved with projects including the TSR.2, the Jaguar, and the Panavia Tornado. Quill died in February of 1996 at age 83.

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Spitfire Mk.I, X4067

Squadron Leader Donald MacDonnell
64 Squadron, RAF Kenley
15 August 1940

Detail Note

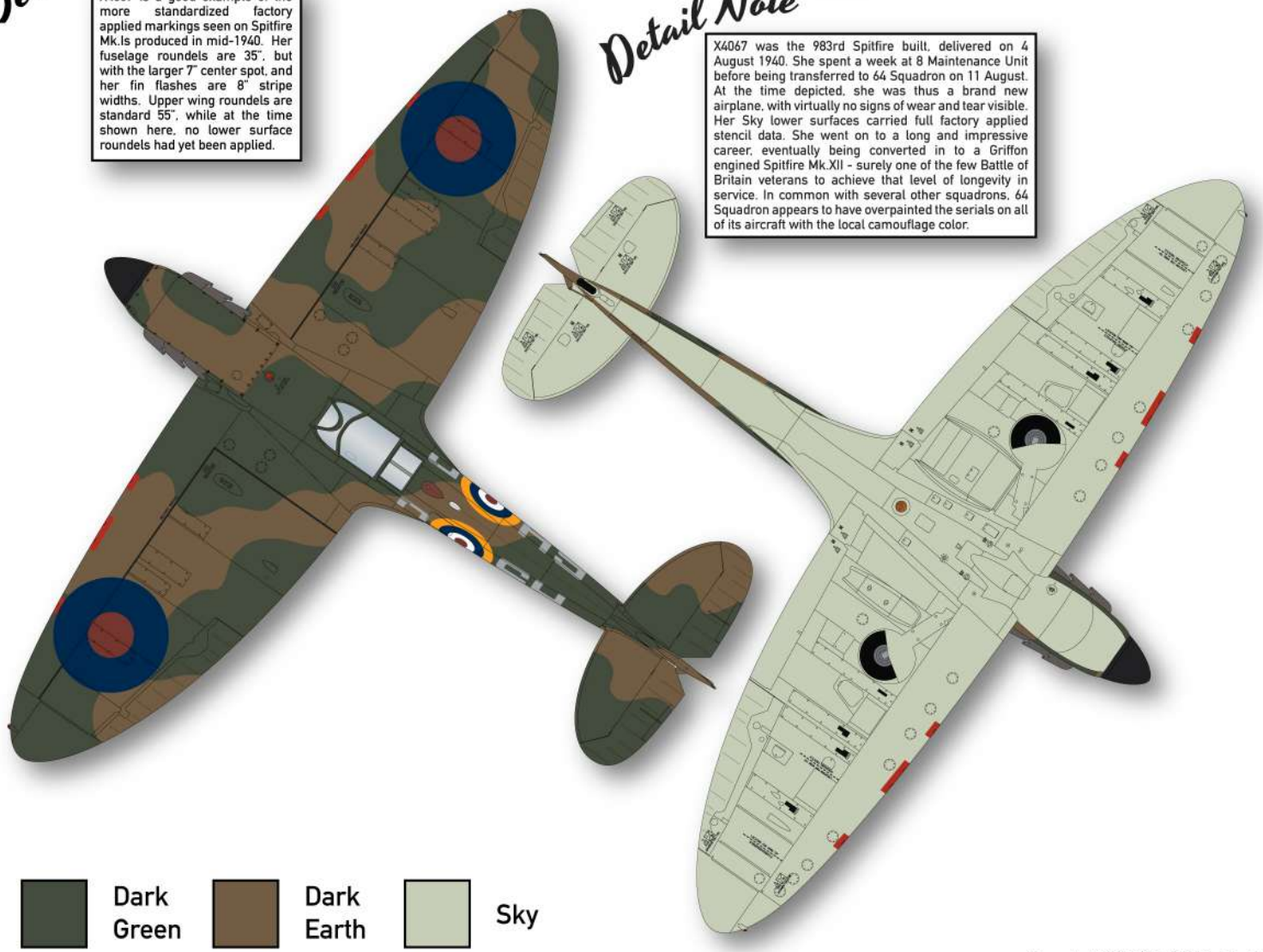
Note the unusual style of rear view mirror seen on these 64 Squadron aircraft. They appear to stand up taller than others, and are at a more vertical angle than the rake of the armored windscreen. We have not seen this mirror on any other Spitfires.

Detail Note

X4067 is a good example of the more standardized factory applied markings seen on Spitfire Mk.Is produced in mid-1940. Her fuselage roundels are 35", but with the larger 7" center spot, and her fin flashes are 8" stripe widths. Upper wing roundels are standard 55", while at the time shown here, no lower surface roundels had yet been applied.

Detail Note

X4067 was the 983rd Spitfire built, delivered on 4 August 1940. She spent a week at 8 Maintenance Unit before being transferred to 64 Squadron on 11 August. At the time depicted, she was thus a brand new airplane, with virtually no signs of wear and tear visible. Her Sky lower surfaces carried full factory applied stencil data. She went on to a long and impressive career, eventually being converted in to a Griffon engined Spitfire Mk.XII - surely one of the few Battle of Britain veterans to achieve that level of longevity in service. In common with several other squadrons, 64 Squadron appears to have overpainted the serials on all of its aircraft with the local camouflage color.



Dark Green

Dark Earth

Sky

Squadron Leader Donald MacDonald

Squadron Leader Don MacDonnell flew Spitfire Mk.I X4067 on 15 August 1940, when he shot down a Bf109E and damaged another. MacDonnell finished the war with 9 and 1 shared destroyed.

Given their overpainted serials, we cannot be absolutley certain of the true identies of these aircraft and their tie-ins with specific pilots. If either of our assumptions is in error it will not affect the decals – which accurately portray Spitfires SH-D and SH-Q in mid-August 1940.

These two shots show what we believe to be MacDonald's aircraft. Note the rather tall rear view mirror - a style we have not seen elsewhere. It may have been a squadron level creation unique to 64 Squadron.

Photos this page: Fündekals collection

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Spitfire Mk.I, R6623

Flight Sergeant Jack Mann
64 Squadron, RAF Kenley
12 August 1940

Detail Note

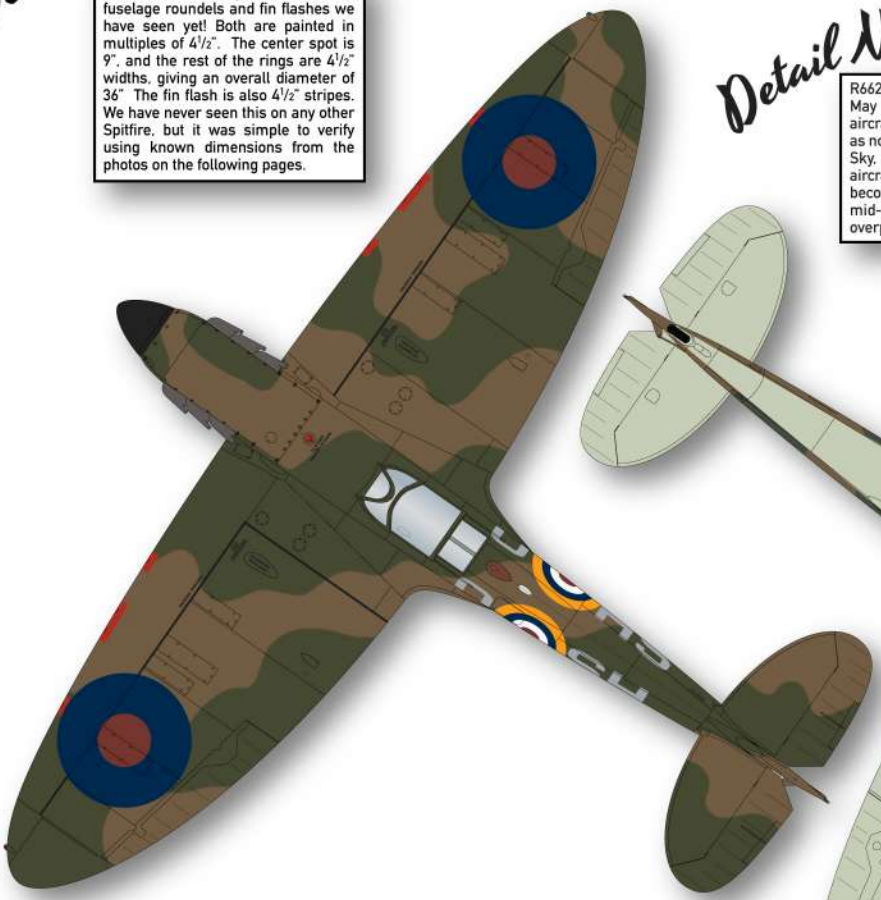
Note the unusual style of rear view mirror seen on these 64 Squadron aircraft. They appear to stand up taller than others, and are at a more vertical angle than the rake of the armored windscreen. We have not seen this mirror on any other Spitfires.

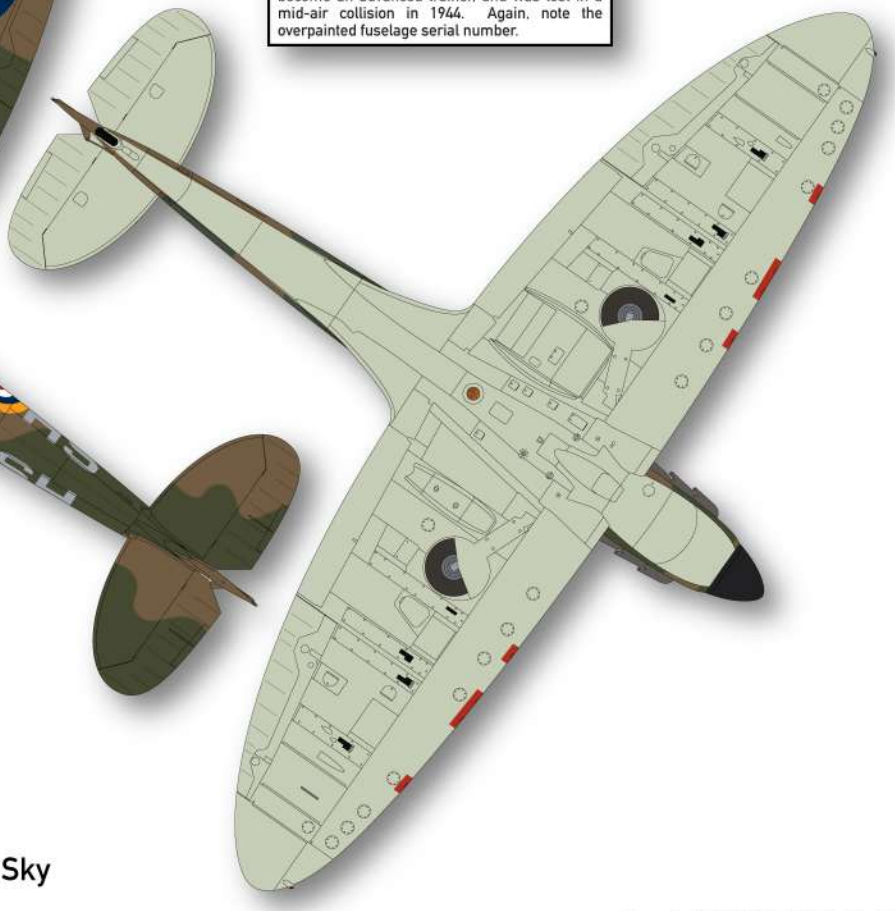
Detail Note

R6623 has absolutely the most bizarre fuselage roundels and fin flashes we have seen yet! Both are painted in multiples of 4½". The center spot is 9", and the rest of the rings are 4½" widths, giving an overall diameter of 36" The fin flash is also 4½" stripes. We have never seen this on any other Spitfire, but it was simple to verify using known dimensions from the photos on the following pages.

Detail Note

R6623 was the 712th Spitfire built, delivered on 22 May 1940. She is very much a standard looking aircraft with the exception of the rear view mirror as noted above. Her lower surfaces were painted Sky, most likely obliterating all stencil data. This aircraft survived the Battle of Britain to eventually become an advanced trainer, and was lost in a mid-air collision in 1944. Again, note the overpainted fuselage serial number.





Dark Green

Dark Earth

Sky

Flight Sergeant Jack Mann

Film footage of 64 Squadron at Kenley in August 1940 found on YouTube piqued our interest in this relatively neglected Battle of Britain squadron. Clear shots of SH-D and SH-Q show no sign of serial numbers, so deducing just who the pilots were has been challenging.

Seen quite clearly in the footage is SH-Q and her Seargent pilot. We're not 100% certain, but we believe this is Flight Seargent Jack Mann. He flew R6623 on 12 August when he shot down a Bf109E and again the 14th when he damaged another.

Three shots of SH-Q showing a bit of artistic flair in the tail of the "Q". Also note the very odd 4½" proportions of the fuselage roundel and the tail flash - something we have seen on no other Spitfire of this period.

Photos this page: Fündekals collection

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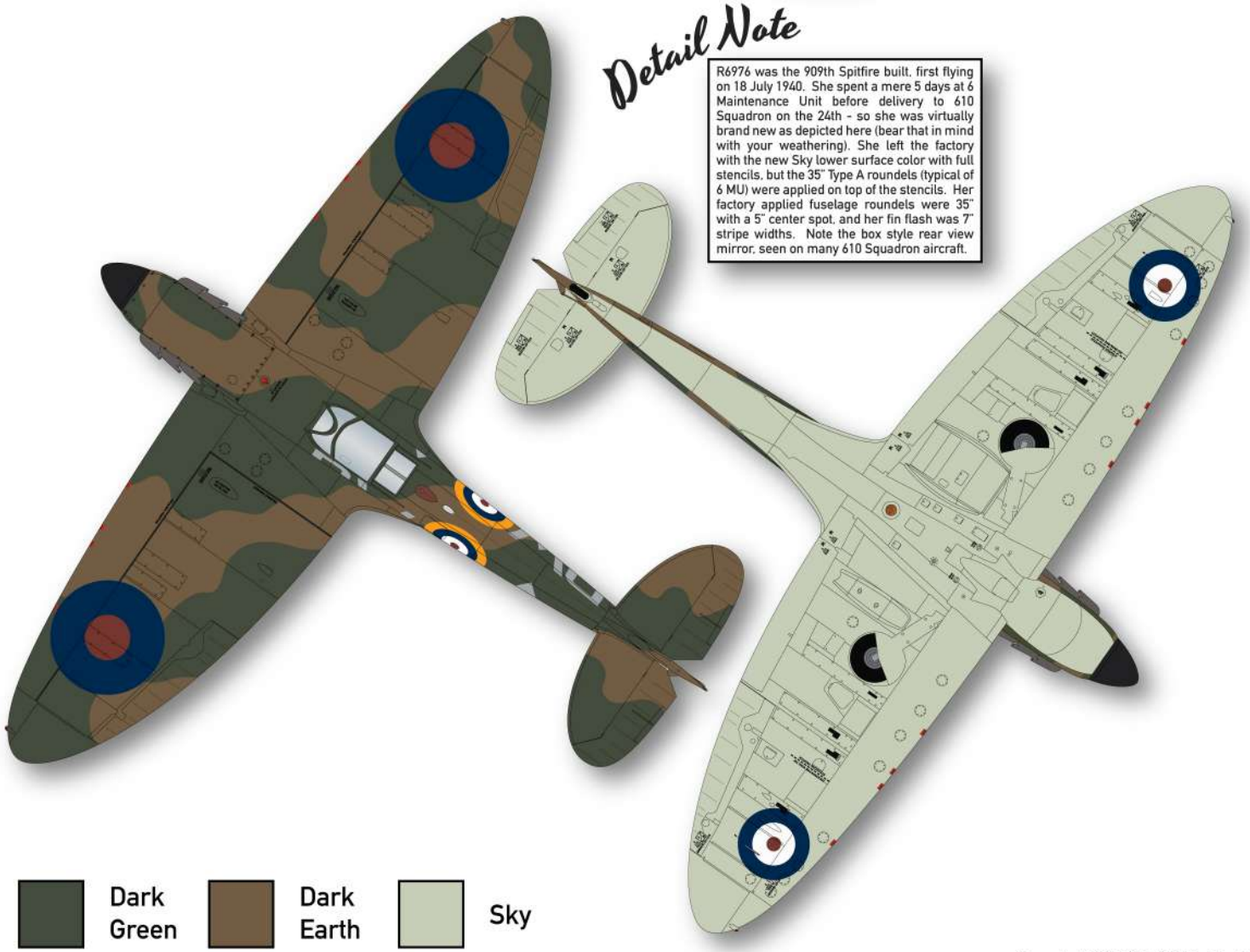
Spitfire Mk.I, R6976

Flying Officer Peter Lamb
610 "County of Chester" Squadron, RAF Biggin Hill
24 - 30 August1940

Detail Note

R6976 was the 909th Spitfire built, first flying on 18 July 1940. She spent a mere 5 days at 6 Maintenance Unit before delivery to 610 Squadron on the 24th - so she was virtually brand new as depicted here (bear that in mind with your weathering). She left the factory with the new Sky lower surface color with full stencils, but the 35" Type A roundels (typical of 6 MU) were applied on top of the stencils. Her factory applied fuselage roundels were 35" with a 5" center spot, and her fin flash was 7" stripe widths. Note the box style rear view mirror, seen on many 610 Squadron aircraft.



Dark Green

Dark Earth

Sky

Flying Officer Peter Lamb

Peter Lamb joined 610 Auxiliary Squadron in 1938, initially flying the Hawker Hind. He converted to Spitfires with the squadron in September of 1939.

Between 24 and 30 August 1940 he made 4 claims while flying Spitfire R6976 DW-A. On the 24th he shot down a Bf109E, on the 26th a Do17 and on the 29th a Bf110. His final claim was an He111 destroyed on the 30th.

Lamb left the RAF in 1945 but returned a year later to 610 Squadron, which he commanded until 1950.

Flying Officer Lamb is pictured with his comrades from 610 Squadron, standing second from left.

610 Squadron Spitfires taken after their move to Biggin Hill shows DW-K in the foreground. In the background is R6976 with it's unique "pointed" style of "A".

Photos this page: Fündekals collection

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Spitfire Mk.I, R6927

Pilot Officer Hubert "Dizzy" Allen
66 Squadron, RAF Gravesend
15 September 1940

Detail Note

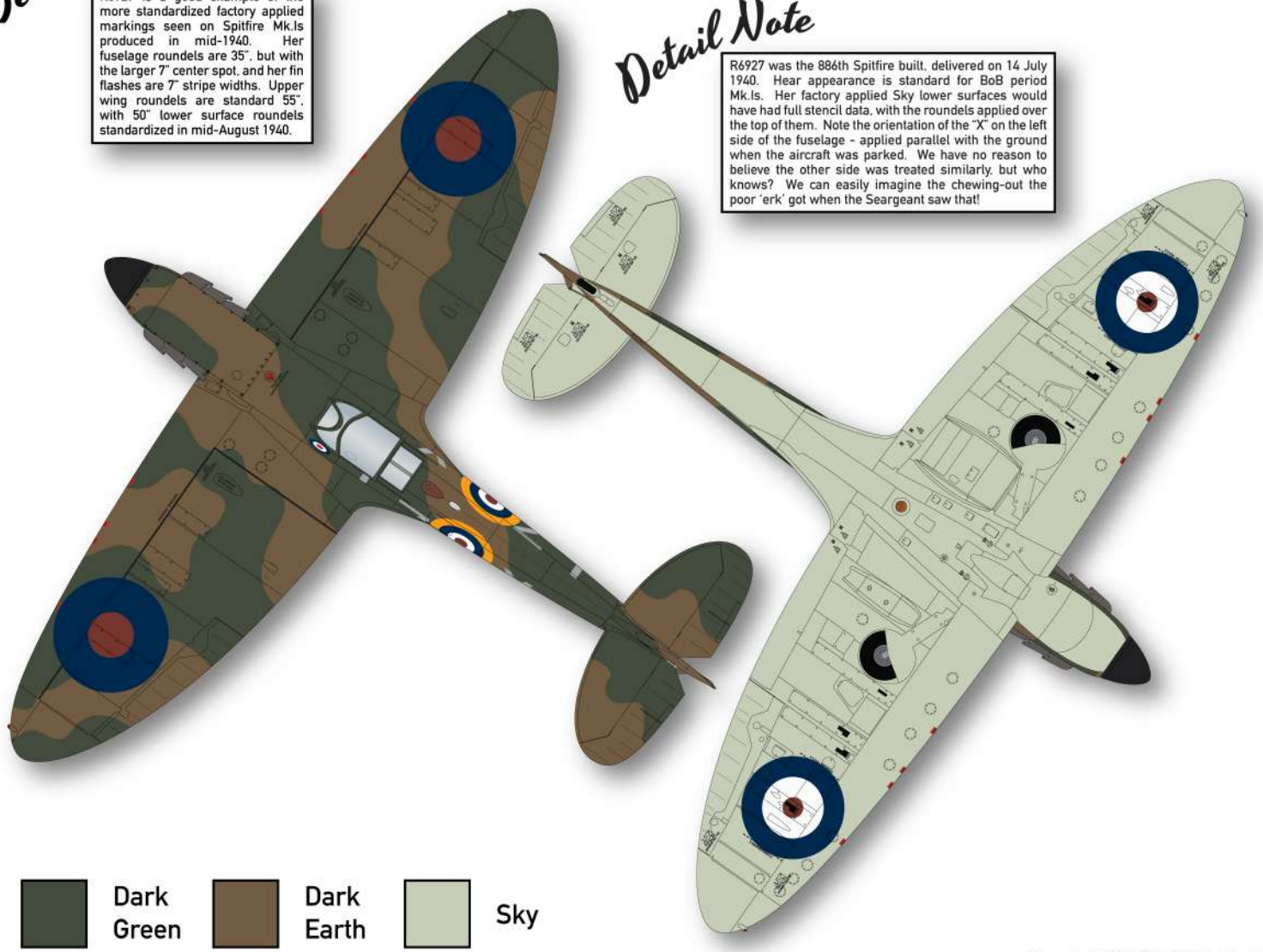
R6927 has the box style factory fitted rear view mirror.

Detail Note

R6927 is a good example of the more standardized factory applied markings seen on Spitfire Mk.Is produced in mid-1940. Her fuselage roundels are 35", but with the larger 7" center spot, and her fin flashes are 7" stripe widths. Upper wing roundels are standard 55", with 50" lower surface roundels standardized in mid-August 1940.

Detail Note

R6927 was the 886th Spitfire built, delivered on 14 July 1940. Hear appearance is standard for BoB period Mk.Is. Her factory applied Sky lower surfaces would have had full stencil data, with the roundels applied over the top of them. Note the orientation of the "X" on the left side of the fuselage - applied parallel with the ground when the aircraft was parked. We have no reason to believe the other side was treated similarly, but who knows? We can easily imagine the chewing-out the poor 'erk' got when the Seargeant saw that!



Dark Green

Dark Earth

Sky

Pilot Officer "Dizzy" Allen

The fortuitous discovery of some film footage of 66 Squadron Spitfires at Gravesend in September 1940 provided us with LZ-X R6927. According 66 Squadron's Operational Record Book this Spitfire usually was flown by P/O "Dizzy" Allen. On 9 September 1940 he shared in the destruction of an He111. On the 15th he destroyed an He111 and damaged a Do17. Three days later he shot down a Bf109E. On the 30th he claimed a Bf109E as probable. All of these claims made in R6927. Allen's final tally was 5 and 3 shared destroyed. Of note is the unusual roundel artwork under the windscreen.

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A still frame from a short piece of footage showing 66 Squadron's R6927 being serviced before a sortie in September of 1940. Note the roundel under the windscreen which has proportions similar to a post-war type roundel. The significance of this marking is unknown, but something very unusual. Also note the leftward "tilt" of the "X" aft of the roundel.

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Spitfire Mk.I, P9386

Squadron Leader Brian Lane
19 Squadron, RAF Fowlmere
7-11 September 1940

Stop Right There!

Before you start composing an angry email to us about the color of P9386's spinner, please see the following page!

Detail Note

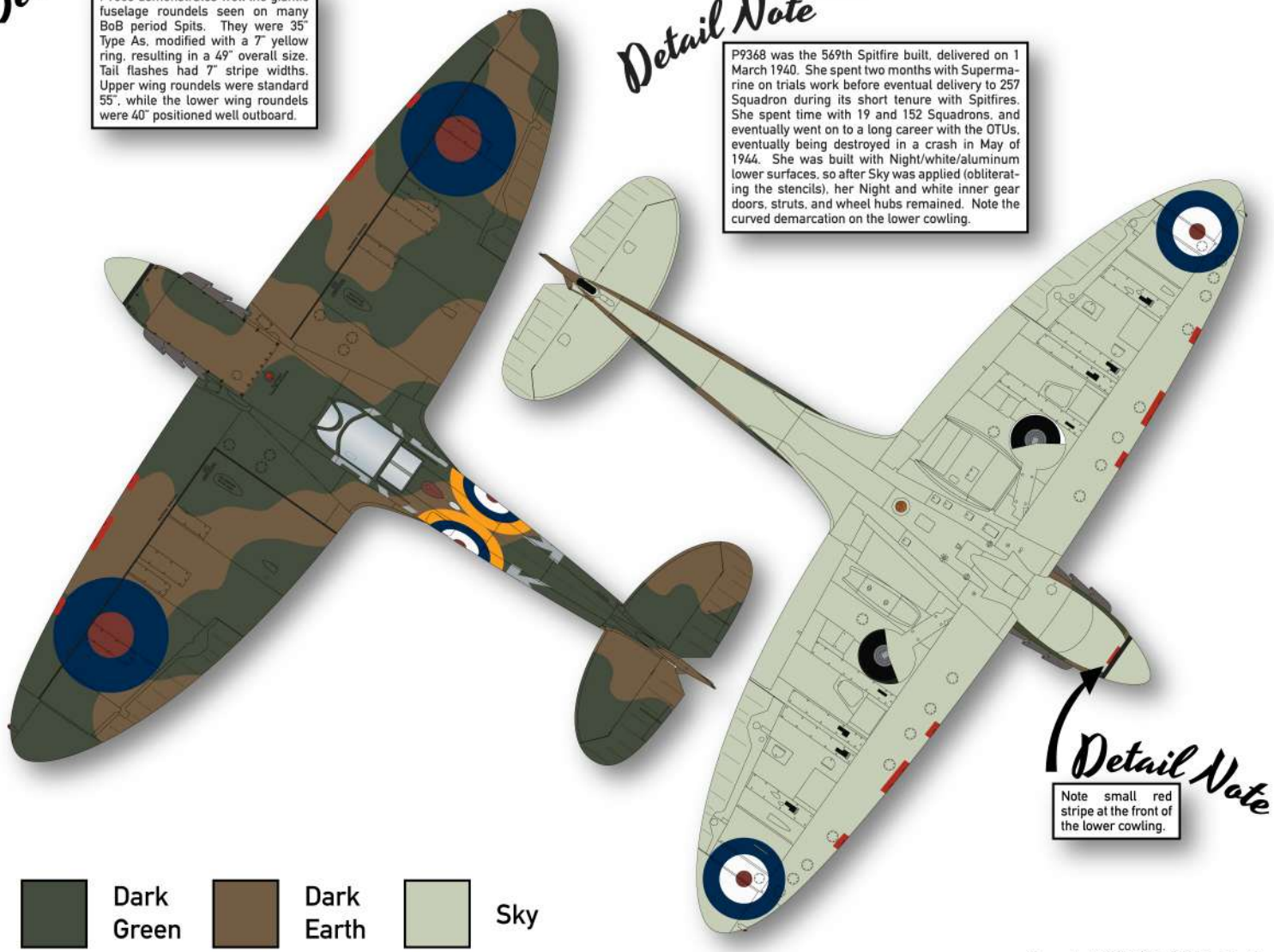
P9368 has the box style rear view mirror.

Detail Note

P9368 demonstrates well the giantic fuselage roundels seen on many BoB period Spits. They were 35" Type As, modified with a 7" yellow ring, resulting in a 49" overall size. Tail flashes had 7" stripe widths. Upper wing roundels were standard 55", while the lower wing roundels were 40" positioned well outboard.

Detail Note

P9368 was the 569th Spitfire built, delivered on 1 March 1940. She spent two months with Supermarine on trials work before eventual delivery to 257 Squadron during its short tenure with Spitfires. She spent time with 19 and 152 Squadrons, and eventually went on to a long career with the OTUs, eventually being destroyed in a crash in May of 1944. She was built with Night/white/aluminum lower surfaces, so after Sky was applied (obliterating the stencils), her Night and white inner gear doors, struts, and wheel hubs remained. Note the curved demarcation on the lower cowling.



Detail Note

Note small red stripe at the front of the lower cowling.

Dark Green

Dark Earth

Sky

Squadron Leader Brian Lane

Shortly after the outbreak of war Brian Lane was posted from 213 Squadron to 19 Squadron. He made four claims during the Dunkirk evacuation (2 unconfirmed). Upon the death of S/L Pinkham on 5 September 1940 Lane was given command of the squadron.

At this time Lane regularly flew Spitfire P9386 QV-K. On 7 September Lane shot down a Bf110 and on the 11th he destroyed 2 more Bf110s and damaged an He111.

These were the only claims that Lane made while flying P9386, but he wasn't the only pilot to make claims flying QV-K. On 9 September F/L Walter Lawson was flying P9386 when he shot down a Bf110.

Lane led 19 Squadron throughout 1940 and handed it over to Walter Lawson in July 1941. On 28 August Lawson failed to return form a sortie. Brian Lane was posted missing the following year.

In the past, the spinner of P9386 has been universally depicted as yellow. This is almost always credited to the aircraft having previously been in an OTU, many of which used colored spinners. However, P9386's known history does not support this theory. She was with operational squadrons (257, 19, and 152) from her delivery in May of 1940 until late March of 1941, when she did go to an OTU - six months *after* she was photographed during the Battle of Britain.

Having a yellow spinner when swarms of "yellow nosed bastards" were coming across the channel to kill you would seem less than prudent, and we believe that for reasons we will likely never know, QV-K's spinner was overpainted with Sky, which became the Fighter Command standard just a few months later.

IWM

Above: A youthful looking Brian Lane photographed during the Battle of Britain.

IWM

Left: A tight crop of the photo above showing the small red stripe just behind the spinner on the lower cowling. We are not sure of the significance of this marking.

Right: A well known photo of P9386. Close examination shows the spinner - universally quoted as being yellow - is noticeably lighter than both the yellow roundel ring and the Sea Grey Medium code letters. We believe it to be Sky, but of course the choice is yours. Regardless, note the base of the spinner remains in Night. Also note her Night left main gear strut, wheel hub, and inner gear door.

IWM

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Spitfire Mk.I, X4179

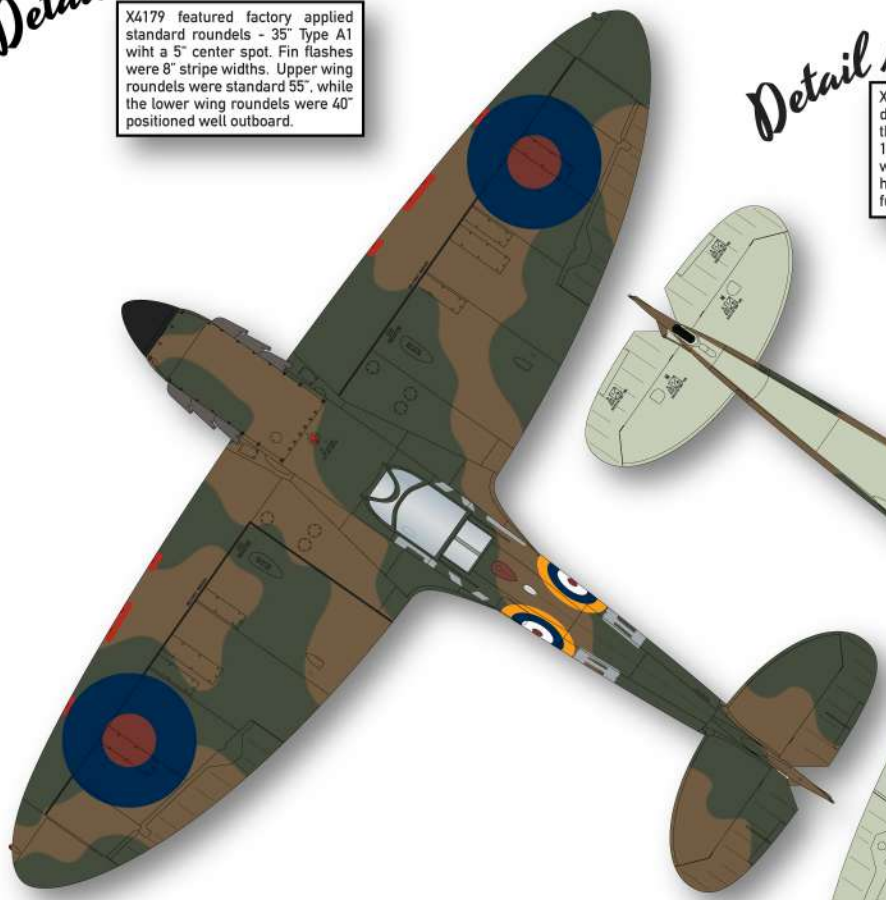
Flight Sergeant George "Grumpy" Unwin
19 Squadron, RAF Fowlmere
15 September 1940

Detail Note

X4179 had the box style factory installed rear view mirror. She was also fitted the new TR11333 VHF radio. The antenna was contained within the mast, and there was no wire leading to the rudder as with the previous TR9 HF set. The triangular wire guide at the top of the mast was also removed.

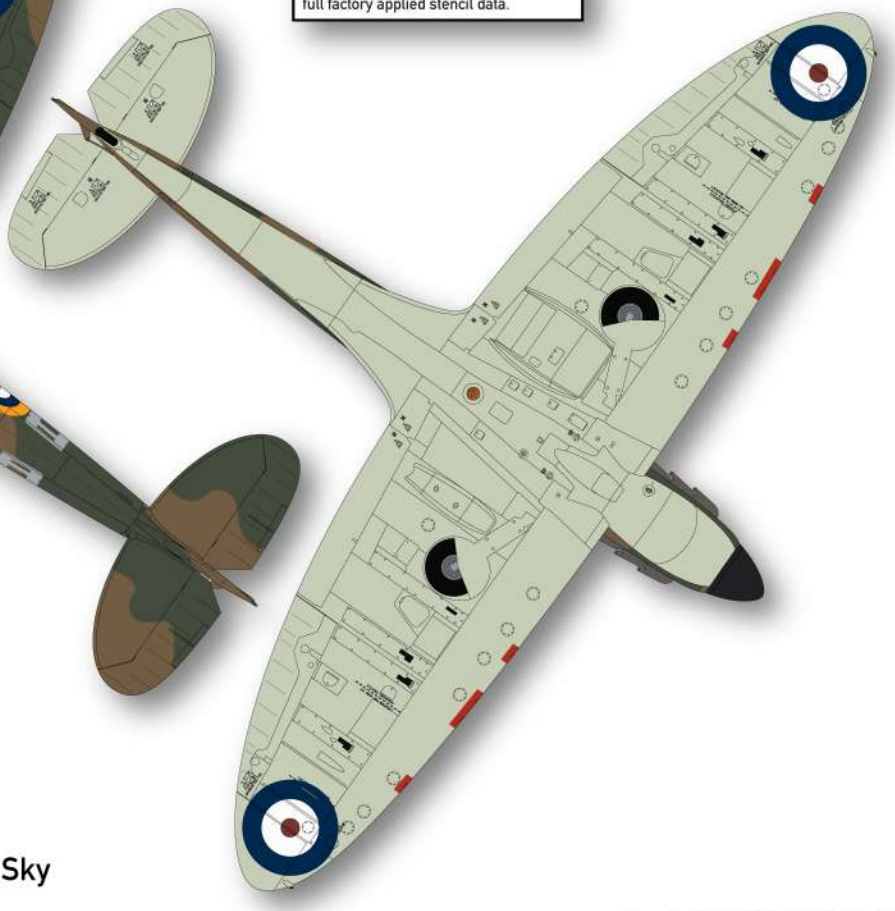
Detail Note

X4179 featured factory applied standard roundels - 35" Type A1 wiht a 5" center spot. Fin flashes were 8" stripe widths. Upper wing roundels were standard 55", while the lower wing roundels were 40" positioned well outboard.



Detail Note

X4179 was the 1019th Spitfire built, delivered on 12 August 1940. She passed through 266 Squadron before delivery to 19 Squadron on 13 September, so she was mere weeks old at the time depicted here. She had Sky lower surfaces with full factory applied stencil data.



Dark Green

Dark Earth

Sky

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Spitfire Mk.I, X4425

Flight Sergeant George "Grumpy" Unwin
19 Squadron, RAF Fowlmere
27 September 1940

Detail Note

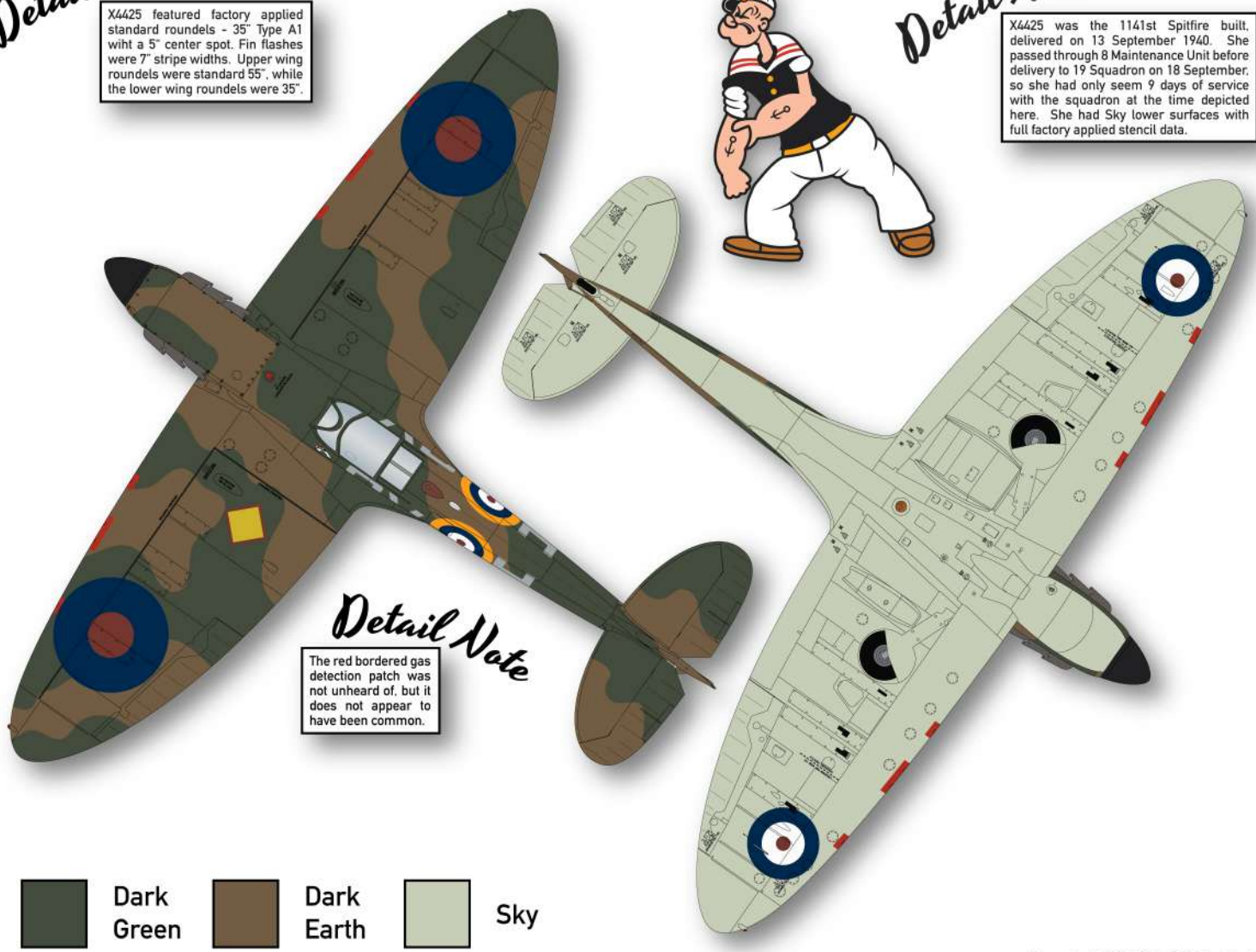
X4425 had the later style factory installed rear view mirror.

Detail Note

X4425 featured factory applied standard roundels - 35" Type A1 wiht a 5" center spot. Fin flashes were 7" stripe widths. Upper wing roundels were standard 55", while the lower wing roundels were 35".

Detail Note

X4425 was the 1141st Spitfire built, delivered on 13 September 1940. She passed through 8 Maintenance Unit before delivery to 19 Squadron on 18 September, so she had only seem 9 days of service with the squadron at the time depicted here. She had Sky lower surfaces with full factory applied stencil data.



Detail Note

The red bordered gas detection patch was not unheard of, but it does not appear to have been common.

Dark Green

Dark Earth

Sky

Flight Sergeant "Grumpy" Unwin

Flight Sergeant George Unwin made five claims during the air battle over Dunkirk (3 confirmed). On one occasion he was angered for being left out of a mission, gaining him the nickname "Grumpy".

Unwin was a prolific scorer during the Battle of Britain and ended the year with 13 and 2 shared destroyed, 2 unconfirmed, 2 probables, and 1 damaged. On 15 September Unwin was flying Spitfire X4179 QV-B when he shot down 3 Bf109Es. Three days later, again flying X4179, Unwin shot down a Bf110. Pictures of X4179 QV-B show it's unusual codes and the odd placement of the underwing roundels.

A series of photographs taken by S.A. Devon captured 19 Squadron returning from a sortie in September 1940. Although the exact date is not known we believe the pictures were taken on 27 September 1940. The photos are very telling - one photo shows a white scarfed "Grumpy" Unwin exiting a Spitfire with "Popeye" under the windscreen. A couple of photos show a group of pilots talking to the squadron's "uncle," including S/L Brian Lane, F/L Walter Lawson, and F/S Unwin. One picture shows QV-H X4425 in the background which Unwin used to shoot down a Bf109E on this date.

IWM

A nice crisp photo of X4179 firing up for a sortie. Note the large gun muzzle patches favored by 19 Squadron at this period, as well as the dirty stained gun access panels under the wings. See the Spitfire details page for more information on this often overlooked detail.

IWM

"Grumpy" Unwin is seen dismounting from X4425, with her Popeye artwork clearly visible. Shortly afterward, 19 Squadron pilot report to the intelligence officer (Unwin is blocked from view by the "Uncle"). In the background you can see X4425. Note the unusual red-bordered gas detection patch on the left wing.

IWM

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Spitfire Mk.I, X4683

Flight Lieutenant Anthony Lovell
41 Squadron, RAF Catterick
30 March 1941

Detail Note

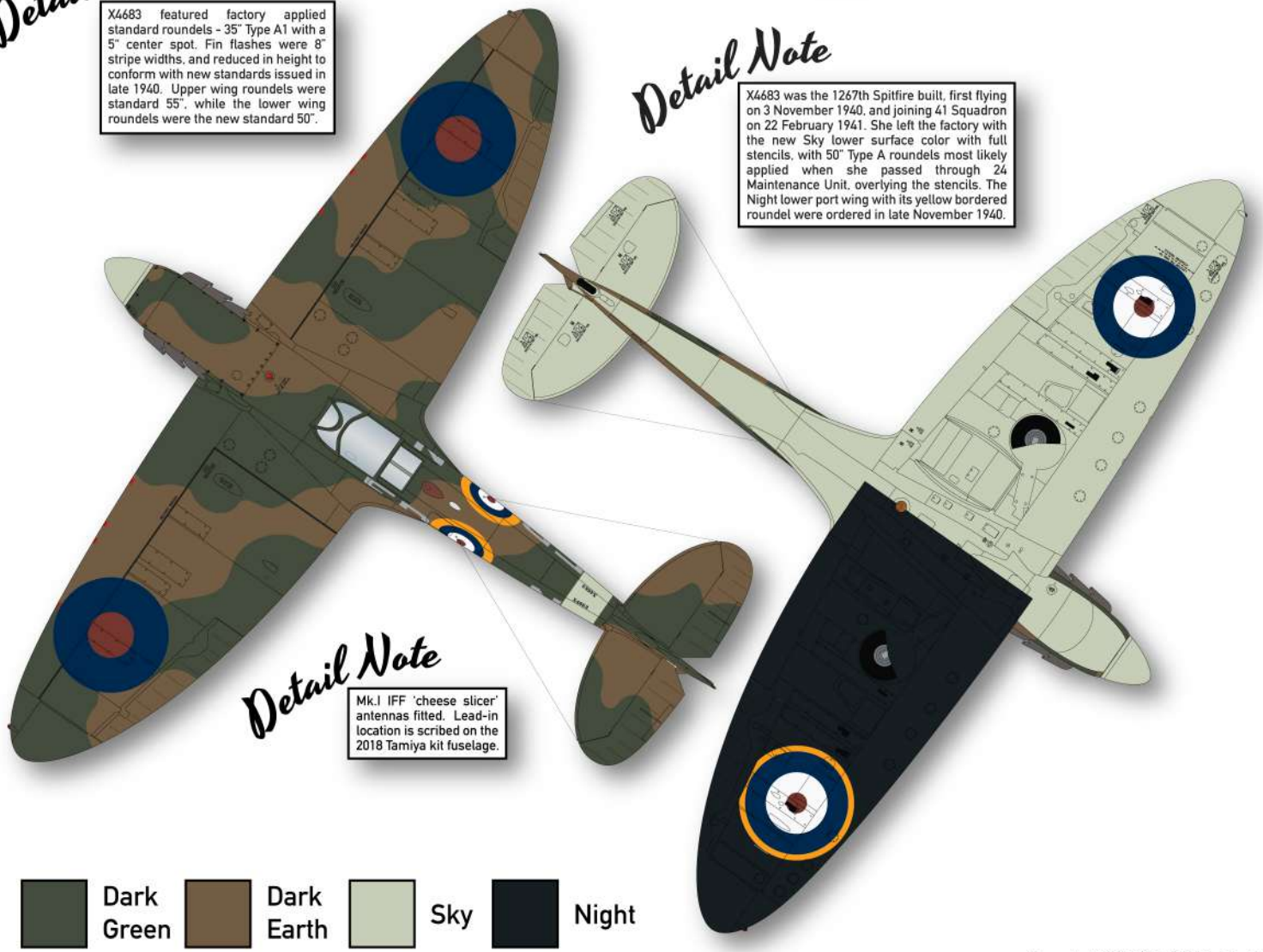
X4683 had the later style factory installed rear view mirror. She was also fitted the new TR11333 VHF radio. The antenna was contained within the mast, and there was no wire leading to the rudder as with the previous TR9 HF set. The triangular wire guide at the top of the mast was also removed as was the anchor point at the top of the rudder.

Detail Note

X4683 featured factory applied standard roundels - 35" Type A1 with a 5" center spot. Fin flashes were 8" stripe widths, and reduced in height to conform with new standards issued in late 1940. Upper wing roundels were standard 55", while the lower wing roundels were the new standard 50".

Detail Note

X4683 was the 1267th Spitfire built, first flying on 3 November 1940, and joining 41 Squadron on 22 February 1941. She left the factory with the new Sky lower surface color with full stencils, with 50" Type A roundels most likely applied when she passed through 24 Maintenance Unit, overlying the stencils. The Night lower port wing with its yellow bordered roundel were ordered in late November 1940.



Detail Note

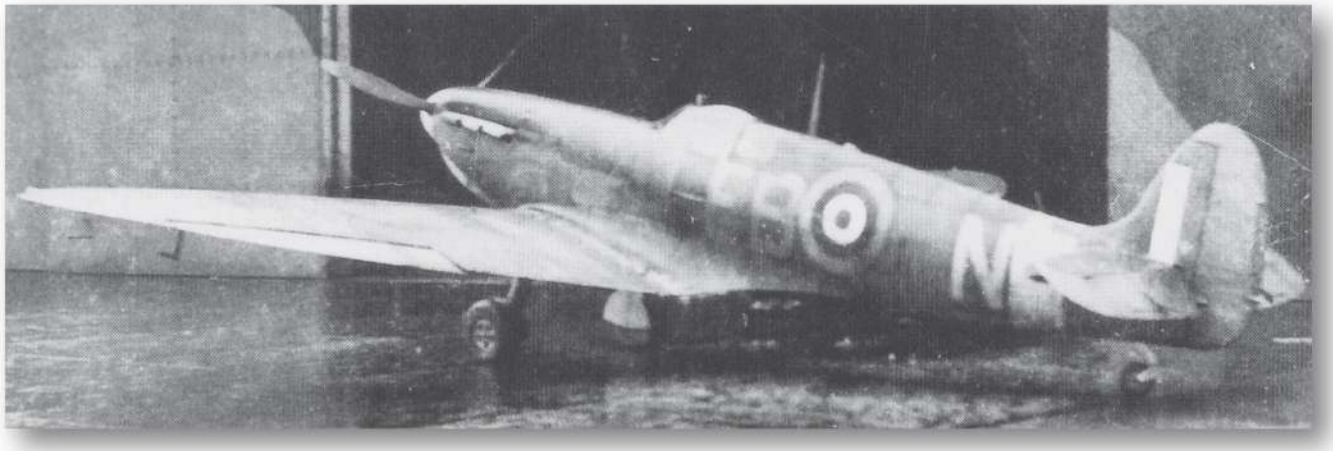
Mk.I IFF 'cheese slicer' antennas fitted. Lead-in location is scribed on the 2018 Tamiya kit fuselage.

Dark Green | Dark Earth | Sky | Night

Extra Innings

Following the Battle of Britain the RAF began planning the next move, taking the air war back to the skies over France. By the time Fighter Command began flying "Circuses," most of the front line squadrons had switched to Spitfire Mk.IIs and Mk.Vbs. However there were still a few Mk.Is soldering on in 1941 protecting England. An example was X4683, which F/L Tony Lovell was flying on 30 March 1941 when he shot down a photo reconnaissance Ju88 near Ouston in County Durham.

Another of the many youthful faces of the RAF in 1940 and 1941. Anthony Lovell poses next to a Spitfire at Catterick.



Lovell's kite at Catterick in early 1941. Note her Sky spinner and fuselage band, both ordered in late November 1940.

Photos this page: Fündekals collection

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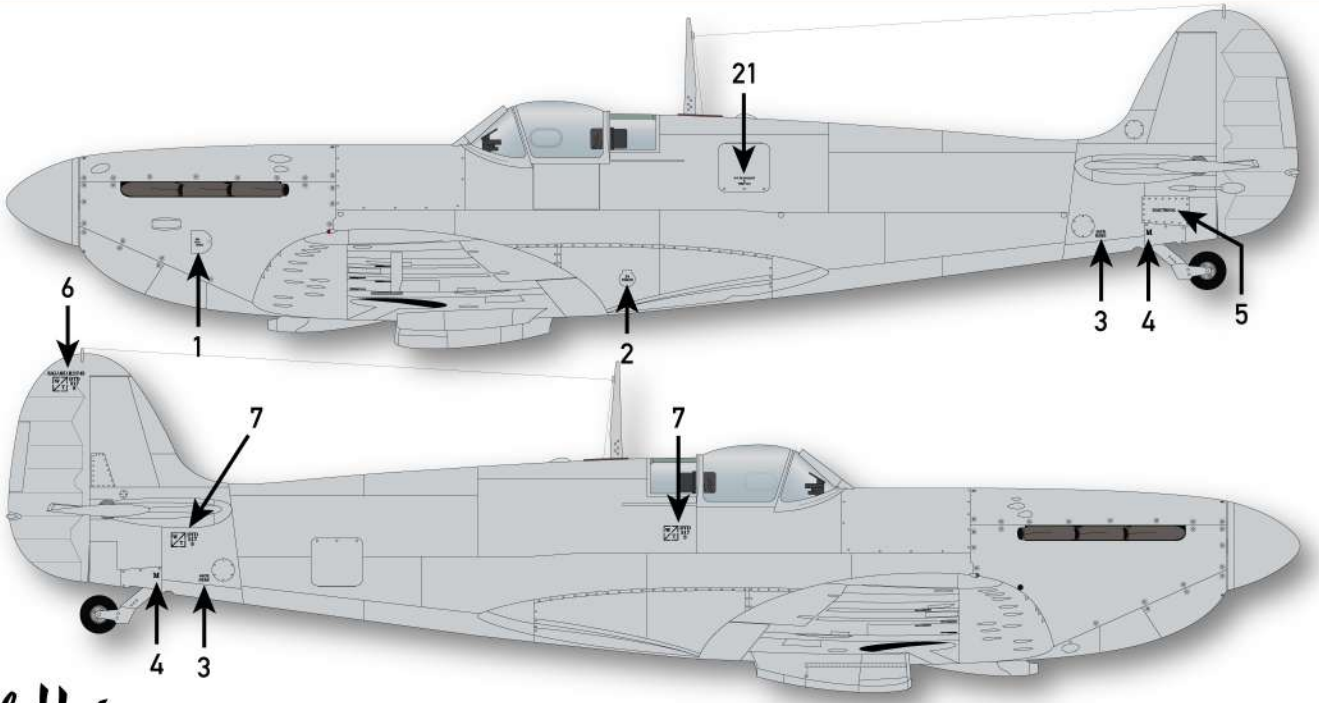
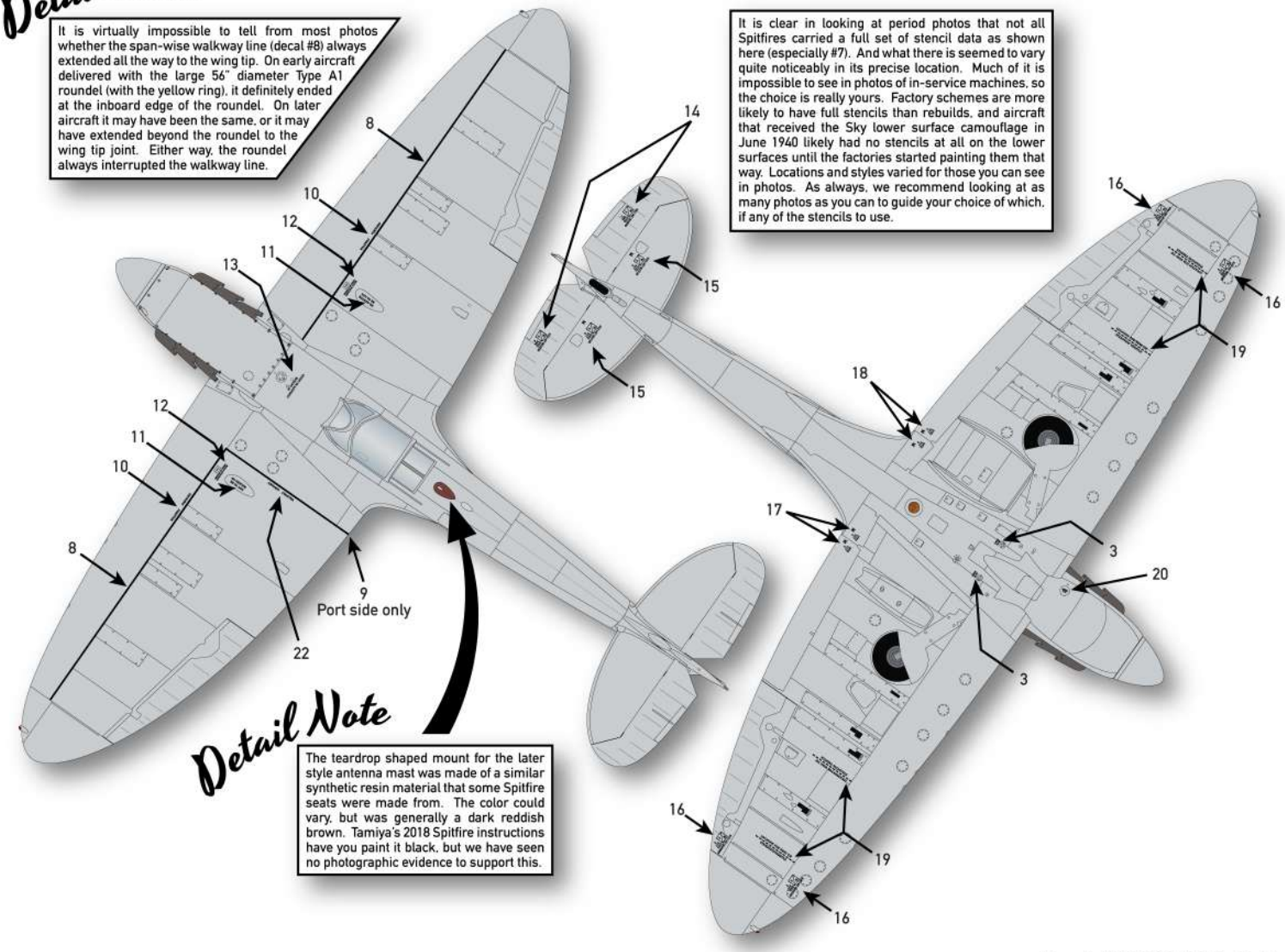
Spitfire Mk.I
Factory Stencil Data



Detail Note

It is virtually impossible to tell from most photos whether the span-wise walkway line (decal #8) always extended all the way to the wing tip. On early aircraft delivered with the large 56" diameter Type A1 roundel (with the yellow ring), it definitely ended at the inboard edge of the roundel. On later aircraft it may have been the same, or it may have extended beyond the roundel to the wing tip joint. Either way, the roundel always interrupted the walkway line.

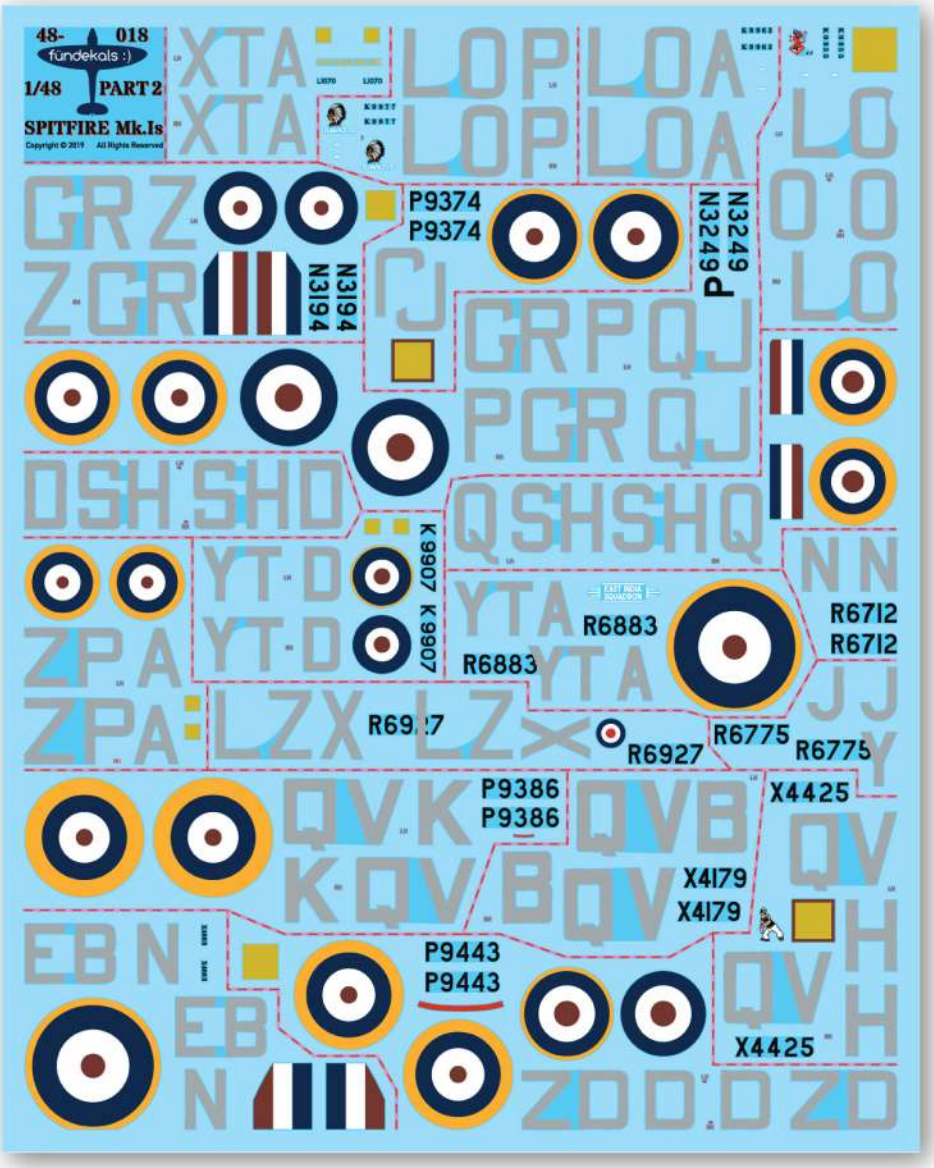
It is clear in looking at period photos that not all Spitfires carried a full set of stencil data as shown here (especially #7). And what there is seemed to vary quite noticeably in its precise location. Much of it is impossible to see in photos of in-service machines, so the choice is really yours. Factory schemes are more likely to have full stencils than rebuilds, and aircraft that received the Sky lower surface camouflage in June 1940 likely had no stencils at all on the lower surfaces until the factories started painting them that way. Locations and styles varied for those you can see in photos. As always, we recommend looking at as many photos as you can to guide your choice of which, if any of the stencils to use.



Detail Note

The teardrop shaped mount for the later style antenna mast was made of a similar synthetic resin material that some Spitfire seats were made from. The color could vary, but was generally a dark reddish brown. Tamiya's 2018 Spitfire instructions have you paint it black, but we have seen no photographic evidence to support this.

A note on the decals...



We have designed these decals with a minimum of clear carrier film, which is visible here as the darker blue. This will result in less chance of silvering and a better finish for your model. However - this will also require you to be extra careful in handling them when applying them to your model. We recommend using warm, but not hot water, and thoroughly soaking them to ensure that the adhesive is fully and completely softened before trying to move the decal off the paper backing.

That extra bit of detail...

The Spitfire, like all combat aircraft, underwent continuous improvement from the day the first aircraft was delivered until the last one rolled out the factory door. We are gearing this discussion around the 2018 Tamiya 1/48 Spitfire Mk.I kit, although most applies to any other kit you may choose to use as well.

So in no particular order, here are some things to consider:

- Early aircraft had the unarmored windscreen, pole type antenna mast and unarmored fuel tank cover.
- The early pole antenna mast wire led from the tail to the top of the pole, then down through the mast into fuselage.
- All a/c featured here had the de Havilland three-bladed prop and spinner.
- All a/c except for X4179, R6883 (12/40), and X4683 had the wire antenna from rudder mast to antenna mast.
- The Mk.I IFF 'cheese slicer' wires from the horizontal stabs to the fuselage were fitted from late 1940, so only R6883 (12/40) and X4683 have it. On the rest, the lead-in on the fuselage sides should be filled. It did not exist on earlier a/c.
- The teardrop shaped mount for the later style aerial mast should be the same red-brown colored SRBP (Synthetic Resin Bonded Paper) as later Spitfire seats (see next page).
- The later antenna mast had triangular antenna wire guide, with the wire turning 90 degrees to go down into fuselage.
- No crowbars mounted on the pilot's entry hatch on any BoB period Spitfire.
- On early Mk.Is, the voltage regulator was mounted low behind the seat, and was not visible behind the headrest.
- By the beginning of the war, most, if not all operational Spitfires had the reflector gun sight fitted. Ring and bead sights were quickly replaced in service.
- Gas detection paint squares/diamonds were common but not universal. We have documented several different styles.
- At the risk of launching an all-out war, it is clear (to us anyway) that while camouflage mats made of leather or rubber may have been used in Spitfire production, their use was by no means universal, or (we believe) even common. Our evidence for that is that while camouflage patterns are similar, you would do well to find any two with identical patterns, even when they were adjacent on the production line. If mats were used, you should at least see groups of aircraft with more or less identical patterns as a result of using the same mats on them, but we have not found that to be the case. The edges of the upper surface colors appear (to us anyway) to have a very, very fine feathered edge. From any significant distance, this appears as a hard edge, and on a 1/48 model, you would probably be most correct in making it that way. As always, look at photos of your subject and try to replicate what you see rather than what you think you see or what you've been trained to see...

- The two photos above show the common pattern of dirt on the lower wings. Guns were re-armed via the panels on the lower wings - not the upper wings. Those allowed for the guns to be removed for cleaning. Routine servicing resulted in the lower wing panels being removed and placed on the ground (see lower photo). Those panels also received the smudges from the shell ejection chutes, which (according to a period report) would often be "cleaned" with gasoline. That usually resulted in simply smudging the entire panel and darkening the camouflage color, as can be clearly seen in the upper photo.
- We have noted the delivery dates for aircraft on this sheet. Bear in mind when you apply weathering, paint chipping, etc how old the aircraft was and how much weathering it would likely have had. Many aircraft were days to weeks old as depicted. You don't generally see a lot of heavy exhaust staining from the Merlin, and while you do see paint chipping on the left wing root, you usually see little or none elsewhere.
- Note in almost all photos that Spitfire camouflage had a slight sheen to it. The finish was specified to be "smooth", and a rough, dead flat texture was not accepted practice.

Photos this page: Fündekals collection

Spitfire Seats...

The late, great denizen of all things Spitfire, Edgar Brooks, whose loss is sadly felt in the modeling community, wrote the following notes on Spitfire seats. We are presenting them here in their entirety for your edification. Note that all Spitfire Mk.Is were built at the Southampton works. Castle Bromwich started producing Sptifires with the Mk.II, so all aircraft on this decal were Southampton built.

* * * * * * * *

There were no plastic seats until mid-May 1940, and no seat armour before June. As the armour was rushed into service, it could easily have been unpainted steel (initially at least), and black (metal) seats have been found at wreck sites.

Seats were interchangeable; the plastic seat was an alternative, not a replacement. It's not generally known, but the plastic seat was originally intended solely for Castle Bromwich, but the destruction of the Supermarine works probably changed everything.

There isn't truly a "correct" colour, since the material could vary quite substantially in colour even on the same seat. It wasn't Bakelite either (some mandarin in Whitehall has a lot to answer for for using that name), but a resin/paper (yes, really) mixture, and the colour depended quite a lot on how the material was made.

"Close enough for government work" is an often-used expression, and too close at times for comfort. Why "Bakelite" appeared in the manual is a mystery, but having talked to someone who's worked with the stuff, the seat would have been far too big in area for the required pressures and critical temperatures needed for acceptable moulds. Making an instrument case is bad enough, but an item the size of a seat would have been impossible with Bakelite.

Tufnol Composites, Ltd (who've been in existence since the 1930s) are in James Watt Place, East Kilbride, Glasgow. Aeroplastics, Ltd (who made the [Spitfire] seats) were in Earl Haig Road, Hillington, Glasgow. Same city, different companies, and I can't see Tufnol allowing another company to use their name, or Aeroplastics actually asking for permission either. It's possible that Tufnol bought out Aeroplastics post-war, because they simply disappeared. But an inquiry about that possibility went unanswered.

Plastic (not Bakelite, not ever, no how) seats were introduced on the production line on 14-5-40; they were intended to be used earlier, but were delayed due to problems with the material cracking. Castle Bromwich were to be the recipients, but it's likely that the bombing of the Supermarine works [in Southampton] caused a change of plan. It's doubtful that they were painted, at least in wartime, and their use extended beyond the end of the war, since there's an order demanding that they be rescued for future use; Hornets, Vampires, and Meteors used plastic seats as well, and I've found reference to a "comfort" seat for bombers, but never found one.

Seats were made of SRBP: Synthetic Resin Bonded Paper (not Bakelite, period, end of discussion forever more).

* * * * * * * *

Metal seat

So essentially, on any Battle of Britain period Spitfire Mk.I built before 14 May 1940, the seat was metal. It could be Interior Grey-Green (as above), or it could be, according to Edgar's wisdom, painted black.

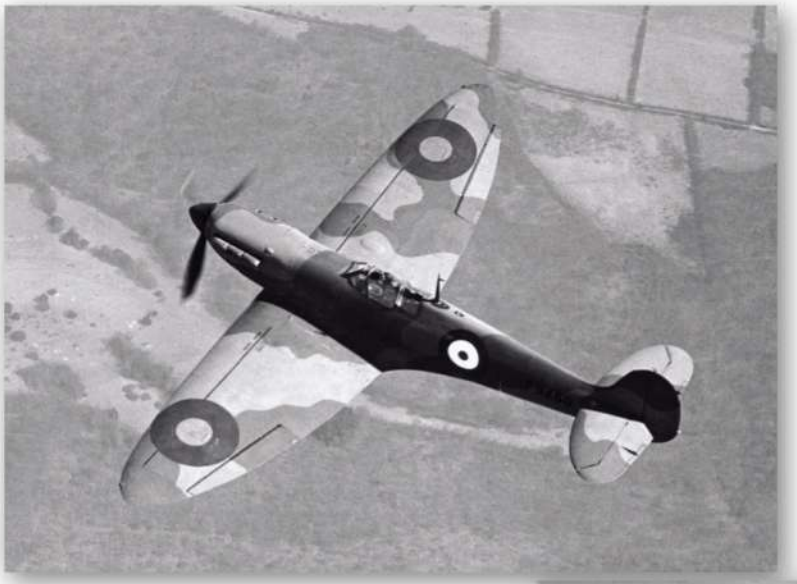
For aircraft built after 14 May 1940, it is possible they carried the Aeroplastics SRBP (not Bakelite, period, end of discussion forever more...) seat, which was unpainted and was any number of flavors of red-brown to dark brown, almost black. It seems logical to assume that supplies of the Aeroplastics seats took at while to catch up to production, so metal seats were likely to have been used on the production lines until well into 1941.

Aeroplastics seat

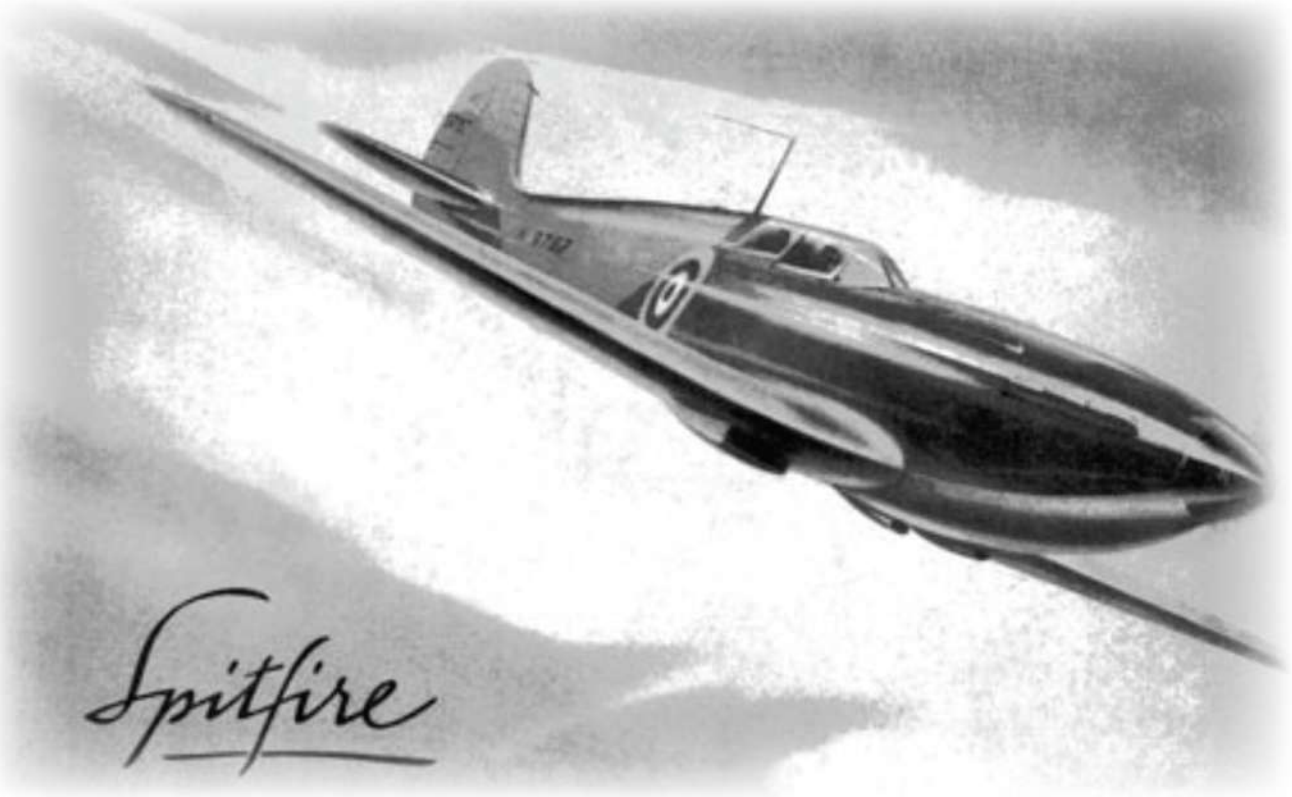
Sheer beauty!

These images of P9450 from the collection of the Imperial War Museum are simply to beautiful not to share. They depict a perfectly factory fresh Mk.I, flown by none other than Jeffrey Quill, cavorting around the sky in April of 1940. She was delivered to 8 Maintenance Unit on 8 April, and went to 64 Squadron on 2 June 1940. She was damaged in combat with a Bf109E near Rouen, France.

Spitfire Mk.I P9450



One small oddity that we have no explanation for is the lack of the fore-aft walkway stripe and the stencil that goes with it on the left wing root area. But note that the span-wise stripes go all the way out to the wing tip joint line, and that the roundel overlies them. Also note that the roundel almost, but not quite touches the edge of the aileron cutout in the wing skin.


Spitfire