## eduard

## 1/48 Scale Plastic Model Kit



# ProfiPACK edition

The piston engine aircraft development peaked at the end of the Second World War, bringing some remarkable designs. The Hawker Tempest was one of them. This high performing beast excelled as the mid and low level fighter and attack aircraft.

The story of the Tempest is in fact nothing more than an attempt to sort out the shortcomings of Hawker Typhoon, which prevented the type from being a successful fighter. The main problem of the Typhoon was the thick wing with NACA 22 profile, offering lot of inner space for fuel and armament, but building drag rapidly with rising speed. Not surprisingly was the wing at the core of the changes on the way to the new fighter. The design was originally supposed to retain the Typhoon name marked as the Mark II but as it became obvious, the final result would be a new plane, so the name was changed. The Tempest name followed the path of Hawker to use the "wind" names for its fighters.

#### Series of changes

The new wing was 5 in (12,7 cm) thinner at the root and the planform changed in comparison with Typhoon wing to more elliptical shape. As the new wing did not offer enough space for fuel, additional fuel tank of 76 gallon (288 l) volume had to be installed in the fuselage. The space for it was found between the firewall and the oil tank, but, consequently, it was necessary to move the engine forward by 21 in (53,4 cm). Due to that, the tail surfaces, both the stabilizer as well as elevator, had to be enlarged, also the undercarriage was rebuilt. All in all, the Tempest really was a new aircraft, although keeping the Typhoon engine, which was a very complex issue by itself. With quite ambitious goals regarding the performance of Tempest, new units were considered instead of troubled Napier Sabre II, but the things went different way...

#### Back to the roots

Early contract was placed for two prototypes based on the Typhoon airframes powered by Sabre IV engine, but, due to delays with supply, only the HM599 was fitted with it, while HM595 used old Sabre II. The two prototypes also differed in radiator layout as the HM595 retained the distinctive chin radiator of Typhoon, while HM599 undergo radical change as Sydney Camm, Hawker chief designer, attempted to streamline the design. The radiator moved to the leading edge of the inner wing sections on both sides and the sleek nose got some resemblance to the Spitfire. The wing-mounted radiators layout worked well aerodynamically, but the Sabre IV evinced multiple problems, while the complexity of the wing assembly with integrated radiators was of some concern. There were only two other units powerful enough for use with the Tempest instead of Sabre IV: The R&R Griffon and radial Bristol Centaurus IV. As the new name Tempest was chosen, different marks were assigned to each engine variant and four more prototypes were ordered. The Mk.I was to be powered by the Sabre IV (HM599), the Mk.II by the Centaurus IV (LA602 and LA607), the Mk.III by the R&R Griffon IIB (LA610) and the Mk.IV by the Griffon 61 (LA614). Finally, the Mk.V (HM595) used slightly improved version of the Sabre II (IIb) engine producing 2,400 hp (1,790 kW), thus 200 hp (147 kW) more than previous one. Although it was meant as a stopgap solution until Sabre IV engines would be available, it finally emerged as the main mark of the Tempest, because Centaurus engine supply was too late, Sabre IV was still troubled by glitches and integration of the Griffon into the Typhoon airframe proved to be more demanding than expected, so Mk.III ended with first and only prototype, while Mk.IV was never built.

#### Legend is born

The HM595 prototype with Sabre II flew for the first time on September 2, 1942, fitted with car door canopy, as the bubble canopy was in development at the time. Streamlined HM599 with Sabre IV performed its maiden flight on February 24, 1943. It was quite faster than HM595, but the solution of its problems would take too much time. The easiest way to get the Tempest into the service was to proceed with the Mk.V.

The first production Tempest Mk.V made its maiden flight on June 21, 1943, already fitted with bubble canopy. Armed with four 20mm Hispano Mk.II cannon (200 rounds per barrel) it achieved a top speed of 432 mph (695 km/h) at 18,400 feet (5,600 m), up to 45 mph (72 km/h) more than Bf 109 od Fw 190 (depending on mark). After the first production batch, the Hispano Mk. V cannons were installed, differentiating the Tempest from the first batch by barrels fully covered by the wing.

The first squadron to receive Tempests was No. 486 in January 1944. Together with No. 3 Squadron it became operational in April 1944. With addition of No. 56 Squadron the first Tempest Wing was formed at Newchurch, Kent, under the command of W/C Roland Prosper "Bee" Beamont.

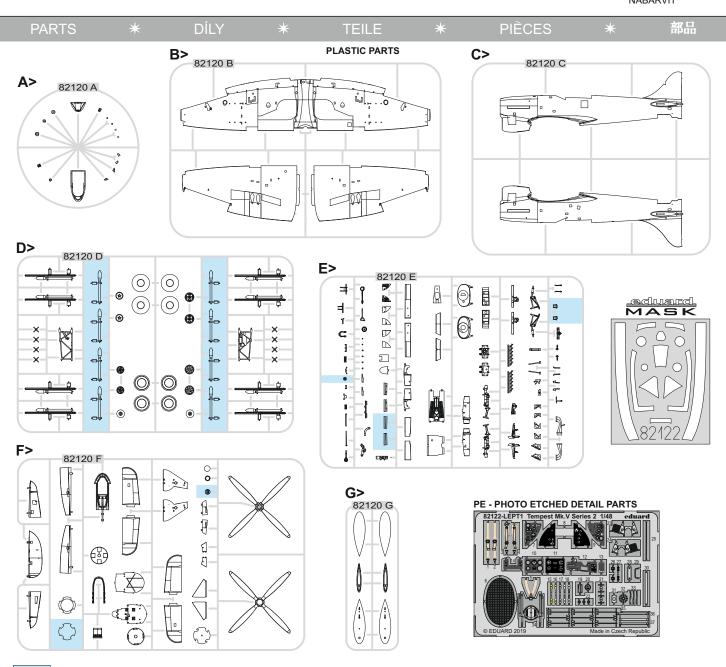
#### Fighting everything

After the period of operations over the France following the D-Day, the Tempest Wing was tasked to fight the V-1 Flying Bombs travelling low at speed of some 400 mph (640 km/h). The Tempest Mk.V was never effective high-level fighter due to the nature of its engine, but at the middle and low levels it was superior to virtually everything. And some 640 destroyed V-1s during the short period between June and August 1944 speak by themselves, as the rest of RAF scored some 160 of them during the period.

After the V-1 bombing campaign ceased, the Tempest Squadrons returned to the common tasks. At the time, seven Tempest squadrons flew air-to-air combats, claiming 240 kills (20 of them being Me 262 jets). Most successful Tempest ace, D. C. Fairbanks (US) recorded 11 kills flying Mk. V "Terror of Rheine". Second with nine kills came W. E. Schrader (NZ) with nine and J. J. Payton with six kills emerged as third overall. The most famous Tempest Pilot, the Free French Pierre Clostermann, added four kills to his tally of 11 (some sources state 18 kills, the precise number is unknown) flying the Tempest.

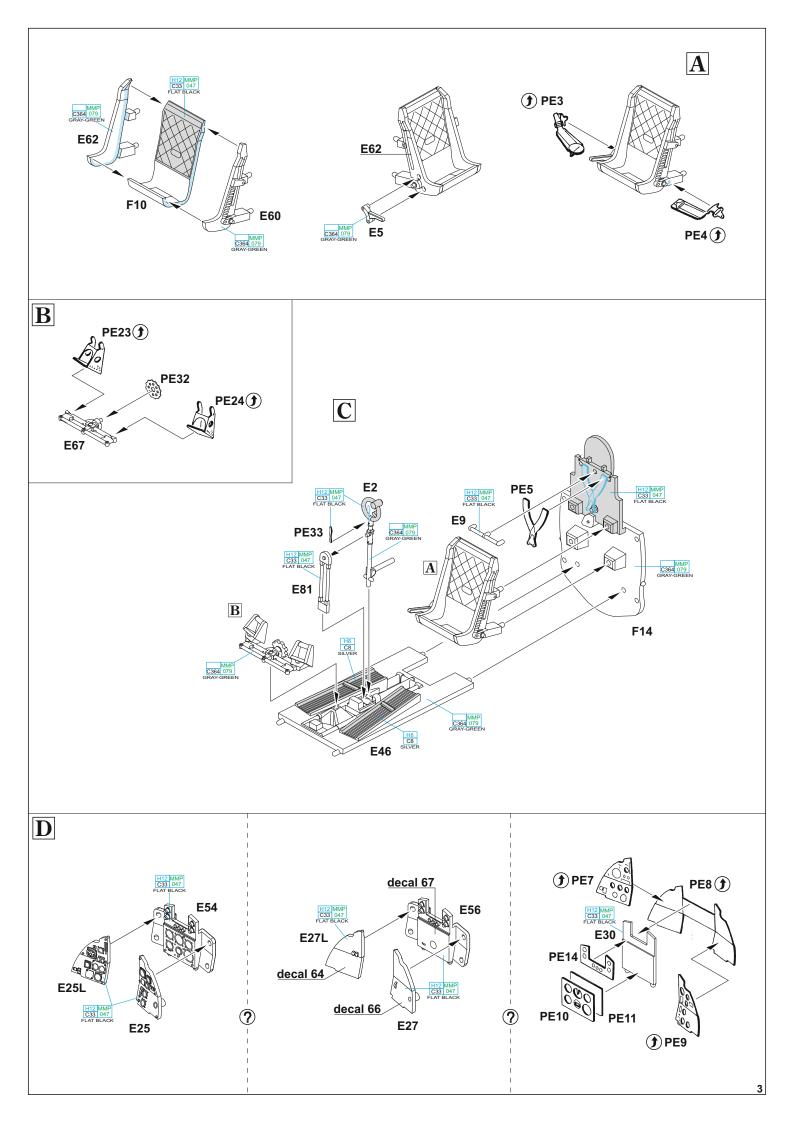
Hawker Tempest was formidable fighter, fast, tough, with powerful weapons. Thanks to the excellent low altitude performance, the strafing attacks were also quite common, usually during the "search and destroy" rides. Apart of cannons, the provision of two 1,000lb (450kg) bombs or eight 60lb (27kg) rockets added to its destructive force.

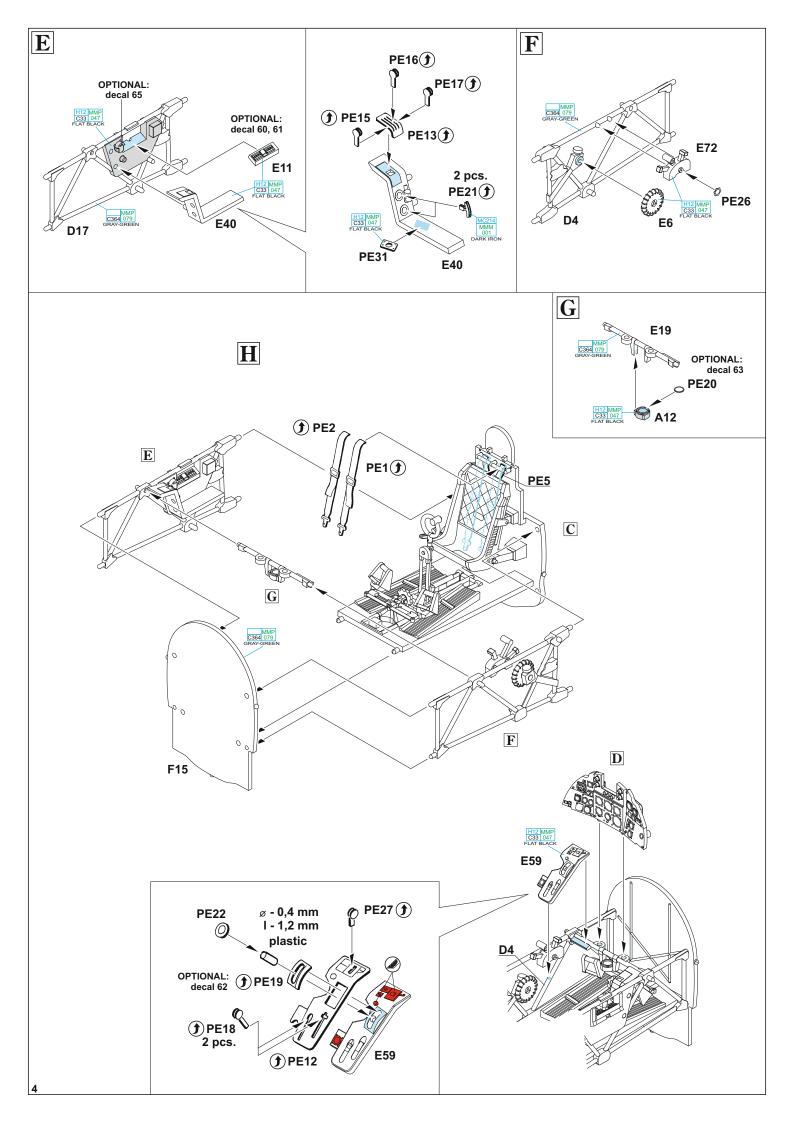


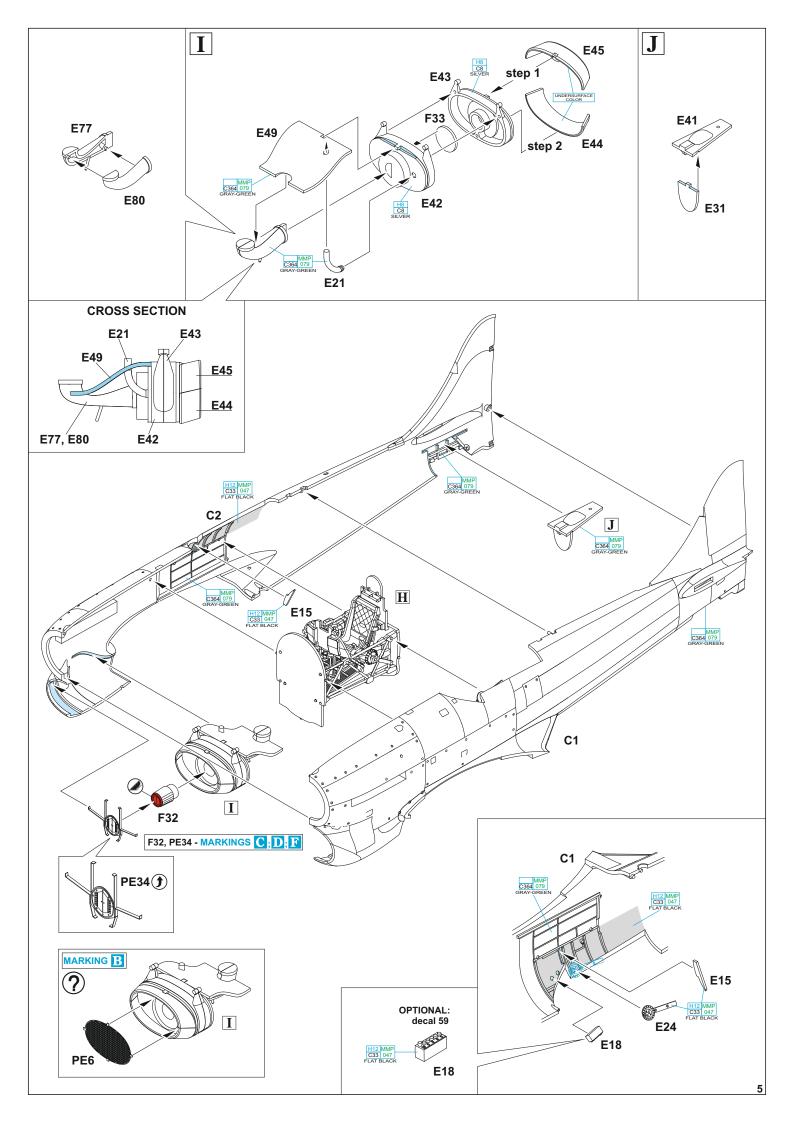


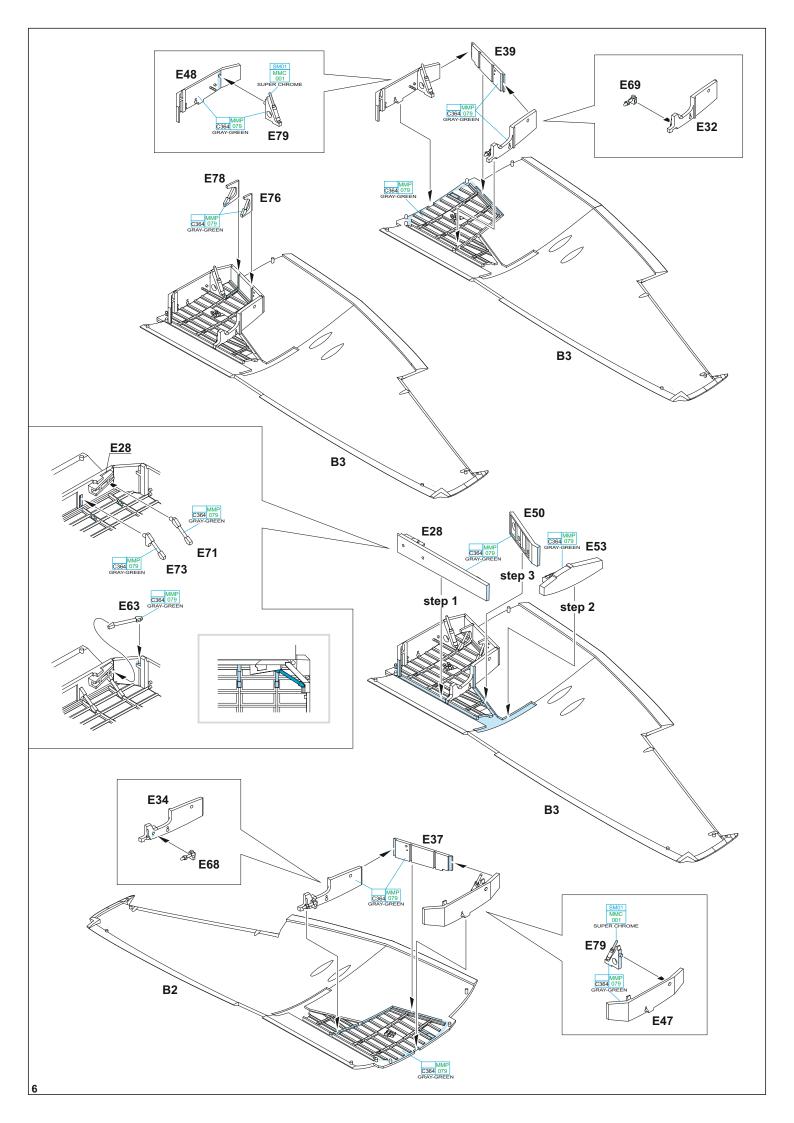
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AQUEOUS	Mr.COLOR	PAINTS			,	AQUEOUS	Mr.COLOR	PAINTS		
H3	C3	MMP-003	RED			H328	C328		BLUE	
H4	C4	MMP-007	YELLOW			H330	C361	MMP-077	DARK GREEN	
H8	C8		SILVER			H335	C363	MMP-094	MEDIUM SEAGRAY	
H11	C62	MMP-001	FLAT WHITE		]		C362		OCEAN GRAY	
H12	C33	MMP-047	FLAT BLACK		1		C364	MMP-079	AIRCRAFT GRAY-GREEN	
H74	C368	MMP-080	SKY		1	Mr.META	AL COLOR	METALLICS		,
H77	C137	MMP-040	TIRE BLACK		1	MC	C214	MMM-001	DARK IRON	
H90	C47		CLEAR RED		1	MC218		MMM-003	ALUMINIUM	
H94	C138		CLEAR GREEN		1	Mr.COLOR SUPER METALLIC		METALLICS		
H326	C326		BLUE		1 1	SM01		MMC-001	SUPER CHROME	

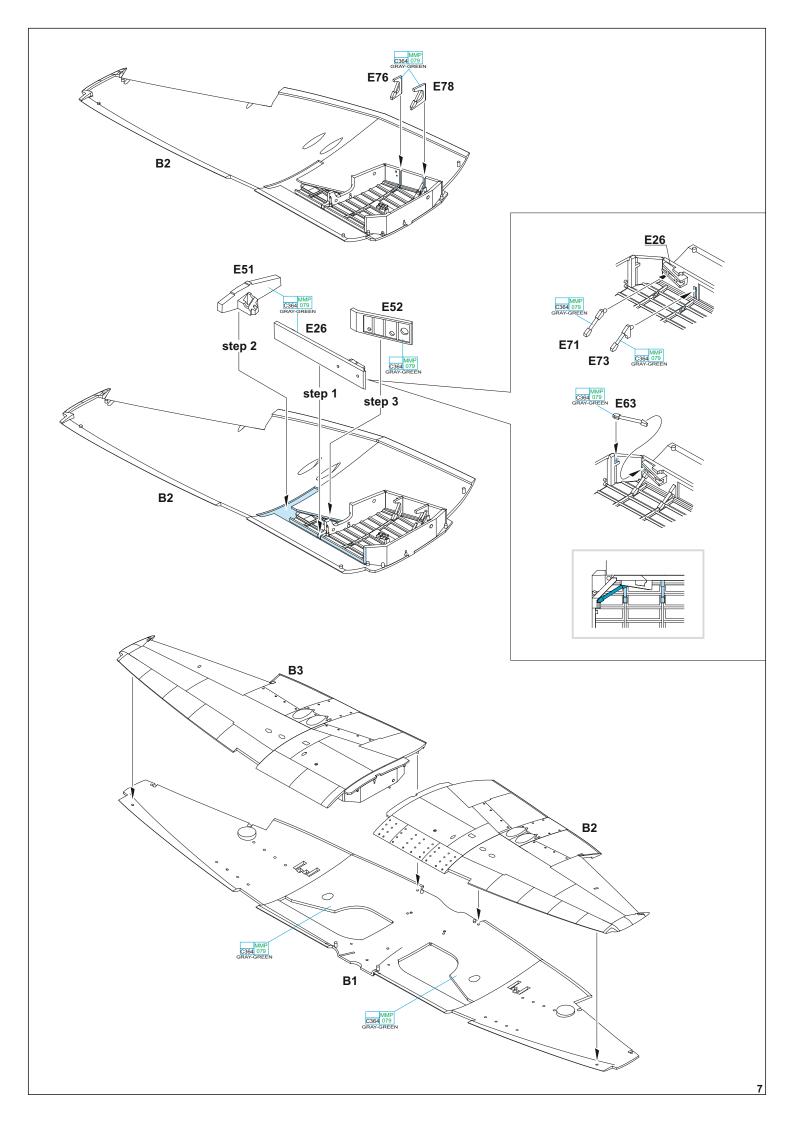
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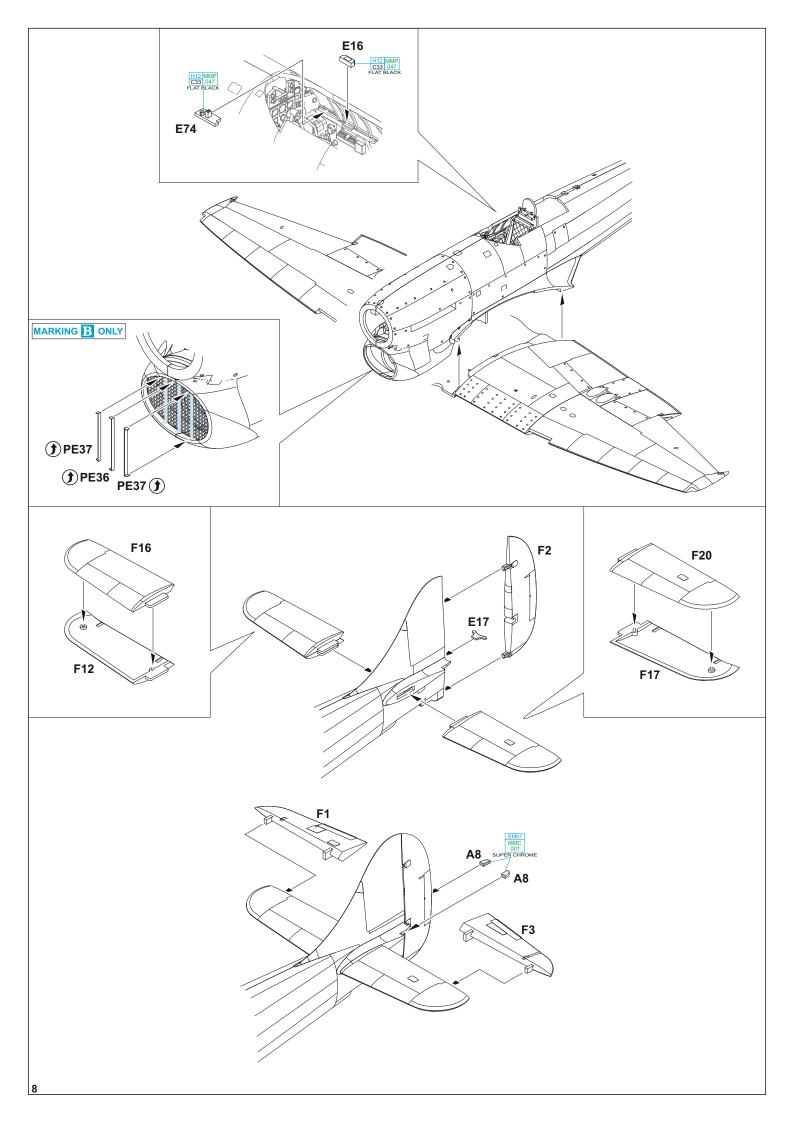


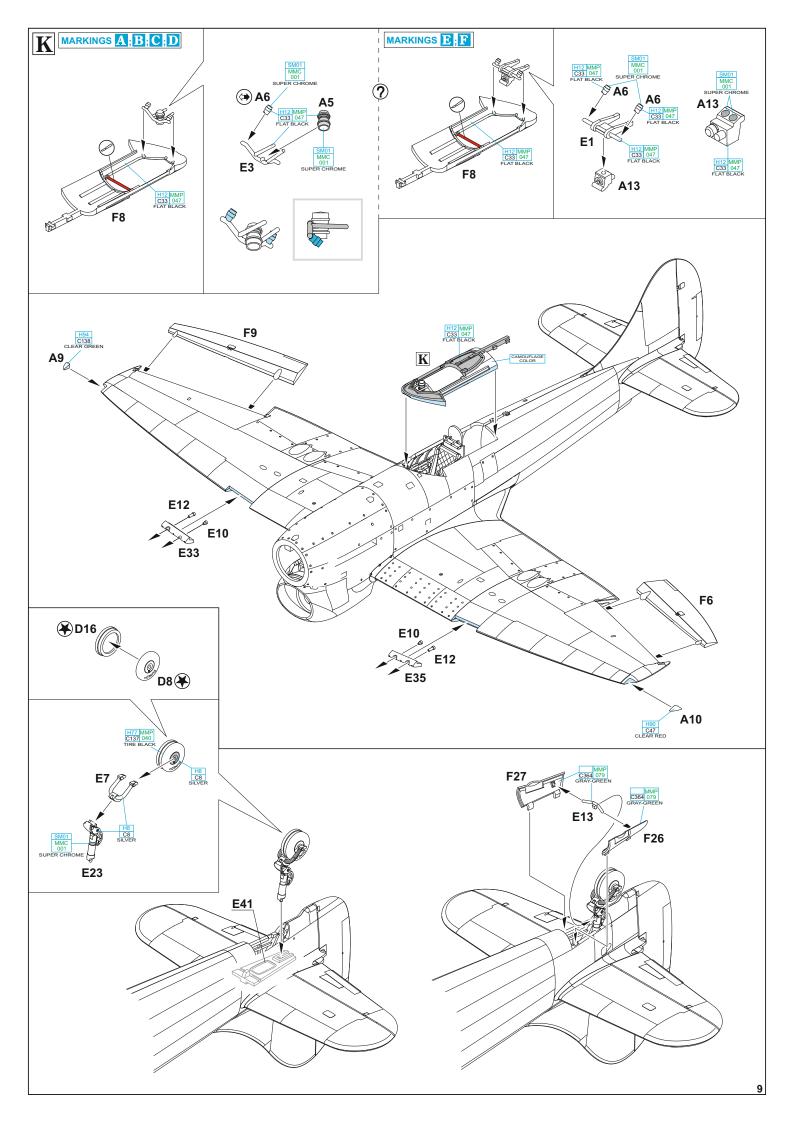


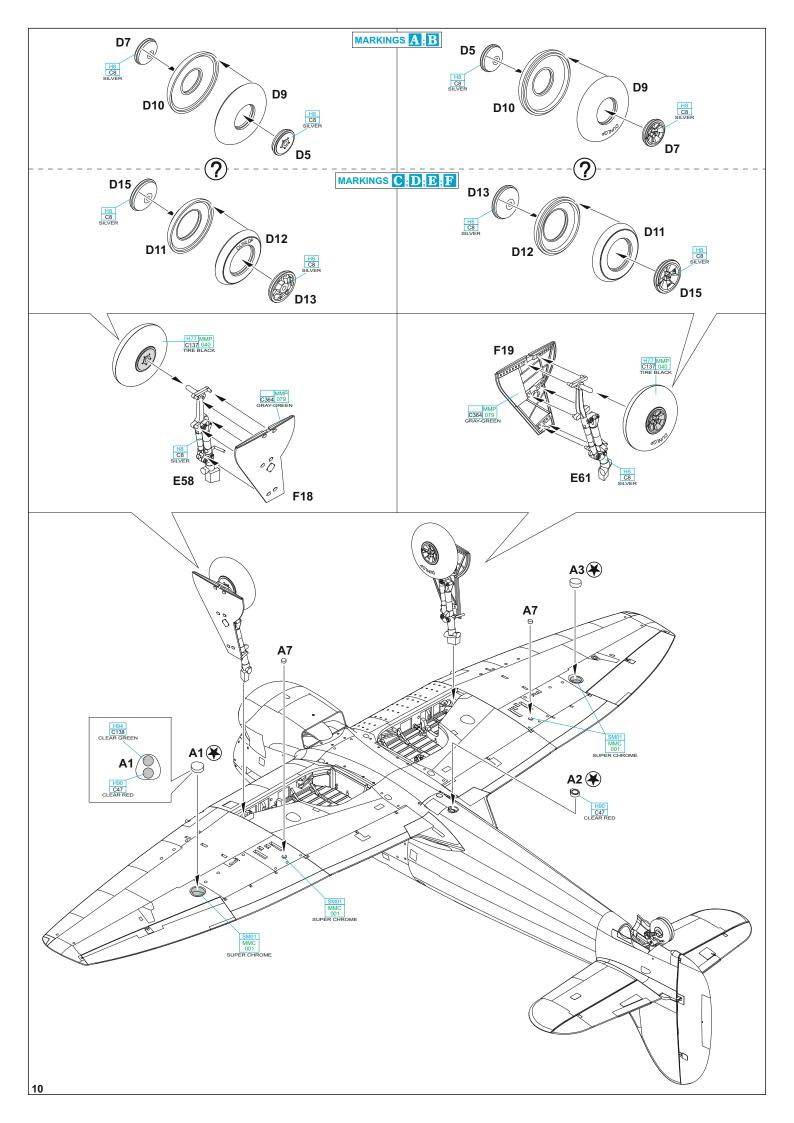


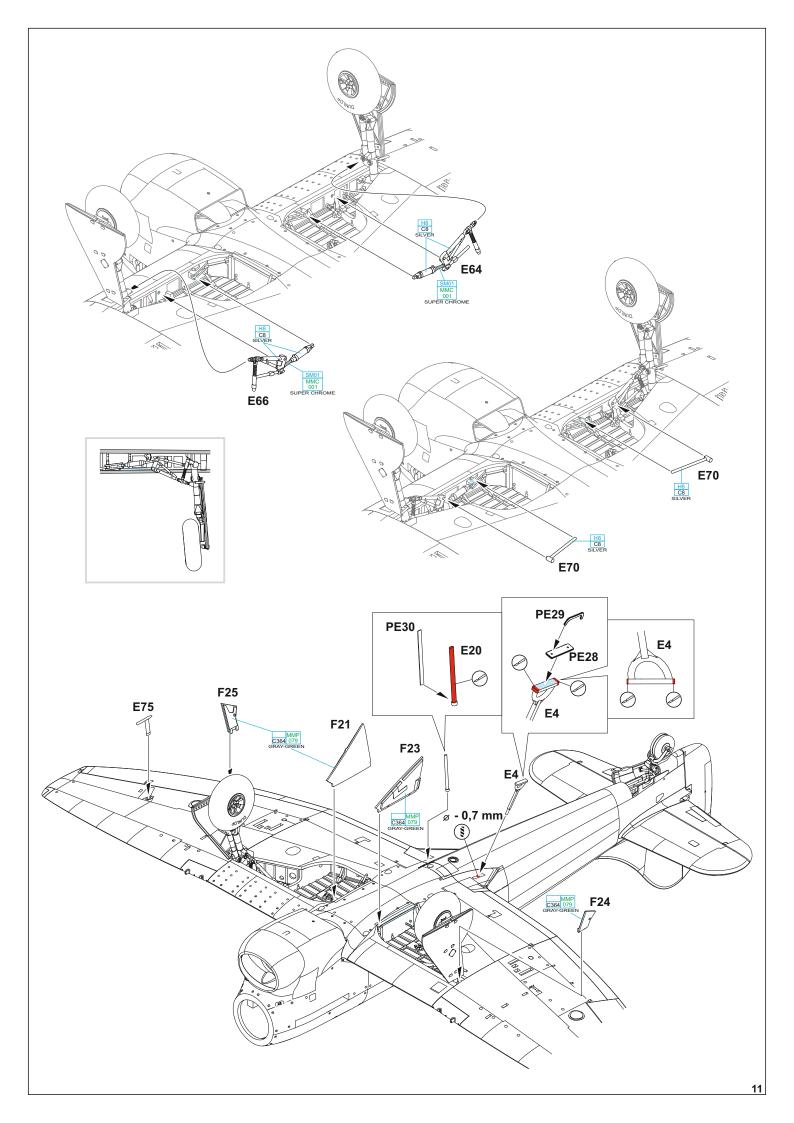


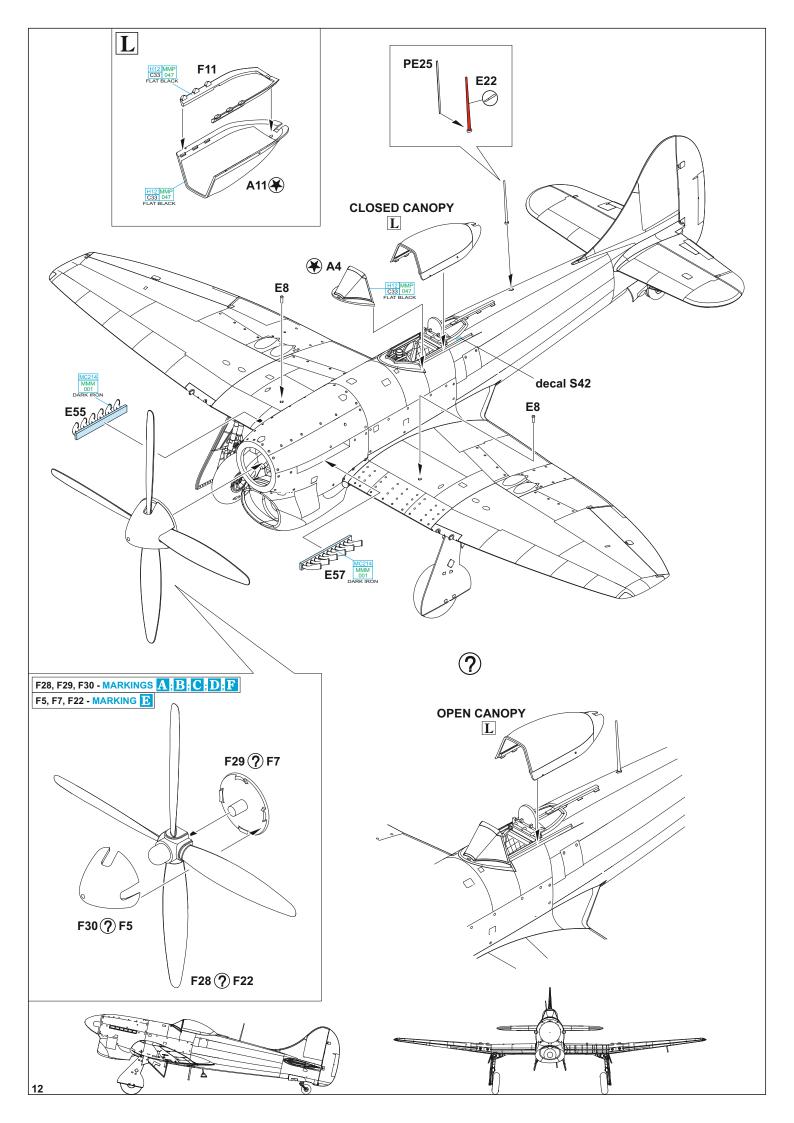


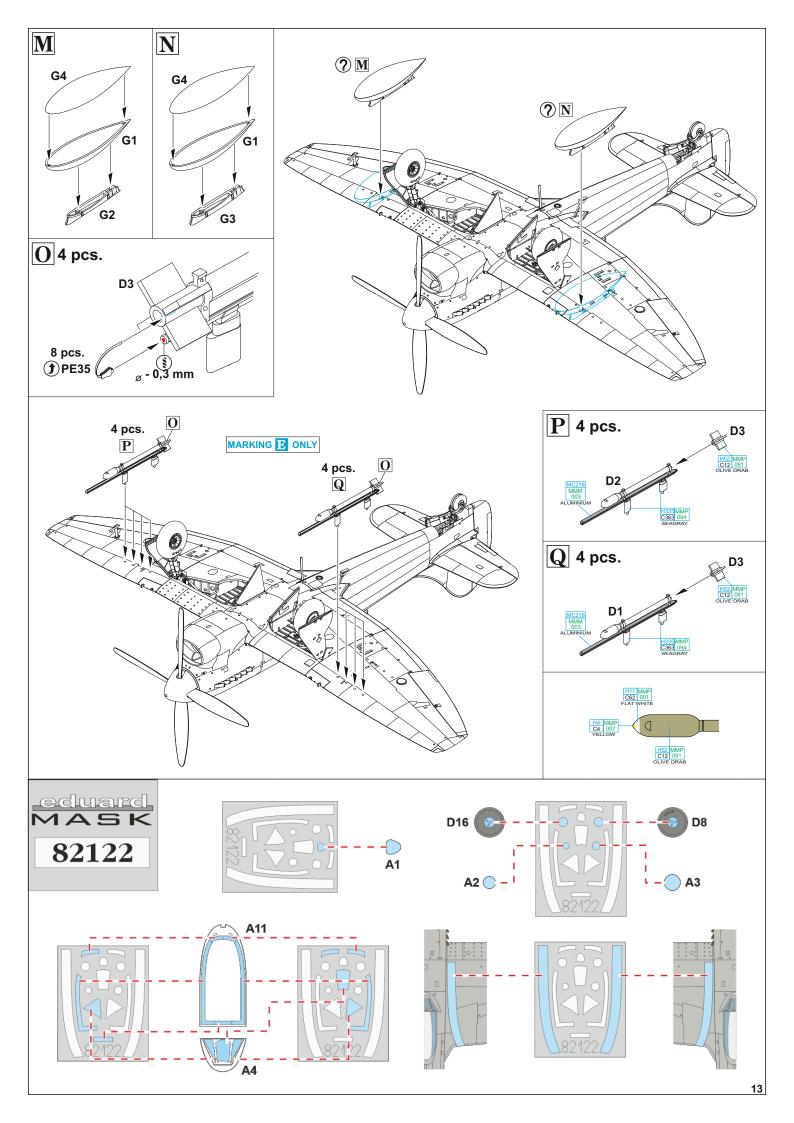








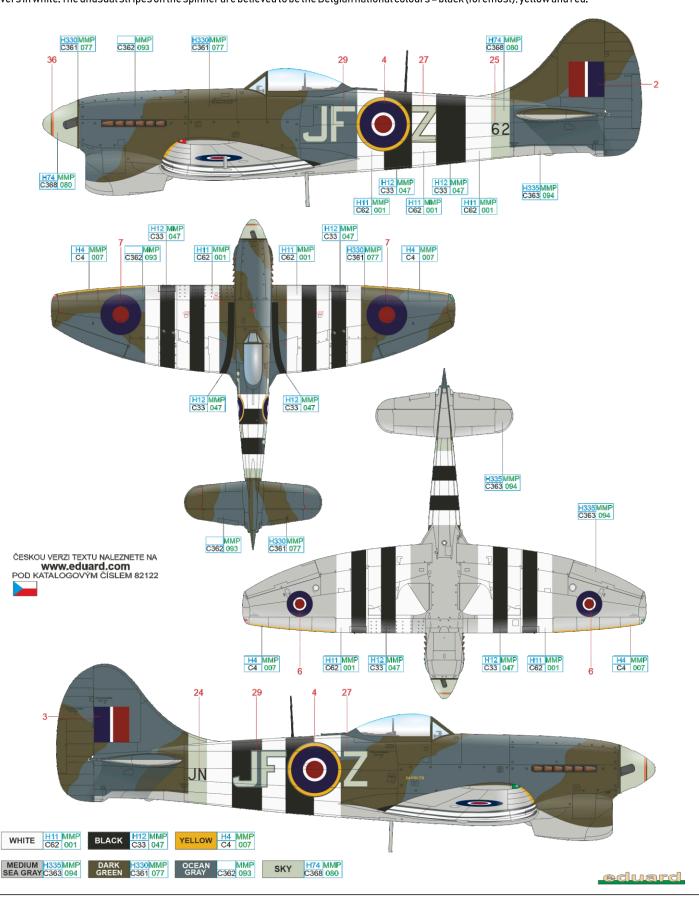




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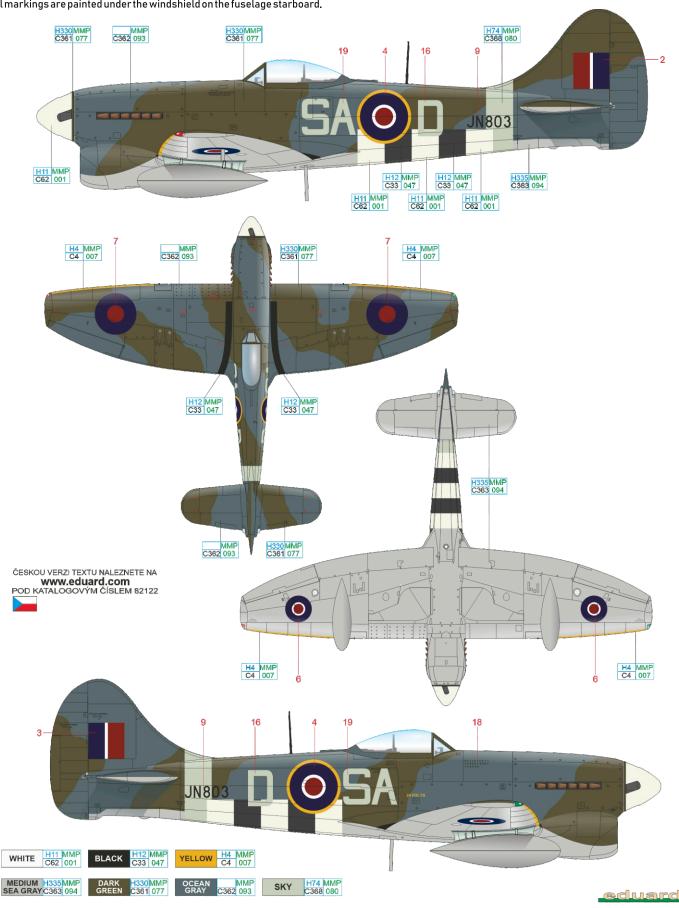
### JN862, No. 3 Squadron, No. 150 Wing, RAF Newchurch, Great Britain, June 1944

Following a very successful tour with No. 609 Squadron, flying Typhoons in which he was credited with 6 enemy aircraft destroyed in the air, and a short spell as a gunnery instructor, F/Lt Remi 'Mony' Van Lierde, a Belgian national, joined No. 3 Squadron as B flight commander. His first allocated Tempest was JN736 JF-Z, a Mk.V Series 1 but when this was lost on operations on May 27, 1944, (when flown by another pilot) Van Lierde was able to acquire a new 'Z', a Mk.V Series 2 Tempest, JN862, which was his chosen mount through most of the campaign against the V-1. Van Lierde became the highest scoring pilot against the V-1 by day and was credited with 35 destroyed plus a further 9 shared with other pilots; 30 of these claims were made while flying JN862. Unfortunately, on August 4th, 1944, Van Lierde had to make a landing with only one wheel down, and although he managed to achieve this with minimal damage, the aircraft was unavailable for some time due the resulting repair work. Van Lierde took a new 'Z', EJ557, and when JN862 was returned to the squadron it became JF-Q. On June 5th, 1944, the aircraft which were to participate in the operation Overlord (Normandy landing), received gaudy markings in the form of eighteen inches wide black and white stripes applied to the wing and fuselage. Ground personnel also painted the lower part of the landing gear covers in white. The unusual stripes on the spinner are believed to be the Belgian national colours – black (foremost), yellow and red.



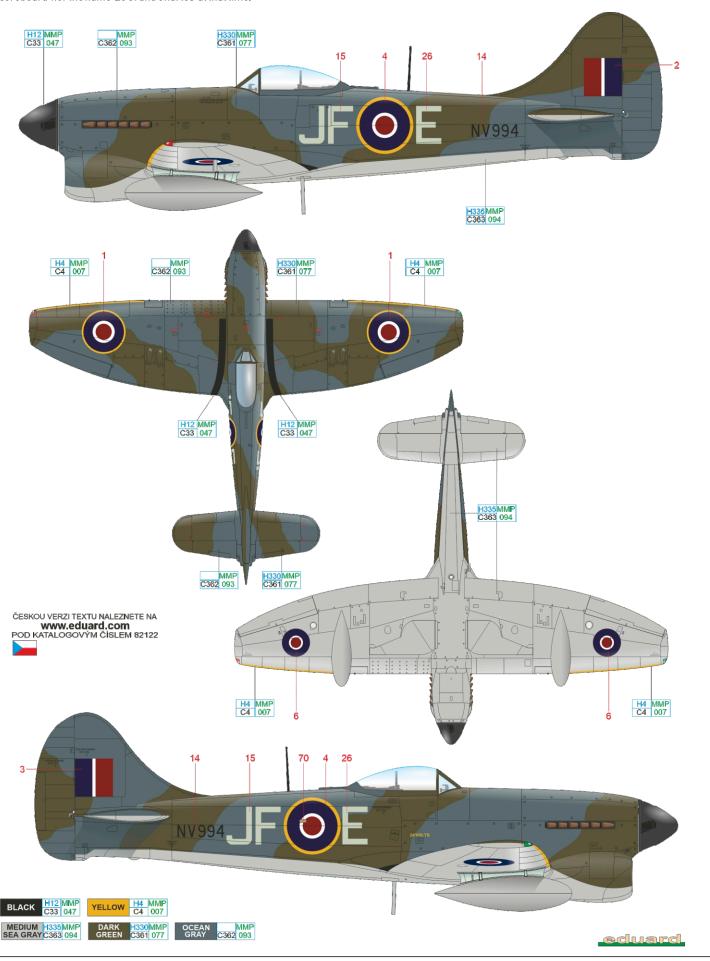
### JN803, No. 486 (RNZAF) Squadron, No. 122 Wing, B.80 Volkel, the Netherlands, October 1944

One of the earliest Tempest Mk.V Series 2 aircraft was delivered to No. 486 (RNZAF) Squadron at RAF Newchurch on May 17th, 1944. It was flown throughout the campaign against the V-1 flying bombs, by many different pilots. It is believed that the 26 kill markings relate to claims made by pilots flying the aircraft rather than claims by any one pilot. This total makes JN803 one of the most successful Tempests against the V-1. At the end of September 1944 the Newchurch Tempests left No. 150 Wing and flew to join No. 122 Wing at B.60 Grimbergen in Belgium and month later to the newly captured B.80 Volkel in the Netherlands. JN803 was often flown by F/O 'Jack' Stafford, who had shot down 4 of the V-1s on its scoreboard. In December 1944 it was issued to No. 3 Squadron. However, the aircraft was lost in combat on December 30th, 1944, when shot down by Bf109s of IV./JG 27, its pilot captured and murdered b6y a security officer at Rheine airfield. Tempest in the standard camouflage, so called Day Fighter Scheme, sports only partial recognition markings in the form of black and white "invasion" stripes. Their application on the wing and fuselage upper surfaces was discontinued by the order dated September 10th, 1944. The V-1 kill markings are painted under the windshield on the fuselage starboard.



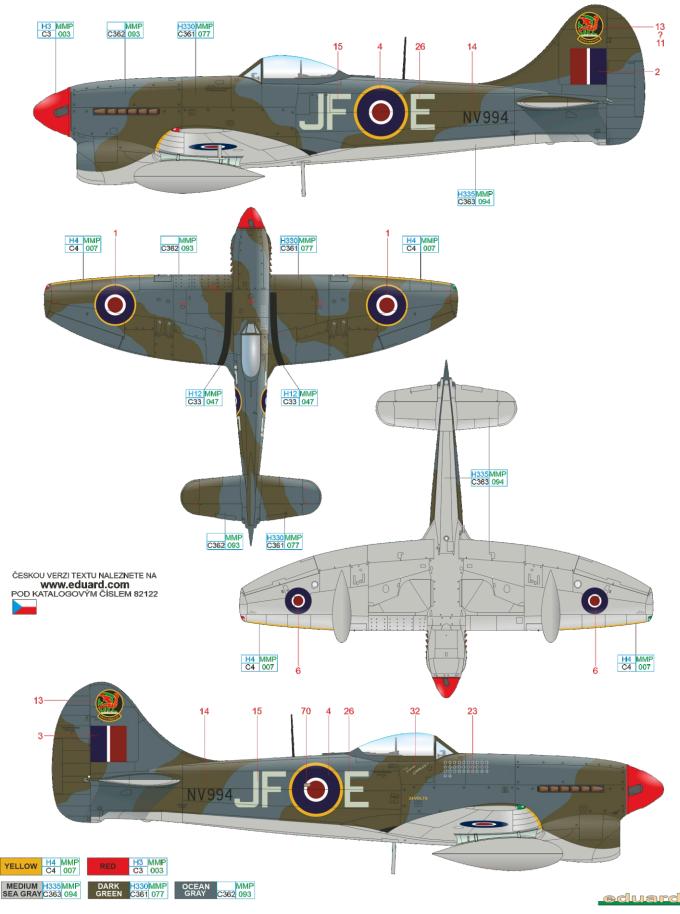
### NV994, F/Lt Pierre Clostermann, No. 3 Squadron, No. 122 Wing, B. 112 Hopsten, Germany, April 1945

The first of F/Lt Pierre Clostermann's famous No. 3 Squadron Tempest, 'JF-E' was NV994, collected from No. 83 Group Support Unit, RAF Dunsfold while No. 3 Sqn were at the Armament Practice Camp, RAF Warmwell. After a ten-day break from operations to practice their gunnery technique and practice bombing, the squadron flew to a new base in Germany, B.112 Hopsten, on April 18th, 1945. No 3. Squadron would not get chance to try its bombing skills on operations before the end of the war – less than three weeks away. Photos taken on April 18th, 1945 show that NV994 was not marked with Clostermann's 'scoreboard' nor the name 'Le Grand Charles' at that time.



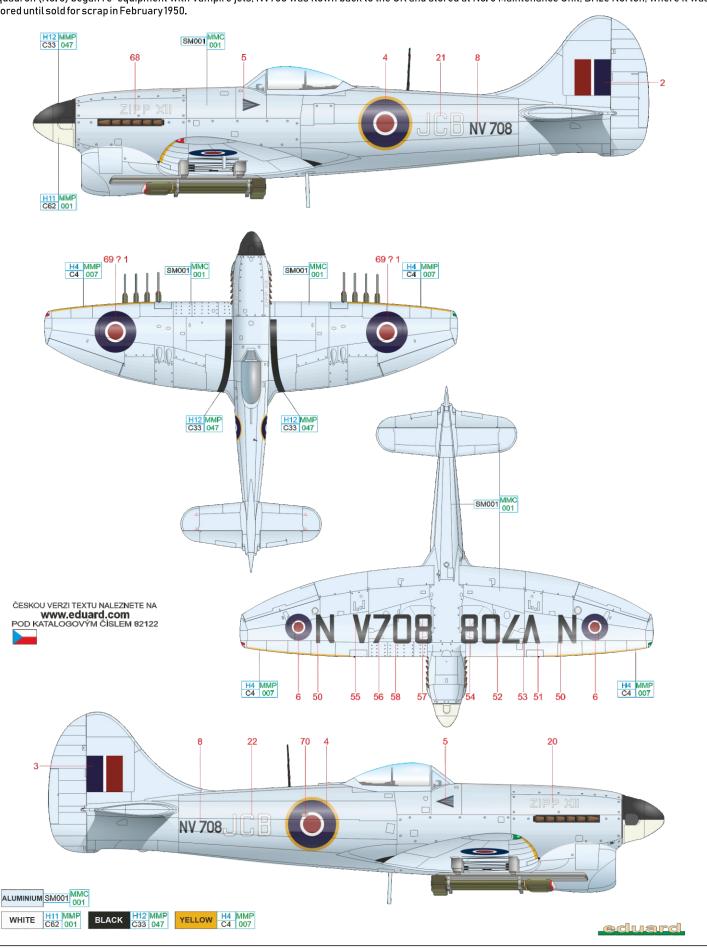
### NV994, S/Ldr Pierre Clostermann, No. 3 Squadron, No. 122 Wing, B.152 Fassberg, Germany, June 1945

Another photo, at No. 3 Squadron's next station, B.152 Fassberg, probably very soon after VE-Day, shows the only change at that time may have been the addition of the famous red spinner. This was unlikely to have been added during hostilities as, following many misidentification incidents and attacks by Allied aircraft, 2<sup>nd</sup> TAF had very strict rules on markings; spinners were invariably painted black. Later in May, No. 3 Sqn added their unit badge (a cockatrice on a monolith, representing an early flying creature and Stonehenge, which was near their first base) to all their Tempests and Clostermann decorated NV994 with his scoreboard (including some kills which he had been able to confirm after the war finished) and the name 'Le Grand Charles' in honour of General Charles de Gaulle. He flew this aircraft through June 1945 and took it to B.160 Kastrup, near Copenhagen. A big air display for the Danish people was planned for the July 1, 1945 and went ahead despite bad weather. Clostermann flew JF-E NV994 in a formation flypast but was unable to land at Kastrup due the bad weather. He managed to land at nearby Vaerlose, a smaller grass airfield but NV994 was damaged in an accident (nature unknown).



## NV708, W/Cdr John Chester Button DSO, DFC, CO of No. 123 Wing, RAF Station Wunstorf, Germany, 1946/47

Having seen wartime service with No. 33 Squadron as '5R-T', NV708 was chosen by W/Cdr J. C. Button, as his personal aircraft, when No. 123 Wing was reorganised as a Tempest wing early in 1946. NV708 was sprayed in all-over Aluminium finish and had a half black/half white spinner as previously seen on his wartime Typhoon 'ZIPP XI'. His initials, JCB' and the name 'ZIPP XII' were in white, thinly outlined in black. Button is known to have flown a Typhoon marked 'ZIPP XII' (see Eduard kit No. 11117) and is thought to have marked his Tempest as 'XII' so as to avoid unlucky 'XIII'. Button's successor, W/Cdr P. P. Hanks DSO, DFC, also used NV708, wearing his initials 'PPH' and Type C roundels replaced by Type D. In April 1948, as the last operational Tempest Mk.V squadron (No. 3) began re-equipment with Vampire jets, NV708 was flown back to the UK and stored at No. 6 Maintenance Unit, Brize Norton, where it was stored until sold for scrap in February 1950.



### EJ865, No. 80 Squadron, No. 123 Wing, RAF Station Wunstorf, Germany, October 1947

EJ865 was allocated to No. 485 Squadron, which was attempting to convert from Spitfires to Tempests. The conversion had to be abandoned due insufficient Tempests available and by early April 1945 EJ865 was with No. 274 Squadron as 'JJ-B'. It remained with this squadron until the unit was renumbered as No. 174 Squadron in October 1945, retaining the unit codes and yellow lightning flash which all No. 274 Squadron aircraft now carried. With the steady reduction of squadrons in BAFO, No. 174 Squadron was disbanded in March 1946 and EJ865 was transferred to No. 80 Squadron. No. 80 Squadron used traditional flight colours on its Tempests, red for A flight and blue for B flight, the latter colour appearing on EJ865's spinner, long-range tanks, background of the fin badge and the small 'Y' on the intake dust-filter. The lightning flash was also retained but now in red outlined in yellow, as was the personal marking – '?' on the side of the intake. In January 1948 No. 80 Squadron's ageing Tempests were replace by new Spitfire F.24s and EJ865 was flown back to the UK and stored at No. 6 Maintenance Unit, Brize Norton, where it was stored for two years before being sold for scrap.

