# Sopwith 2F.1 Camel

# eduard

1/48 Scale Plastic Model Kit



# **ProfiPACK**

Highly maneuverable, but tricky to fly. This can be a short description of Sopwith Camel, one of the most popular WWI fighters. It was effective in hands of skilled pilots, but dangerous to the unexperienced ones. The naval version was called "Ship's Camel".

The Sopwith Camel was a solution to the requirements for a faster and more maneuverable fighter than what was available to Royal Flying Corps and Royal Navy Air Services during 1916. The Sopwith company had already several successful designs added to its reputation and the new "Fighter 1", abbreviated as F.1 was designed under the leadership of Sopwith's chief designer Herbert Smith who was working with the concept conceived by T. Sopwith, F. Sigrist and H. Hawker. Their main idea was to concentrate most of the mass of the aircraft within a relatively small area to create extremely maneuverable aircraft. The design job was fast thanks to the fact the Sopwith's design office was very simple. The basic design drawings were made by chalk directly on the workshop floor in 1:1 scale.

### Conventional but different

The first of three prototypes undertook ground acceptance tests towards the end of the year and was deemed airworthy on December 22, 1916. It is believed the prototype flew for the first time the same day with Harry Hawker behind the controls (some sources state December 26), powered by the Clerget 9Z 110hp engine. Hawker was very positive about flying characteristics, although it was obvious the new design had very sensitive controls and was rather unstable. More to it, a strong gyroscopic effect of rotary engine and propeller was making the control of the aircraft even trickier. Many less experienced and novice pilots fell victim to its flying characteristics later. On the other hand, when mastered, the Camel was very effective in combat.

The Camel's fuselage was made of wooden box-girder, wire-braced assembly. The sides of the cockpit were covered in plywood, while the forward engine bay was covered in sheet aluminum panels. The rest of the fuselage was fabric-covered, as were the wings and tailplanes. To make the mass production easier, the upper wing lacked dihedral and lower wing was given increased 5° dihedral. Armament consisted of two synchronized Vickers 0.303 machine guns mounted in the "hump" in front of the cockpit. The original gun

guns mounted in the "hump" in front of the cockpit. The original gun cover did not allow access to the cocking handle of feed-block pawls, as both weapons had right-hand feed. This made in-flight fix of the jammed starboard gun impossible. To overcome the problem, the opening was cut in forward decking above the breech mechanism of the starboard gun. This modification was standardized on July 28, 1917, by No. 2 Aircraft Depot.

#### Engine and production troubles

The Admiralty placed its first order for 50 aircraft even before the prototypes had flown, while the War Office was waiting until late May. Thanks to that Naval Camels began to reach the units by mid-May, while the No. 70 squadron of RFC obtained their Camels in late June as first to put them in combat with RFC. And while the Naval Camels were powered by the 150-hp Admiralty Rotary No.1 engine (later renamed as Bentley Rotary No. 1), RFC used their Camels with license-built Clerget 9B engines, which not only lacked some performance to their French original, but also lost power after just about 10 hours of running. The solution was to install less powerful but reliable Le Rhône 9J 110 hp. Later, the Clerget 9Bf 140 hp were

also used and the Camels supplied to United States Air Service units were fitted with the Gnome Monosoupape 150 hp engine. Despite of some shortcomings of the design and troubles with engines and guns, the aircraft, which got the name Camel due to the hump on the front section of the fuselage was ordered in huge amounts by both RFC and RNAS. Sopwith company was unable to fulfill the orders, so other companies were tasked with production. These were Ruston, Proctor & Co., Clayton & Shuttleworth, William Beardmore, Boulton & Paul, British Caudron, Hooper & Co., March, Jones & Cribb, Nieuport & General Aircraft and Portholme Aerodrome. There were minor technical differences between aircraft from these factories and bigger in terms of built-in quality.

#### Wide use

Altogether 5597 Camels in 48 series were built until the end of the war. Twelve RFC day fighter squadrons operated them on Western front. The RNAS had eight Camel squadrons and Home Defence used Camels with seven squadrons. Some of their night fighters were converted to the "Comic" version. Another special version of the Camel was 2F.1 used as shipborne fighter. Two USAS squadrons were equipped with Camels, Nos. 17 and 148.

Although the Camel was a fighter, squadrons used them also as fighter-bombers using bomb rack for four 20 lb (11 kg) Mk.I Cooper bombs. All in all, Camel pilots shot down some 1543 enemy aircraft and 120 balloons during the WWI. Another 1086 enemy aircraft were reported as OOC (Out-of-Control).

### This kit: Sopwith 2F.1 Camel

As the Admirality wished to replace Sopwith Baby seaplanes with more powerful aircraft, the Sopwith company decided to "navalise" brand new Camel. Two prototypes, N4 and N5, were built. The N4 was fitted with the floats and crashed, the N5 had wheeled undercarriage. The prototypes already sported the differences to the standard Camel. The rear part of fuselage was separable for easy stowage aboard ship, the controls for the tail were changed accordingly with outer control beams on both sides of the cockpit. Armament was also changed, as there was only one synchronized Vickers machine gun left, while the second one was changed for the Lewis mounted on the on the upper wing. The center section struts were steel instead of wooden ones.

The first contract for the 2F.1 as the "Ship's Camel" was marked, was placed with Sopwith company on September 8, 1917. Most of the 2F.1s were built with the BR.1 engine, first deliveries were made in late October 1917. Many of the 2F.1s were allotted to the main vessels and were launched from minuscule platforms on the gun turrets employing the techniques that had been pioneered by RNAS for Sopwith Pups. Another take off procedure was developed, using the towed lighter as a launch base. Both these options offered only two landing possibilities: on the land, if it was within the reach, or into the sea as early carriers were not allowing safe landing. The landed aircraft was then salvaged from the water by the crane, so four hardpoints for the rope or cable were added to the top of the upper wing for this purpose.

Carefully read instruction sheet before assembling. When you use glue or paint, do not use near open flame and use in well ventilated room. Keep out of reach of small children. Children must not be allowed to suck any part, or pull vinyl bag over the head.



Před započetím stavby si pečlivě prostudujte stavební návod. Při používání barev a lepidel pracujte v dobre větrané místnosti. Lepidla ani barvy nepoužívejte v blízkosti otevřeného ohně. Model není určen malým dětem, mohlo by dojít k požití drobných dílů.

### INSTRUKTION SINNBILDEN \* SYMBOLES



**VOLBA** 



OHNOUT



**BROUSIT** 





SYMETRICKÁ MONTÁŽ

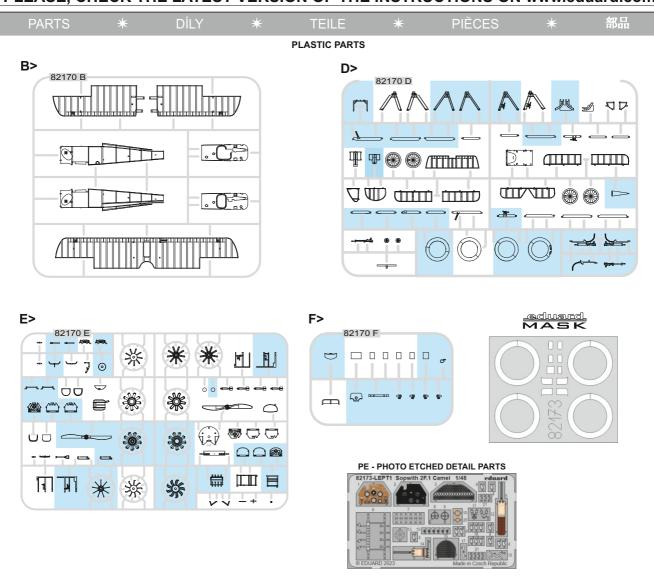






POUŽÍT EDUARD MASK NABARVIT

### PLEASE, CHECK THE LATEST VERSION OF THE INSTRUCTIONS ON www.eduard.com



FARBEN

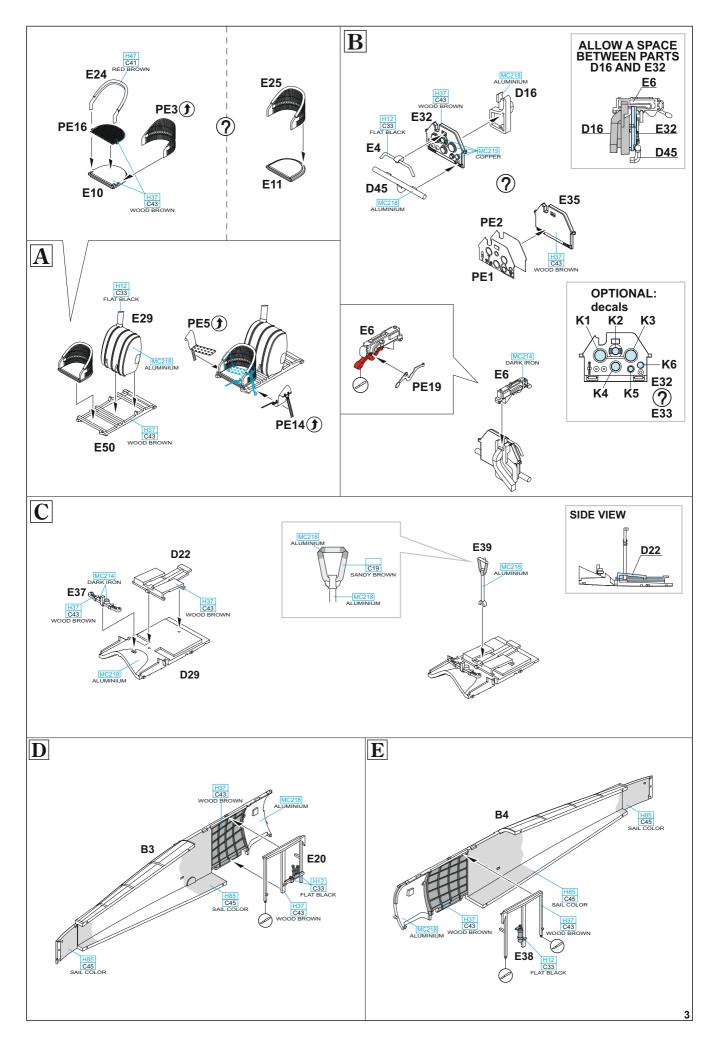
-Parts not for use. -Teile werden nicht verwendet. -Pièces à ne pas utiliser. -Tyto díly nepoužívejte při stavbě. -使用しない部品

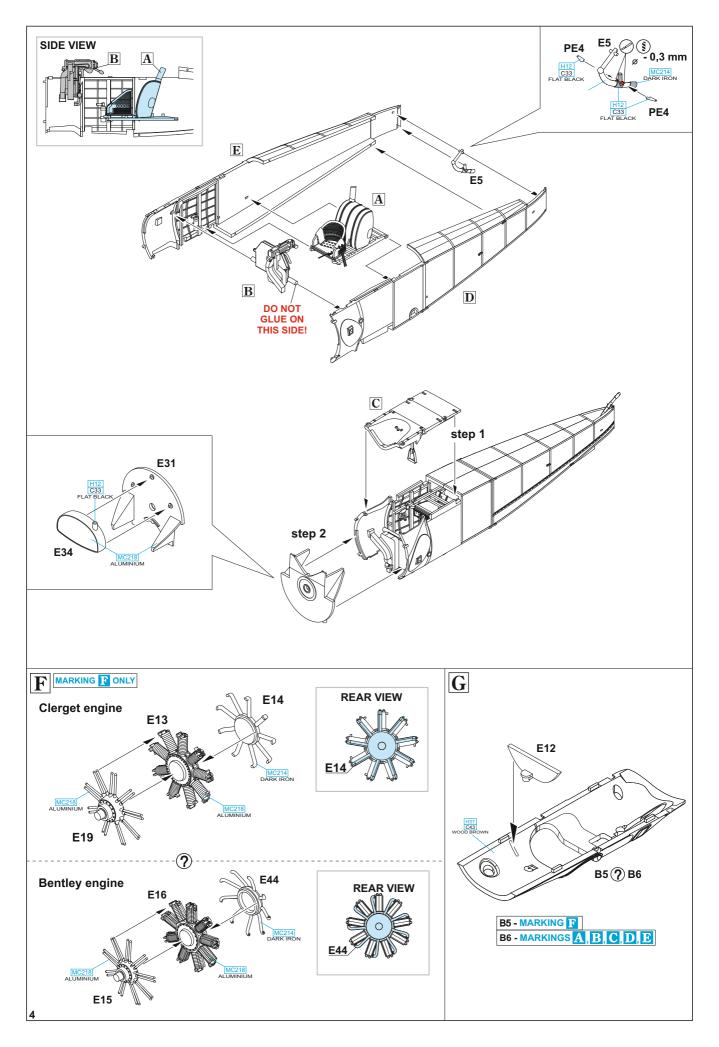
GSi Creos (GUNZE)		
AQUEOUS	Mr.COLOR	
H4	C4	YELLOW
H11	C62	FLAT WHITE
H12	C33	FLAT BLACK
H37	C43	WOOD BROWN
H47	C41	RED BROWN
H51	C11	LIGHT GULL GRAY
H53	C13	NEUTRAL GRAY
H78	C38	OLIVE GREEN
H84	C42	MAHOGANY
H85	C45	SAIL COLOR

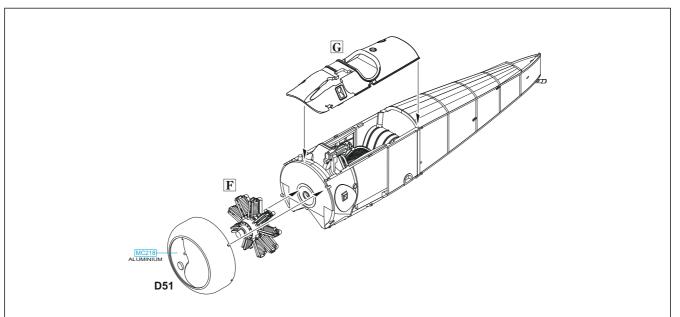
		_
GSi Creos (GUNZE)		
AQUEOUS	Mr.COLOR	
	C19	SANDY BROWN
	C74	AIR SUPERIORITY BLUE
Mr.METAL COLOR		
MC214		DARK IRON
MC215		COPPER
MC218		ALUMINIUM
Mr.COLOR SUPER METALLIC		
SM203		SUPER IRON 2

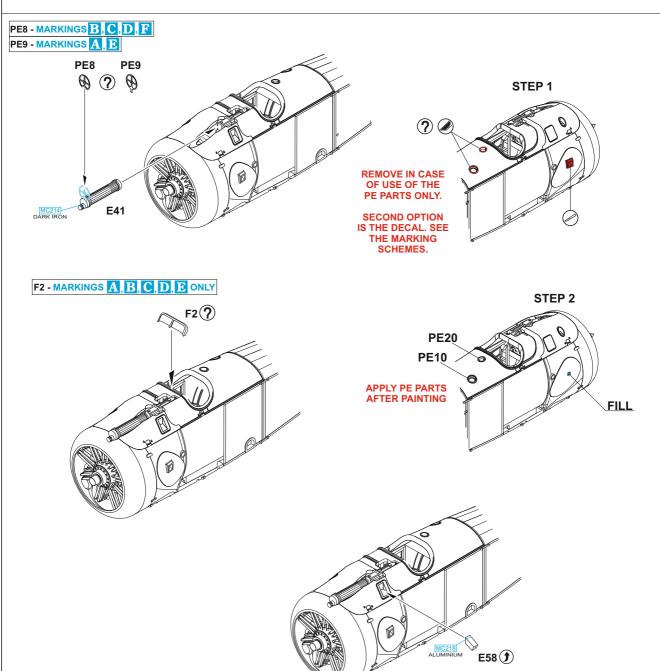
PEINTURE

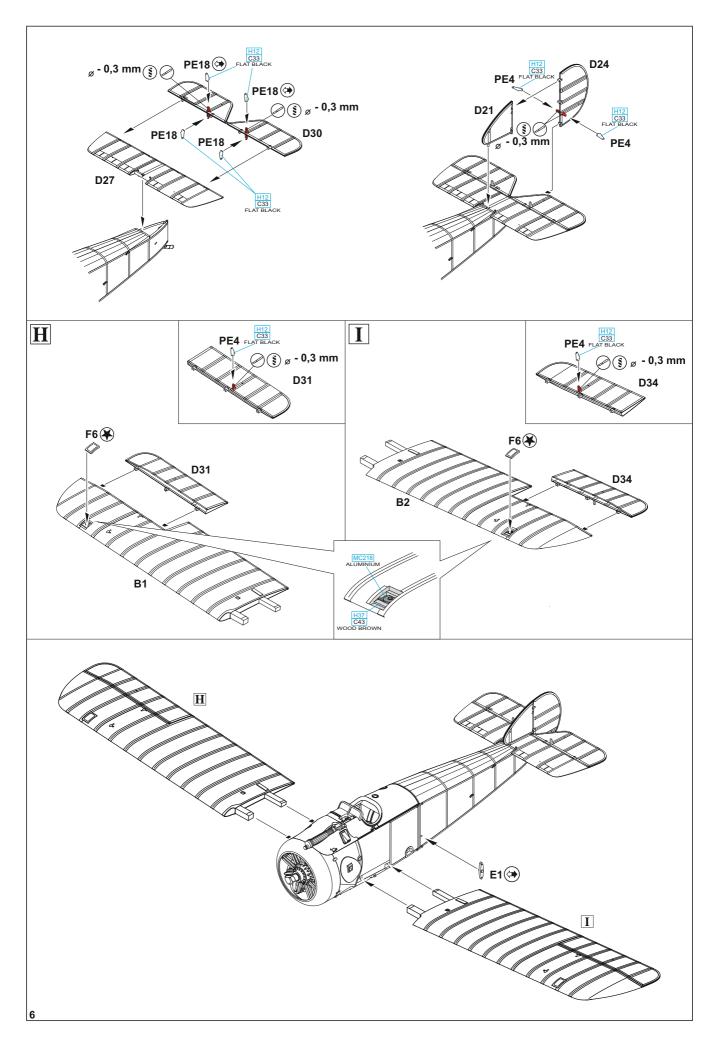
**COLOURS** 

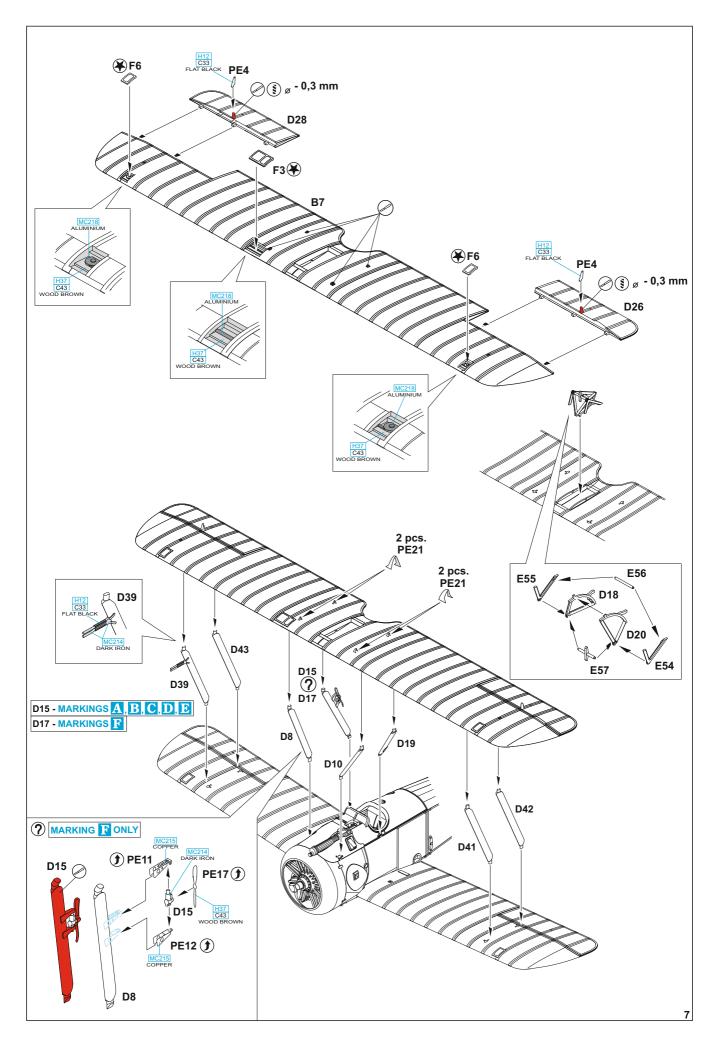


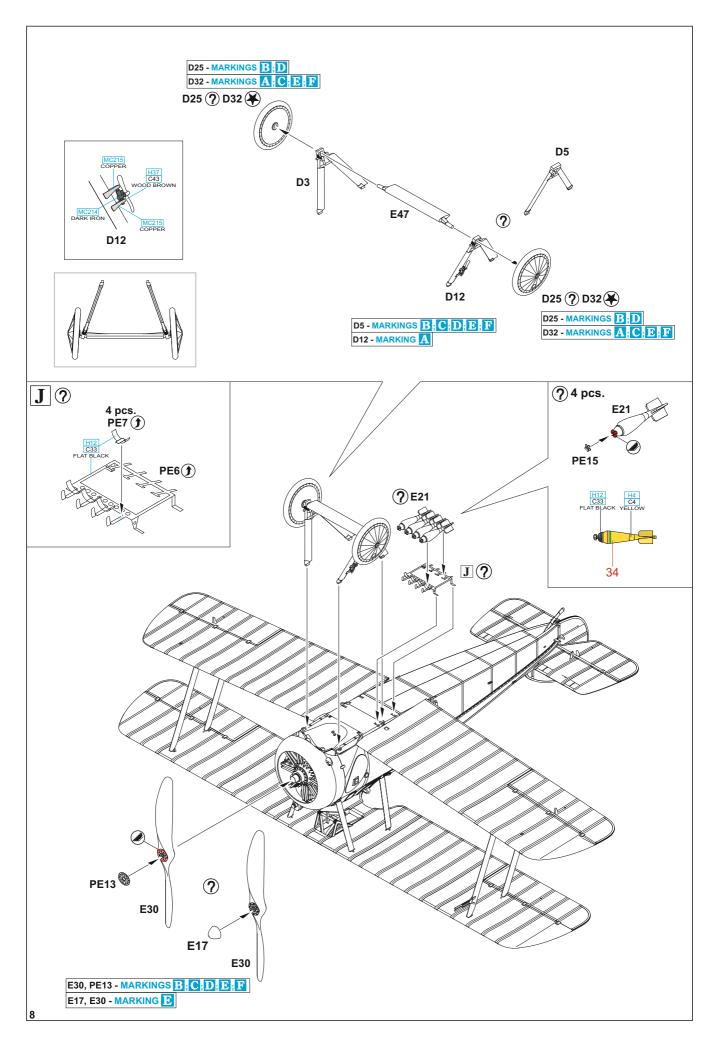


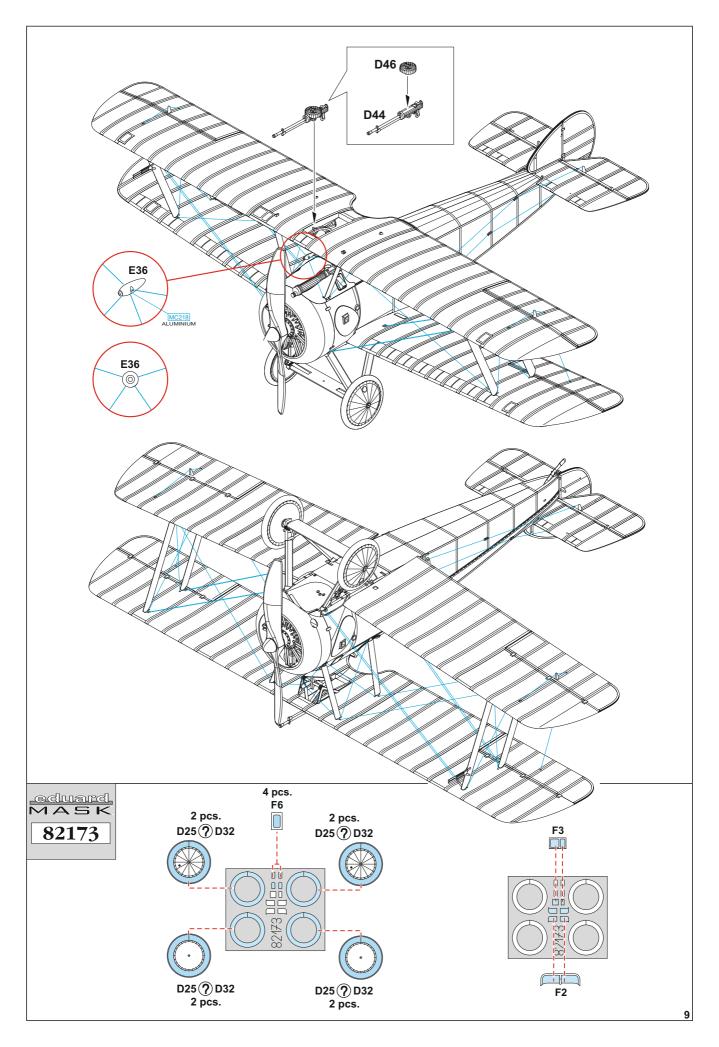




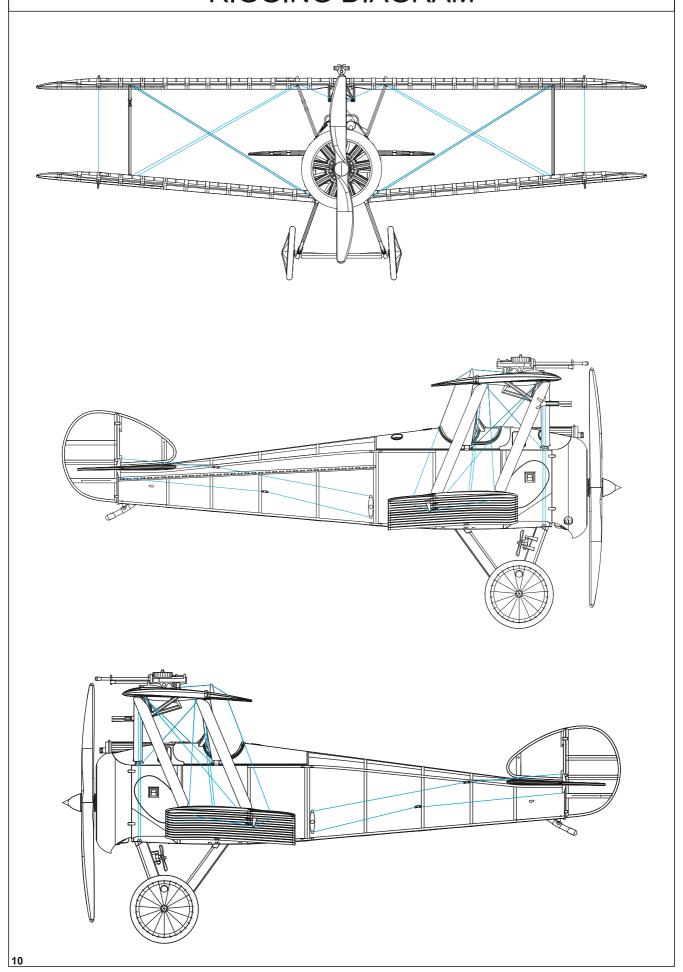






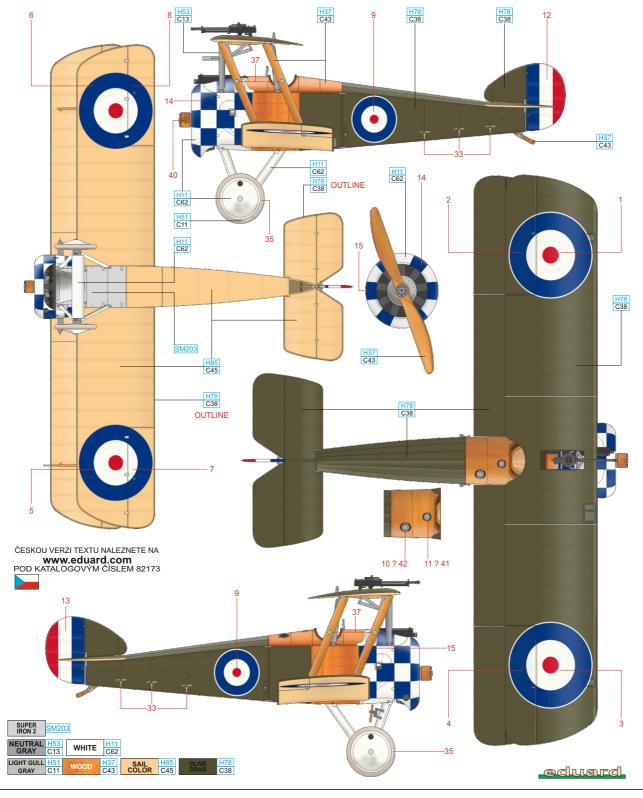


# RIGGING DIAGRAM



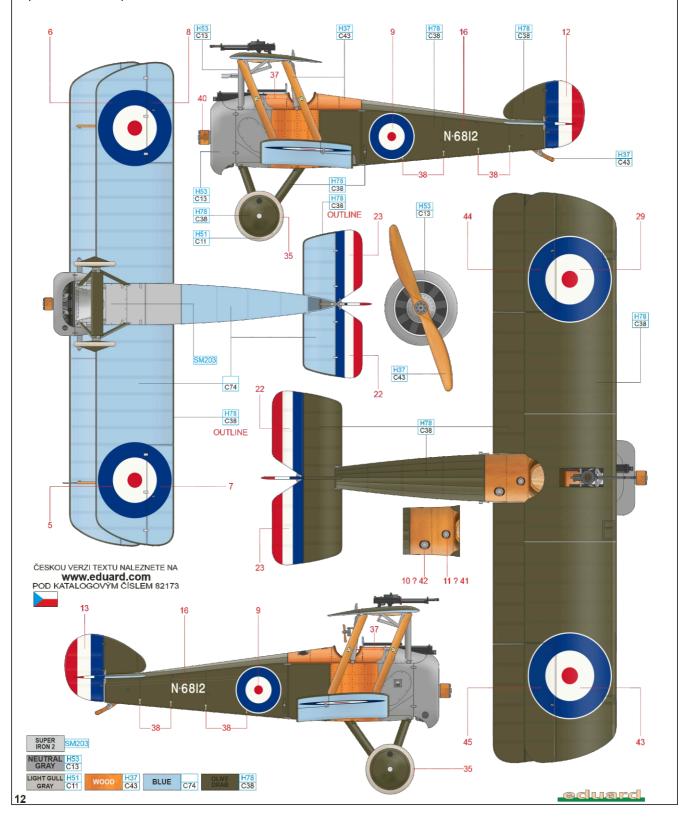
## A N6755, Capt. Bernard A. Smart, HMS Furious, July 1918

Bernard Arthur Smart was born on December 24, 1891 in Luton. He qualified as a pilot on July 24, 1916, becoming a Captain in the Royal Naval Air Service. He made himself famous with shooting down the Zeppelin L23 German airship in his Sopwith Pup on August 21, 1917, the 17-men strong crew led by Oblt. Bernhard Dinter was killed. As he took off from a platform on a gun turret of the HMS Yarmouth, he thus achieved the first ever aerial victory with an aircraft launched from a vessel. Smart's second day of glory came on July 19, 1918, when he led the second wave of "Ship's Camels" in a raid on the German Zeppelin hangars at Tondern (today Tonder, Denmark). It was the first bombing raid carried from the deck of a Royal Naval Ship. Seven Camels 2F.1 took off from the HMS Furious and managed to destroy two airships (L54 and L60) hidden in the biggest hangar named Toska. A captive baloon in hangar Tobias was also destroyed. The N6755 serial of this Camel is probable and the coloring depicted here shows the aircraft prior to the Tondern raid. For this mission, the roundels on the upper wing as well as on the fuselage and cockade on the rudder were toned down with PC10 or PC12 overspray, under which the insignia colors were only hardly visible. Some sources state the undersides were also oversprayed in one of the aforementioned colors, but the photo of one of the Camels which landed in Denmark on the return leg shows it was not the case. It is possible the elevator was painted with the tricolore in the same way as the options B and D. If You feel so, use the decals 22 and 23.



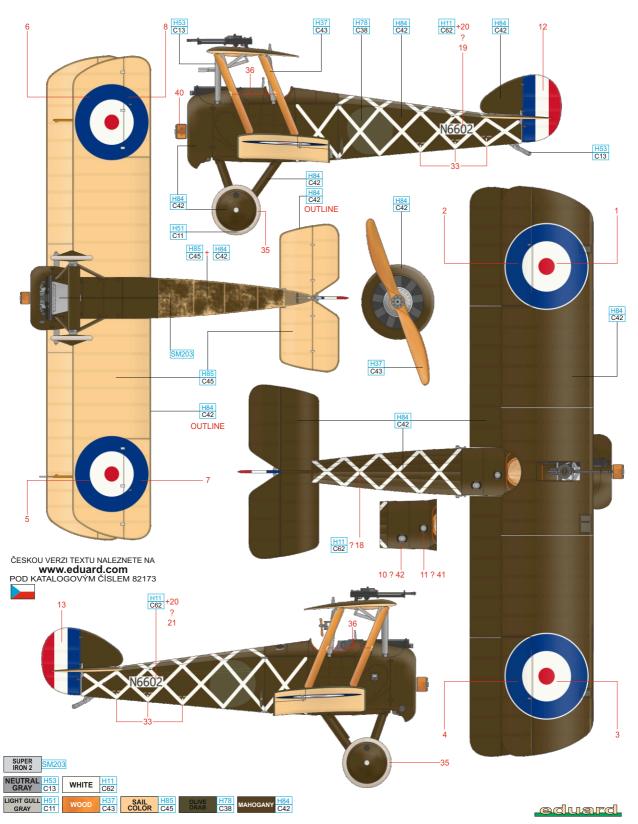
# N6812, FSL Stewart D. Culley, Special Flight, NS Felixstowe, United Kingdom, July 1917

Stewart Douglas Culley was born on August 23, 1895, in Omaha as the son of an English father and a Canadian mother. After his studies in California and Vermont he joined RNAS in Ottawa on April 19, 1917. A month later he arrived in UK and after training he served at Calshot and Falmouth Naval Air Stations before he moved to Felixstowe. There he made the first successful take off from lighter H3 barge towed by a destroyer steaming at 36 knots. It happened on July 31, 1918 and he used N6812. On Sunday August 11, Culley was in his Camel aboard a lighter towed by HMS Redoubt as a part of the Harwich Strike Force tasked with defending east coast of Britain. When a Zeppelin airship was spotted, Culley took off and it took him about an hour to reach his quarry and attack. One of his machine guns jammed, but he emptied the other one's magazine into the sky giant setting it afire. His victim was L53 and crew of 19 led by Kapitänleutnant Eduard Prölss died. Just prior to this event, N6812 was modified, sporting two Lewis machine guns mounted atop the upper wing. The fuselage-mounted Vickers was removed and an Aldis gunsight added. Later, the aircraft served with No. 212 Sqn RAF. At the end of its service it was presented to the IWM, where it is on display until today. Originally, the undersides were painted in light blue, since restoration the Camel sports the natural doped linen.



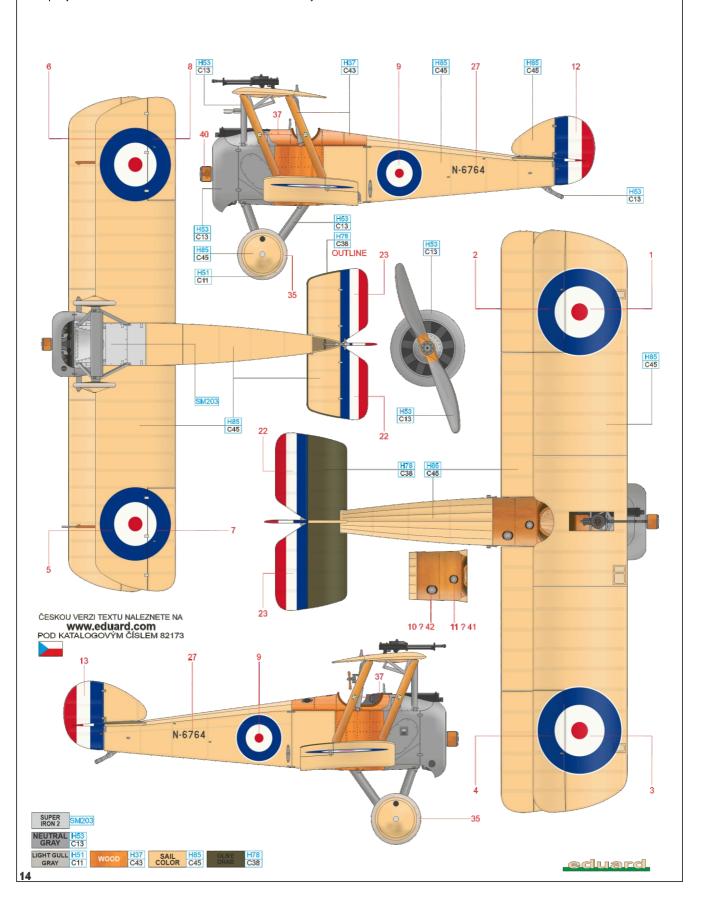
# N6602, HMS Furious, April 1918

This 150hp Bentley BR.1 powered 2F.1 Camel was one of the 50 aircraft delivered by the Sopwith Aviation Company under production order contract Nos. A.S.762 and C.P.103733/17. It was delivered to AAP Brooklands on November 22, 1917 and initially served on HMS Nairana seaplane carrier from December 21 and HMS Lion battlecruiser from January 11, 1918. The aircraft was then put into service with HMS Furious from April 6, 1918, but only for a brief period, as it was sent to HMS Glorious two weeks later. RAF Turnhouse and Donibristle were other places of service of this unusually marked "Ship's Camel". The reason for the white cross striping on the fuselage is not known, the fuselage roundel was overpainted by color which might be just fresh of the same shade or slightly different one. As in the most cases it is not clear, whether the aircraft was finished in PC10 or PC12. Noteworthy is the dark staining on the bottom side of the fuselage in the area covered by linen. We believe it was made by the same color which was applied on upper sides.



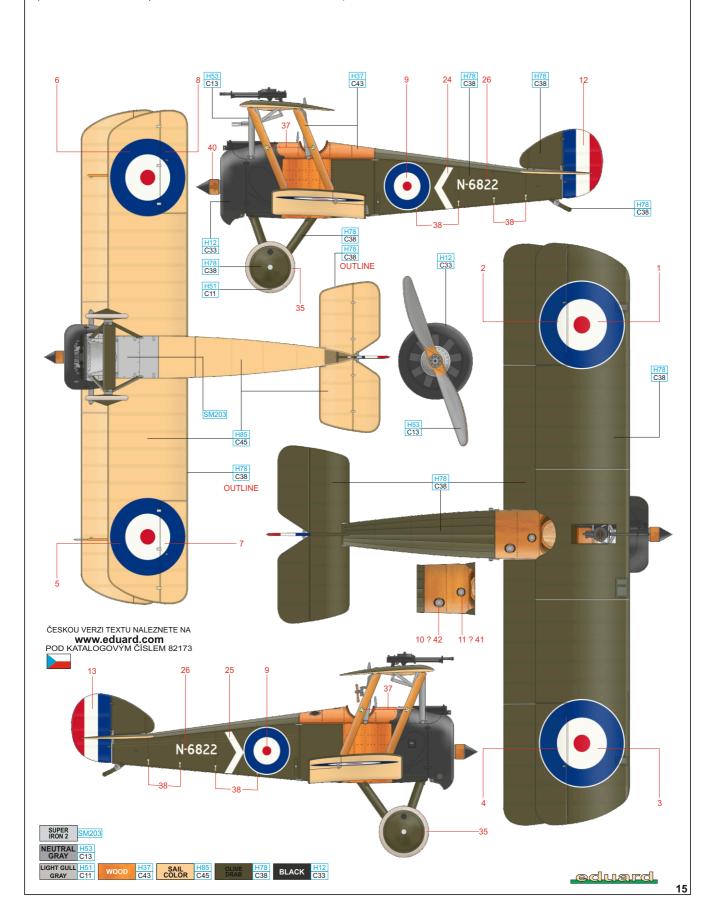
## N6764, HMS Lion, April–June 1918

This Camel was manufactured by Sir William Beardmore & Co LTD in January 1917 and was finished in the standard colors. For whatever reason the fuselage and wings needed re-covering sometime in the period between April and June 1918 and N6764 was photographed on board of HMS Lion in this appearance. The new cover was left in doped linen color, only the horizontal stabilizer kept its original camouflage and the tricolor on the elevator, which was the typical feature of the aircraft manufactured by Sir William Beardmore & Co LTD company. The aircraft served also on the Donibristle and Rosyth air bases.



## N6822, HMAS Sydney, mid 1918

This "Ship's Camel" is one of those manufactured by Sir William Beardmore & Co LTD and sports the typical tricolor elevator, kind of a trademark of this company. It was a Bentley BR.1 powered aircraft and was delivered to Aviation Acceptance Park in Renfrew on June 20, 1918. From there it was subsequently sent to HMAS Sydney light cruiser. There it served with several interruptions for maintenance (or due to other reasons) at the mainland bases until November 21, 1918.



## N8130, HMS Vindictive, Koivisto, Finland, October 1919

The N8130 was an aircraft manufactured by Hooper & Co Ltd and one of the 50 "Ship's Camels" from the penultimate order of this type under contract Nos. 38a/906/C947 & A.S.37354/18. As the first from this batch, it was originally intended as the presentation aircraft and was given the name Tamworth. It was sent aboard HMS Argus on May 19, 1919, then to HMS Vindictive as one of the eight Camels sent to join the fighting against Russian Bolsheviks. There it was used in the fighter-bomber role. On return it served with No. 203 Squadron and served on board of HMS Argus again. The Tamworth inscription was painted on the starboard side of the fuselage, as the photo shows. It is not known, whether it was on port side as well, but the decal sheet contains two inscriptions. Just in case ... There is also a stitched area on the starboard, probably a field repair of damage.

