



**No other aircraft is so intimately connected with rise and fall of the German Luftwaffe during the WWII like the Messerschmitt Bf 109. Its early variants gave the Luftwaffe an upper hand over the opponents.**

The evolution of this aircraft outlived the era in which it was conceptualized. The Bf 109s bore the brunt of Luftwaffe duties from the opening battles of Nazi Germany through to her final downfall.

The history of the Bf 109 begins during 1934-35, when the Reich Ministry of Aviation issued a requirement for the development of a monoplane single-engined fighter. Proposals were submitted by Arado, Heinkel, Focke-Wulf and Bayerische Flugzeugwerke. The team of designers of the last-mentioned company was led by its technical director Willy Messerschmitt, who's goal was to conceive of an aircraft with the best possible performance for the specified weight and size. Over the subsequent months, several prototypes were built. The aircraft was rather tiny and compared to the prevailing trends of the time, full of progressive features such as low wing design, retractable landing gear, wing with a thin airfoil, wing slats, landing flaps and so on. At its conception, the Bf 109 was a very promising asset despite some powerplant troubles, which were solved by the introduction of the DB 601. This engine, together with its extrapolated development DB 605, is umbilically connected to the success of the Bf 109. These two-row, twelve-cylinder inverted V engines powered several tenths of thousands of 109s.

#### From Spanish War to the Reich Defence

The first combat use of Bf 109 occurred during Spanish Civil War, where three developmental Bf 109s were deployed in December 1936. The main reason of revealing the modern fighter to the world was to validate the aircraft's abilities in modern aerial combat. Shortly thereafter, production Bf 109B-1s began to reach 2.J/88, the Legion Condor. The desire of Germany to demonstrate its aerial prowess to potential foes was advanced further in international sport meets. The triumphs attained in Zurich in the summer of 1937 were complemented several months later by grabbing the speed record of 610.95 kph. In very short order, the progressive developments represented by the C, D and E versions appeared. The delivery of Bf 109s to combat units did not sustain the rate that was desired by military brass. Even by August 1938 the Bf 109 accounted for less than half of the 643 front line fighters in service. The later months saw an increase in these rates and by the time of the invasion of Poland the Luftwaffe possessed the best fighter produced in the continental Europe. With both a qualitative and quantitative advantage, the Luftwaffe entered the Polish campaign, the first defense of the Fatherland and Blitzkrieg against the West. After this period of continual success, the Luftwaffe embarked on the attacks on Great Britain in the summer of 1940. Here, the weakness of the Bf 109 emerged: The inability to carry drop tanks that would have enabled the type to escort bombers to England. This was one of the factors responsible for the defeat of the Luftwaffe in the Battle of Britain. Experiences gained in 1940 led to the development of the F (Friedrich) version prior to the spring of 1941 followed by late production variants of Bf 109G (Gustav) and K (Kurfürst).

#### Emil emerges

The Bf 109E series represents a turning point in the development of the Bf 109. It saw the replacement of the Jumo 210 engine with the more powerful, more reliable and also larger and heavier unit Daimler-Benz DB 601 driving the VDM (Vereinigte Deutsche Metallwerke) three-bladed propeller.

The larger and more powerful engine also needed a larger coolant radiator. Instead of a large "chin" on the nose, which would have significantly increased aerodynamic drag, cooling was moved to flat radiators on the bottom of the wing. This relocation also helped to balance the increased weight of the engine and propeller, but required the entire wing to be redesigned. To verify the design changes, V14 and V15 prototypes were built, differing in armament. The former had a pair of 7.92 mm MG 17 machine guns supplemented by two 20 mm wing-mounted guns. The V15 prototype had only two machine guns.

Production of the first production version of the "Emil", the E-1 version, began in early 1939 and the extra 298 hp (223 kW) compared to previous Jumo 210 also provided a corresponding increase in flight performance despite the 400 lb (180 kg) weight increase.

The E-1 version was armed with four MG 17 machine guns, and further development concentrated mainly on armament. The E-2 received an MG FF cannon mounted in between the engine cylinder blocks, firing through the center of the propeller instead of two wing machine guns. Although this configuration eventually became standard on the later G and K versions, it was not successful with the E-2. Nevertheless, the "Motorkanone" was retained in the E-3 version, which also had two MG FF guns in the wing. However, due to vibrations caused by firing, the "Motorkanone" was often removed by frontline units. The firing power of two machine guns and two cannons was still more than satisfactory.

#### The kit: Bf 109E-4

At the beginning of the Battle of Britain, the Bf 109E-4 began to replace the E-3 version. The first aircraft appeared in July 1940 and quickly replaced their predecessors. Many E-3s were also converted to E-4 standard. The differences between the two versions were relatively minor. The Bf 109E-4 in particular received improved MG FF/M wing guns with higher rate of fire and also with the ability to fire a new type of explosive ammunition. In addition, the armor protection behind the pilot's head was improved and the cockpit canopy was revised. To make the production easier, the canopy with rounded corners was replaced by a "boxy" type with straight windows attached to the welded frame. The new canopy also improved the pilot's view from the cockpit. Some Bf 109E-4s and later versions of "Emil" received the improved DB 601N high-altitude engine with 1,159 hp (864 kW). They were designated E-4/N. Similar to the E-1 version, a fighter-bomber (JaBo) version of E-4 was also produced, designated either E-4/B (with the DB 601A engine) or E-4/BN (with the DB 601N). It had provision for one 250 kg bomb or four 50 kg bombs. A total of 561 Bf 109E-4s were produced.

ATTENTION



UPOZORNĚNÍ



ACHTUNG



ATTENTION



注意



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 lepidla pracujte v dobře větrané místnosti. Lepidla ani barvy nepoužívejte v blízkosti otevřeného ohně. Model není určen malým dětem, mohlo by dojít k požití drobných dílů.

INSTRUCTION SIGNS \* INSTR. SYMBOLS \* INSTRUKTION SINNBILDEN \* SYMBOLES \* 記号の説明

OPTIONAL  
VOLBABEND  
OHNOUTSAND  
BROUSITOPEN HOLE  
VYVRTAT OTVORSYMETRICAL ASSEMBLY  
SYMETRICKÁ MONTÁŽREMOVE  
ODŘÍZNOUTREVERSE SIDE  
OTOČITAPPLY EDUARD MASK  
AND PAINT  
POUŽIT EDUARD MASK  
NABARVITPLEASE CHECK THE LATEST VERSION OF THE INSTRUCTIONS ON [www.eduard.com](http://www.eduard.com)

PARTS



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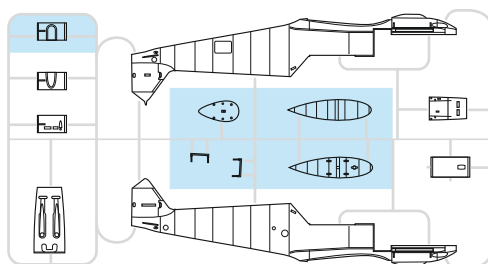
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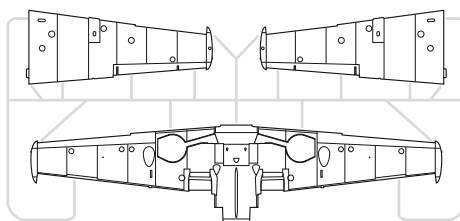
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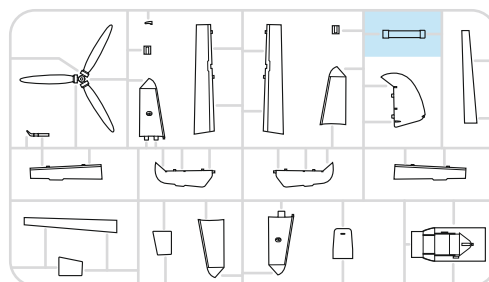
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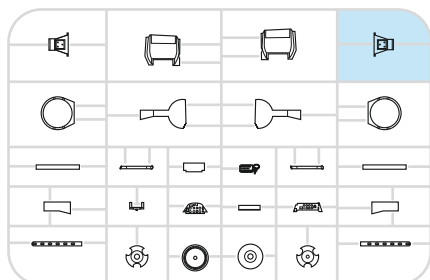
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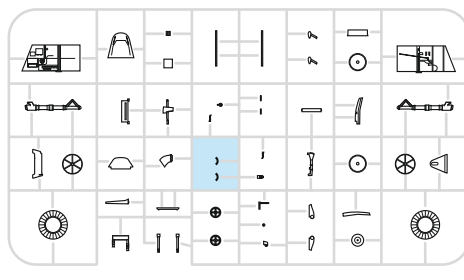
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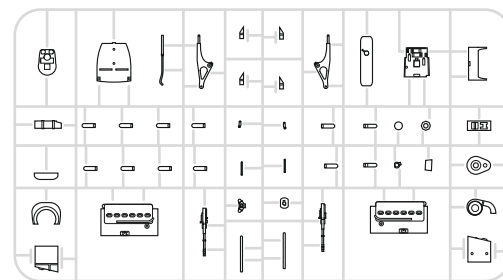
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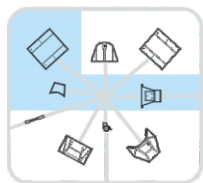
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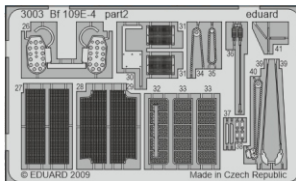
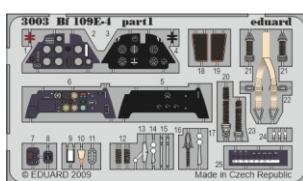
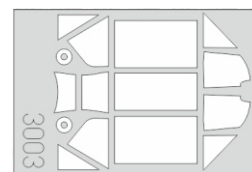
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## PE - PHOTO ETCHED DETAIL PARTS

eduard  
MASK

-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

COLOURS



BARVY



FARBEN



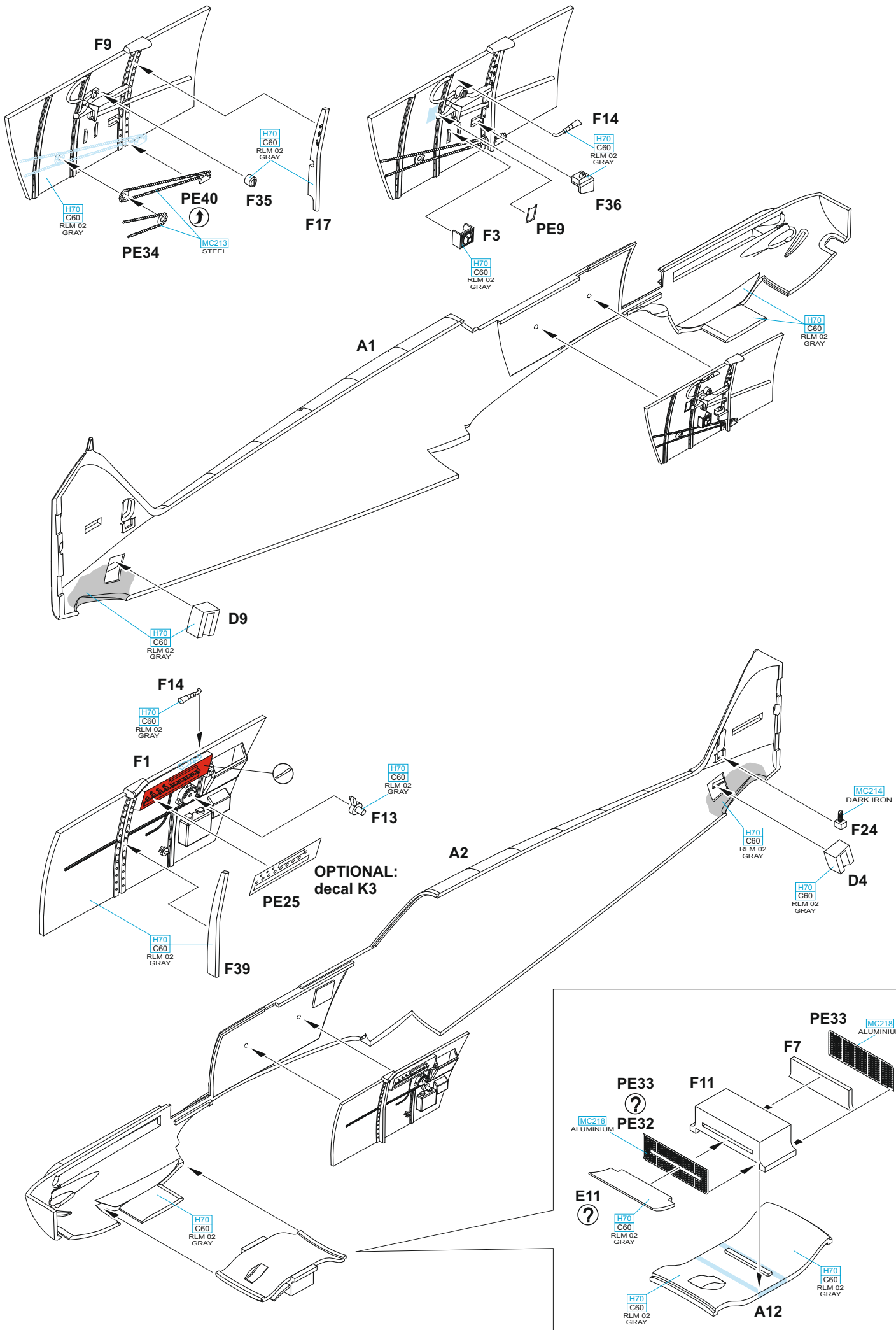
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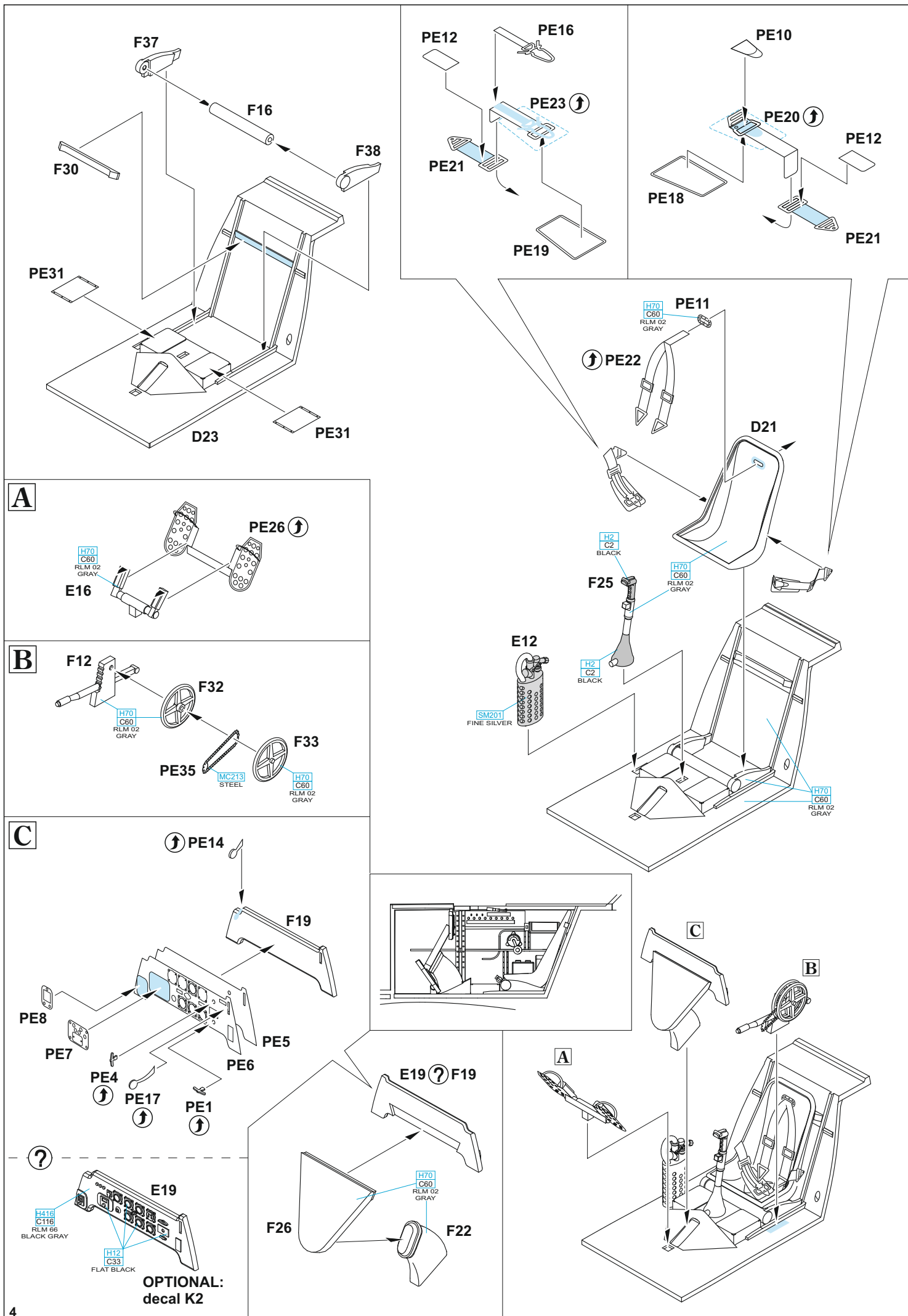


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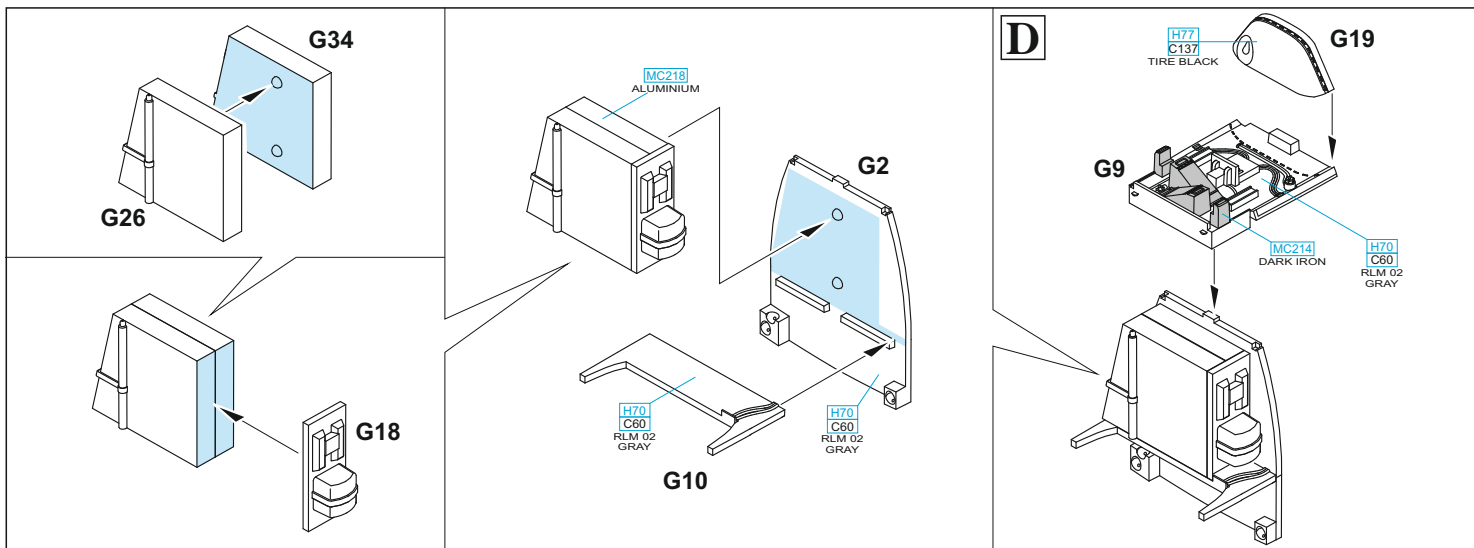
GSI Creos (GUNZE)		
AQUEOUS	Mr.COLOR	
H2	C2	BLACK
H4	C4	YELLOW
H11	C62	FLAT WHITE
H12	C33	FLAT BLACK
H47	C41	RED BROWN
H64	C17	RLM71 DARK GREEN
H65	C18	RLM70 BLACK GREEN
H67	C115	RLM65 LIGHT BLUE
H70	C60	RLM02 GRAY
H77	C137	TIRE BLACK

AQUEOUS	Mr.COLOR	
H90	C47	CLEAR RED
H94	C138	CLEAR GREEN
H413	C113	RLM04 YELLOW
H414	C114	RLM23 RED
H416	C116	RLM66 BLACK GRAY
Mr.METAL COLOR		
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	MC214	DARK IRON
	MC218	ALUMINIUM
Mr.COLOR SUPER METALLIC		
	SM201	SUPER FINE SILVER

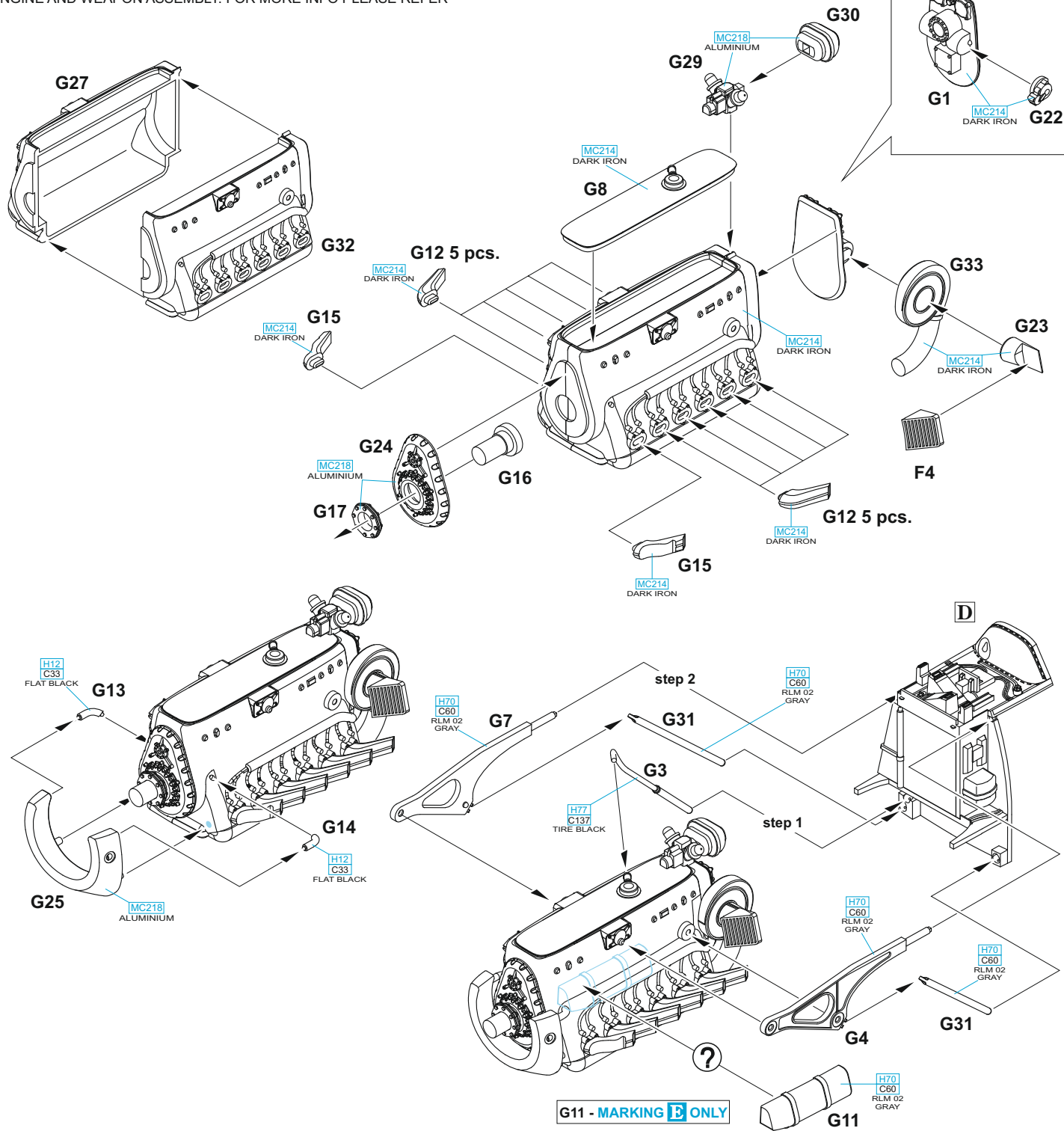


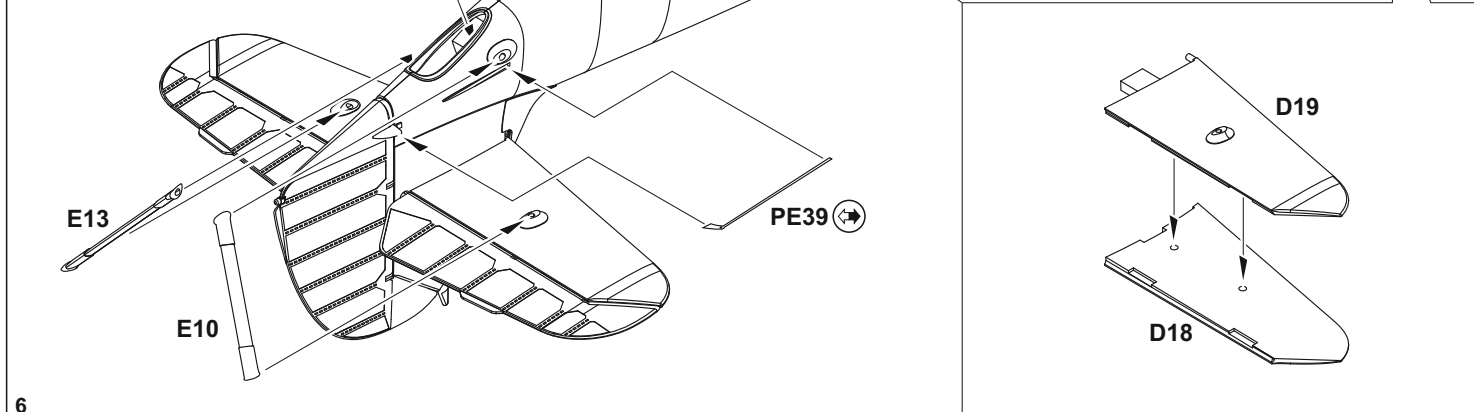
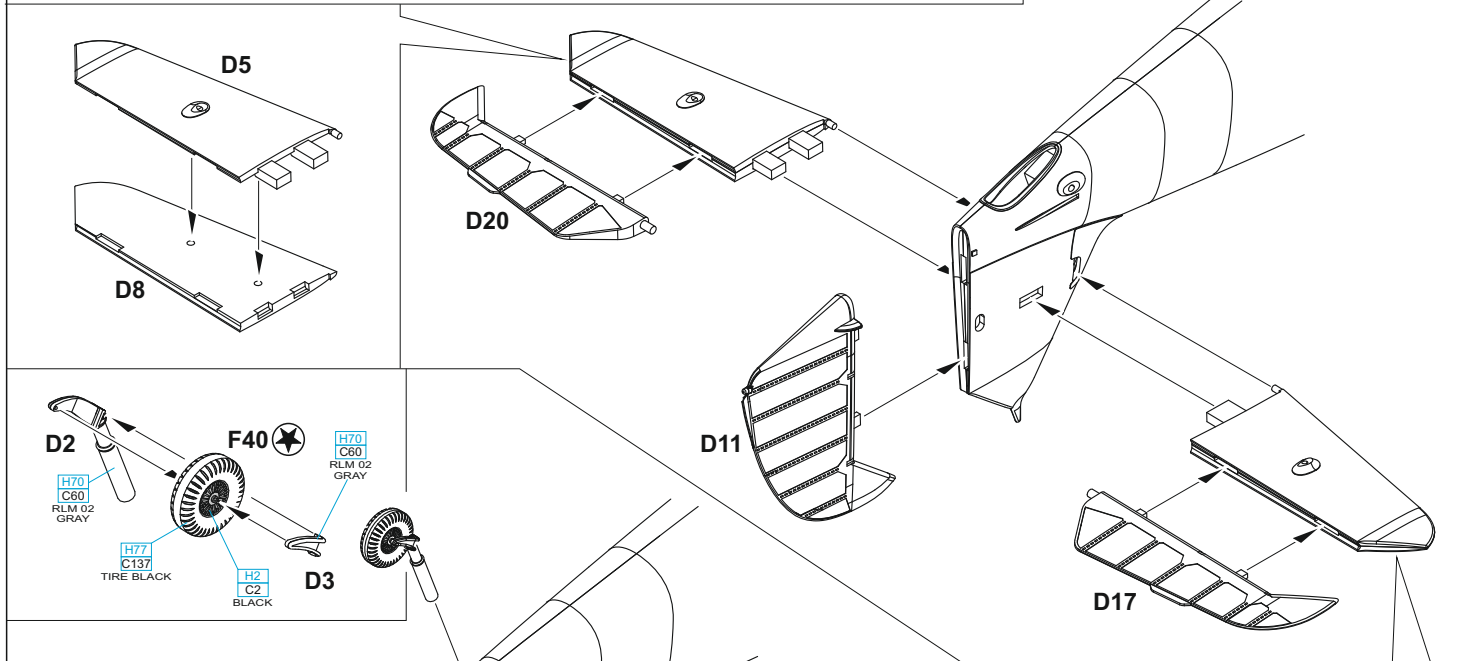
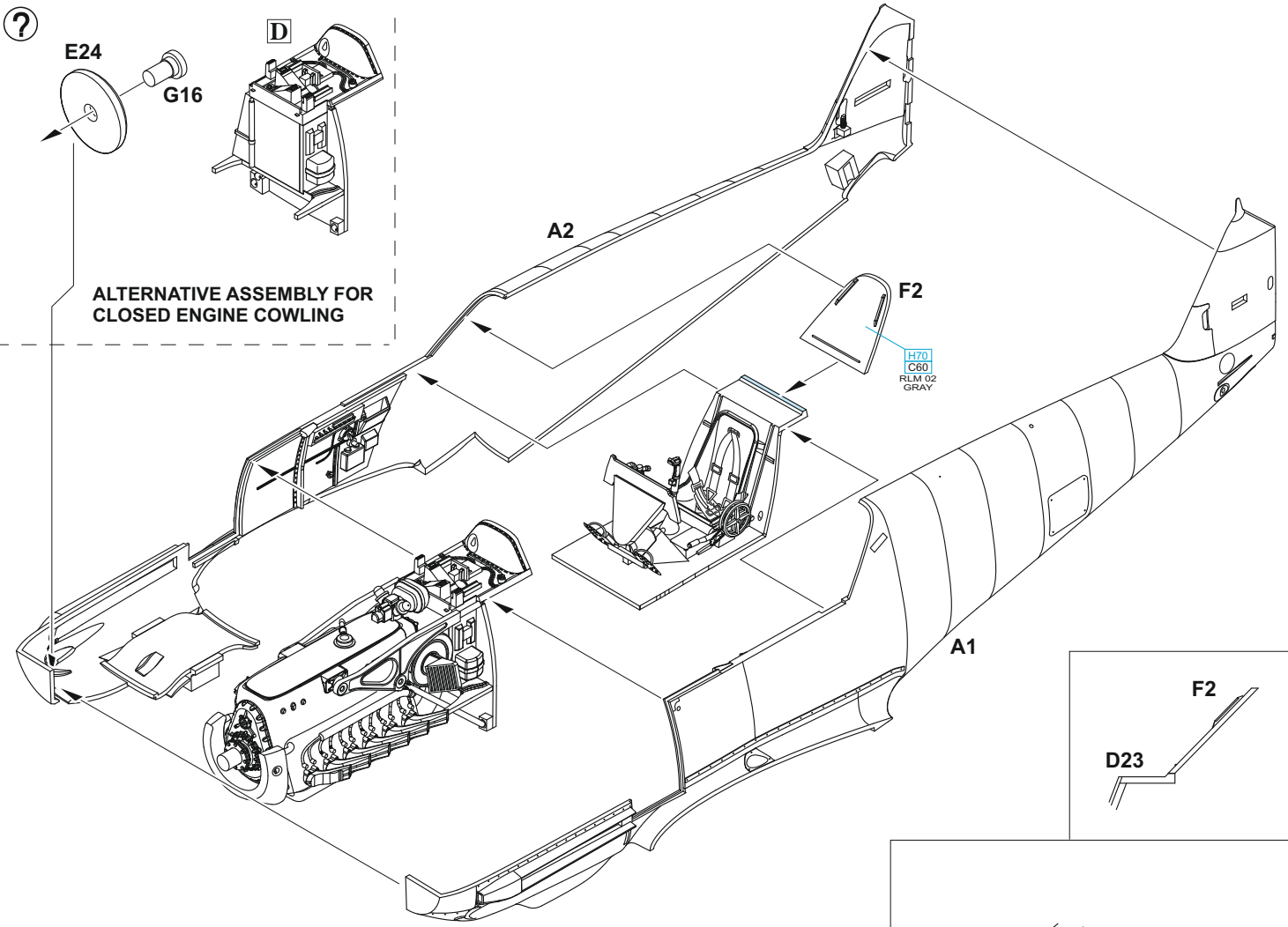


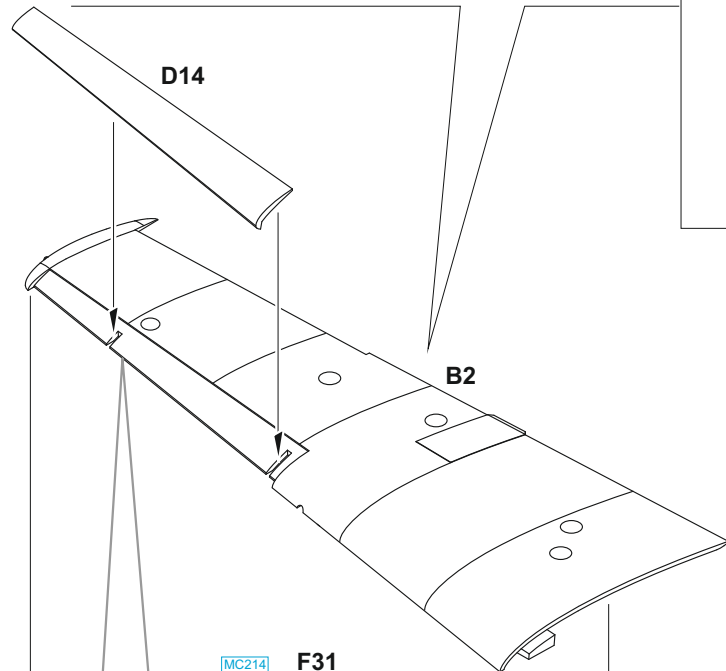
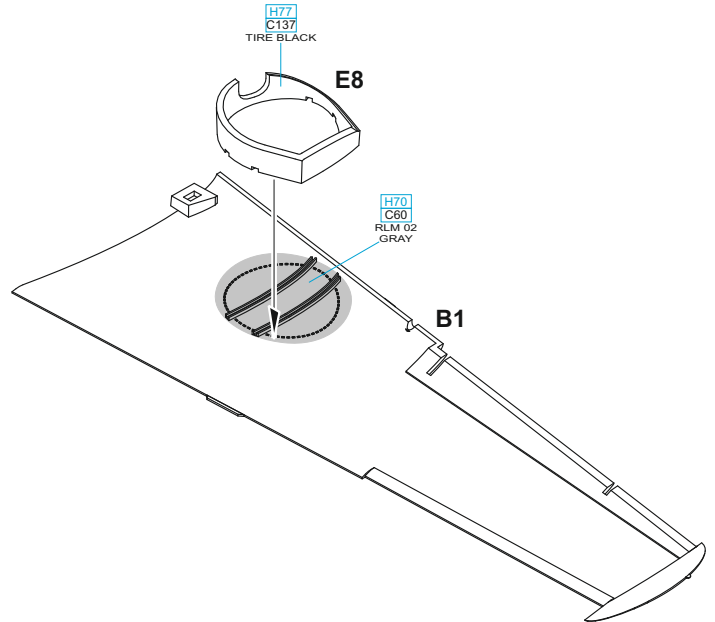
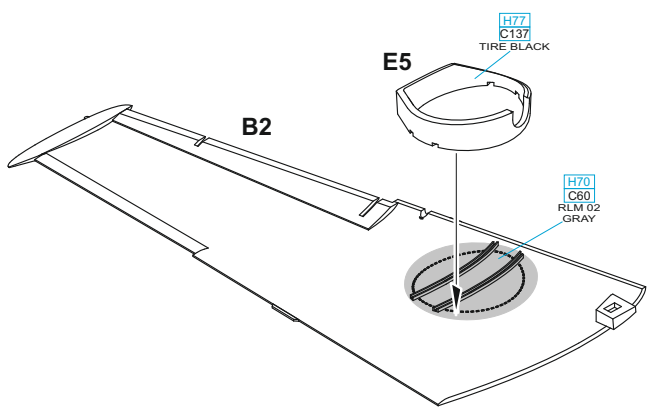




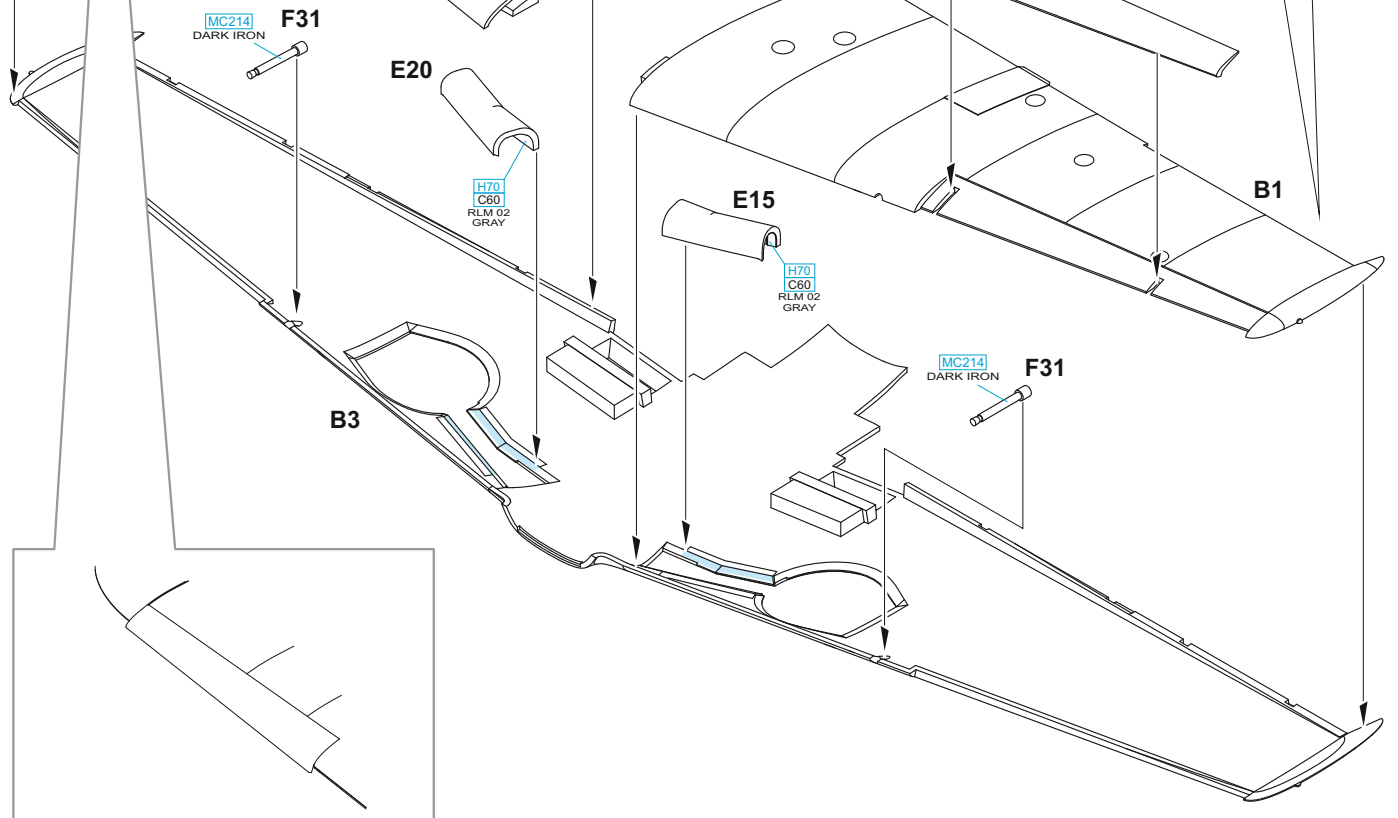
TO BUILD THE MODEL WITH THE CLOSED ENGINE COWLING AND THE WEAPON COVER, YOU CAN'T INSTAL THE COMPLETE ENGINE AND WEAPON ASSEMBLY. FOR MORE INFO PLEASE REFER



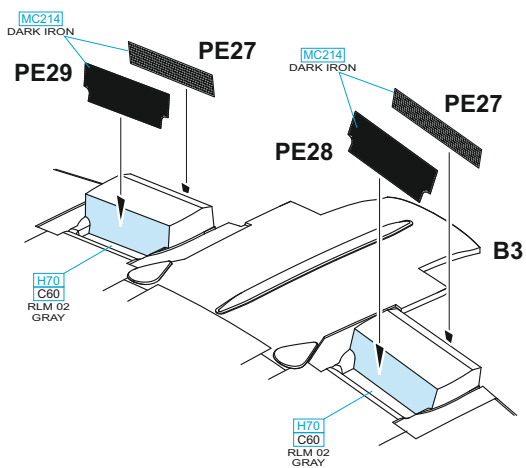
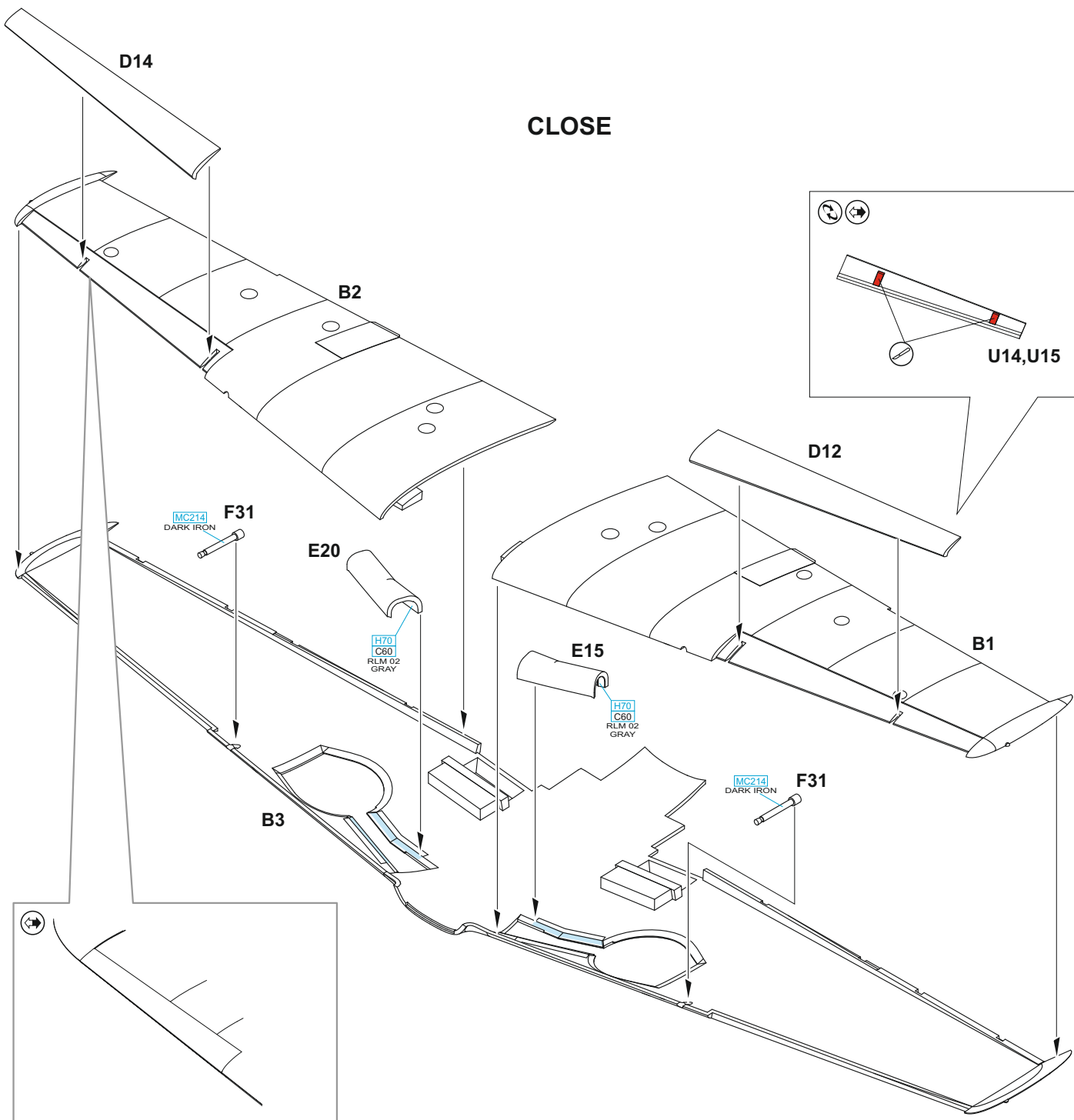




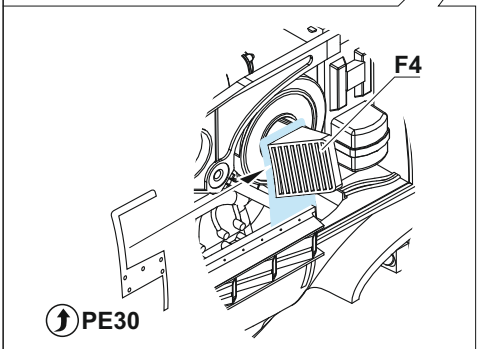
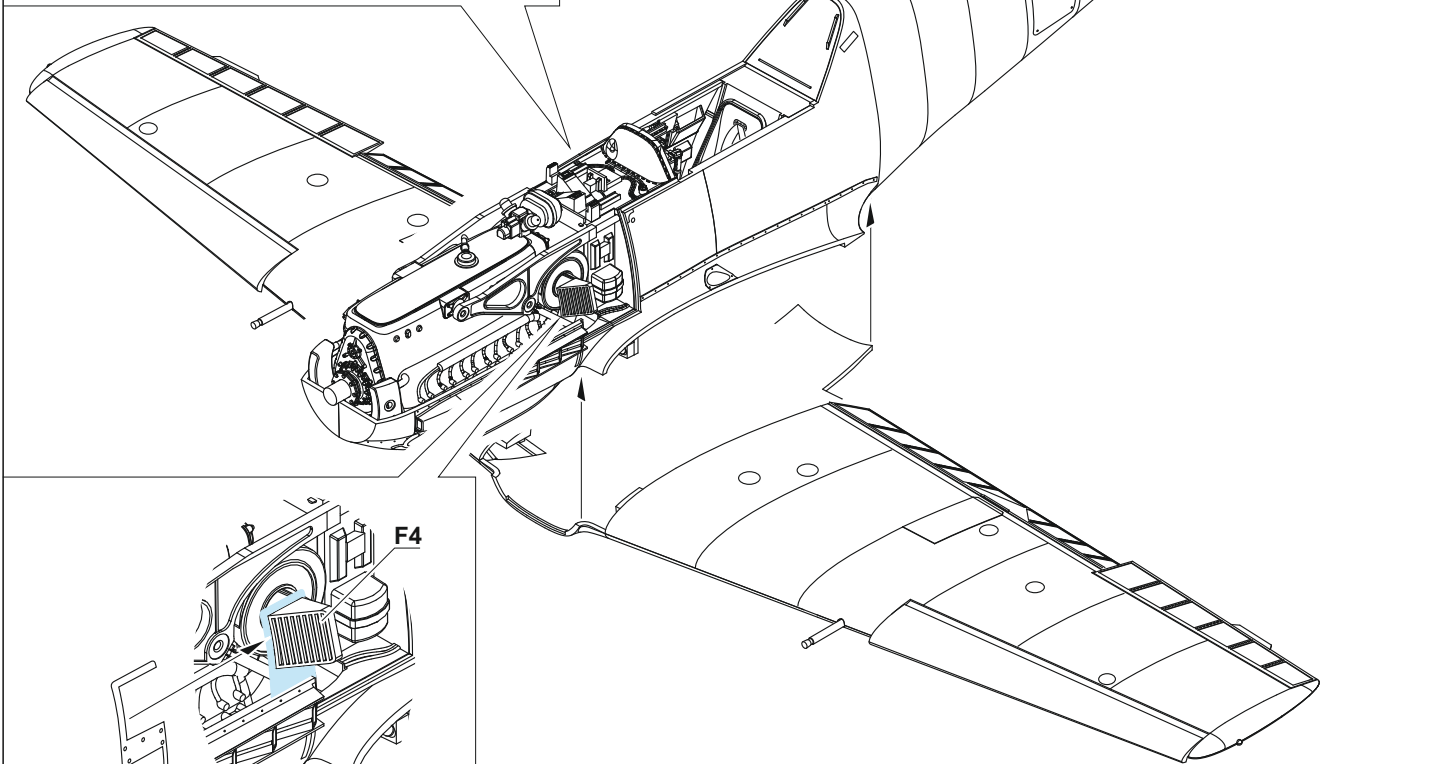
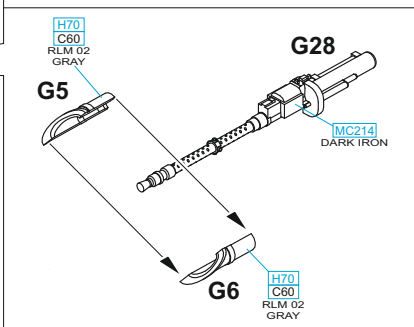
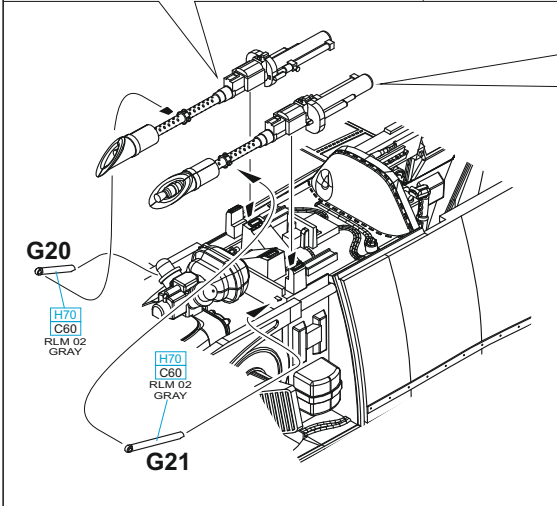
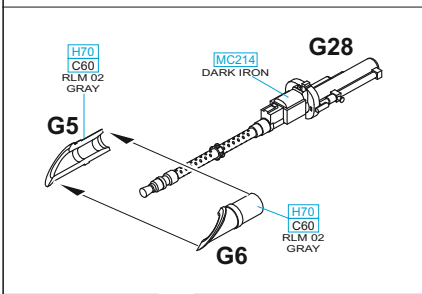
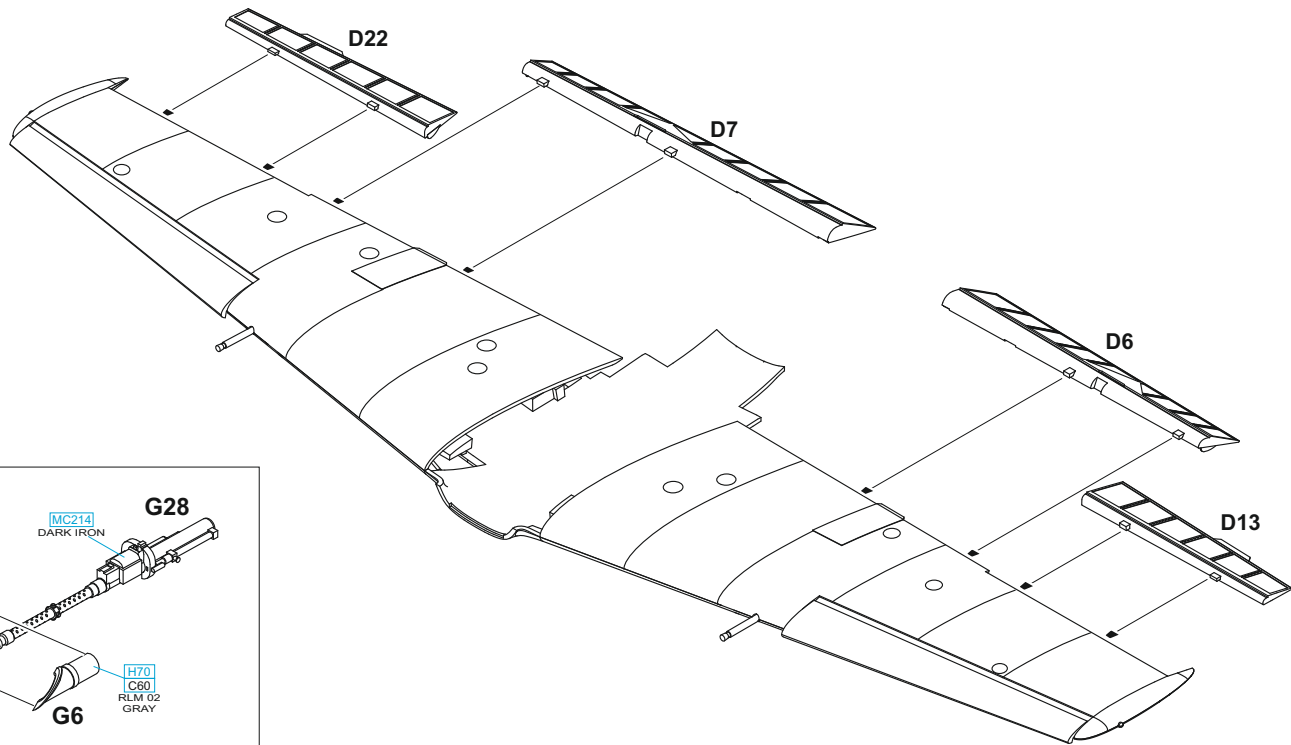
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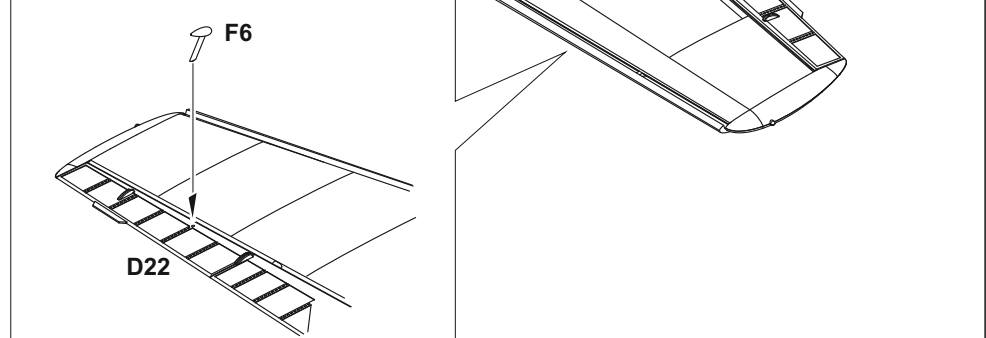
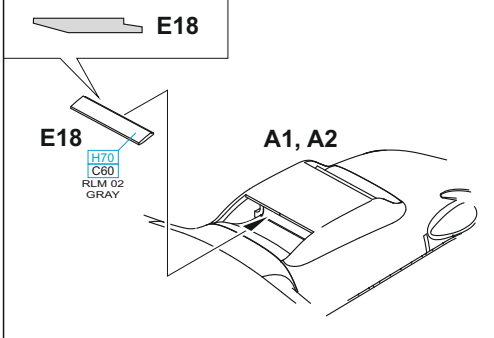
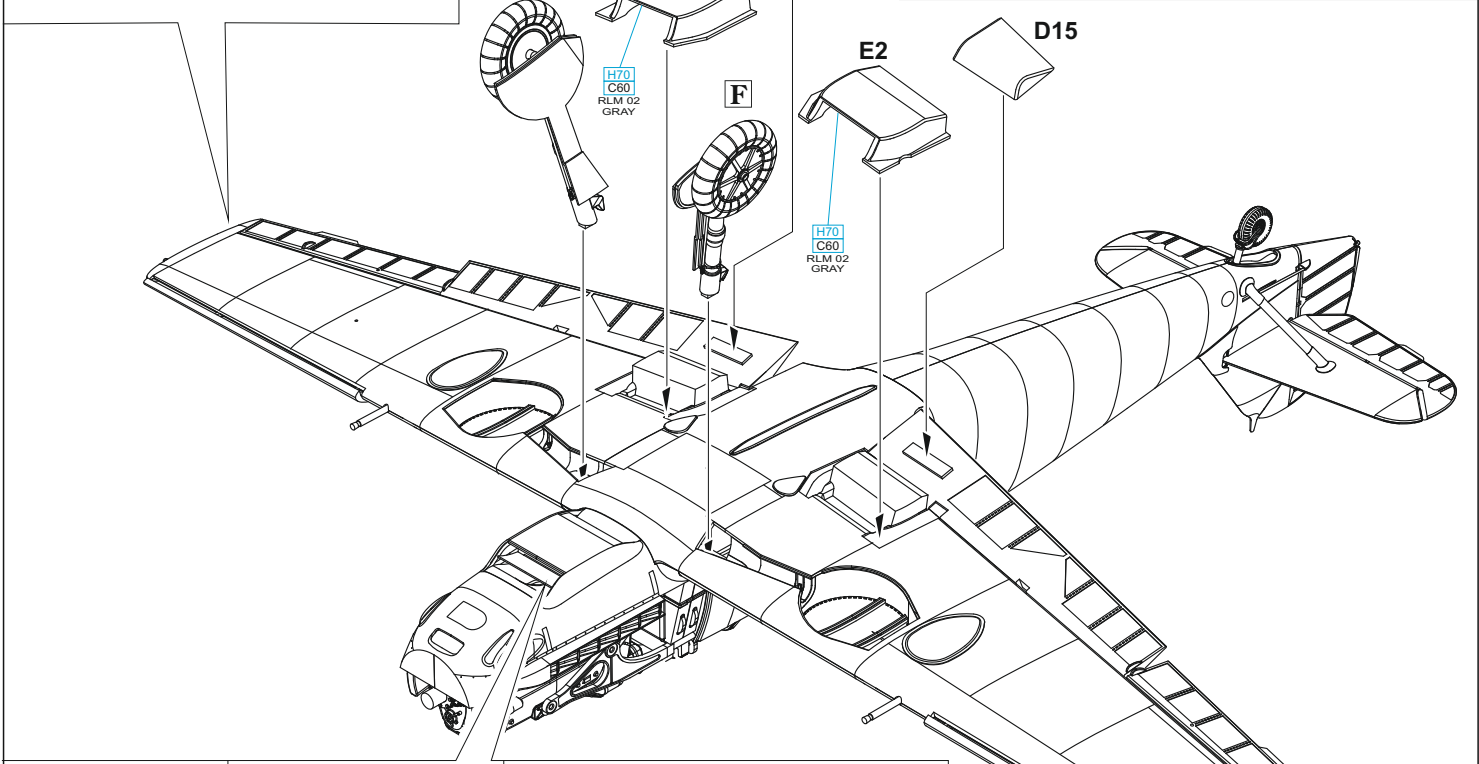
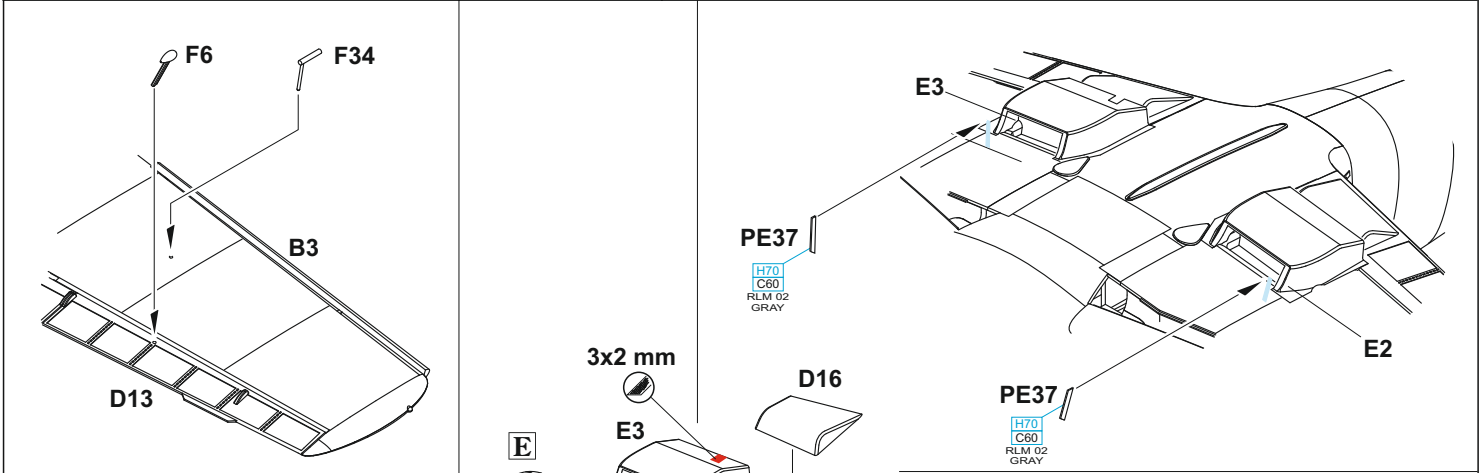
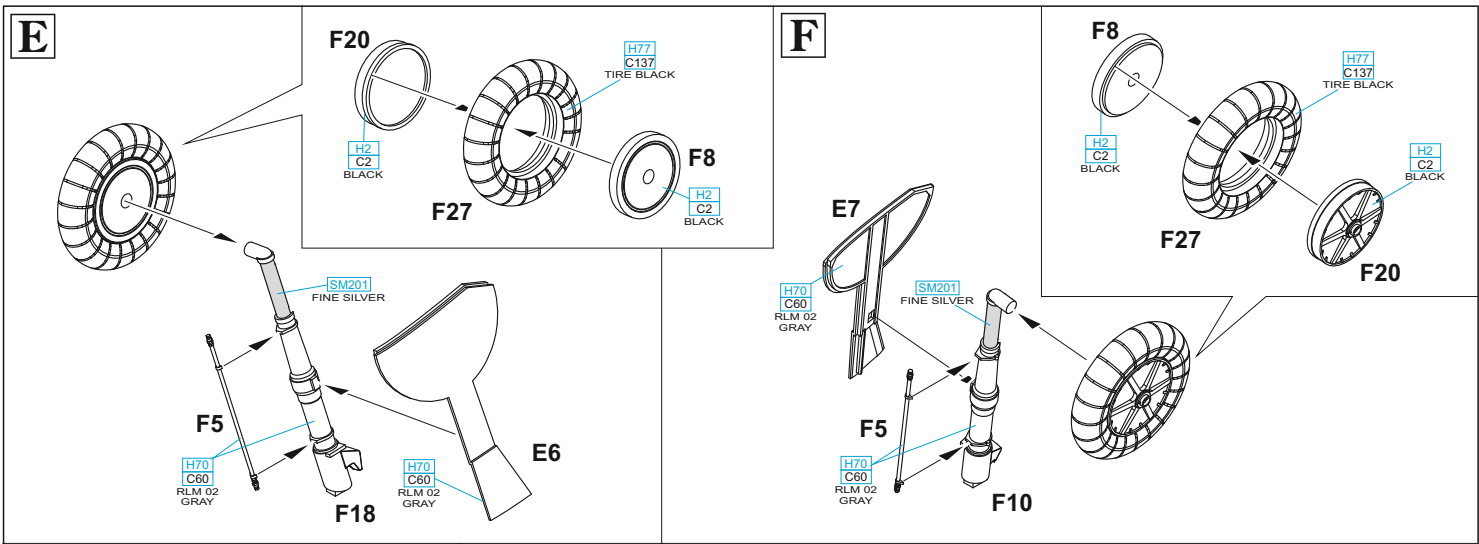
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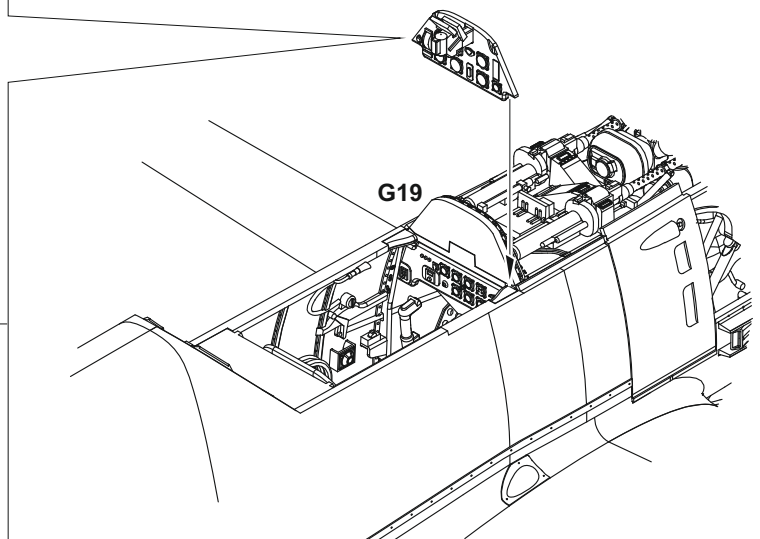
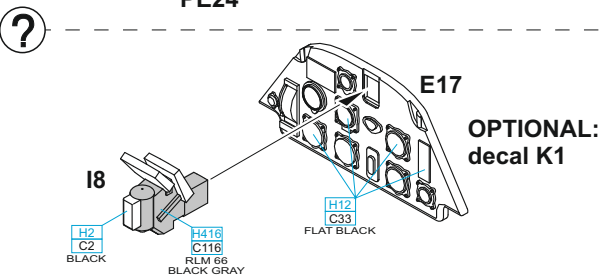
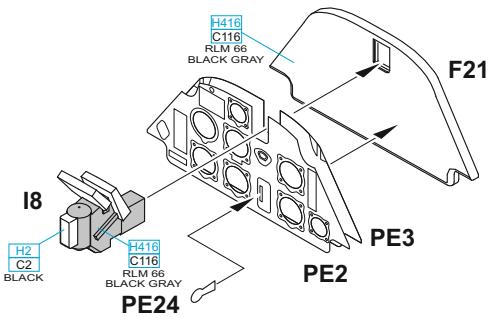
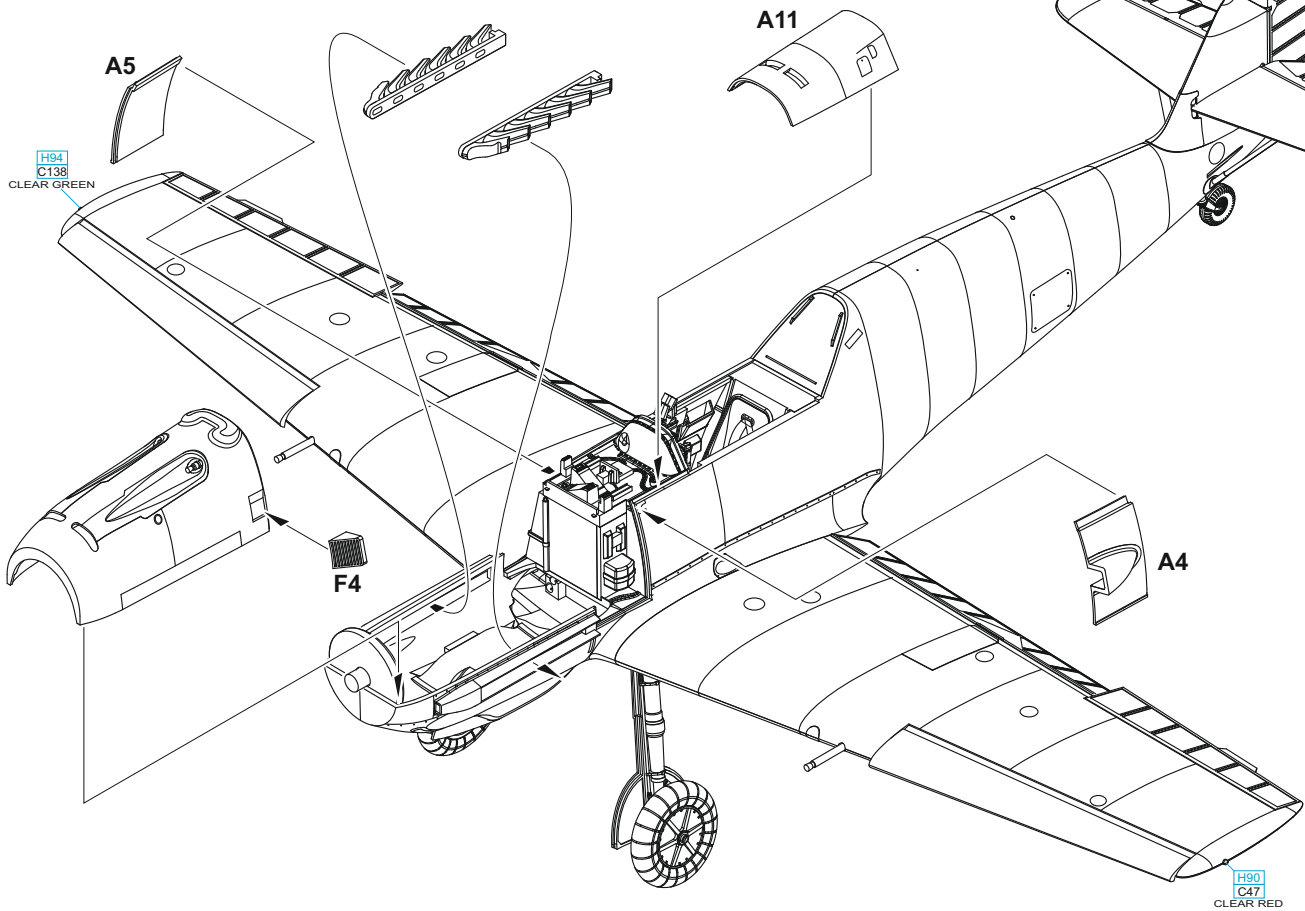
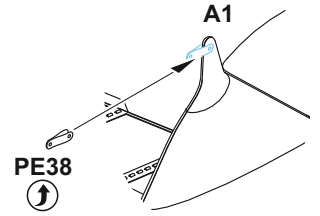
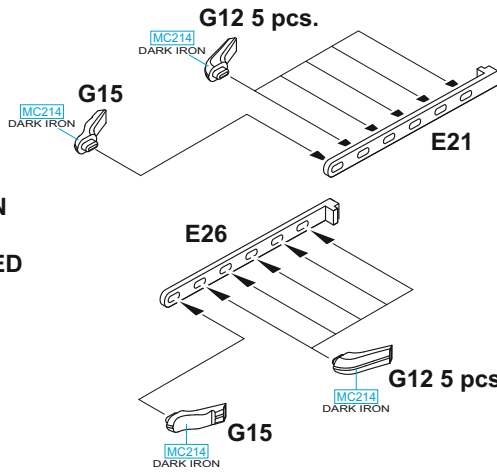
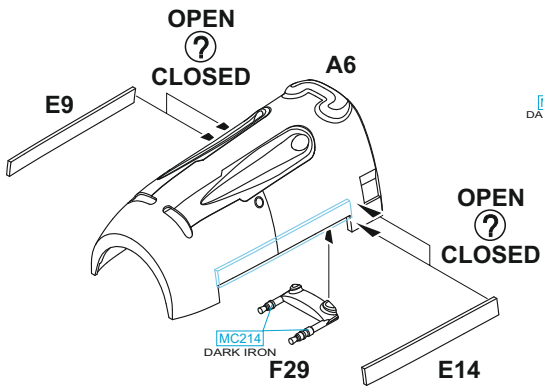


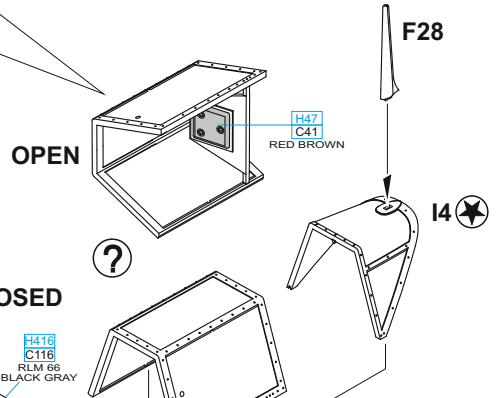
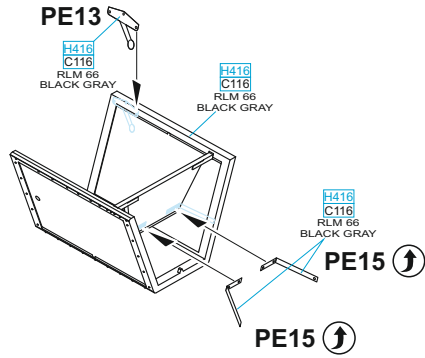
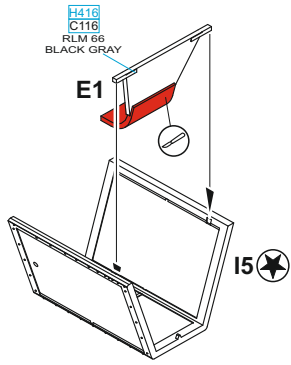


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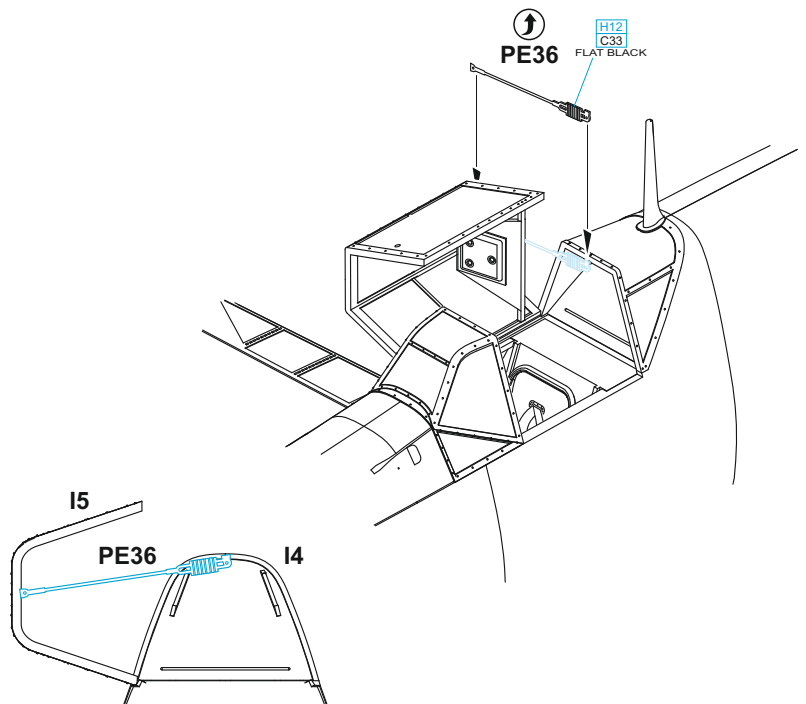
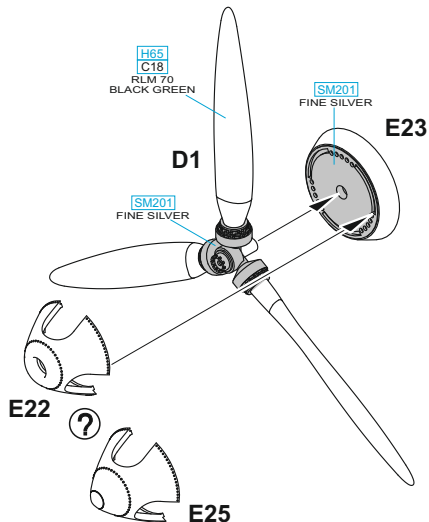
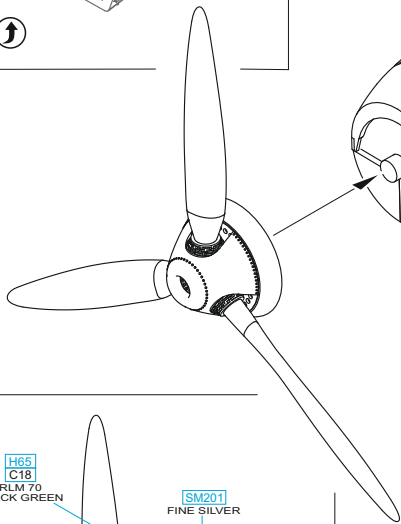
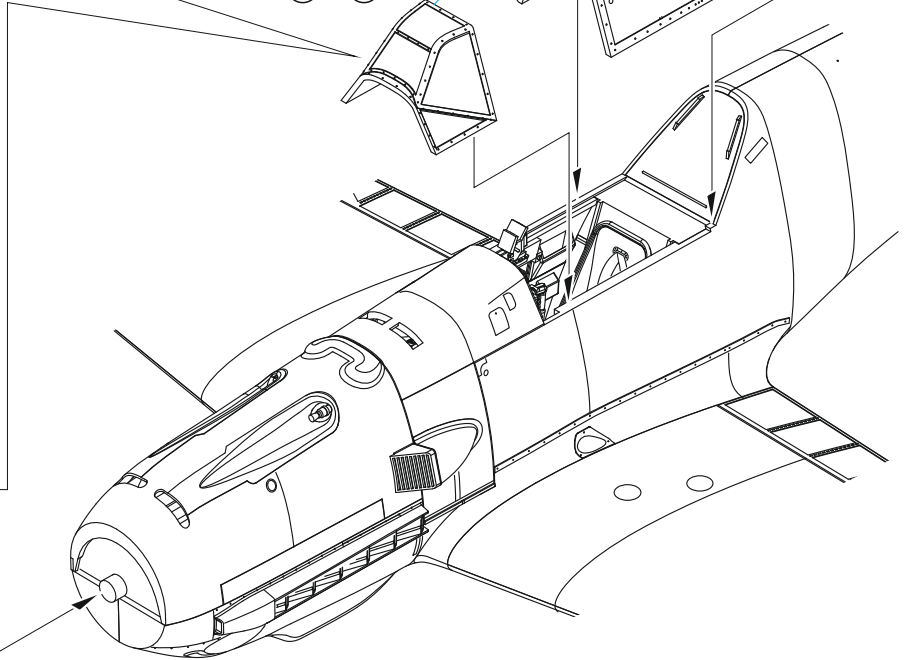
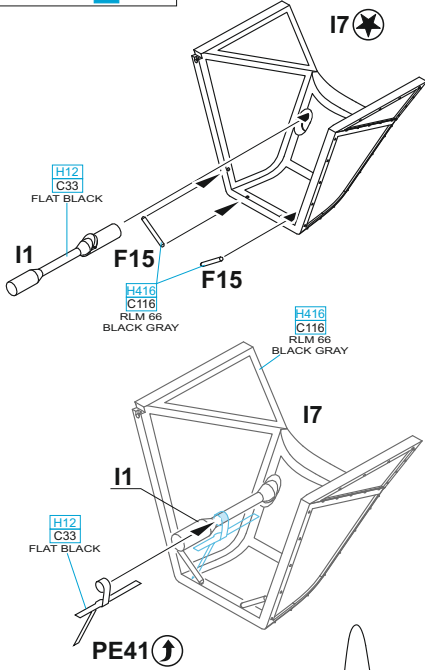


**? ALTERNATIVE ASSEMBLY FOR CLOSED ENGINE COWLING**





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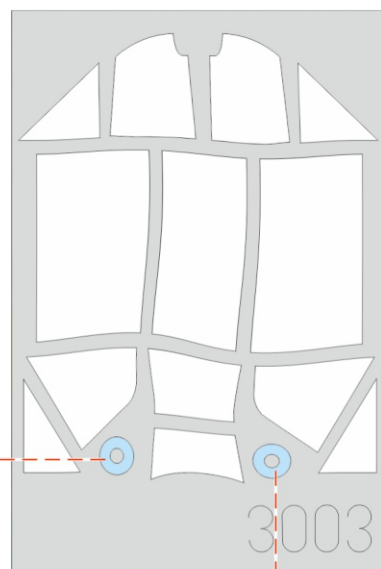
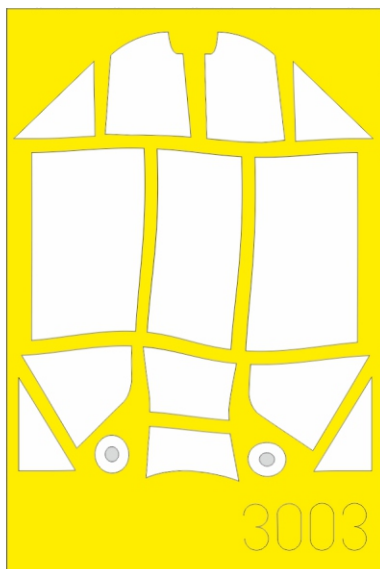


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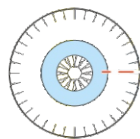


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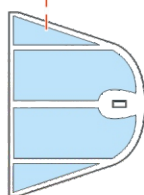
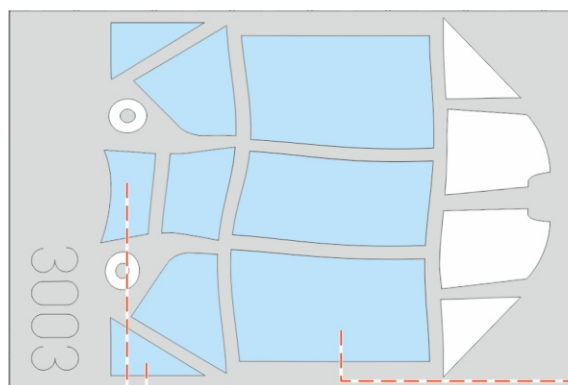
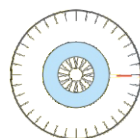
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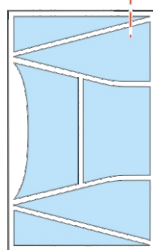
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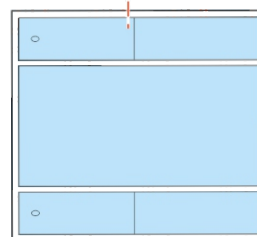
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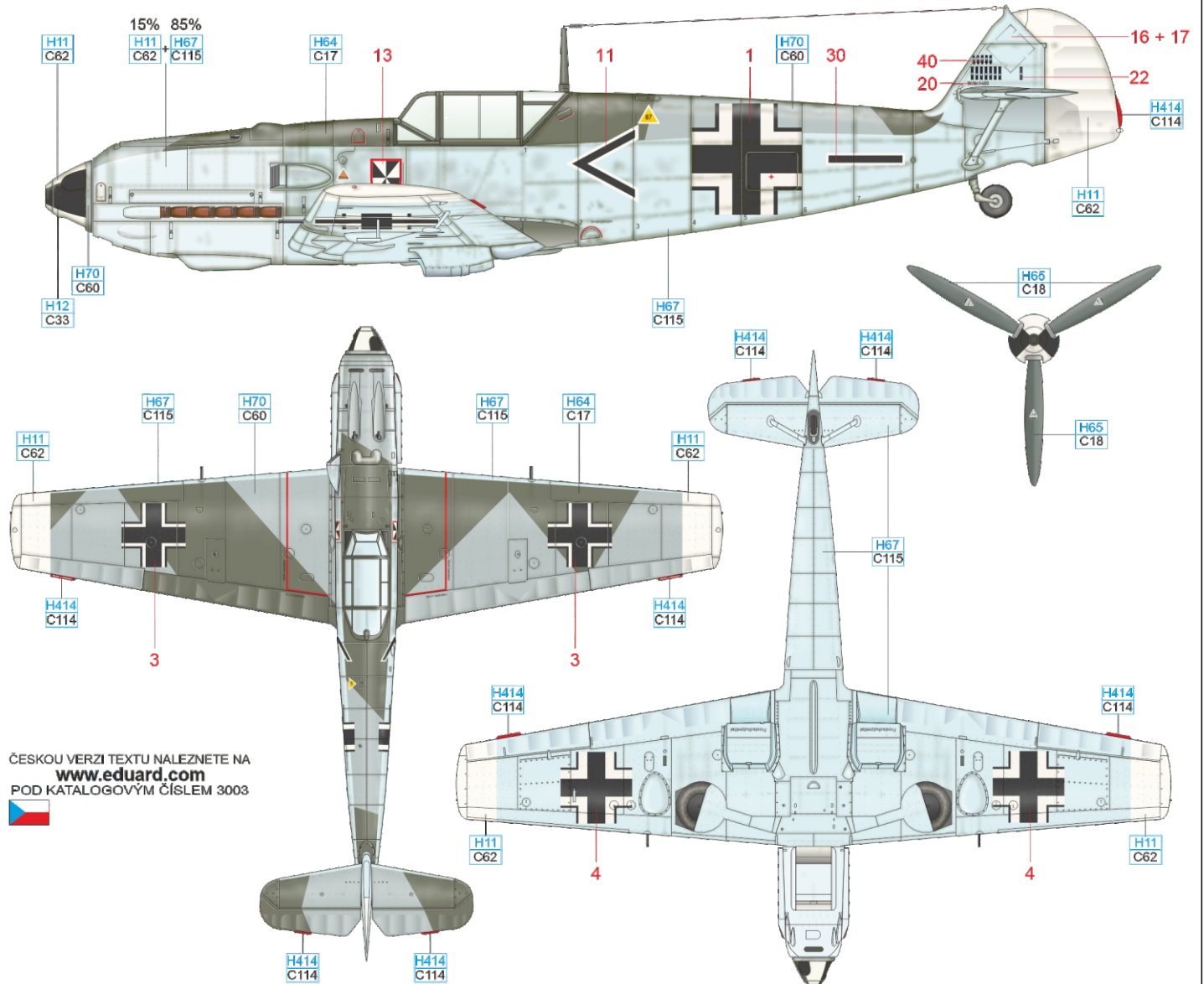






# D WNr. 1480, Oblt. Franz von Werra, II./JG 3, Wierre-au-Bois, France, September 1940

This "Emil" became the subject of a fascinating event that delivered the first German ace Oblt. Franz von Werra into British hands. On the morning of September 5, 1940, Franz von Werra was shot down over Kent. He managed a successful belly landing and was taken prisoner of war. His plane was scrutinized by RAF experts. Von Werra attempted to escape on several occasions, and finally succeeded during transfer to a POW camp in Canada. He managed to go through the United States to South America, and then back to Germany, where he rejoined the Luftwaffe. He served on both the eastern and western fronts but had strict orders to avoid the shores of England. The Channel, nevertheless, proved fateful for him when, on October 25, 1941, as CO of I./JG 53, he vanished. Aircraft WNr. 1480 carried the standard camouflage of RLM 02/71/65 with white identification markings. These included the rudder and wingtips. The RAF report suggests that the engine cowl was in RLM 65 and looked cleaner than the rest of the airframe. It may have been a replacement off another aircraft. The tail surfaces carried victory marks (eight aerial and five on the ground). Positioning of them was different on each side of the fin. The RLM 65 color extended to the upper surfaces of the leading edge wing.

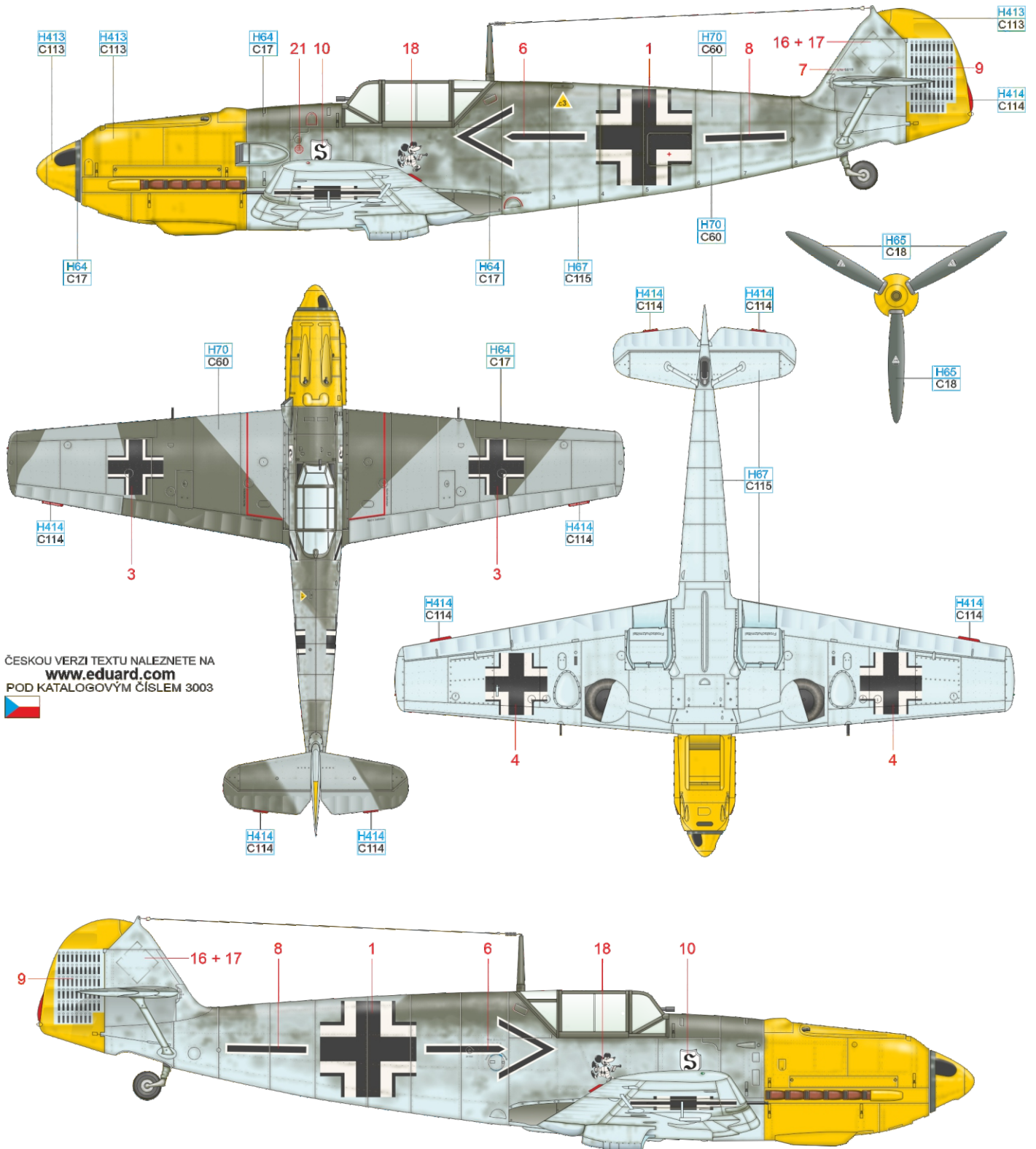


ČESKOU VERZI TEXTU NALEZNETE NA  
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RLM 23	H414 C114	FLAT WHITE	H11 C62	FLAT BLACK	H12 C33
RLM 02	H70 C60	RLM 70	H65 C18	RLM 71	H64 C17
				RLM 65	H67 C115

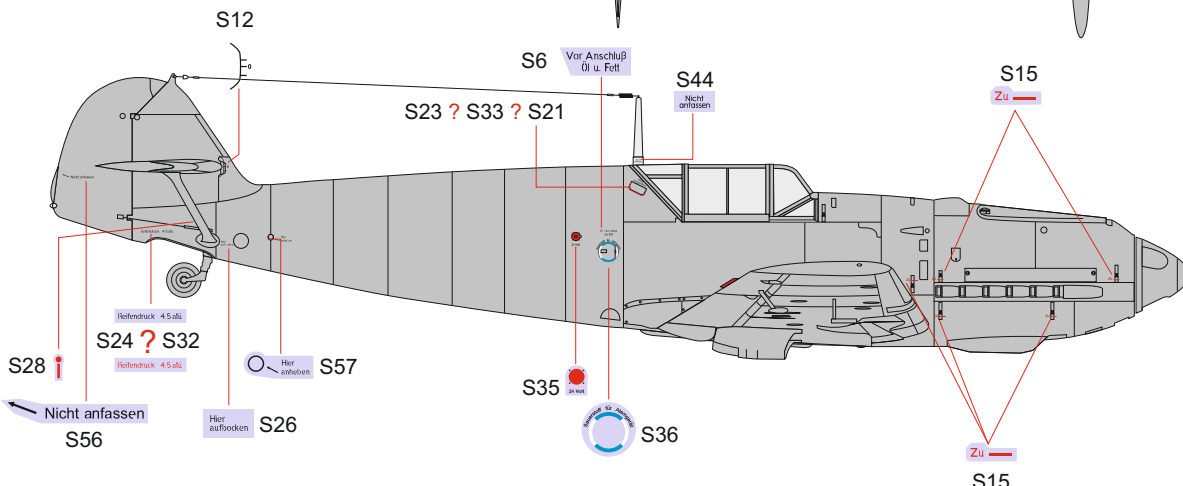
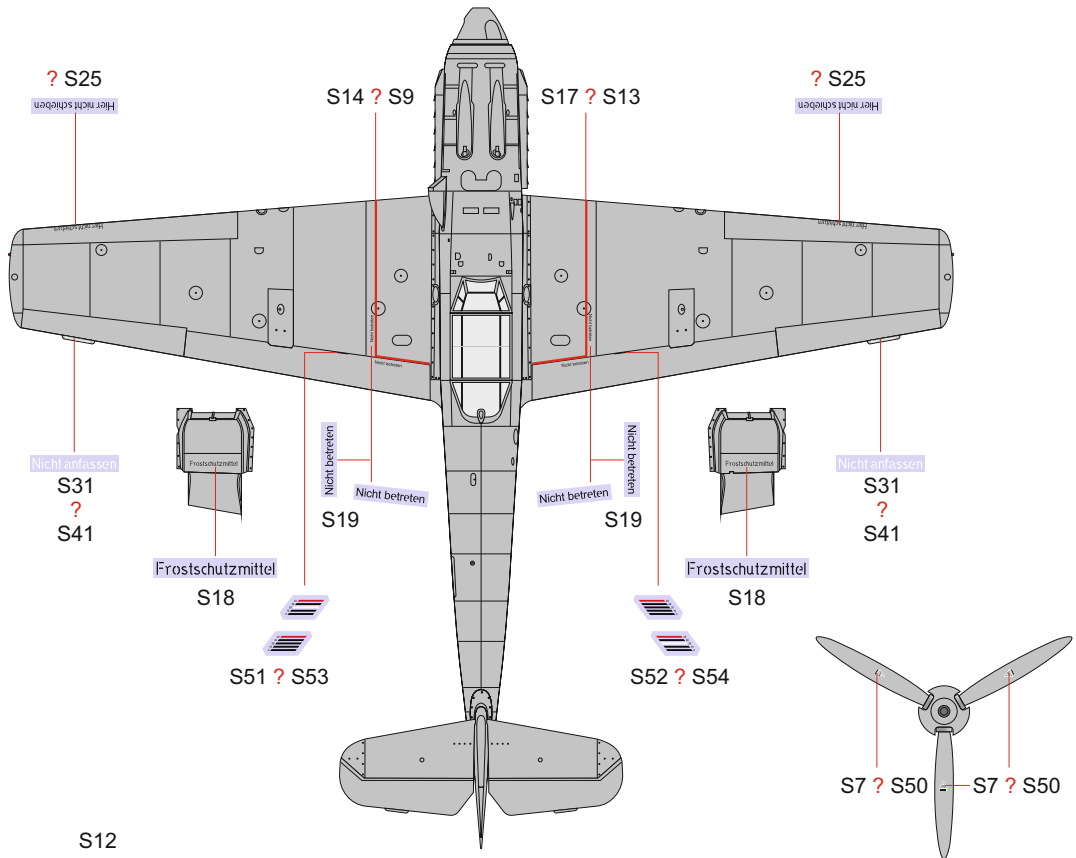
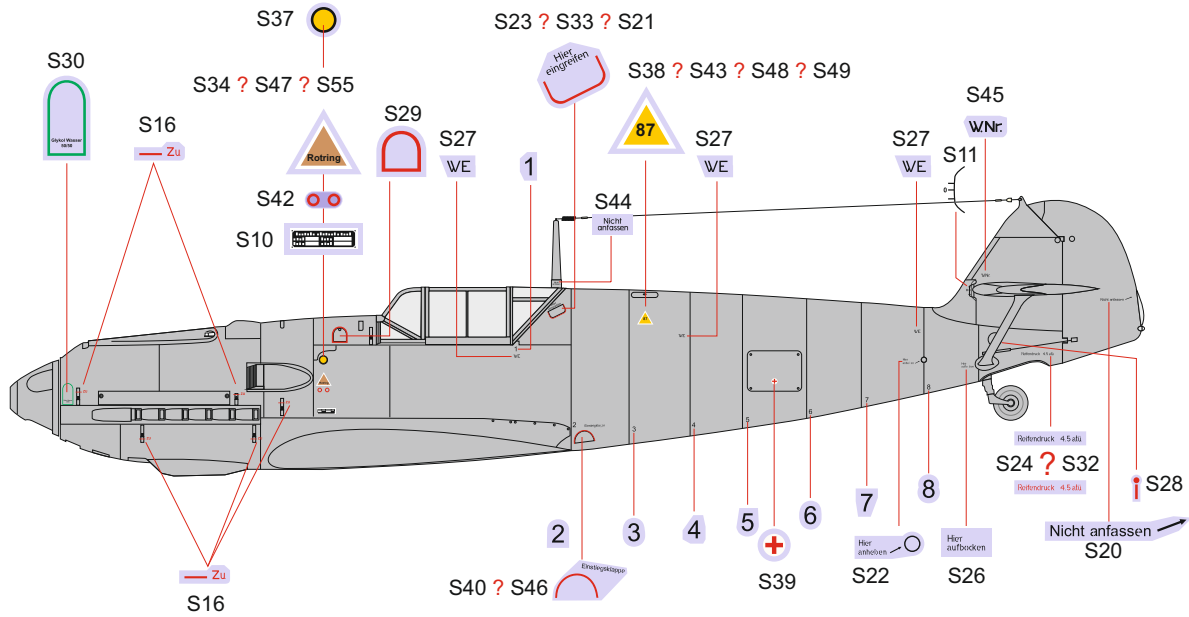
Adolf Galland flew the illustrated Emil in the fall of 1940 to the beginning of 1941 as CO of III. Gruppe, and later of the entire JG 26. The tactical markings on the aircraft kept pace with the changes during this period. The standard camouflage of RLM 02/71/65 was darkened on the fuselage sides with RLM 02/71. The yellow cowling was complemented by the yellow rudder that also bore the kill marks. The surface area of the original RLM 65 was not enough for them and the yellow was oversprayed with fresh RLM 65 for the next row of kill marks. The most typical changes for WNr. 5819 at this time came with the personal emblem of Mickey Mouse and most of all the installation of the ZFR-4 telescope (installed together with the regular Revi). It didn't serve as a gunsight but for the identification of distant aircraft. Galland replaced Werner Mölders who commanded the German fighter force as General der Jagdflieger. Later on, he became famous for locking horns with Hermann Göring. He established JV 44 at the end of the war, the famous unit well known for its Me 262 jet fighters and colorful Fw 190D piston fighters. Galland managed to shoot down 104 enemy airplanes and was awarded with Knight Cross with Oak Leaves, Swords and Diamonds.



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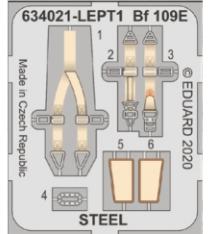


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