



**The Messerschmitt Bf 110 soldiered throughout the WWII as a fighter, fighter-bomber or night fighter. In the latter role, it proved its worth even at the very end of the war.**

It was in 1934 when the Reich Ministry of Aviation (RLM, Reichsluftfahrtministerium) issued a request for a new twin-engine heavy fighter capable of successful dogfight with single-engine fighters. Apart of the long range and high speed the heavy armament was also to be an advantage of the new aircraft. Hermann Göring, the Reich Aviation Minister, was the "heavy weight" behind the concept and strong proponent of the new Kampfzerstörer (Combat Destroyer). The concept was intended to overcome troubles the designers were running into with first generation of monoplane designs as these fighters usually lacked range and power.

Due to the reasons, the RLM requested twin-engine, three-seat aircraft of all-metal design with internal bomb bay. Three manufacturers responded with their design: Focke-Wulf, Henschel and BFW (i.e., Bayerische Flugzeugwerke). The latter, which was to become Messerschmitt, defeated its opponents and was given funds to build three prototypes. Messerschmitt decided to omit the internal bomb bay in change for even more firepower than requested and this proved to be wise decision, as the ministry changed its mind (partly under pressure from Ernst Udet) about the internal bomb load.

#### From A to G

On May 12, 1936, Rudolf Opitz, the BFW company test pilot, flew the Bf 110 at Augsburg for the first time. It was powered by two DB 600A engines. Although the Bf 110 was not as maneuverable as desired, it was faster than requested and even faster than Bf 109B-1 single seat fighter. Thanks to it the order for four pre-production Bf 110A-0 units was placed with first of them delivered in January 1937 and after comparison with Fw 57 and Hs 124 competitors it was ordered for serial production.

Due to the troubles with the DB 600 engine supplies, the Jumo 210B units had to be installed into early Bf 110s, leaving them underpowered with top speed just 268 mph (431 km/h). More to it, the armament was limited to four MG 17 7.92 mm machine guns in the nose. The more powerful Jumo 210G developing 515 kW (44 kW more to 210B unit) was used for the Bf 110B with three versions. The B-1 was first to finally get two 20 mm MG FF cannons, while B-2 was reconnaissance version fitted with camera and the B-3 was used as a trainer.

Just 45 of all Bf 110Bs were manufactured as the design team reworked the engine nacelles to adapt DB 601B-1 engines, as they became available in late 1938. The top speed improved to 336 mph (541 km/h) with the resulting Bf 110C version.

With the Bf 110D the designers concentrated on range increase. The D-1 thus got the 277 gal (1,050 l) conformal tank under the belly of the fuselage with large cover. Also, two 238 gal (900 l) external drop underwing tanks were adopted, increasing the total fuel capacity to 1,088 gal (4,120 l). But the added drag of the early "dachshund's" belly was too high to allow serial production. The big tank was only used after the improvement of the shape as Bf 110D-1/R1 whereas the D-1/R2 was equipped with two drop tanks. Later D-2 and D-3 versions retained the twin underwing 900 l drop tank capability, using multipurpose ordnance racks capable of holding either drop tanks or bombs. The

development then proceeded with the fighter-bomber E version and Bf 110F, which featured new DB 601F engines capable to deliver 1,350 PS (993 kW). More power allowed armor upgrade and strengthening the airframe without performance loss. The E version was considered best among all the Bf 110s. It was fully aerobatic and responsive, although not as fast as the Bf 109. Eventually 512 Bf 110F models were completed between December 1941 and December 1942 including the first night fighter, the Bf 110F-4.

#### In combat

The Bf 110 served with considerable success in early campaigns of WWII until the Battle of Britain, where all its shortcomings became more apparent when facing Hurricanes and Spitfires. The main weakness of the Bf 110 was its worse maneuverability, which was fully exploited by the RAF fighters. High losses of the Bf 110s during their day escort sorties forced Luftwaffe to change the tactics and scenarios when using this aircraft. Apart of this letdown, there were still tasks in which the Bf 110 would serve well when deployed properly. It was used as an air superiority fighter and fighter-bomber in Africa, Balkan, Mediterranean and on Eastern Front. It also developed into formidable night fighter with the onboard radar for searching the enemy bombers. Most of the German night fighter aces flew Bf 110s.

Early variants of Bf 110 were armed with two MG FF 20 mm cannons and four 7.92 mm (.312 in) MG 17 machine guns in the nose, while single 7.92 mm (.312 in) MG 15 machine gun was rear firing for self-defensive fire. Later variants would replace the MG FFs with 15 mm MG 151s and the rear gunner's station would be armed with the twin-barreled MG 81Z (7.92 mm). Some Bf 110Gs got the 30 mm Mk 108 cannons instead of MG 17s.

#### This kit: Bf 110G-2

The Bf 110F version would probably have been the last evolutionary stage of a design which was getting obsolete at the time, if the successor, the Me 210, had been successful. But the opposite was true. The Me 210 was a disappointment and so development of the Bf 110 continued. The new version, designated G, received DB 605B engines of up to 1,475 HP (1,085 kW) of power. It also sported upgraded armament and underwent some aerodynamic changes. A number of field conversion kits (Rüstsätze) were developed, making the G version the most versatile of all the Bf 110s. The rear cockpit access was moved forward with a side-hinged opening part of the main canopy opening to port side.

After the initial batch of six pre-production Bf 110G-0 the G-1 version was skipped, and the initial subversion was the G-2. There were 797 examples manufactured. Pilots were generally pleased with more power allowing better performance. The aircraft were used as fighter-bombers and destroyers as they were considered excellent gun platform. They were also used against Allied bombers, using rockets. The Bf 110G-2/R1 was armed with BK 3,7 cannon of 37 mm caliber, the R4 kit added to this heavy weapon also two MK 108 30 mm cannons in the nose. This made the Bf 110G-2/R4 an aircraft with extreme fire power.

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 započítím stavby si pečlivě prostudujte stavební návod. Při používání barev a lepidel 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



SYMBLES



記号の説明

OPTIONAL  
VOLBABEND  
OHNOUTOPEN HOLE  
VYVRTAT OTVORSYMETRICAL ASSEMBLY  
SYMETRICKÁ MONTÁŽNOTCH  
ZÁREZREMOVE  
ODŘÍZNOUTAPPLY EDUARD MASK  
AND PAINT  
POUŽÍT EDUARDS MASK  
NABARVIT

PARTS



DÍLY



TEILE

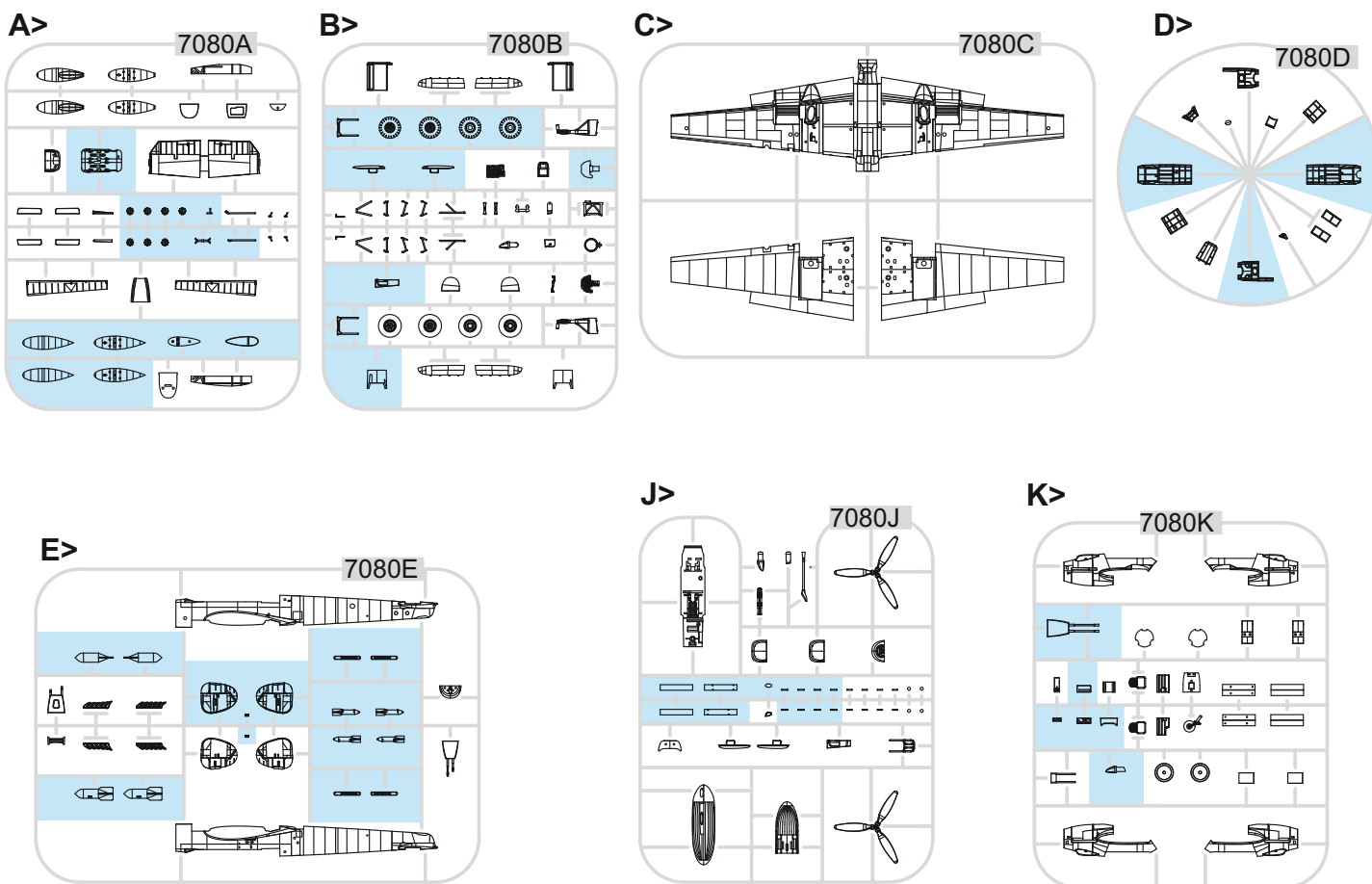


PIÈCES



部品

## PLASTIC PARTS



-Parts not for use. -Teile werden nicht verwendet. -Pièces a ne pas utiliser. -Tyto díly nepoužívejte při stavbě. -

使用しない部品

COLOURS



BARVY



FARBEN



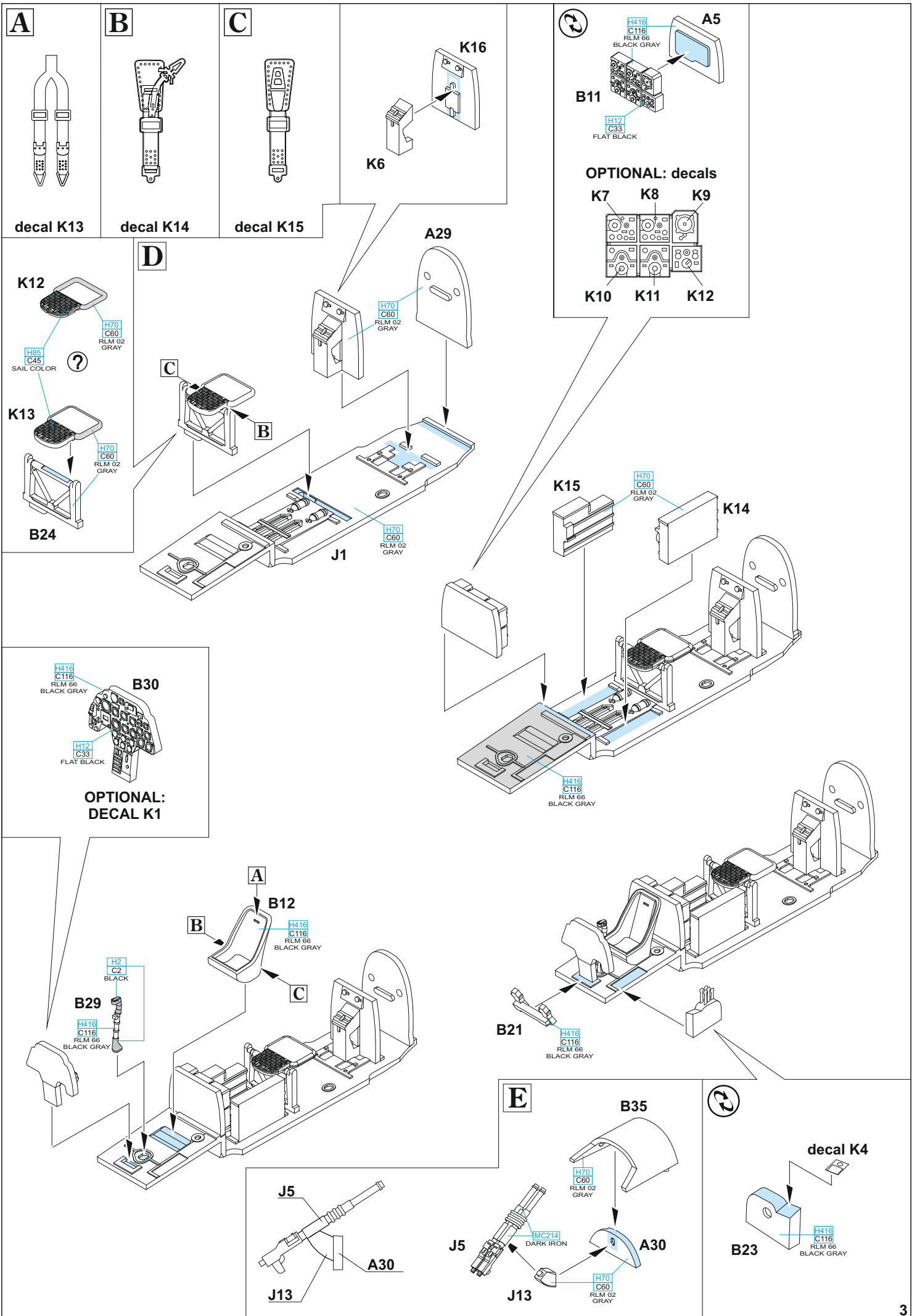
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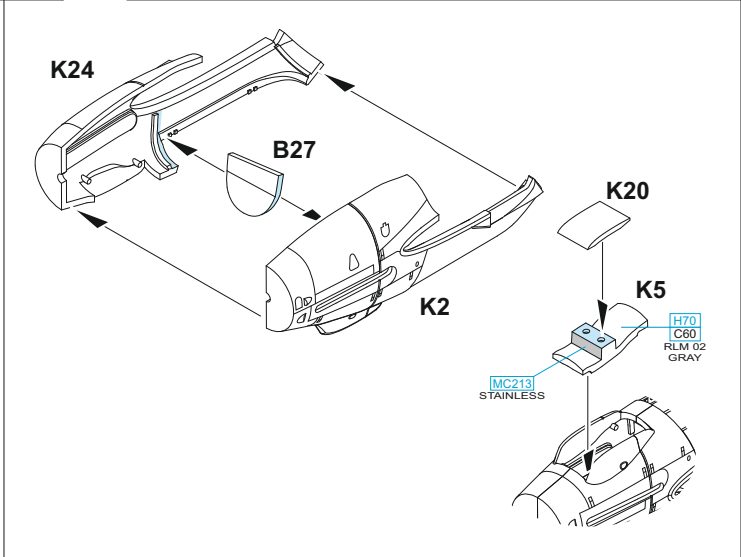
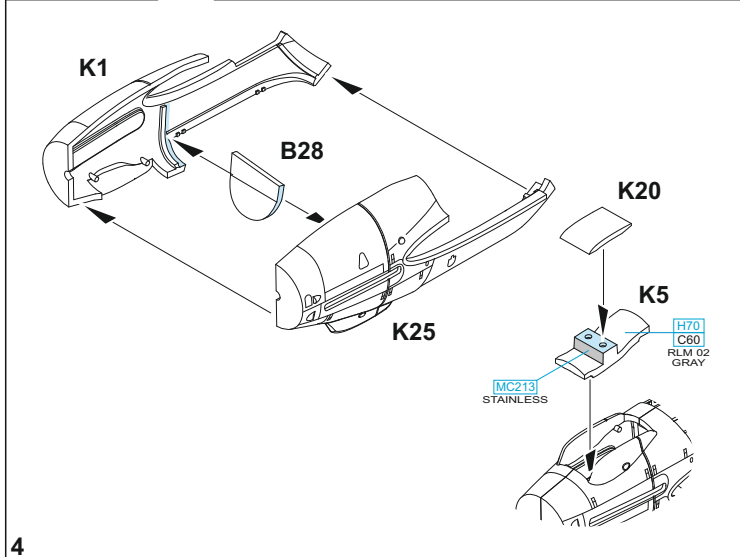
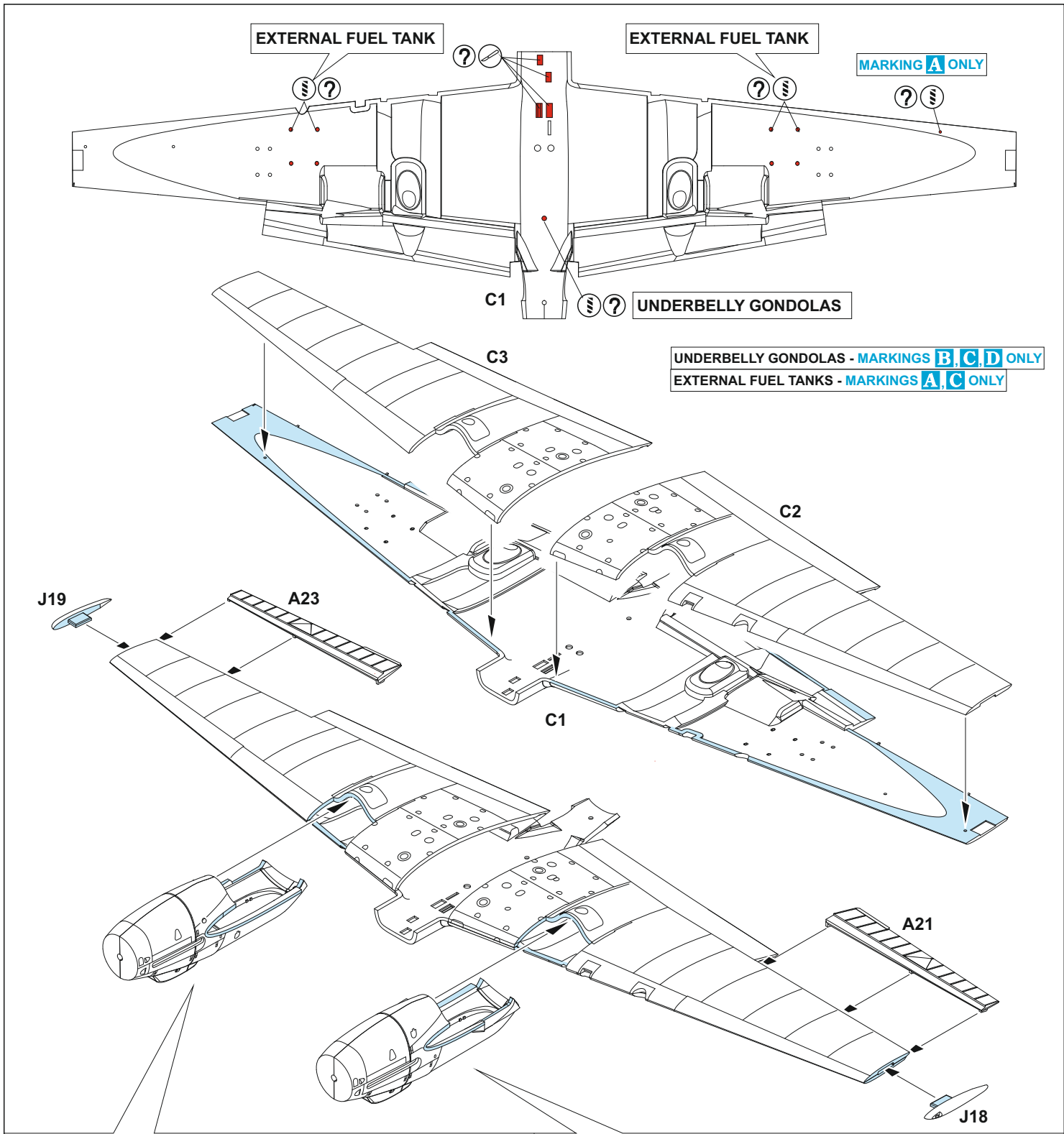


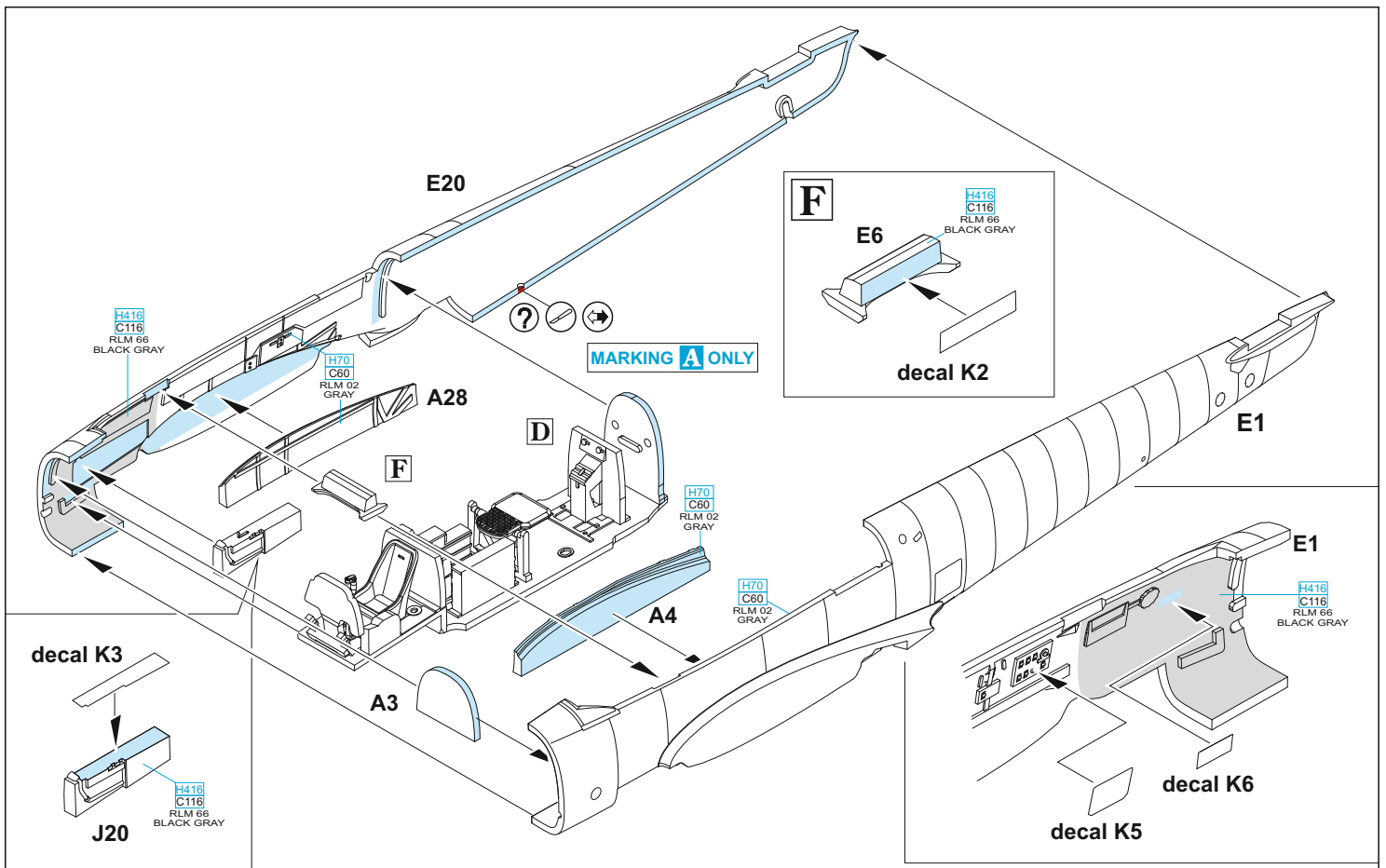
色

GSi Creos (GUNZE)		
AQUEOUS	Mr.COLOR	
<a href="#">H2</a>	<a href="#">C2</a>	BLACK
<a href="#">H11</a>	<a href="#">C61</a>	FLAT WHITE
<a href="#">H13</a>	<a href="#">C3</a>	FLAT RED
<a href="#">H37</a>	<a href="#">C43</a>	WOOD BROWN
<a href="#">H47</a>	<a href="#">C41</a>	RED BROWN
<a href="#">H65</a>	<a href="#">C18</a>	RLM70 BLACK GREEN
<a href="#">H68</a>	<a href="#">C36</a>	RLM74 DARK GRAY
<a href="#">H69</a>	<a href="#">C37</a>	RLM75 GRAY
<a href="#">H70</a>	<a href="#">C60</a>	RLM02 GRAY
<a href="#">H77</a>	<a href="#">C137</a>	TIRE BLACK
<a href="#">H90</a>	<a href="#">C47</a>	CLEAR RED
<a href="#">H94</a>	<a href="#">C138</a>	CLEAR GREEN

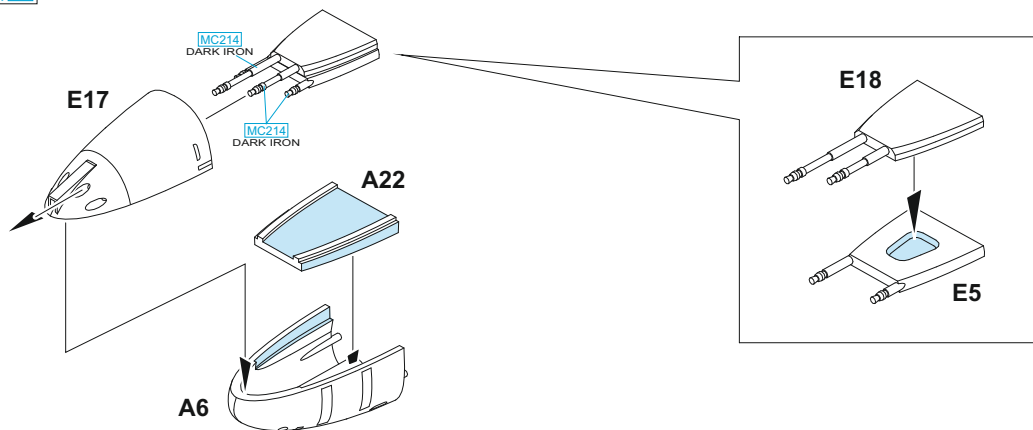
GSi Creos (GUNZE)		
AQUEOUS	Mr.COLOR	
<a href="#">H413</a>	<a href="#">C113</a>	RLM04 YELLOW
<a href="#">H414</a>	<a href="#">C114</a>	RLM23 RED
<a href="#">H416</a>	<a href="#">C116</a>	RLM66 BLACK GRAY
<a href="#">H417</a>	<a href="#">C117</a>	RLM76 LIGHT BLUE
Mr.METAL COLOR		
<a href="#">MC213</a>		STAINLESS
<a href="#">MC214</a>		DARK IRON
<a href="#">MC218</a>		ALUMINIUM
<a href="#">MC219</a>		BRASS
Mr.COLOR SUPER METALIC		
<a href="#">SM201</a>		SUPER FINE SILVER



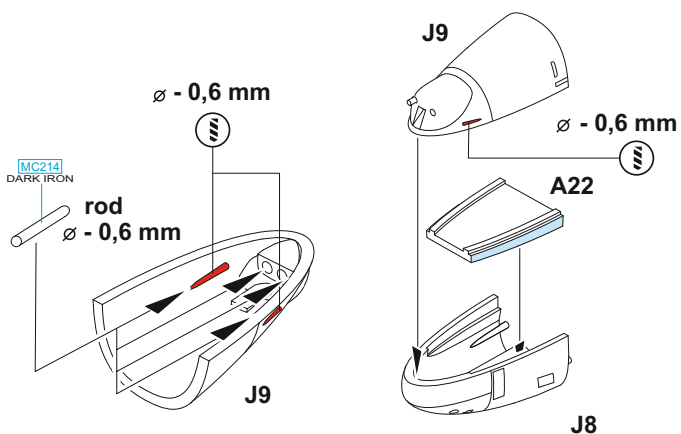




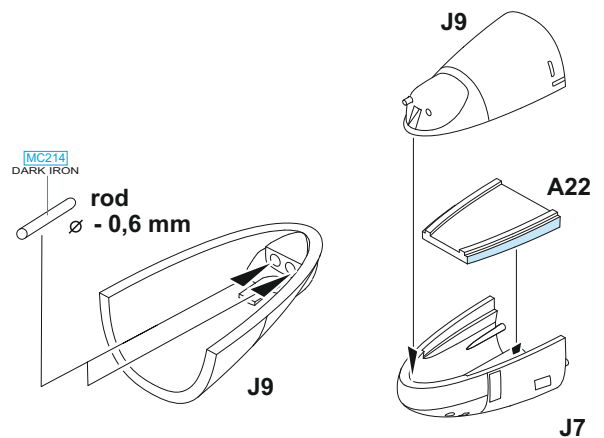
**G** MARKINGS **A, C**

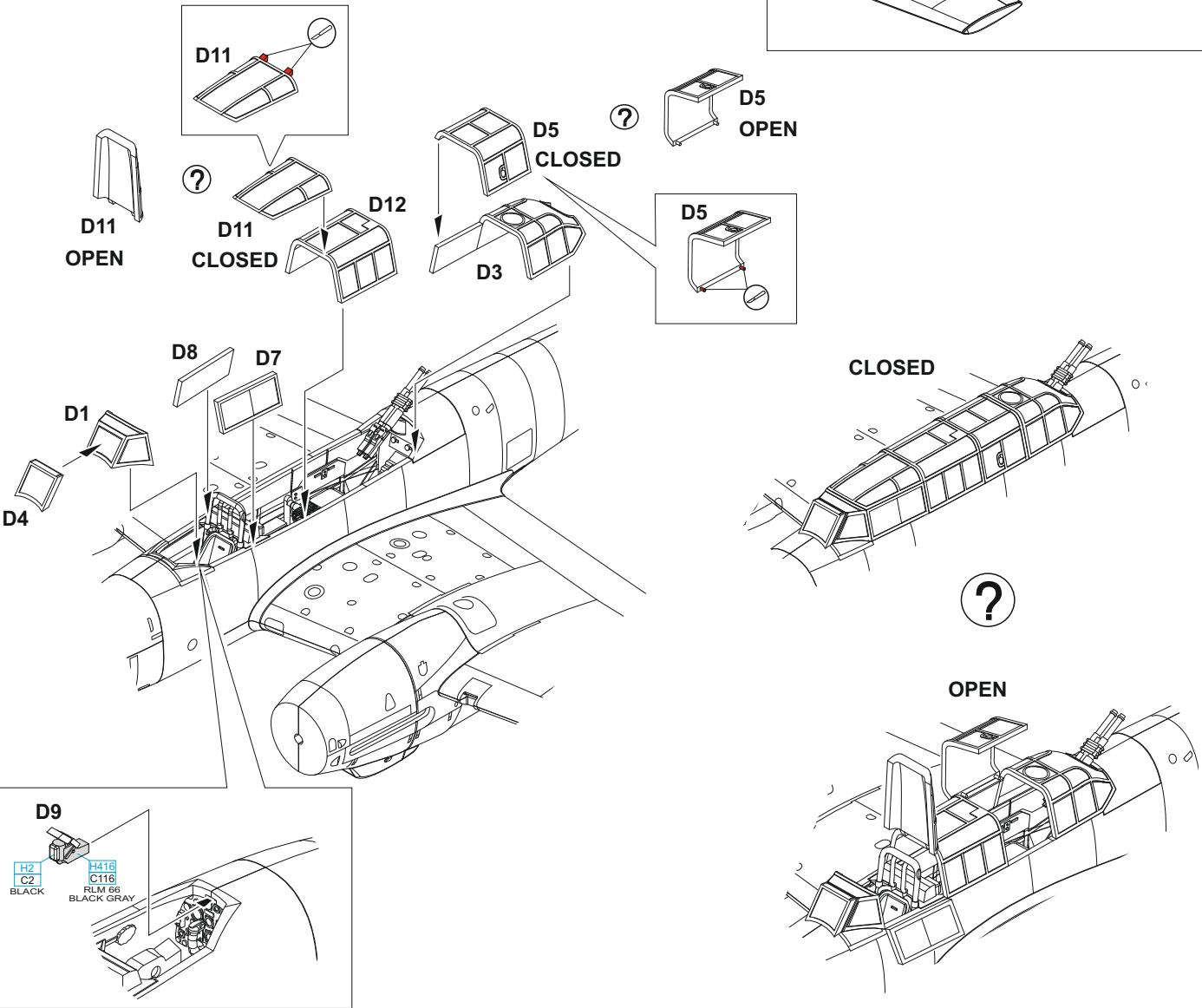
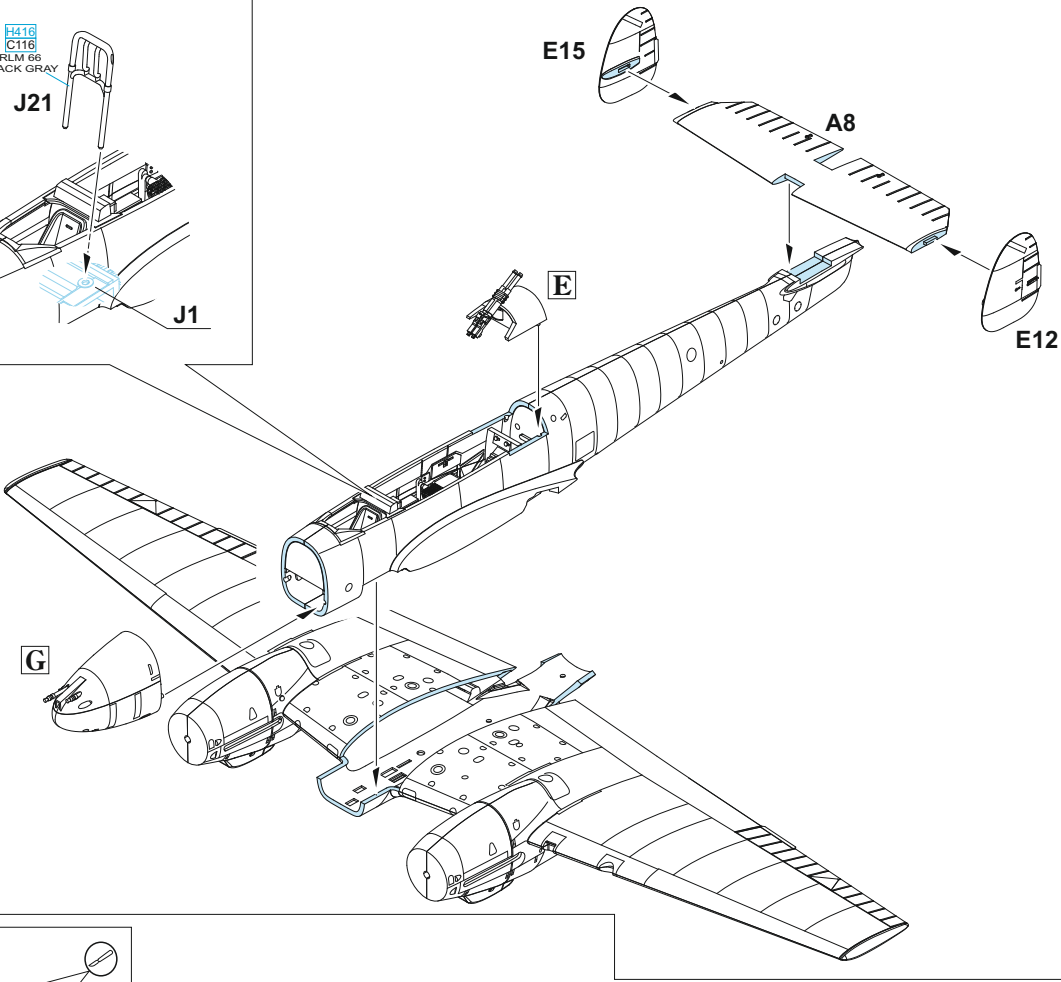
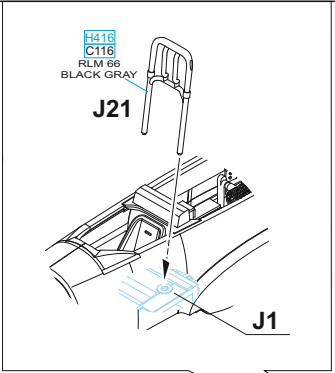


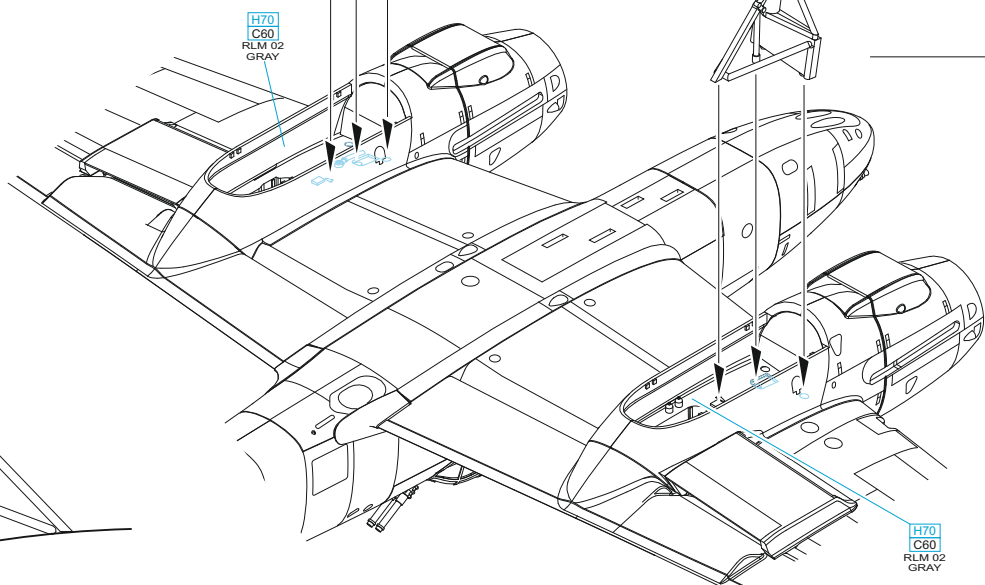
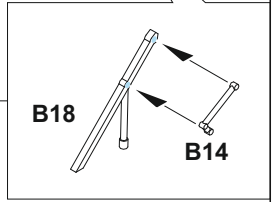
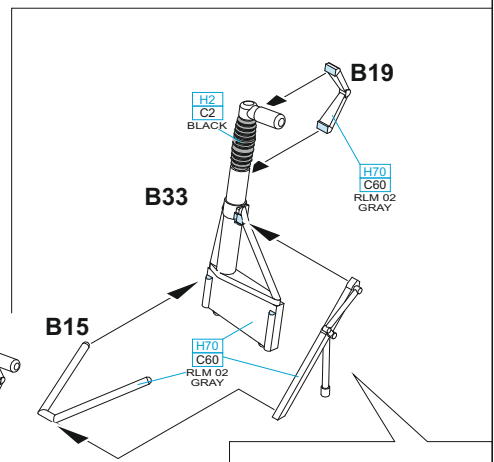
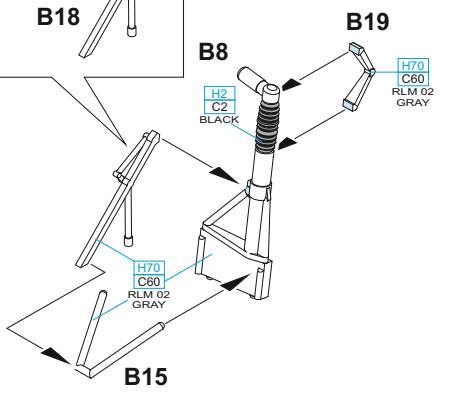
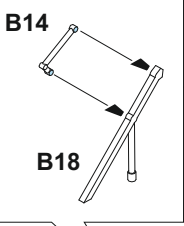
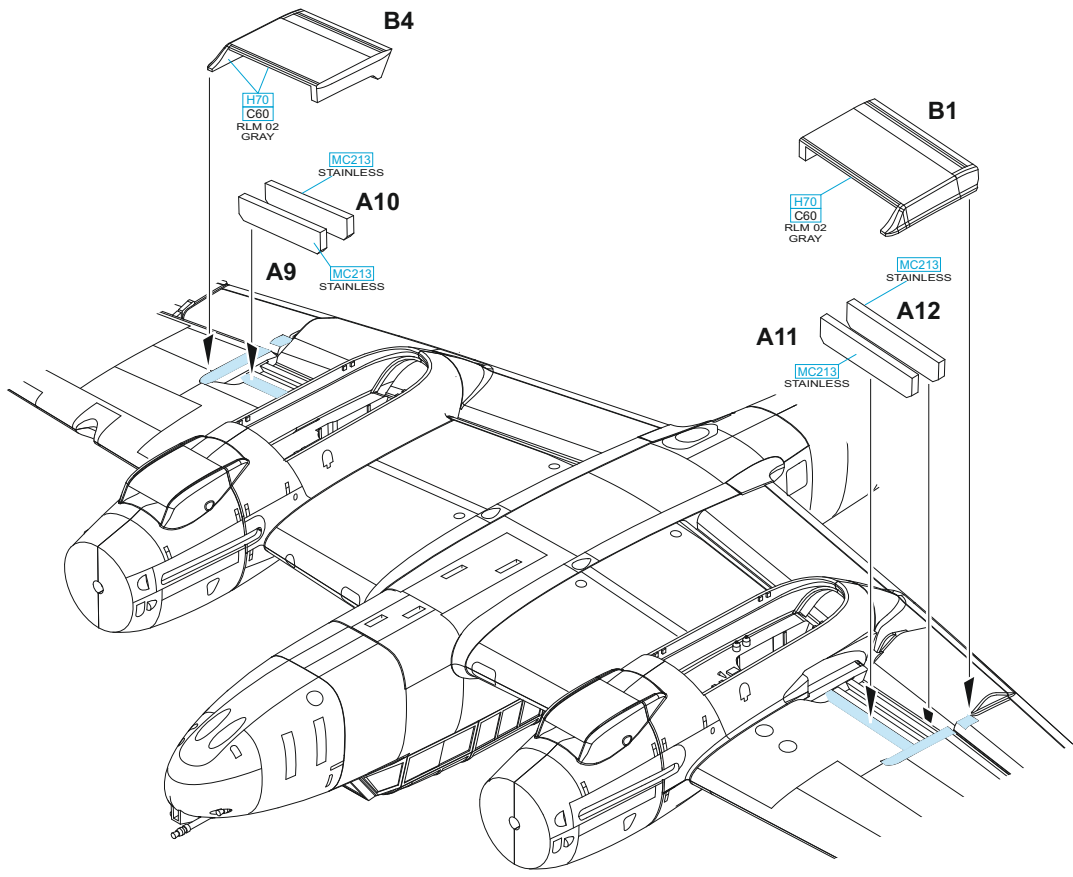
**MARKING D**



**MARKING B**

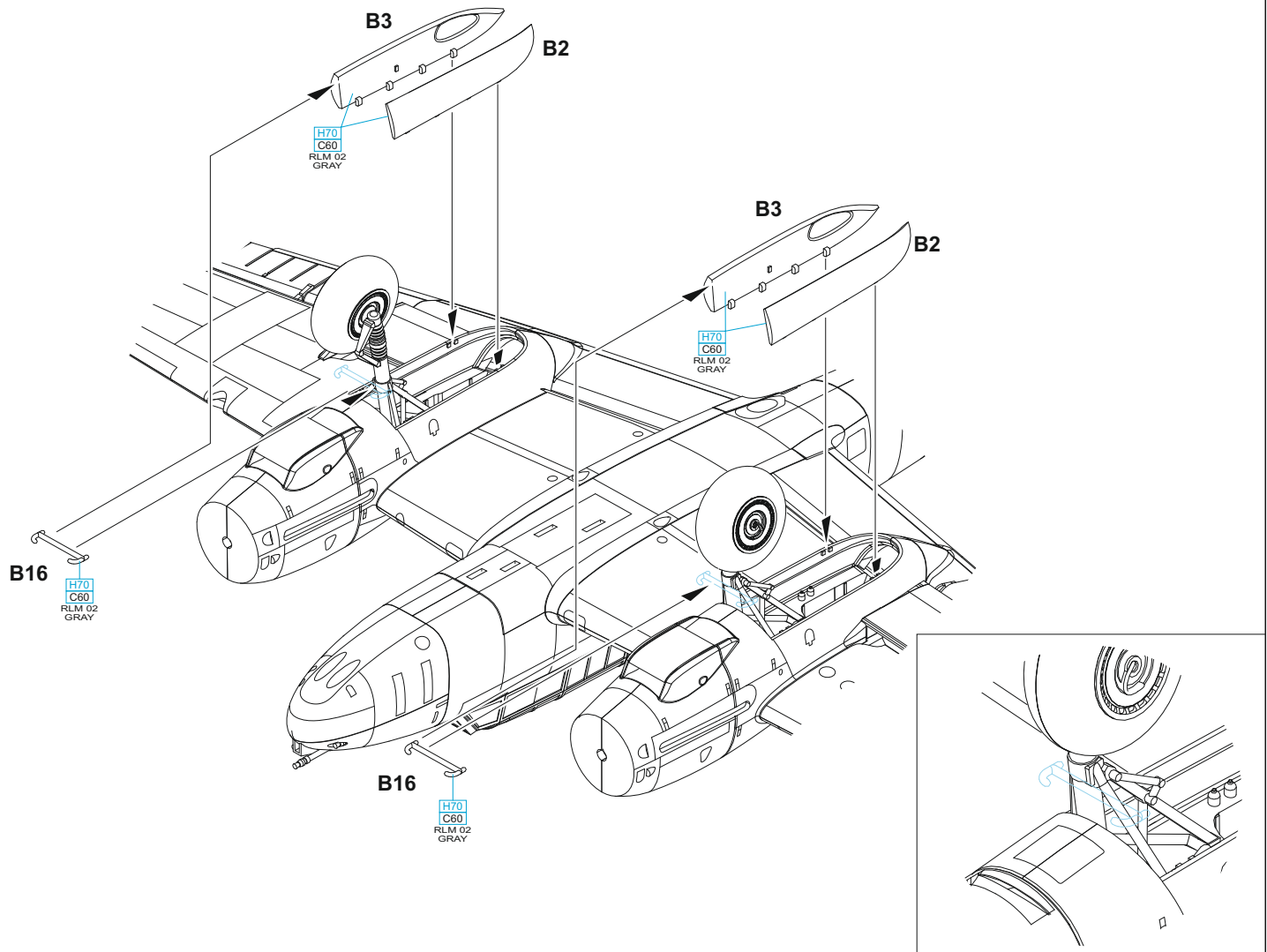
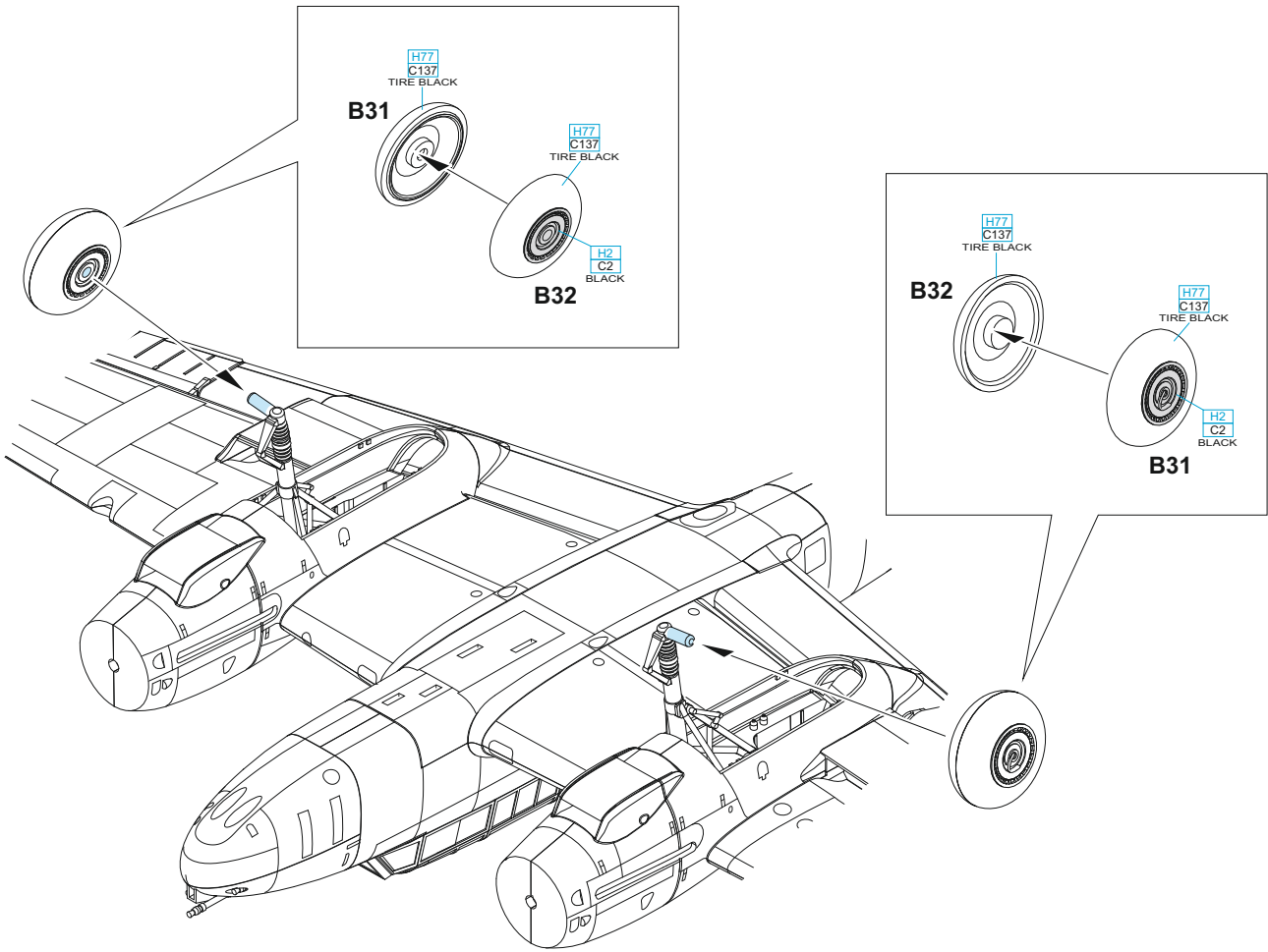




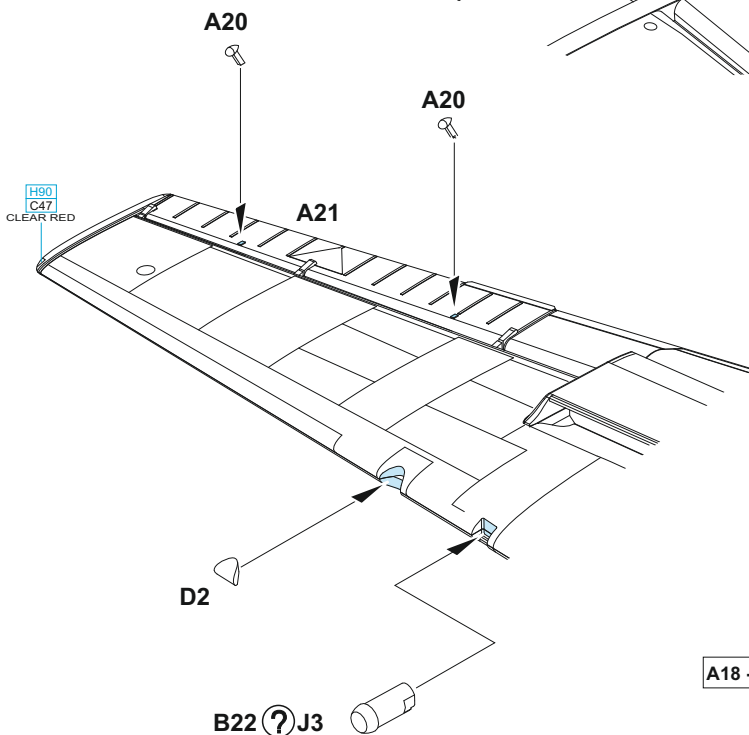
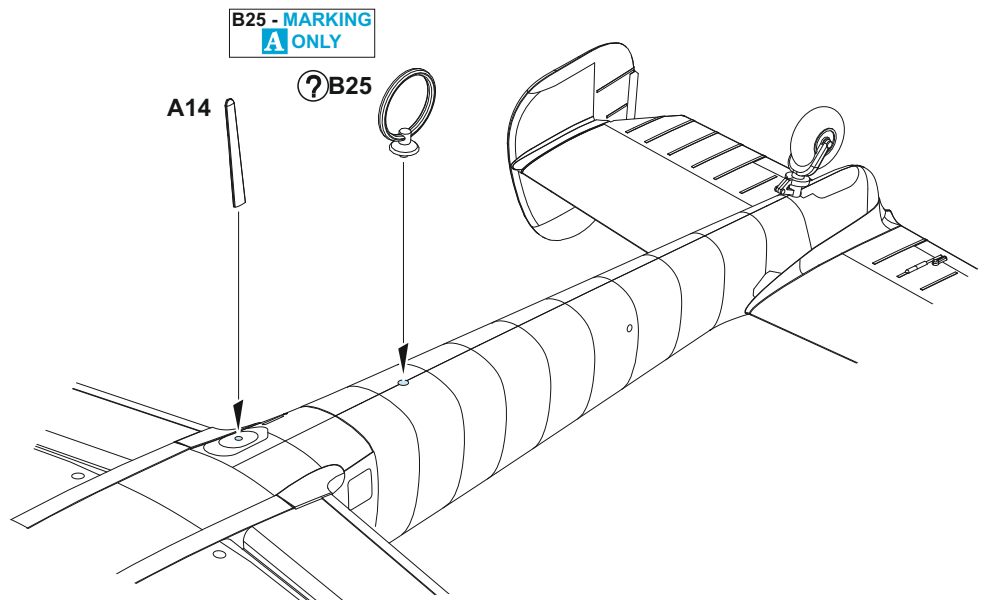
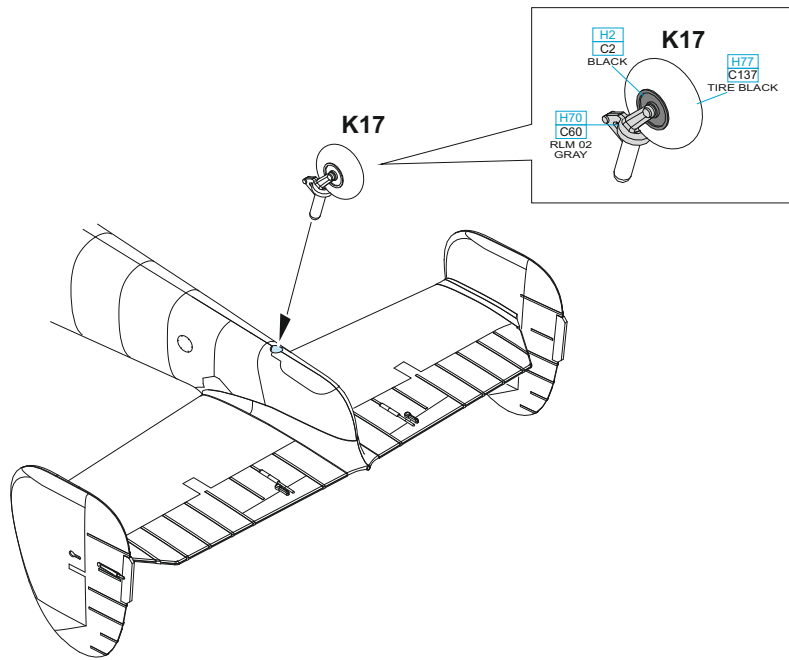


**SIDE VIEW**

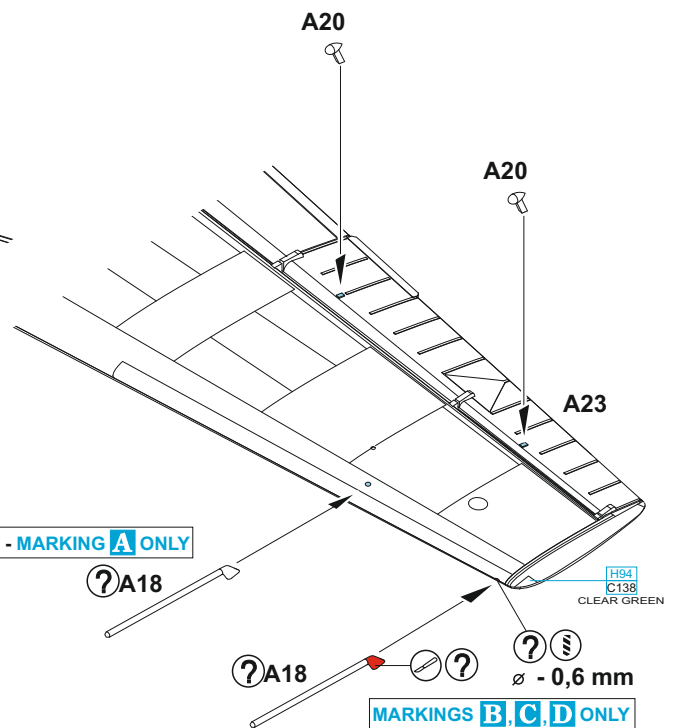
**REAR VIEW**



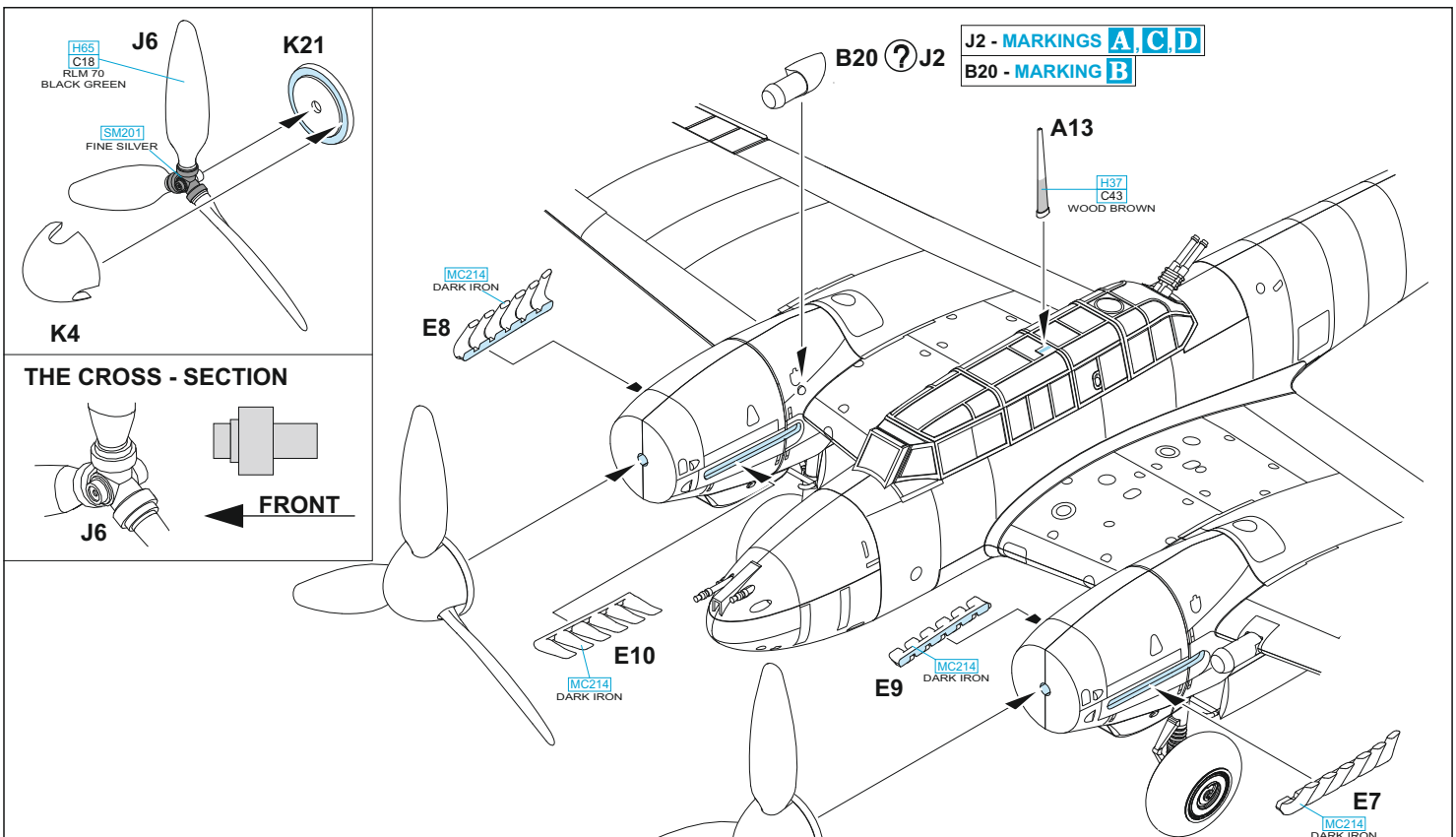




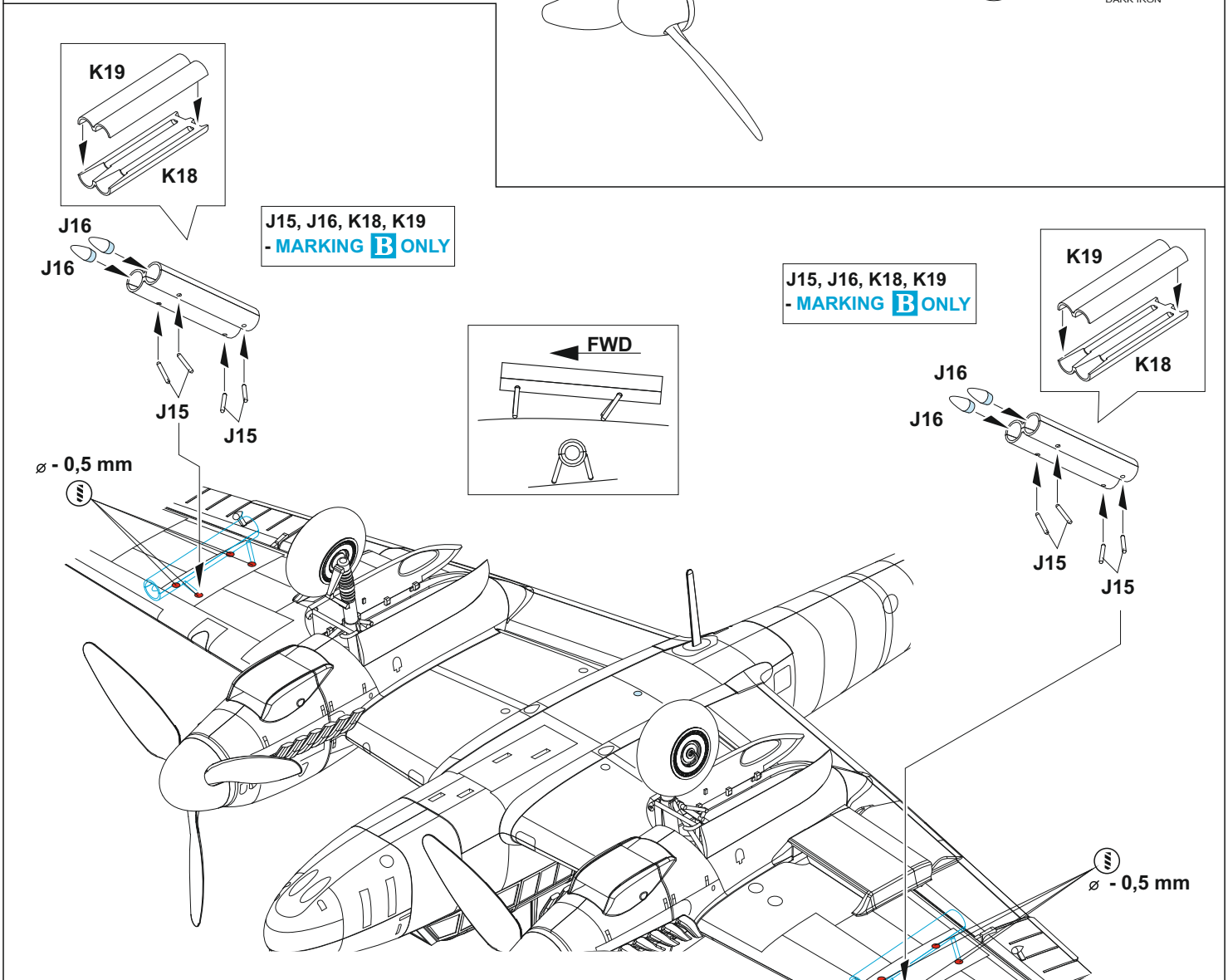
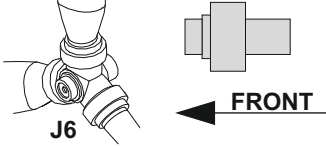
J3 - MARKINGS A, C, D  
B22 - MARKING B



A18 - MARKING A ONLY

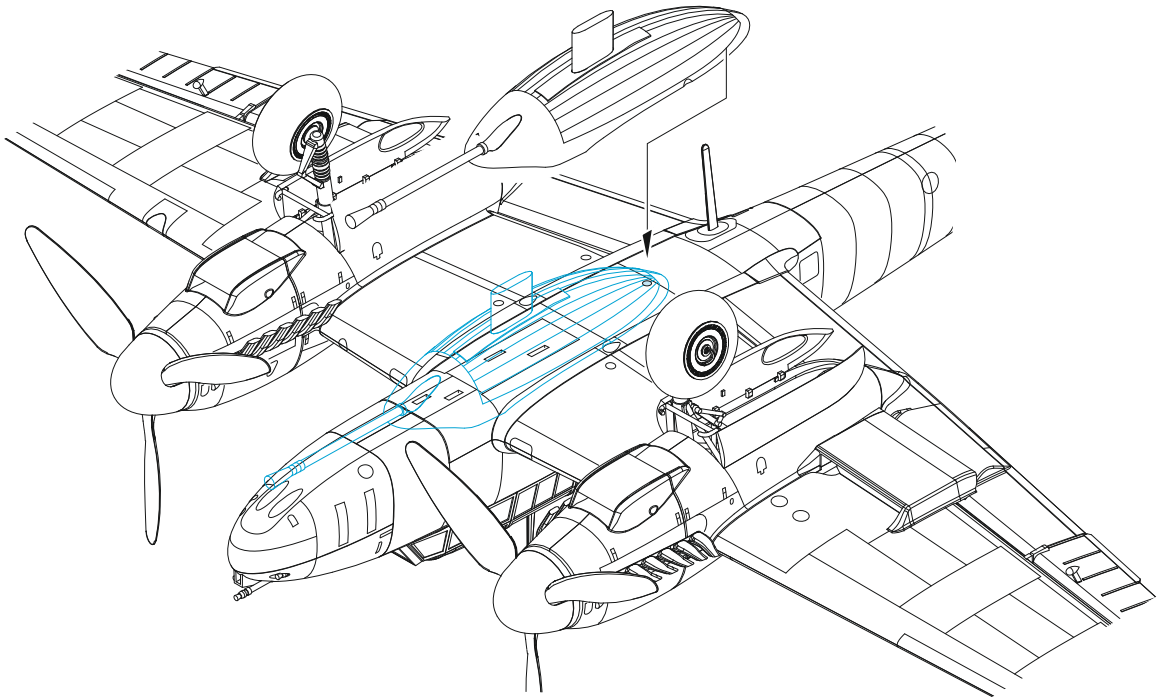
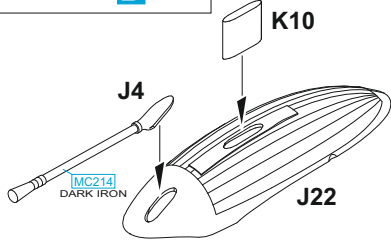


**THE CROSS - SECTION**

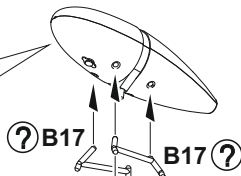
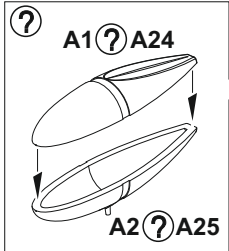


**FOR THE CORRECT POSITION OF THE ROCKET LAUNCHERS  
OPEN THE SHALLOW HOLES. THE POINTS TO OPEN ARE  
MARKED WITH NUTS EACH.**

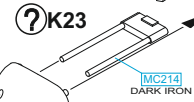
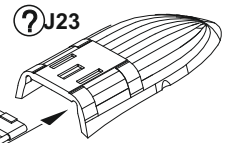
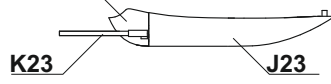
J4, K10, J22 -  
MARKINGS **D** ONLY



A1?A24, A2?A25, B17- MARKINGS **A, C** ONLY

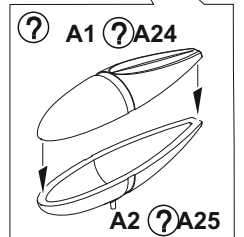
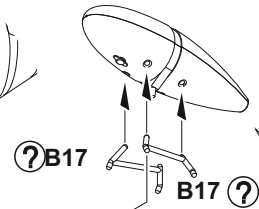
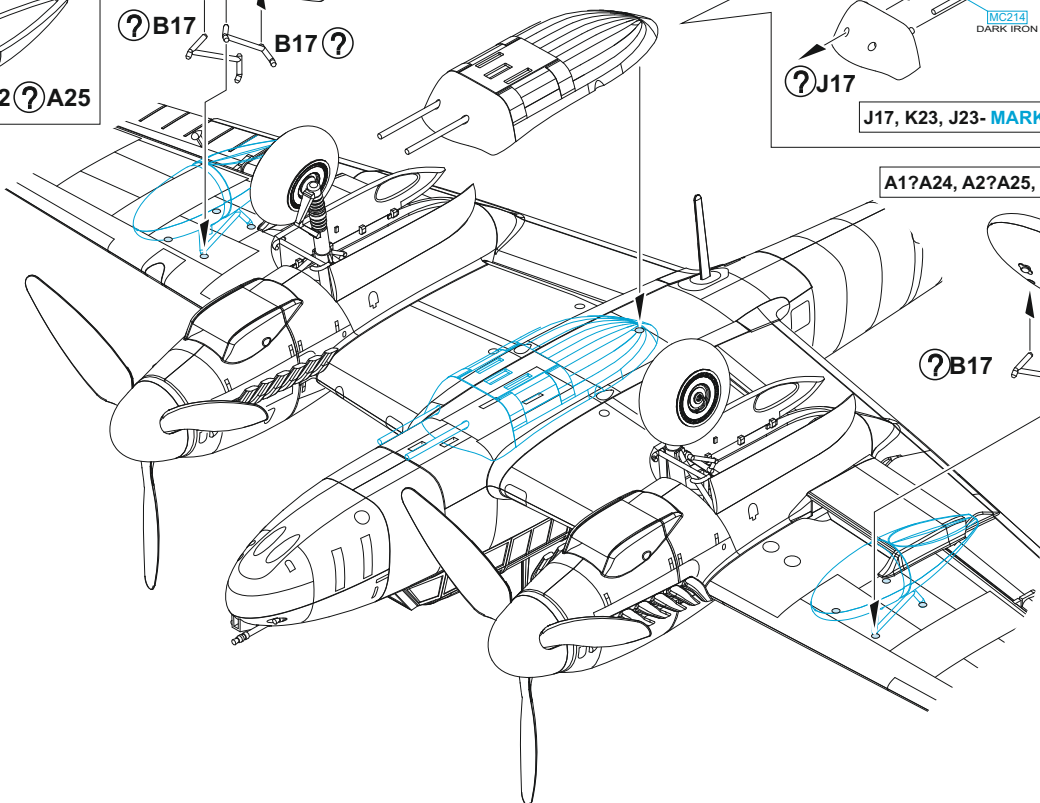


J17 CROSS SECTION



J17, K23, J23- MARKINGS **B, C** ONLY

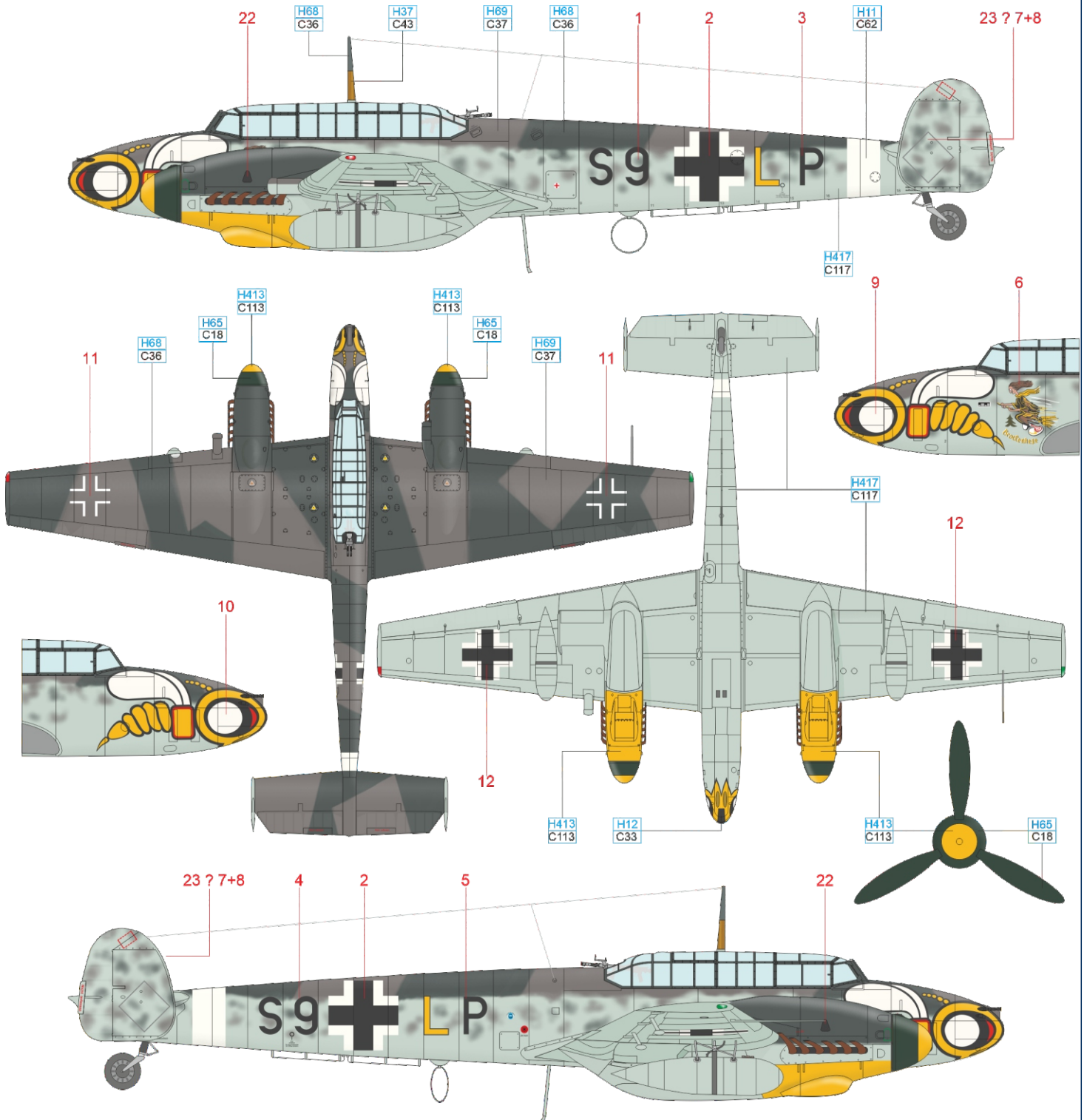
A1?A24, A2?A25, B17- MARKINGS **A, C** ONLY



# A Bf 110G-2/R7/M2, 6./ZG 1, Brest, France, August 1943

In August 1943, 6./ZG 1 moved from Sicily to Brest, France, where the unit was tasked with escorts of German submarines on their way across the Bay of Biscay to the Atlantic. The standard camouflage scheme of RLM 74/75/76 colors was darkened on the fuselage sides with patches of the same colors. The unit's emblem was a drawing of a wasp on the nose, additionally supplemented on the left side of the fuselage under the cockpit by a drawing of a witch on the S9+LP. The color of the 6. Staffel was yellow hence the aircraft code is yellow and the same applies to the color of the spinners. The aircraft had also a white stripe on the fuselage in front of the tail surfaces, which was a remnant of the unit's time on the Southern Front in Italy.

ČESKOU VERZI TEXTU NALEZNETE NA  
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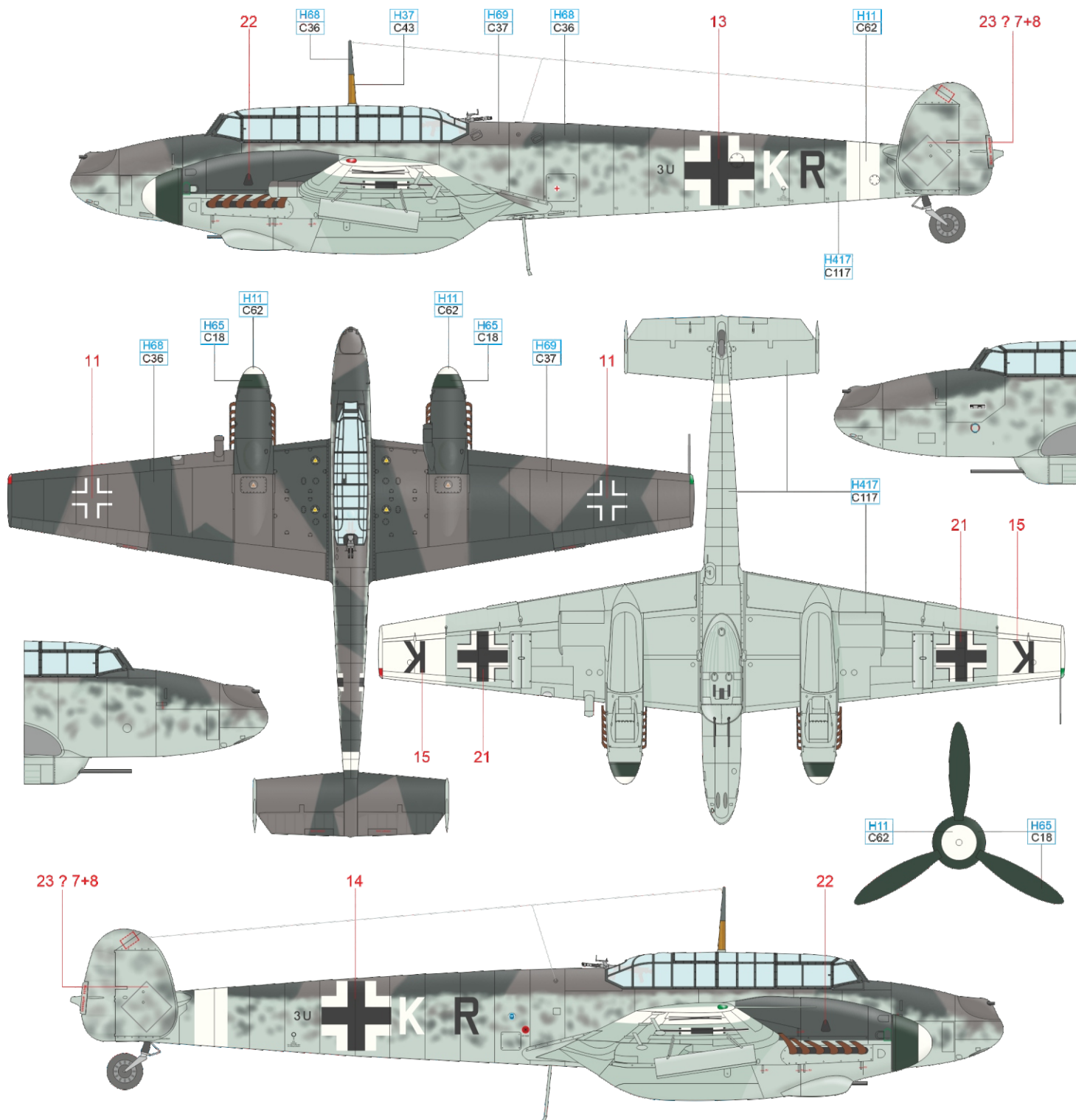


WHITE	H11 C62	BLACK	H12 C33
RLM 76	H417 C117	RLM 75	H69 C37
RLM 74	H68 C36	RLM 04	H413 C113
WOOD	H37 C43	RLM 70	H65 C18

# B Bf 110G-2/R3/M1/M5, 7./ZG 26, Fels am Wagram, Austria, May 1944

Due to the intensification of Allied air raids from Italy on the southern areas of the German Reich, 7./ZG 26 was relocated to Fels am Wagram airfield in May 1944. The unit's aircraft had the tips of the spinners and the third letter in the code painted white, which was the color of the 7. Staffel. The black code letter K was painted also on the bottom of the wingtips. The 3U+KR sported a white fuselage stripe in front of the tail surfaces and white bottom of wing tips. Both were the designation of aircraft operating on the southern front. Two MK 108 guns of 30 mm caliber mounted in the nose were the Rüstsätze 3 kit add ons. Additional armament were WGr. 42 rocket launchers under the wing.

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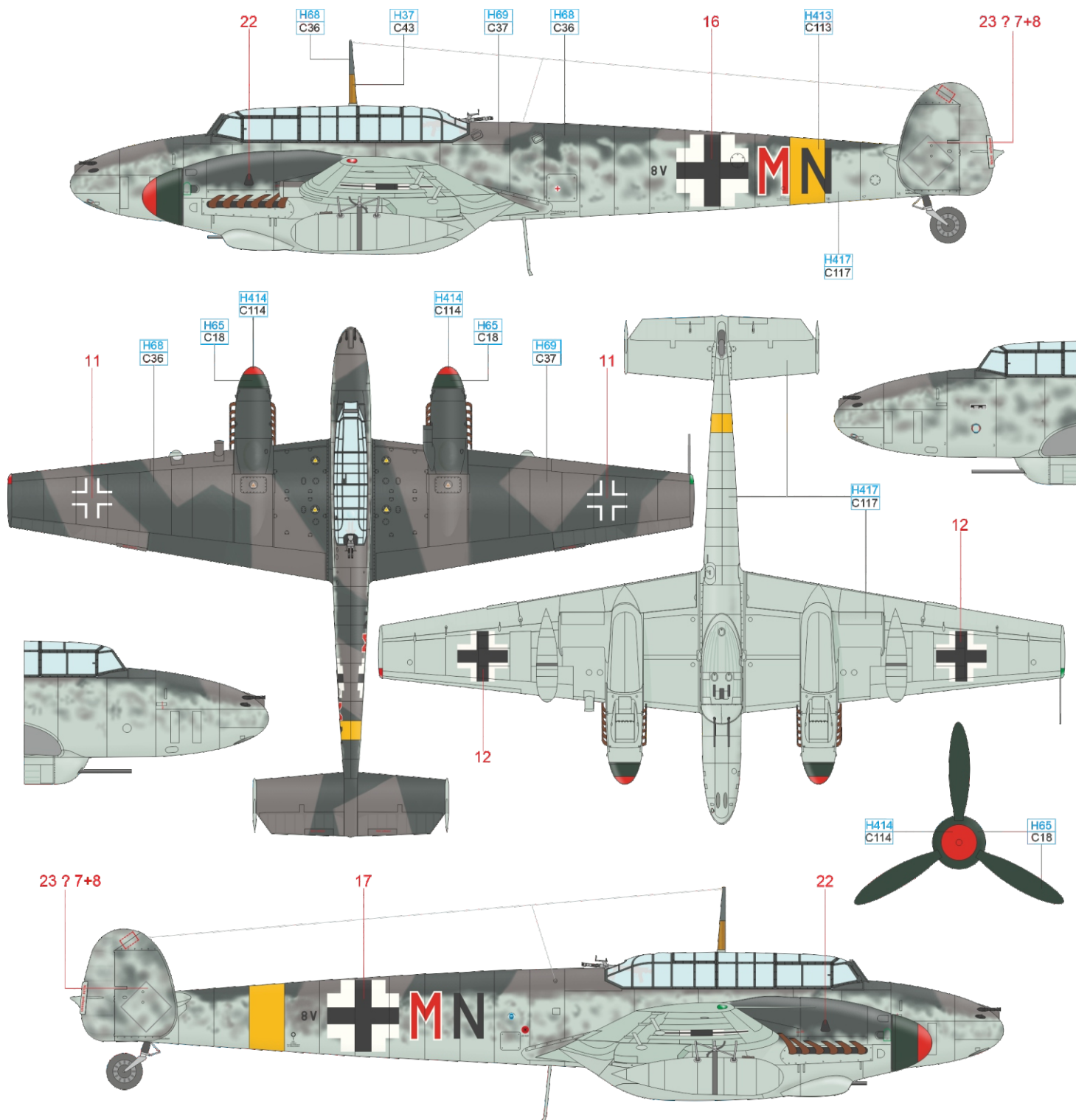


RLM 76	H417 C117	RLM 75	H69 C37	RLM 74	H68 C36	WHITE	H11 C62	WOOD	H37 C43	RLM 70	H65 C18
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# C Bf 110G-2/M1/R7, 5./NJG 200, Nikolayev, Soviet Union, September 1943

In September 1943, 5./NJG 200 was based on the airfield near the town of Nikolayev in Ukraine. The pilots were tasked with night interception of VVS (Soviet Air Force) aircraft. This machine was camouflaged with standard RLM 74/75/76 colors. The distinguishing color of 5. Staffel was red hence both the codes and the tips of the spinners were painted so. The aircraft had a yellow stripe on the fuselage in front of the tail surfaces, which was a distinguishing feature of machines operating on the Eastern Front and in the USSR.

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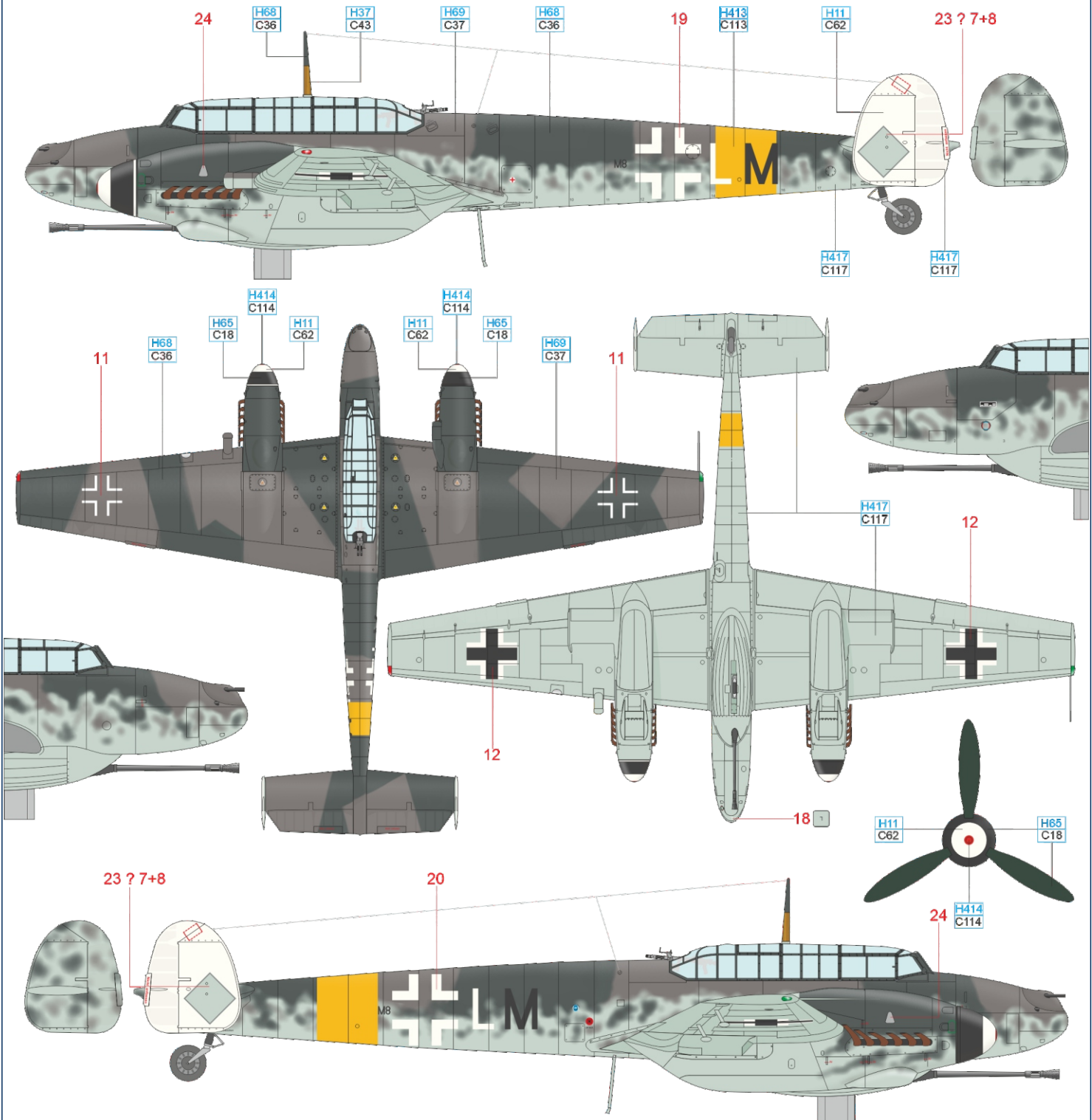
RLM 76 H417 C117 RLM 75 H69 C37 RLM 74 H68 C36 RLM 04 H413 C113 WOOD H37 C43 RLM 70 H65 C18 RLM 23 H414 C114

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# D Bf 110G-2/R1, 4./ZG 76, Wertheim, Germany, October 1943

Dispersed Zerstörer units were called up from all over Eastern Europe and the Mediterranean to be incorporated into the defense of the Reich. ZG 76 was rebuilt in southern Germany with the use of the personnel of training and reconnaissance units and ZG 76 stayed there through the winter of late 1943/44. Its aircraft were armed with a 37 mm BK 3.7 cannon under the fuselage and WGr. 42 rockets to scatter American bomber formations. On October 4, 1943, the American Eighth Air Force attacked targets in Frankfurt am Rhein. II./ZG 76 encountered the stream of bombers alone and shot down four American bombers. But they encountered the American 56<sup>th</sup> Fighter Group afterwards and without their own fighter escort nine Bf 110s were shot down in the ensuing battle. Eleven of the downed crews were killed and seven wounded. The introduction of the American long-range fighter escort meant a large increase in losses for the Zerstörgeschwader units. In November 1944, 4./ZG 76 was disbanded and its pilots were retrained on the Bf 109, subsequently transferred to the 9./JG 54 fighter unit.

ČESKOU VERZI TEXTU NALEZNETE NA  
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WHITE	H11 C62
RLM 76	H417 C117
RLM 75	H69 C37
RLM 74	H68 C36
RLM 04	H413 C113
WOOD	H37 C43
RLM 70	H65 C18
RLM 23	H414 C114

