



**The Bf 110 served throughout the war as fighter, attacker or night fighter. Although not so maneuverable as single engine fighters, it was capable multirole aircraft.**

It was in 1934 when the Reich Ministry of Aviation (RLM, Reichsluftfahrtministerium) issued a request for a new twin engine heavy fighter capable to successfully dogfight 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 Luftwaffe commander, was the "heavy weight" behind the concept and strong proponent of the new Kampfzerstörer (Combat Destroyer).

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 (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. Now, with the focus on the attack capabilities, the sleek design of Bf 110 was superior in speed and range to its opponents, the Fw 57 and Henschel Hs 124.

#### 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 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. The design team reworked the engine nacelles to adapt DB 601B-1 engines, when 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.

The F version might well be the last of 110s, but in the wake of the failure of the Me 210, the Bf 110G was designed. It was fitted with DB 605B engines, developing up to 1,475 PS (1,085 kW). It had also upgraded nose armament and underwent some aerodynamical changes. There were many field conversion packs (Rüstsätze) developed, making the G version the most versatile of all Bf 110s. The most numerous of all G versions was the G-4 three-seat night fighter (2,293 built).

#### 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. 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 rearward firing self-defense weapon operated by gunner.

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. Many Bf 110G night fighters were retrofitted or factory-fitted with the Schräge Musik, the guns firing upward at an oblique angle for shooting down bombers while passing underneath.

#### This kit: Bf 110E

In mid-1940 the Bf 110E fighter bomber (Zerstörer Jabo) was developed. It was capable to carry four 110 lb (50 kg) ETC 50 racks under the wing along with the centerline ETC 500 rack. Initially, the Bf 110 E-1 was powered by the DB 601B engine, but the production switched to the DB 601P when they became available. The E version had upgraded armor and reinforced fuselage in order to counter the added weight. And it was the added weight what proved troublesome. Pilots considered this version too slow with unresponsive controls. A total of 856 Bf 110E were built between August 1940 and January 1942.

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 \* 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  
NABARVIT

PARTS



DÍLY



TEILE



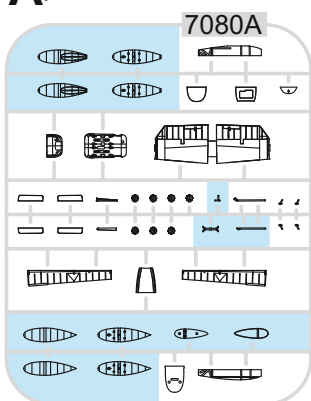
PIÈCES



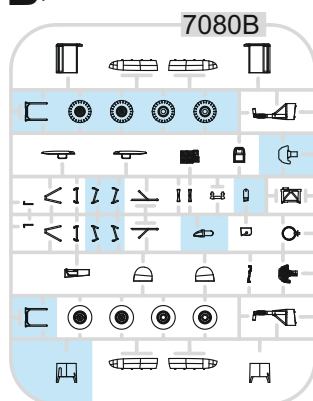
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## PLASTIC PARTS

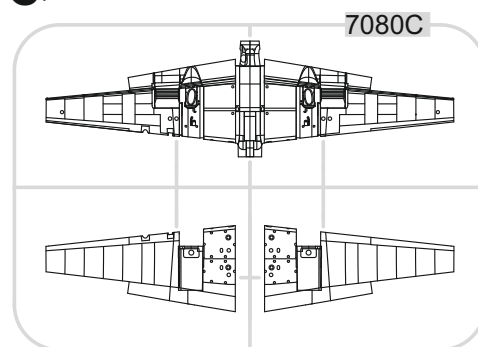
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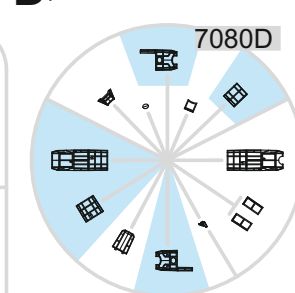
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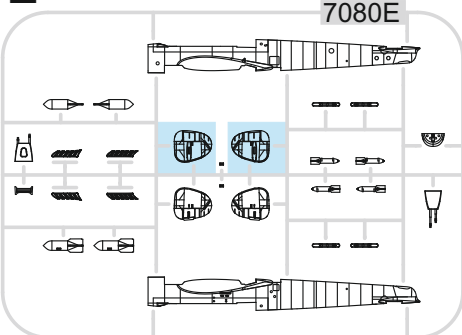
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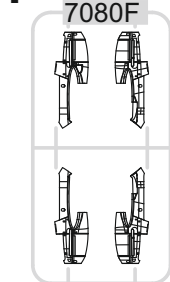
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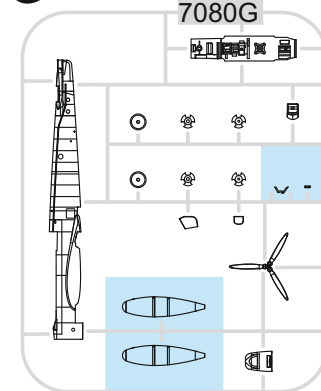
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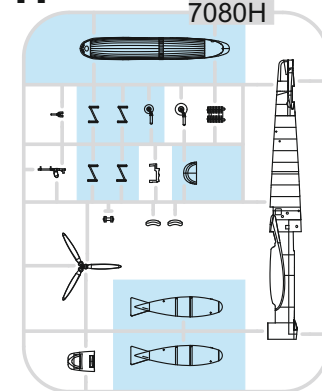
F&gt;



G&gt;



H&gt;



-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



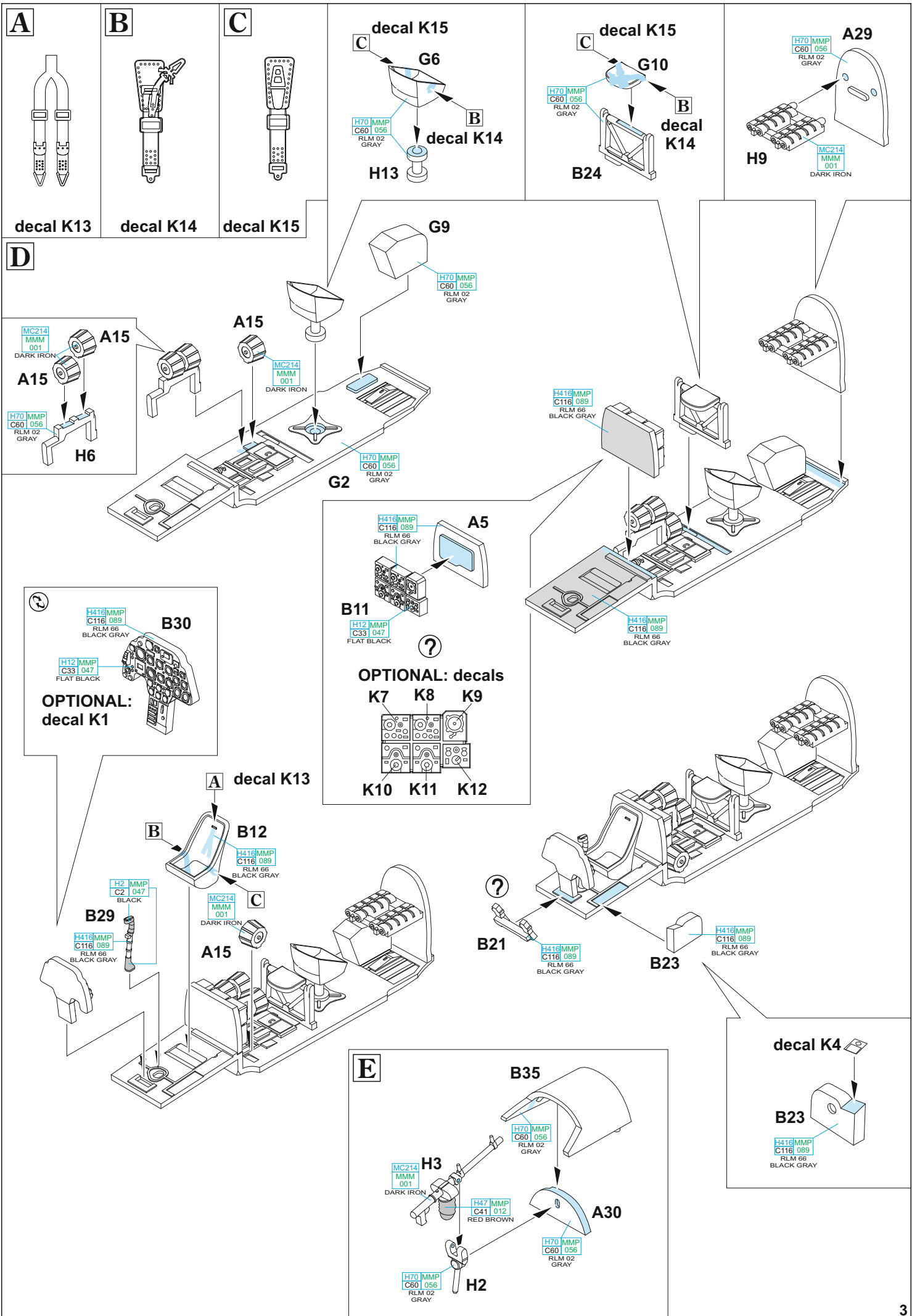
PEINTURE



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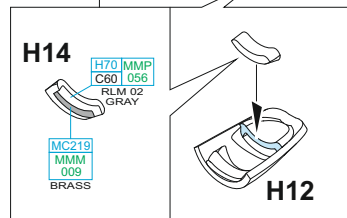
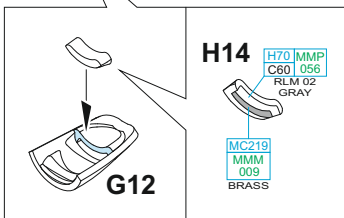
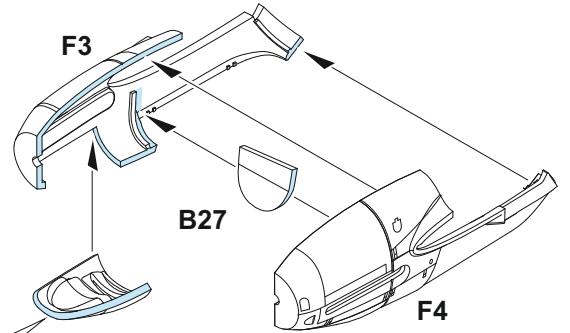
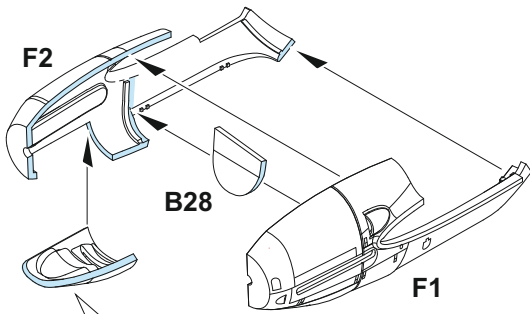
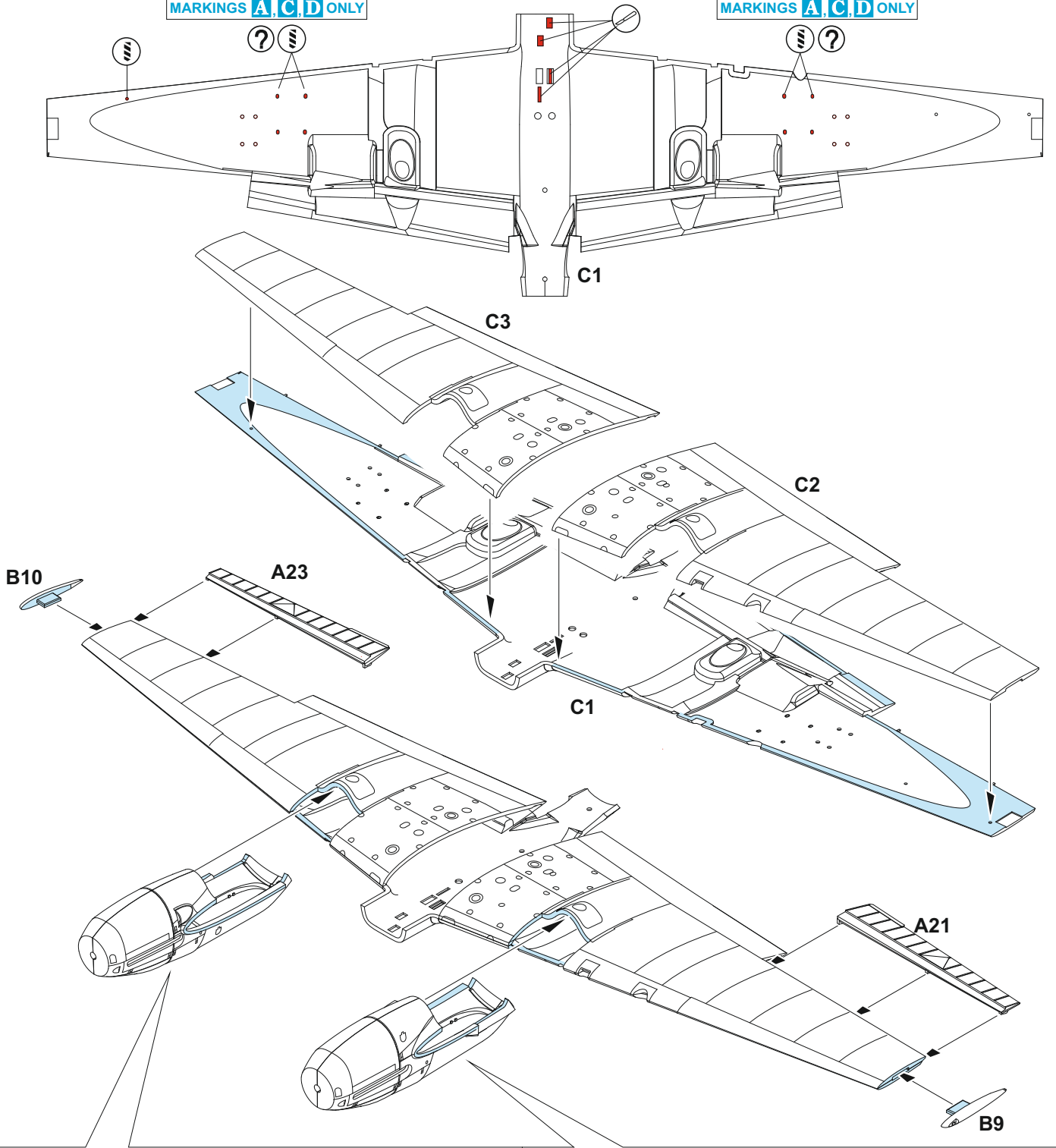
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AQUEOUS	Mr.COLOR	PAINTS	
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<a href="#">H11</a>	<a href="#">C62</a>	<a href="#">MMP-001</a>	FLAT WHITE
<a href="#">H12</a>	<a href="#">C33</a>	<a href="#">MMP-047</a>	FLAT BLACK
<a href="#">H37</a>	<a href="#">C43</a>		WOOD BROWN
<a href="#">H47</a>	<a href="#">C41</a>	<a href="#">MMP-012</a>	RED BROWN
<a href="#">H64</a>	<a href="#">C17</a>	<a href="#">MMP-087</a>	RLM71 DARK GREEN
<a href="#">H65</a>	<a href="#">C18</a>	<a href="#">MMP-088</a>	RLM70 BLACK GREEN
<a href="#">H67</a>	<a href="#">C115</a>	<a href="#">MMP-057</a>	RLM65 LIGHT BLUE
<a href="#">H68</a>	<a href="#">C36</a>	<a href="#">MMP-049</a>	RLM74 DARK GRAY
<a href="#">H69</a>	<a href="#">C37</a>	<a href="#">MMP-050</a>	RLM75 GRAY
<a href="#">H70</a>	<a href="#">C60</a>	<a href="#">MMP-056</a>	RLM02 GRAY
<a href="#">H77</a>	<a href="#">C137</a>	<a href="#">MMP-040</a>	TIRE BLACK

GSI Creos (GUNZE)		MISSION MODELS	
AQUEOUS	Mr.COLOR	PAINTS	
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<a href="#">H90</a>	<a href="#">C47</a>		CLEAR RED
<a href="#">H94</a>	<a href="#">C138</a>		CLEAR GREEN
<a href="#">H413</a>	<a href="#">C113</a>	<a href="#">MMP-090</a>	RLM04 YELLOW
<a href="#">H414</a>	<a href="#">C114</a>	<a href="#">MMP-003</a>	RLM23 RED
<a href="#">H416</a>	<a href="#">C116</a>	<a href="#">MMP-089</a>	RLM66 BLACK GRAY
<a href="#">H417</a>	<a href="#">C117</a>	<a href="#">MMP-051</a>	RLM76 LIGHT BLUE
Mr.METAL COLOR		METALLICS	
<a href="#">MC214</a>		<a href="#">MMM-001</a>	DARK IRON
<a href="#">MC219</a>		<a href="#">MMM-009</a>	BRASS
Mr.COLOR SUPER METALLIC		METALLICS	
<a href="#">SM201</a>		<a href="#">MMC-001</a>	SUPER FINE SILVER 2

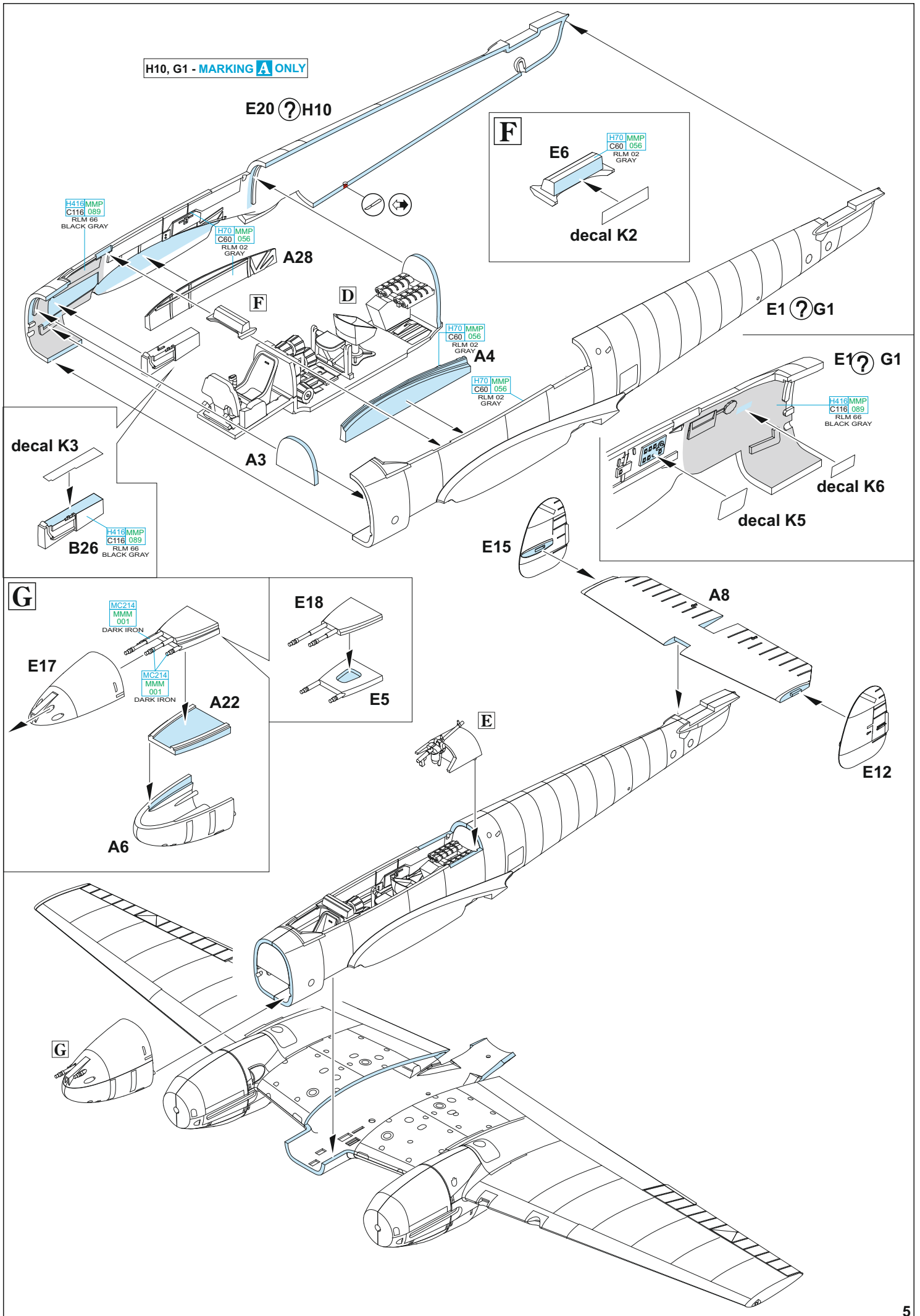


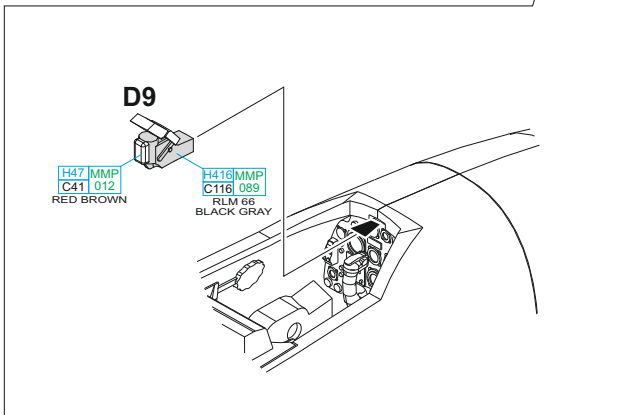
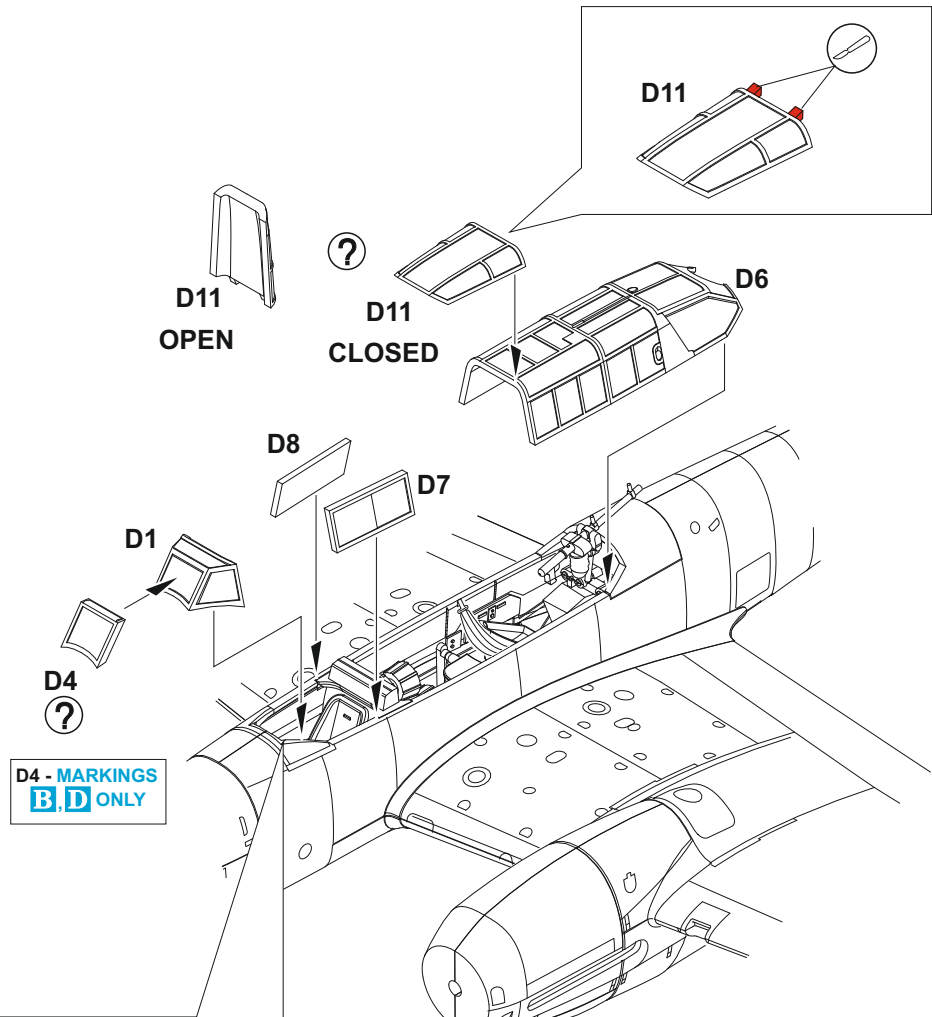
MARKINGS A, C, D ONLY

MARKINGS A, C, D ONLY

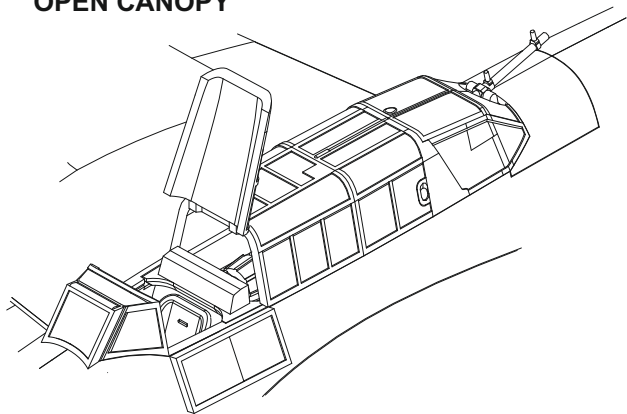


H10, G1 - MARKING A ONLY



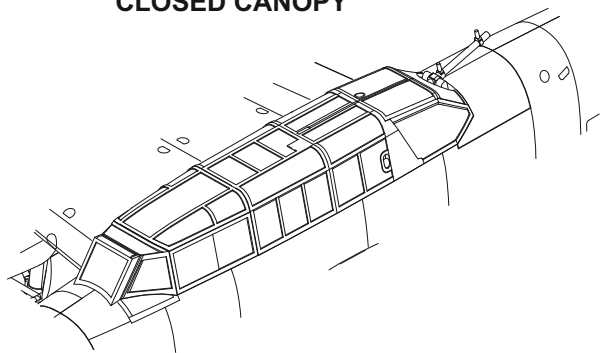


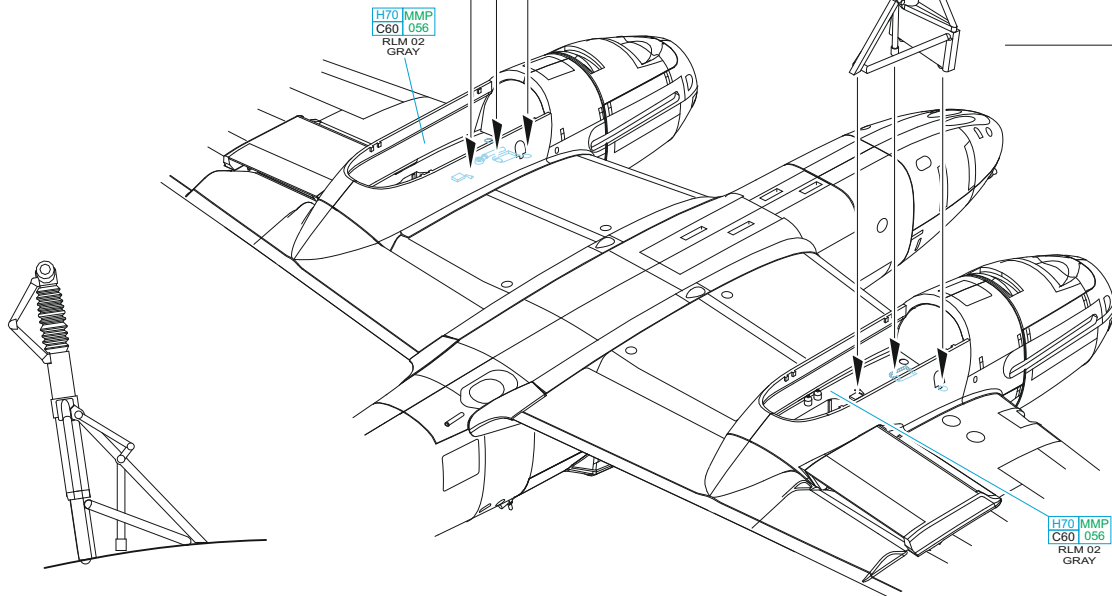
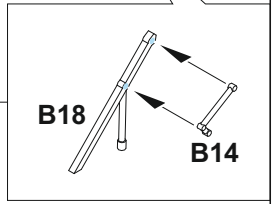
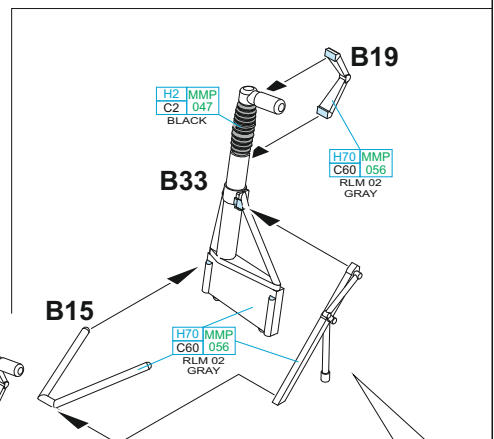
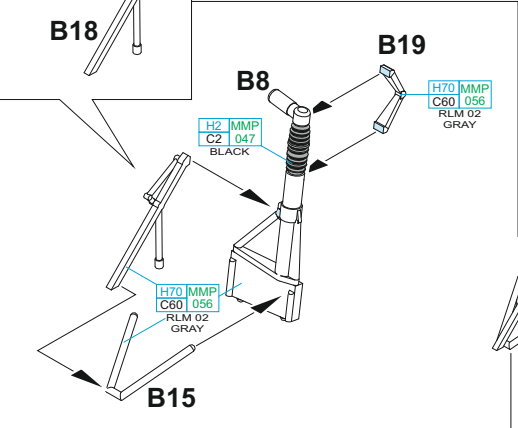
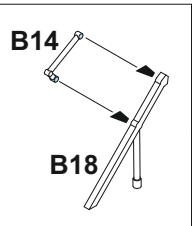
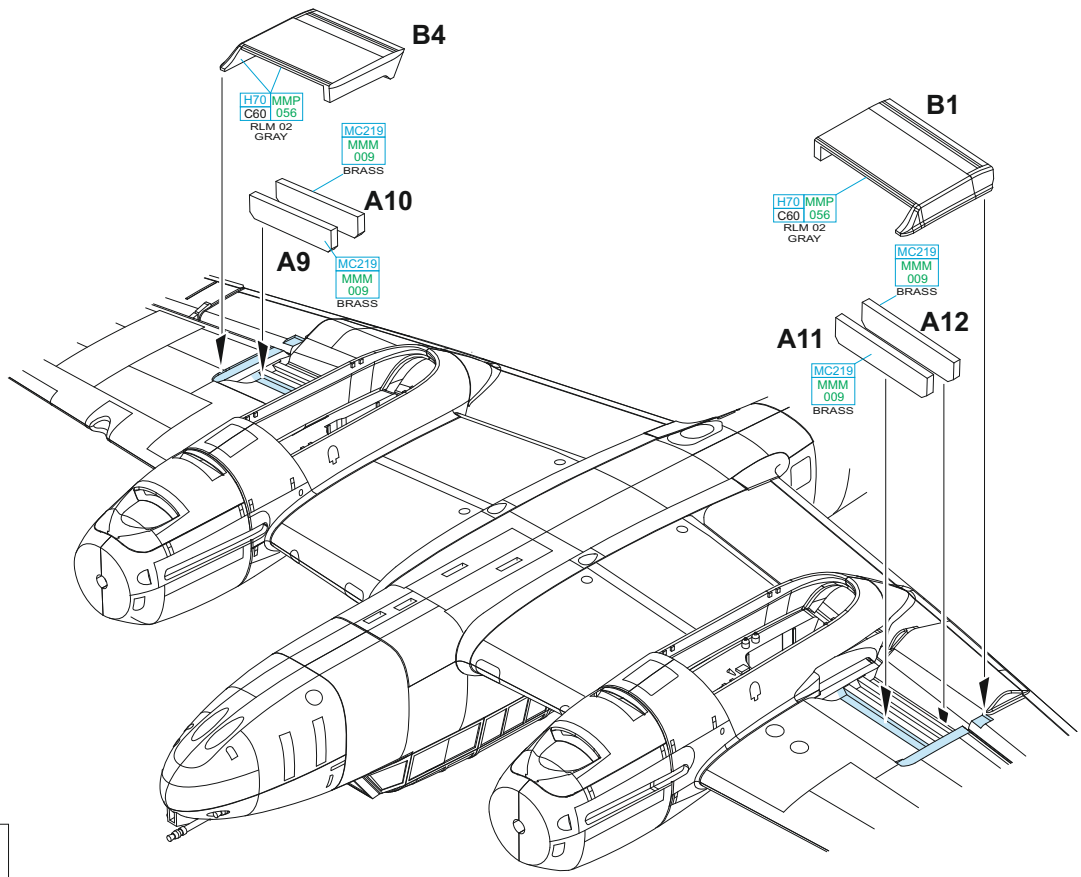
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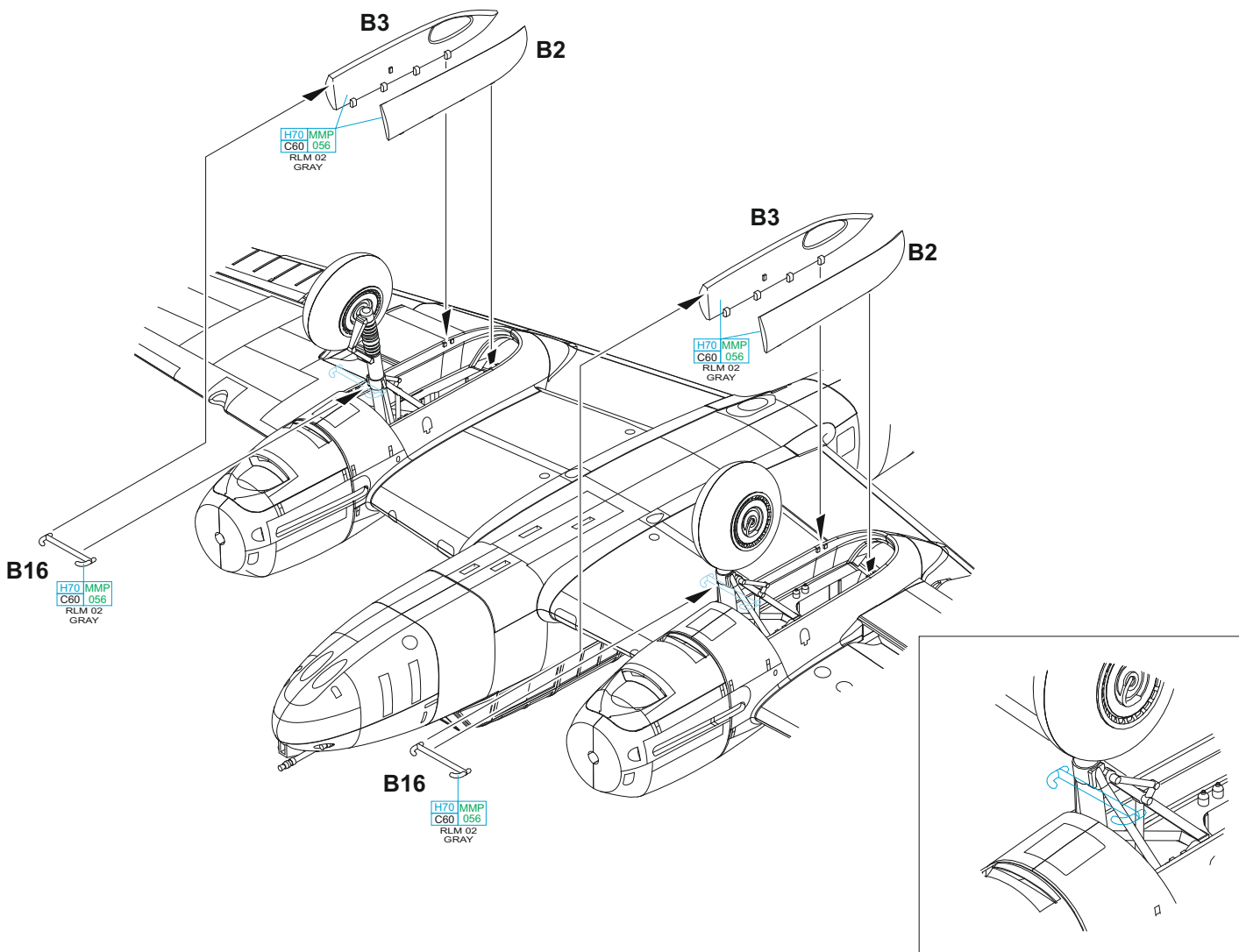
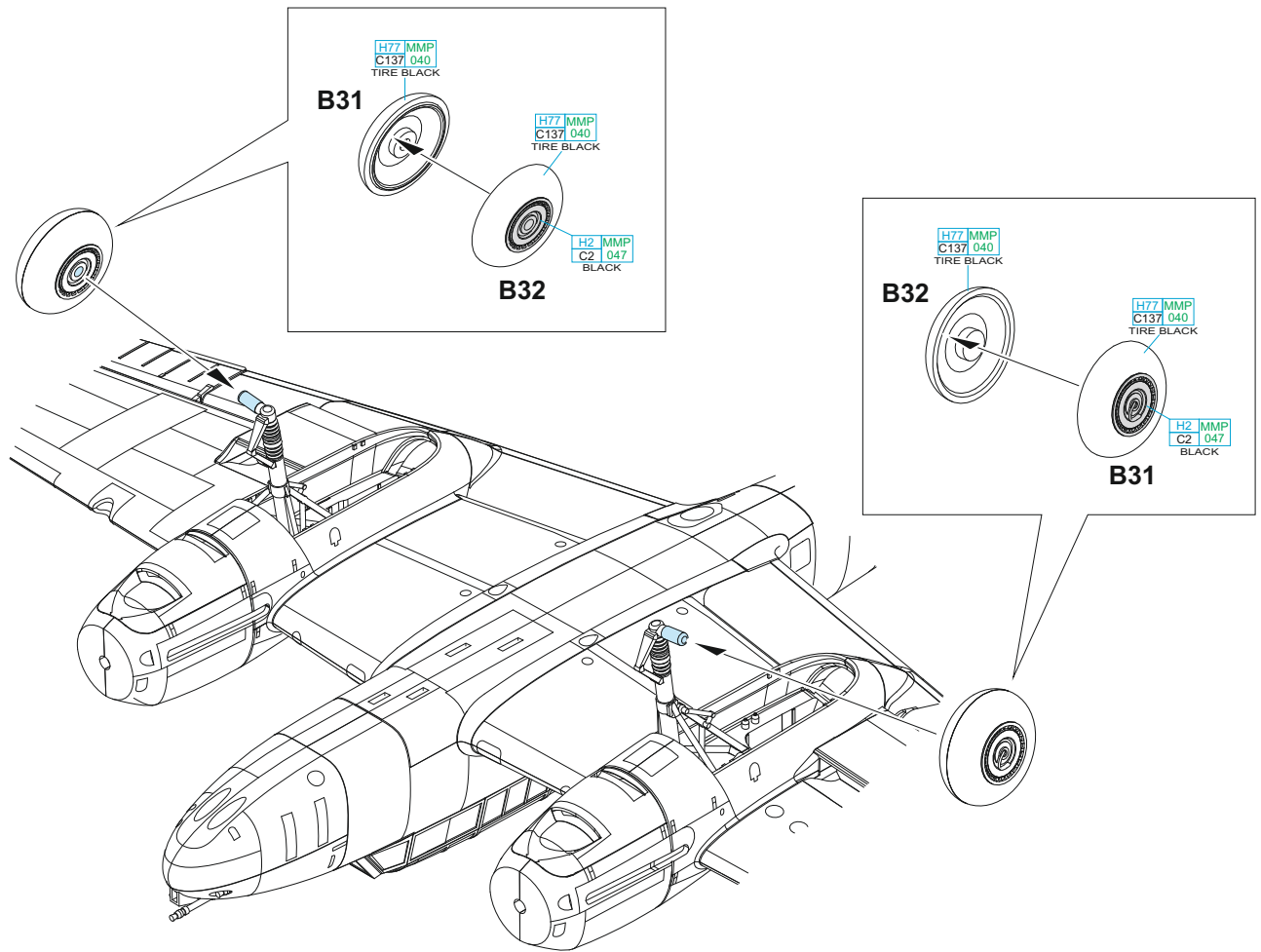
**CLOSED CANOPY**





**SIDE VIEW**

**REAR VIEW**

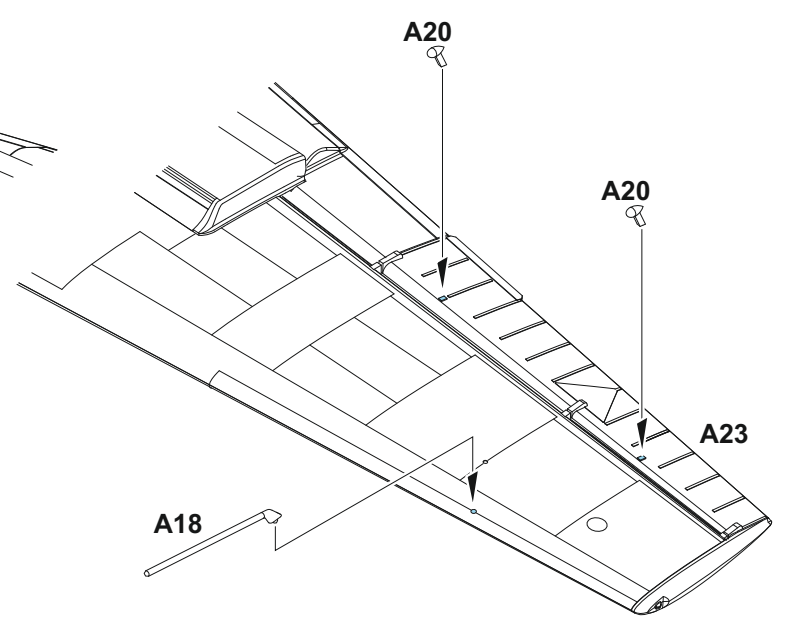
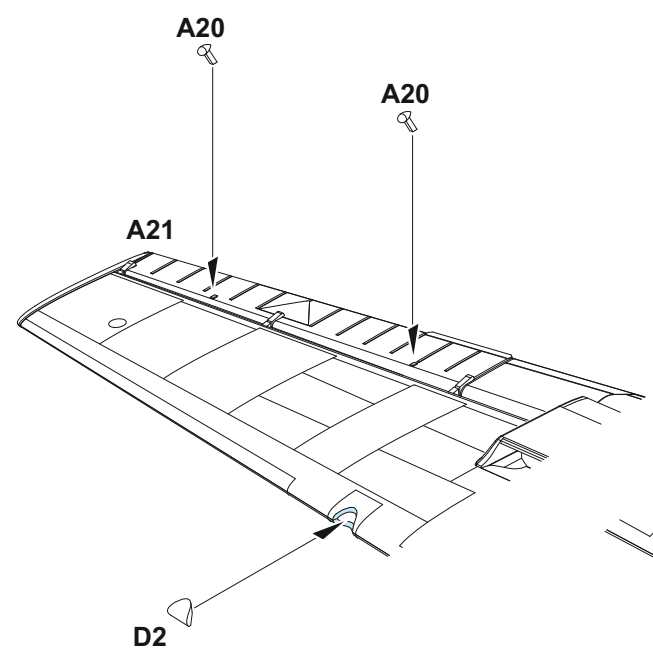
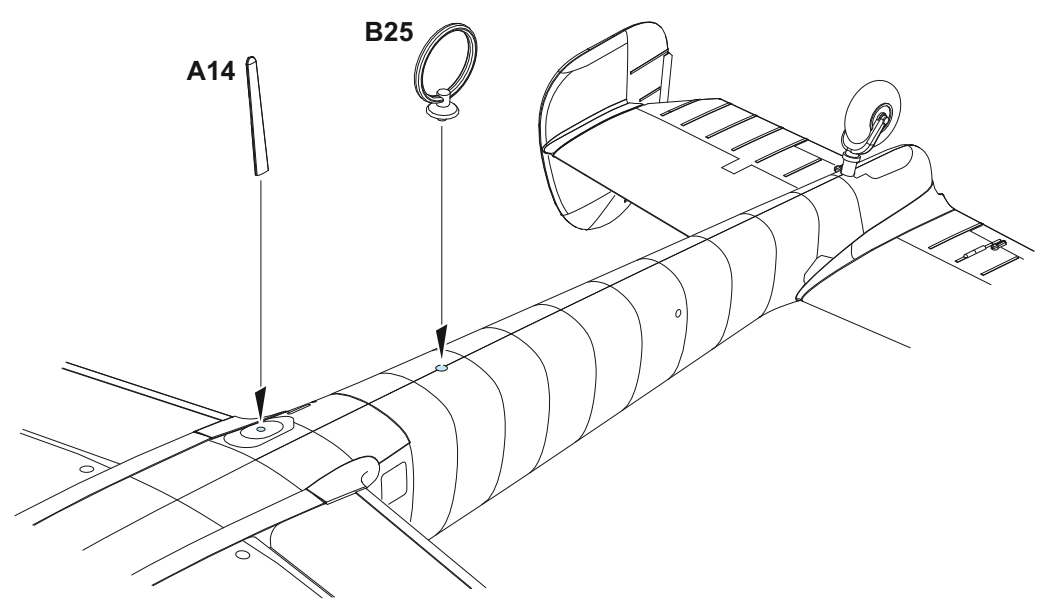
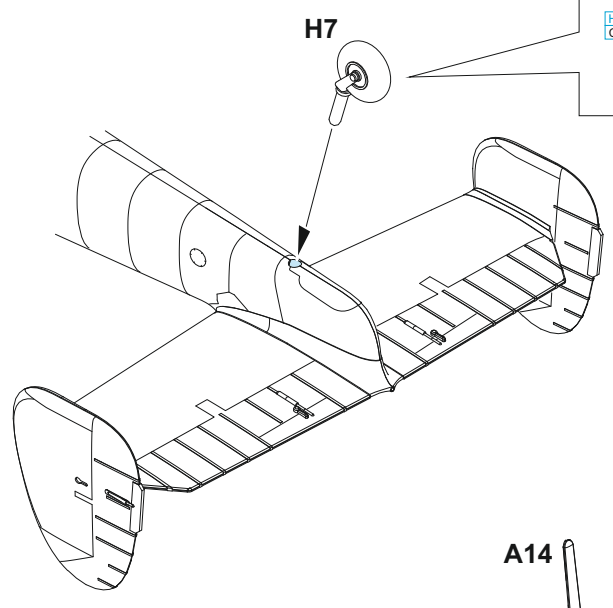


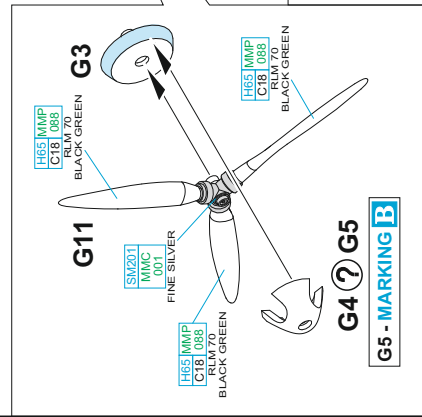
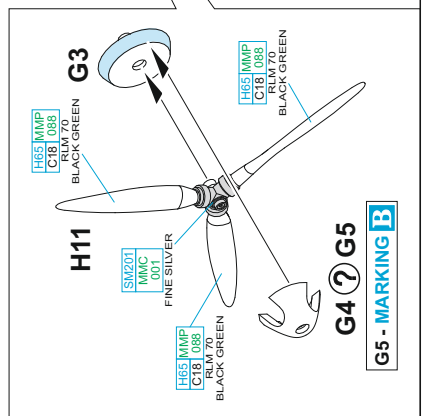
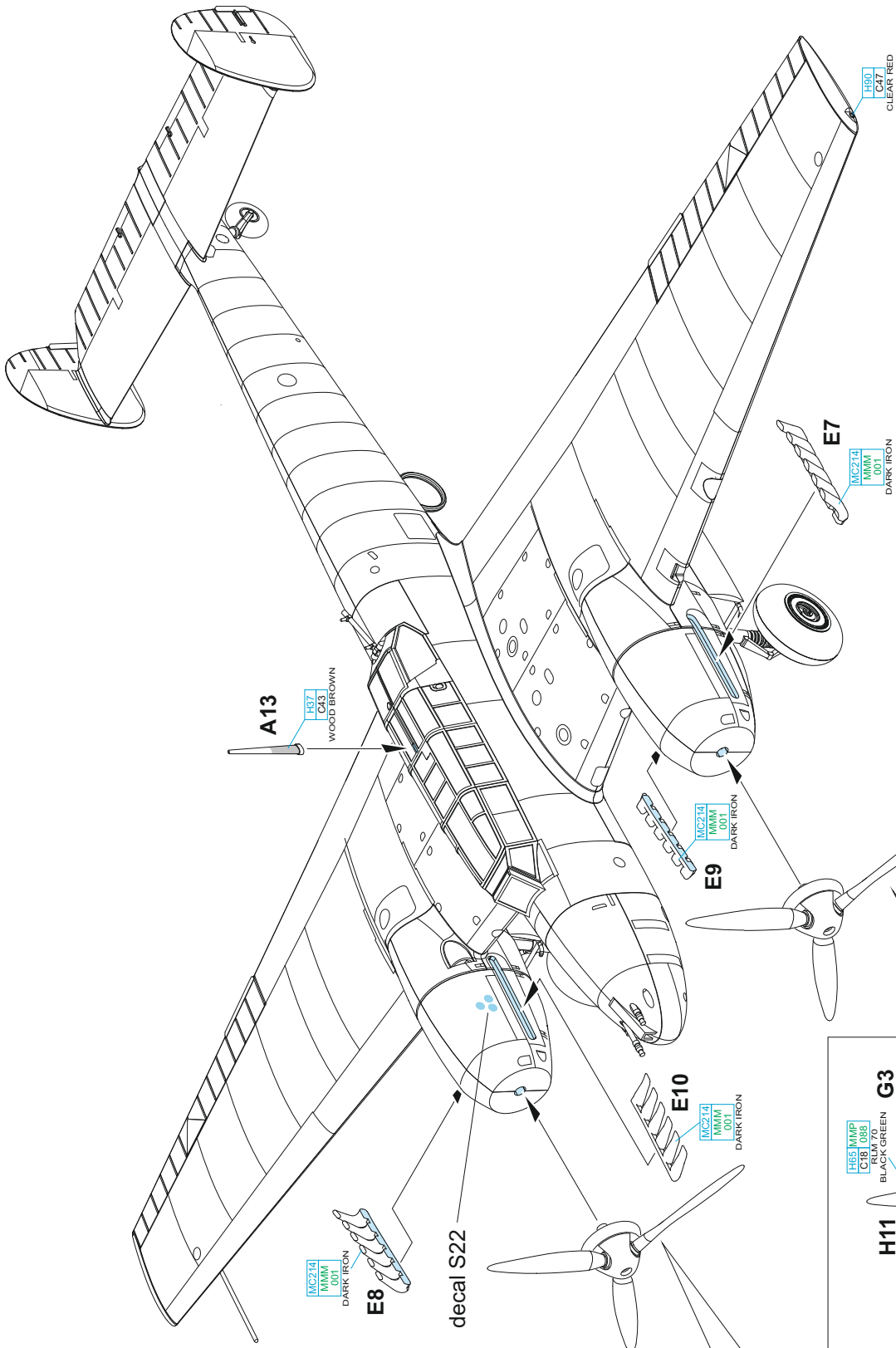


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H70 MMP	C60 056	

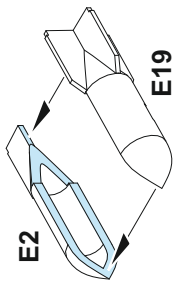
**H7**

H77 MMP	C137 040	TIRE BLACK
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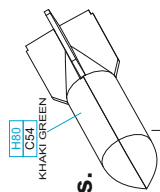


**H** 2 pcs.



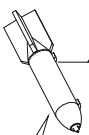
**E2**

2 pcs.



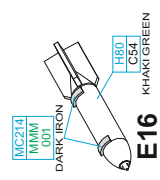
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2 pcs.



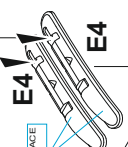
**E3**

UNPAINTED SURFACE  
COLOR



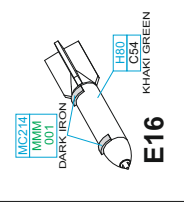
**E16**

2 pcs.

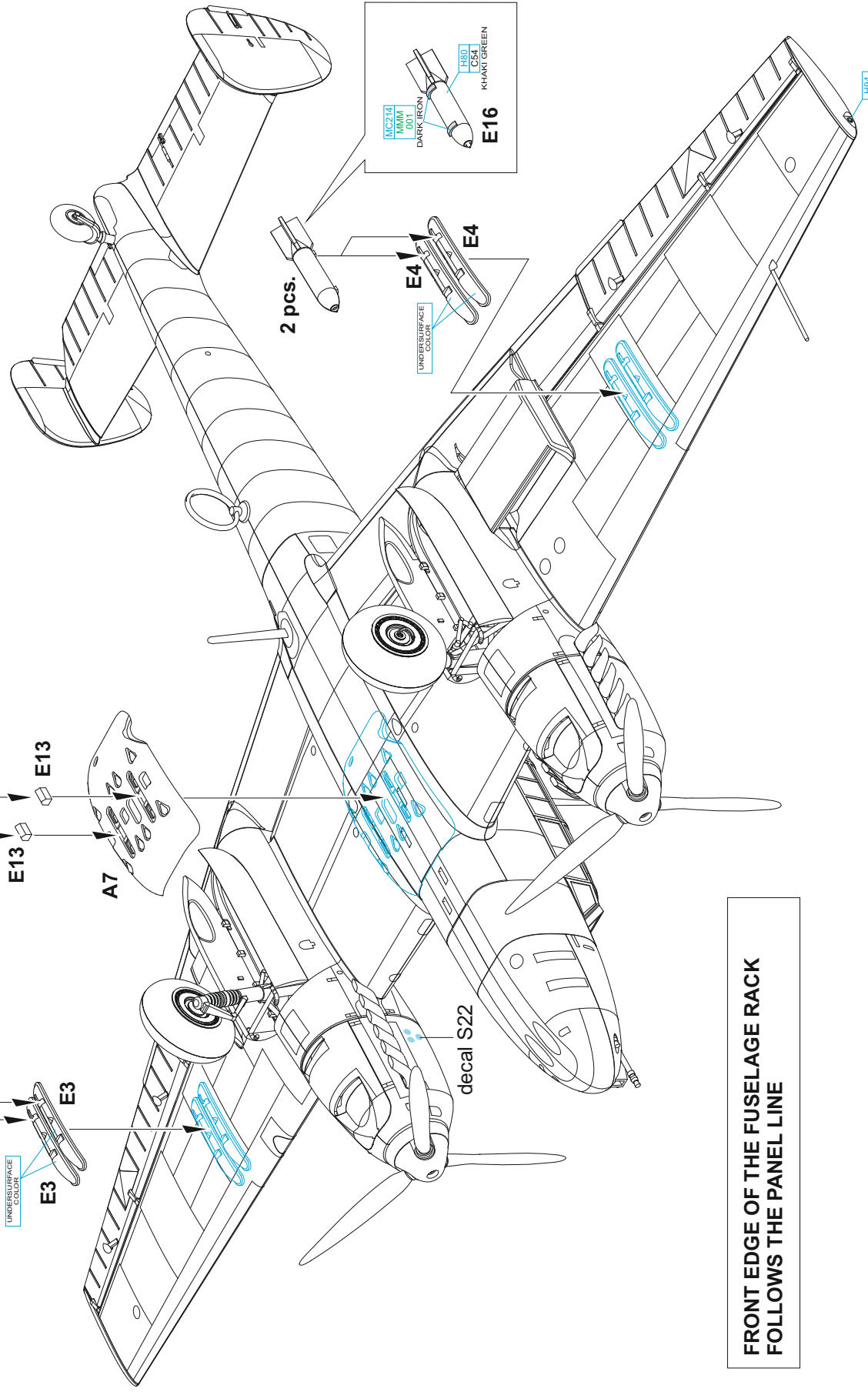


**E4**

UNPAINTED SURFACE  
COLOR



**E16**

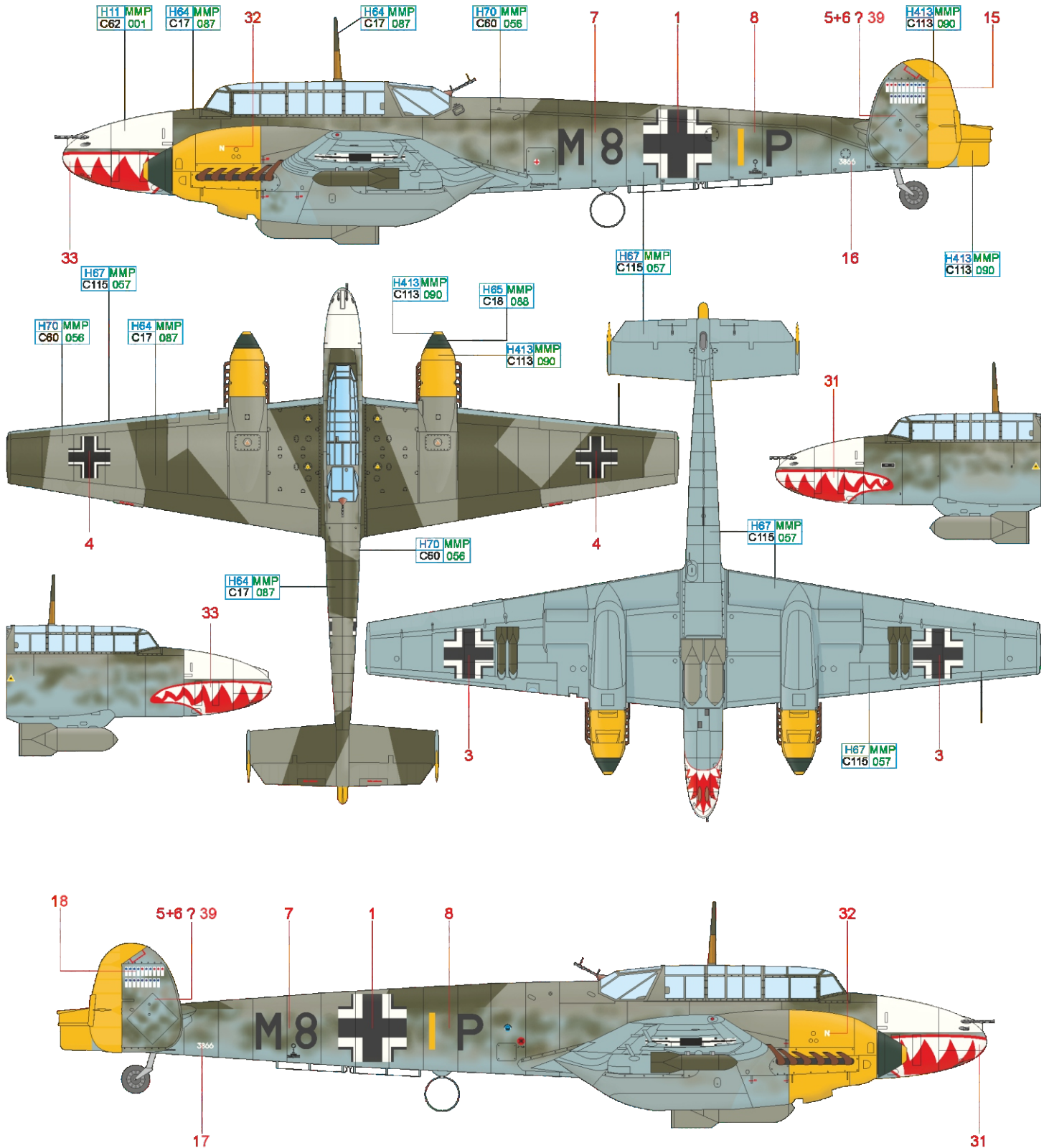


**FRONT EDGE OF THE FUSELAGE RACK  
FOLLOWS THE PANEL LINE**

**H94**  
**CT38**  
CLEAR GREEN

In the end of 1941, the II. Gruppe ZG 76 including Oblt. Hans-Joachim Jabs, commander of 6./ZG 76, transferred from Germany to Balkans in order to support the invasion of Crete. The Battle of Crete started on May 20, 1941 and lasted until June 1, 1941. During this period the crew of Oblt. Hans-Joachim Jabs and Oblt. Erich Weissflog flew Bf 110E WNr. 3866 coded M8+IP. The lower part of the aircraft nose sported the shark mouth while the weapons upper cover was painted white. The propeller spinner tips and letter "I" were painted yellow, which was the color of 6. Staffel. Yellow paint on the front of the engine nacelles, rudders and the fuselage tail were the Balkans campaign markings. Jabs' 6. Staffel was typically tasked with ground targets and Allied shipping attacks on Crete. The dogfights were rare.

ČESKOU VERZI TEXTU NALEZNETE NA  
**www.eduard.com**  
POD KATALOGOVÝM ČÍSLEM 7464



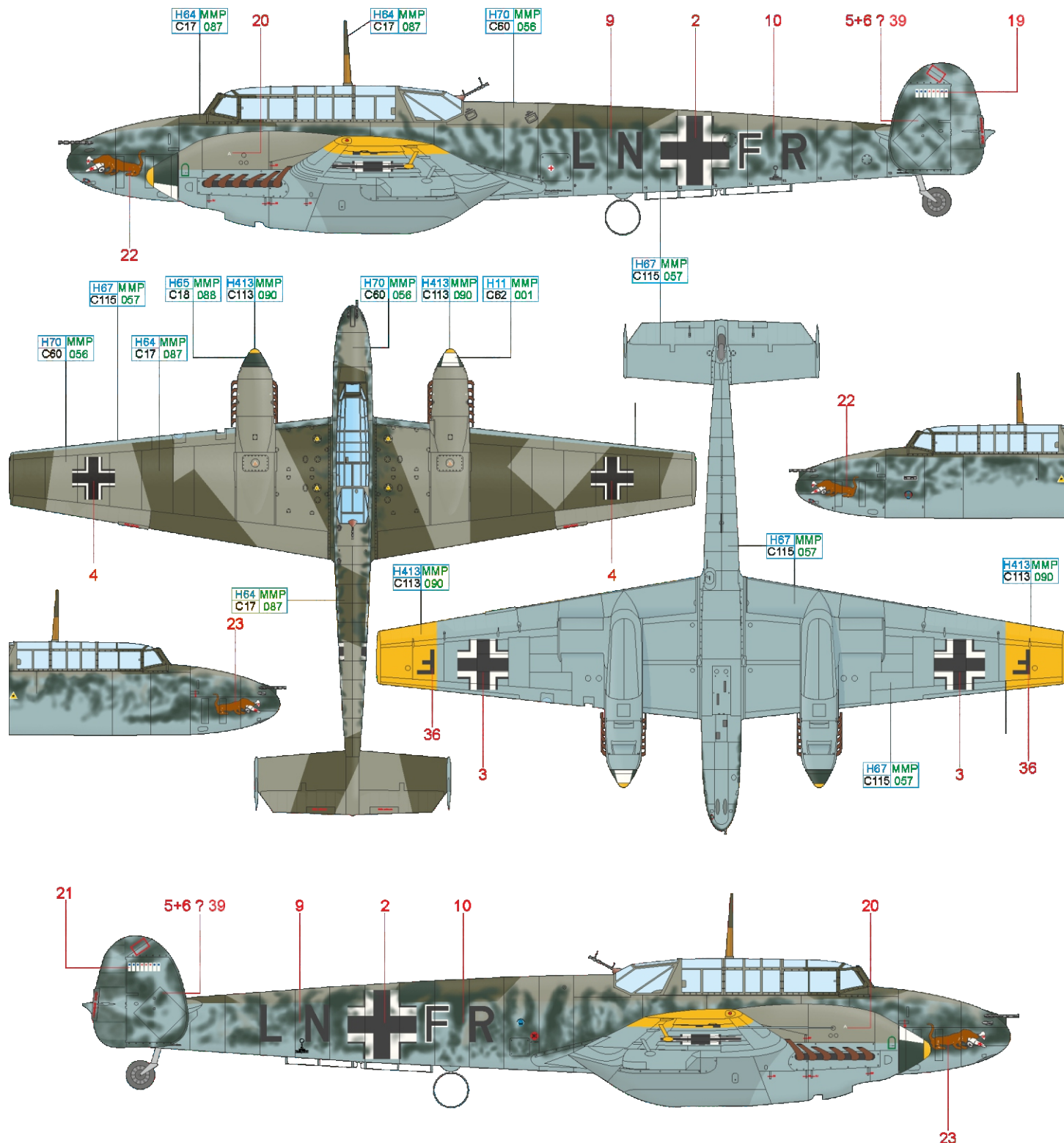
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RLM 65	H67 MMP C115 057	RLM 02	H70 MMP C60 056
		RLM 71	H64 MMP C17 087
		RLM 70	H65 MMP C18 088

In the beginning of 1941, Felix-Marian Brandis served with JG 77 and was assigned to Bf 110 Zerstörerkette which flew the coastal reconnaissance missions out of the Kirkenes base in Norway. After the invasion of the Soviet Union the unit was enforced and redesigned to 1.(Z)/JG 77. It was deployed in the northern sector of the front based on Rovaniemi in Finland and Leutnant Felix-Maria Brandis assumed its command. The target of the crews was the port of Murmansk. On September 1, 1941, returning from the combat mission over the Soviet Union, two Bf 110E got lost in bad weather and landed in Tärenö, Sweden. These crews were Lt. Felix-Maria Brandis and radio operator Fw. Albert Harnack with Bf 110E WNr. 4114, LN+FR and Uffz. Rudolf Reitz and radio operator Gefr. Guntram Weigl in the Bf 110E WNr. 4113, LN+KR. On September 7, 1941, all airmen were returned from Sweden and could continue their service in Luftwaffe. In the end of September both aircraft were returned to Germans as well. Lt. Brandis was killed on February 2, 1942, after an emergency landing in Bf 110E, WNr. 2546, LN+AR on the frozen lake Pjaosero. His radio operator Fw. Herbert Baus was thrown out of the cockpit and suffered the head wounds to which he later succumbed.

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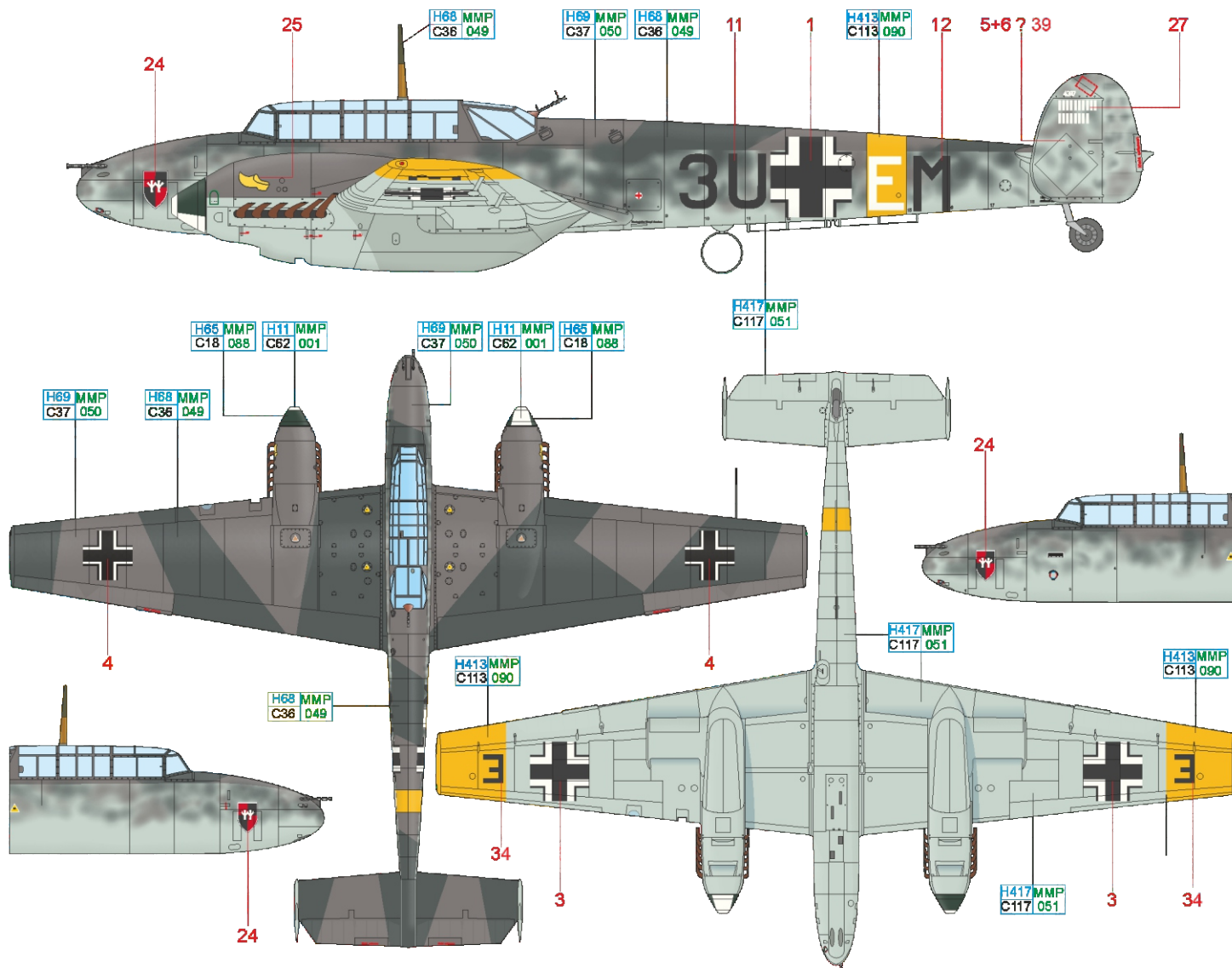


RLM 04	H413MMP C113 090	WHITE	H11 MMP C82 001
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RLM 65	H67 MMP C115 057	RLM 02	H70 MMP C60 056	RLM 71	H64 MMP C17 087	RLM 70	H65 MMP C18 088
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After the attack on the Soviet Union in June 1941, Oblt. Tratt flew with SKG 210 on the central sector of the front. His unit focused on attacking the ground targets while the dogfights took place quite often. Until the end of 1941, Oblt. Eduard Tratt scored in total nine kills of the Soviet aircraft and in January 1942 assumed command of the 4./ZG 26. On February 18, 1942, the crew of Oblt. Eduard Tratt and radio operator Uffz. Friedrich Gillert flying Bf 110E WNr. 4397, 3U+EM over Rzhev was hit by the AA fire and wounded. The aircraft carried ZG 26 insignia on the both sides of the nose and the II./ZG 26 insignia, the yellow clog on the outer sides of the engine nacelles. It also sports the Eastern Front markings, the yellow band on the fuselage and yellow wingtips on the lower surfaces. There are 18 kill marks (Abschussmarken) painted on the vertical stabilizer with white number 4397 above them. Oblt. Eduard Tratt was killed on February 22, 1944, on the Western Front.

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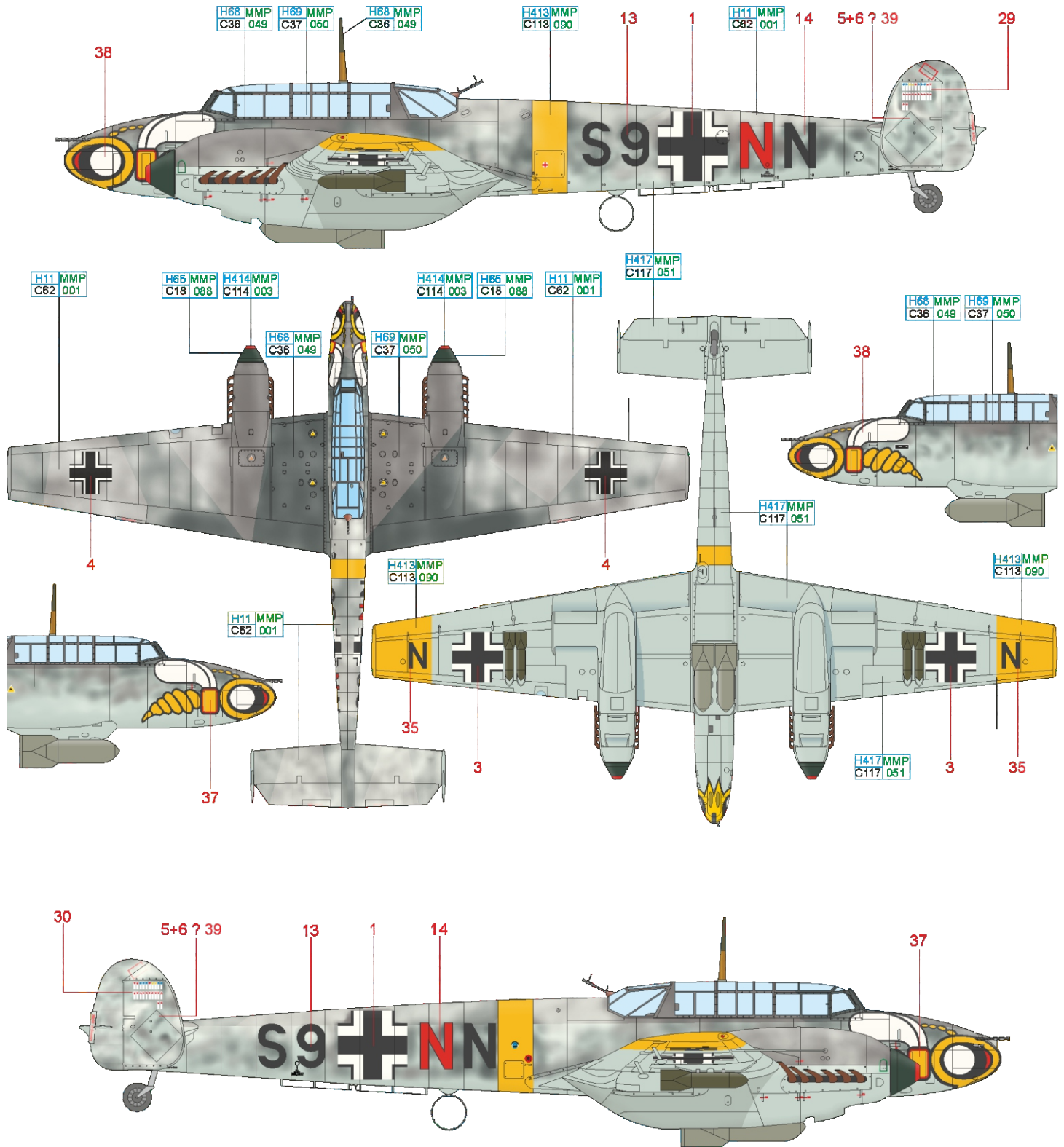


RLM 04	H413 MMP C113 090	WHITE	H11 MMP C62 001
RLM 76	H417 MMP C117 051	RLM 75	H69 MMP C37 050
		RLM 74	H68 MMP C36 049
		RLM 70	H65 MMP C18 088

# D Lt. Herbert Kutscha/Fw. Martin Heinz, 5./ZG 1, Soviet Union, 1942

In the beginning of the war, Lt. Herbert Kutscha flew with II./JG 77 but soon was ordered to 5./ZG 1 equipped with Bf 110. During the French campaign he shot down several enemy aircraft including the Bf 109 of the neutral Switzerland's air force. On the Eastern Front where his II./ZG 1 was redesignated to II./SKG 210, Kutscha enjoyed great successes as a fighter-bomber pilot. His II. Gruppe SKG 210 led by Hptm. Rolf Kadrack specialized in the high-speed low level attacks which led to the unit's designation the Fast Bombing Squadron (SKG - Schnellkamptgeschwader). Having scored 22 kills Lt. Herbert Kutscha was awarded the Knight's Cross.

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RLM 04	H413MMP C113 090	RLM 23	H414MMP C114 003	WHITE	H11 MMP C62 001
RLM 76	H417MMP C117 051	RLM 75	H69 MMP C37 050	RLM 74	H68 MMP C36 049
				RLM 70	H65 MMP C18 088

