

GERMAN WWII NIGHTFIGHTER 1:72 SCALE PLASTIC KIT



eduard

intro

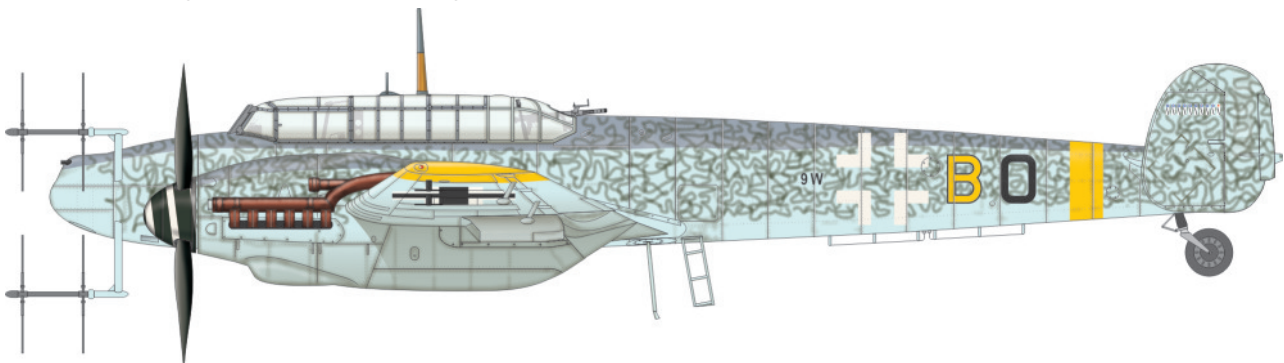
ProfiPACK



The first pages of history for the famous Zerstörer Bf 110 were written at the end of 1934, when C-Amt RLM (the technical branch of the Reich's Air Ministry) issued a specification for a two seat, twin engined aircraft to fulfill a need within the Kampfzerstörer category. Submitted proposals came from Focke-Wulf (Fw 57), Henschel (Hs 124) and BFW (Messerschmitt Bf 110). In the spring of 1935, the RLM changed its thinking on the spec, and cancelled the universal Kampfzerstörer category in favor of two specific types, the Schnellbomber and the Zerstörer. The new concept of a heavy fighter of the RLM were best satisfied by the Messerschmitt design, which wasn't really dictated as much by the original specifications. The first prototype, the Bf 110 V1, first flew May 12, 1936, and the modified second prototype V2 was submitted to the Erprobungsstelle in Rechlin on January 14, 1937. Four development aircraft, A-01 to A-04, powered by JUMO 210Da engines, were delivered at the beginning of 1938. A production run of 45 Bf 110Bs began in July, powered by JUMO 210Ga engines, delivering some 500kW (680hp). At the end of 1938, the production line for the high performance DB 601 finally got going, and these were mounted into the first major Bf 110 version, the Bf 110C. The Bf 110C, as was the case with the Bf 110B, was armed with two MG FF cannon, mounted in the fuselage below the cockpit floor, four MG 17 machine guns mounted in the nose and one rear firing MG 15 machine gun manned by the gunner/radio operator. There was a crew of two. The Luftwaffe received a total of 169 Bf 110Cs by September, 1939. The first combat experience of the type in Norway and France uncovered a small operational radius, unsuitable for an escort fighter. The first attempt to remedy the shortcoming came in the form of a large, underfuselage conformal type external fuel tank, called the Dackelbauch. The Bf 110C-3, adapted to carry this tank, were redesignated D-0. Results were not entirely satisfactory with the D version, and so there was a reconstruction of the fuel system, after which aircraft of the D version carried two drop tanks under the wings, and a small oil tank under the fuselage. The Bf 110D also standardized a longer fuselage, by way of an extension at the rear carrying a life raft and other emergency survival gear. This was a feature also evident on some subsequent Bf 110Es, which were equipped with bomb racks under the fuselage and wings. The majority of Bf 110Es were powered by the DB 601N engines. The following Bf 110F received the DB 601F engines housed in reshaped nacelles, with newer, more rounded spinners, aerodynamic features taken from the Bf 109F. Upgrading efforts were noted in the armament as well, where the MG FF were replaced by MG 15s. Significant changes came with the Bf 110G, powered by new DB 605 engines. The rear firing MG 82Z double gun appeared on the G-2, and with the G-4 came the replacement of four forward firing machine guns with two 30mm MK 108 cannon. The G-4 also saw larger rudders mounted. The Bf 110 went through not only technical changes throughout its career, but also through a development of its operational use. It entered the war as a heavy escort and attack fighter. By the time of the Battle of Britain, it became apparent that the aircraft, in the role of escort fighter, had been pushing the envelope of its capabilities. On the contrary, as a defensive weapon against British bombers, the Bf 110 made an extremely good showing of itself, and remained a deadly foe through to the end of the war. The placement of RAF bombing operations within nighttime hours from 1941 brought the Bf 110 into the realm of nightfighting on the Western Front. On the Eastern Front, they excelled as fast fighter bombers. Their earlier role as a day attack fighter was still fulfilled not only on the Eastern Front (where they were employed throughout the war successfully even as the originally envisioned escort fighter), but also on the Western Front into the depths of the summer of 1944, where the role was abandoned primarily, and finally. As a nightfighter in the G-4 version, thanks to a heavy forward firing armament and radar, they soldiered on literally until the very end of the war. As such, it was the nightfighter role that would prove to be the most significant for the Bf 110 during the course of the Second World War.

The Bf 110G-4 Version

The evolution of the Bf 110 line was to continue in 1941 with the introduction of the Me 210, a result of the development of the original design coupled with combat experience. Major ongoing problems with the prototypes and unspectacular results in combat halted production of Me 210 at under 300. The role of the heavy fighter and fighter-bomber for the Luftwaffe would need to continue to be served by the Bf 110, calling for a list of changes and modifications. The installation of the newly developed DB 605 engines (1470hp at higher performance) allowed for the development of the stronger and aerodynamically refined 'G' version, represented in combat by the G-2 and G-4. Although the G-2 variant found its role especially as a heavy day defender, the domain of the G-4 was that of the night fighter. The nocturnal air war over Germany in 1943 saw the RAF targeting German industry and logistical centres, The night fighter was a distinctive piece of equipment that found widespread use on both sides. The droning of RAF Lancs and Halifaxes was an almost nightly ritual over German cities, factories and harbors. Night fighting Mosquitoes were tasked with dispatching German defenders before they could intercept their bigger brothers. The Luftwaffe countered with a sophisticated system of radars and central facilities connected to the night fighters bases in a ground control intercept network. Night air combat was very different from that of daylight dog fights not only due to physical conditions, but also through the necessary development of specialized tactics. Instead of aerobatic maneuvering and jockeying, it became preferred to slowly position behind the target, get in close, and hit hard. Naturally, acquiring a target in low light presented the need for entirely new approaches on its own. Aircraft during this timeframe needed new armament combinations and electronic equipment to maximize usefulness. Generally, there was no great use for single-engined developments, although there were successful evolutions of the Bf 109 and Fw 190 in this role. The bulk of that duty was carried out by twin engine types whose original role was either that of heavy day-fighter or, more likely, as bombers, such as the Bf 110, Ju 88, Ju 188, He 219, Me 262, and others. The Bf 110G-4 was the most prolific of all of them. The required equipment for the G-4 was an on-board radar system, mainly the FuG 202, FuG 220, FuG 212 (+SN-2) and FuG 218. Part of the basic armament was often the installation of 30 mm MK 108 cannon in the nose, and 20 mm Schräge Musik cannon (slang term for 'Jazz Music', prohibited in Germany at that time) used when the target was above and slightly ahead of the attacking fighter. Although the Luftwaffe was unable to stop the RAF raids, which steadily increased until the end of the war, the Bf 110G-4 and their crews deserve great respect for their combat success. As a nightfighter in the G-4 version, thanks to a heavy forward firing armament and radar, they soldiered on literally until the very end of the war. As such, it was the nightfighter role that would prove to be the most significant for the Bf 110 during the course of the Second World War.



GB

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.

CZ

Před započatím 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.

F

Ire soigneusement la fiche d'instructions avant d'assembler. Ne pas utiliser de colle ou de peinture à proximité d'une flamme nue, et aérer la pièce de temps en temps. Garder hors de portée des enfants en bas âge. Ne pas laisser les enfants mettre en bouche ou sucer les pièces, ou passer un sachet vinyl sur la tête.

D

Von dem Zusammensetzen die Bauanleitung gut durchlesen. Kleber und Farbe nicht nahe von offenem Feuer verwenden und das Fenster von Zeit zu Zeit Belüftung öffnen. Bausatz von kleinen Kindern fernhalten. Verhüten Sie, daß Kinder irgendwelche Bauteile in den Mund nehmen oder Plastiktüten über den Kopf ziehen.

JP

組み立てる前に必ず説明書をお読み下さい。接着剤や塗料をご使用の際は、窓を開けて十分な換気をおこない、火のそばでは使用しないで下さい。小さな子供の手の届かない所に必ず保管してください。部品や破片を噛んだり、なめたり、飲んだりすると大変危険です。又、部品を取り出した後のビニール袋は、小さな子供が頭から被ったりすると窒息する恐れがありますので、破り捨ててください。

INSTRUKTION SIGNS

* INSTR. SYMBOLY

* INSTRUKTION SINNBILDEN

* SYMBOLES

* 記号の説明



OPTIONAL
VOLBA
FACULTATIF
NACH BELIEBEN
選択する



BEND
OHNOUT
PLIER SIL VOUS PLAIT
BITTE BIEGEN
折る



OPEN HOLE
VYVRTAT OTVOR
FAIRE UN TROU
OFFNEN
穴を開ける



SYMETRICAL ASSEMBLY
SYMETRICKÁ MONTÁŽ
MONTAGE SYMÉTRIQUE
SYMMETRISCHE AUFBAU
左右均等に組み立てる



NOTCH
ZÁŘEZ
L'INCISION
DER EINSCHNITT
切る



REMOVE
ODŘÍZNOUT
RETIRER
ENTFERNEN
移す



APPLY EXPRESS MASK
POUŽIT EXPRESS MASK
NABARVIT PŘED SLEPENÍM
AND PAINT BEFORE
GLUING

PARTS

*

DÍLY

*

TEILE

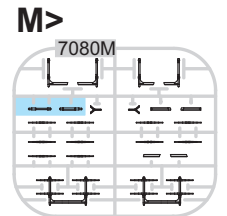
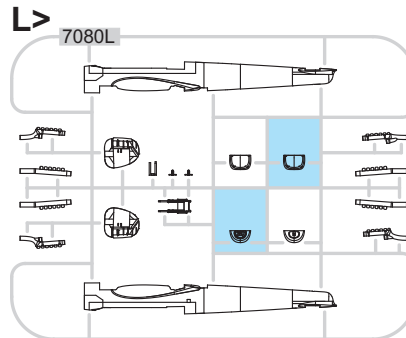
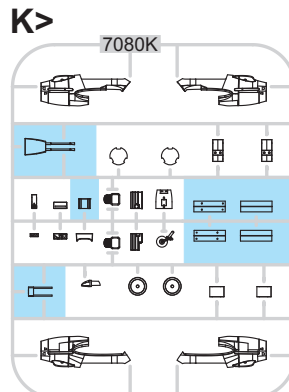
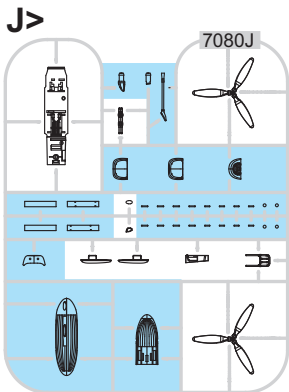
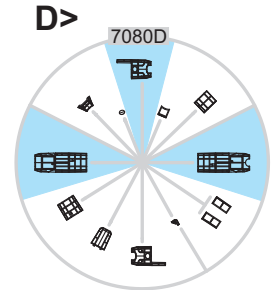
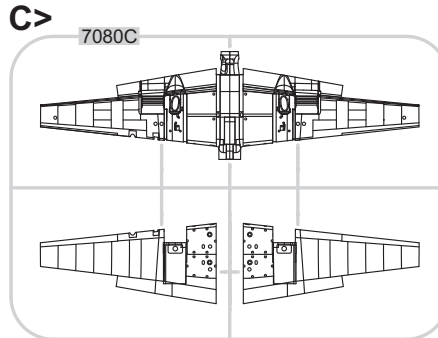
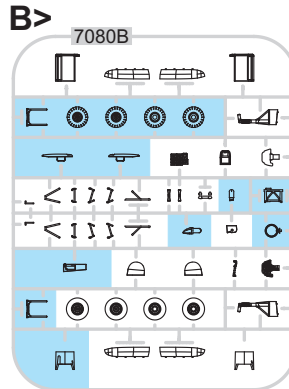
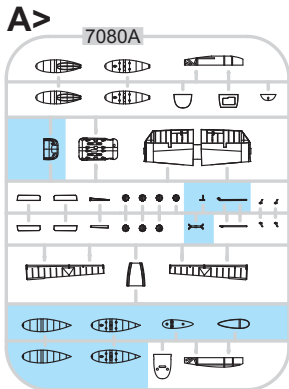
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PIÈCES

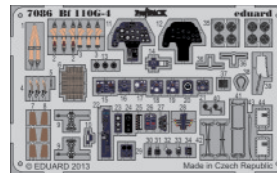
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部品

PLASTIC PARTS



eduard
MASK

PE - PHOTO ETCHED
DETAIL PARTS

-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

*

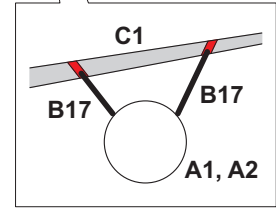
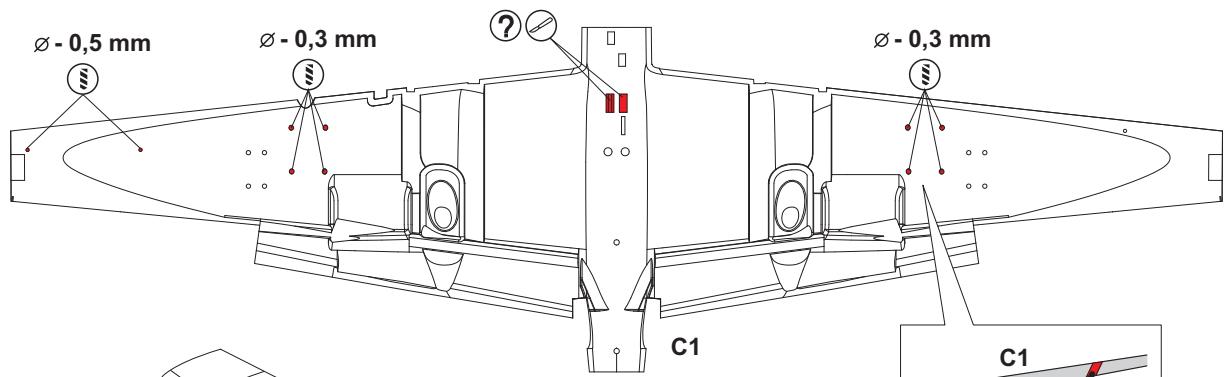
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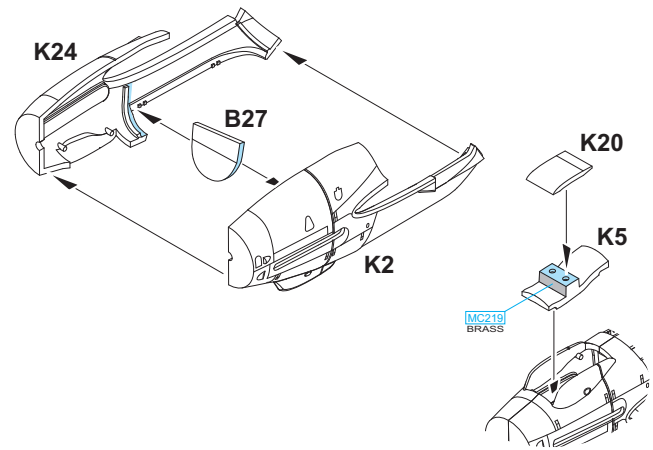
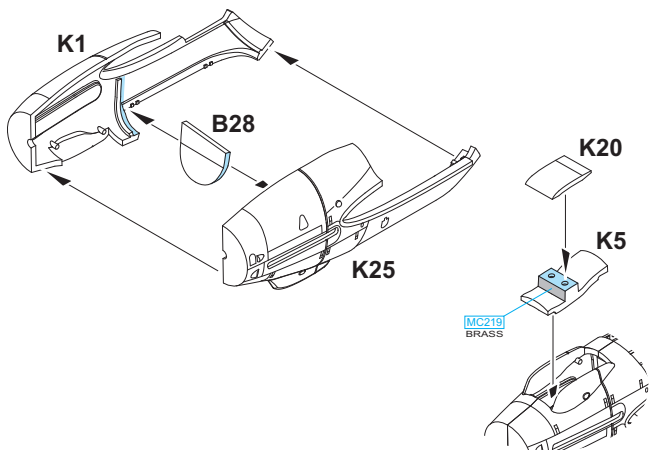
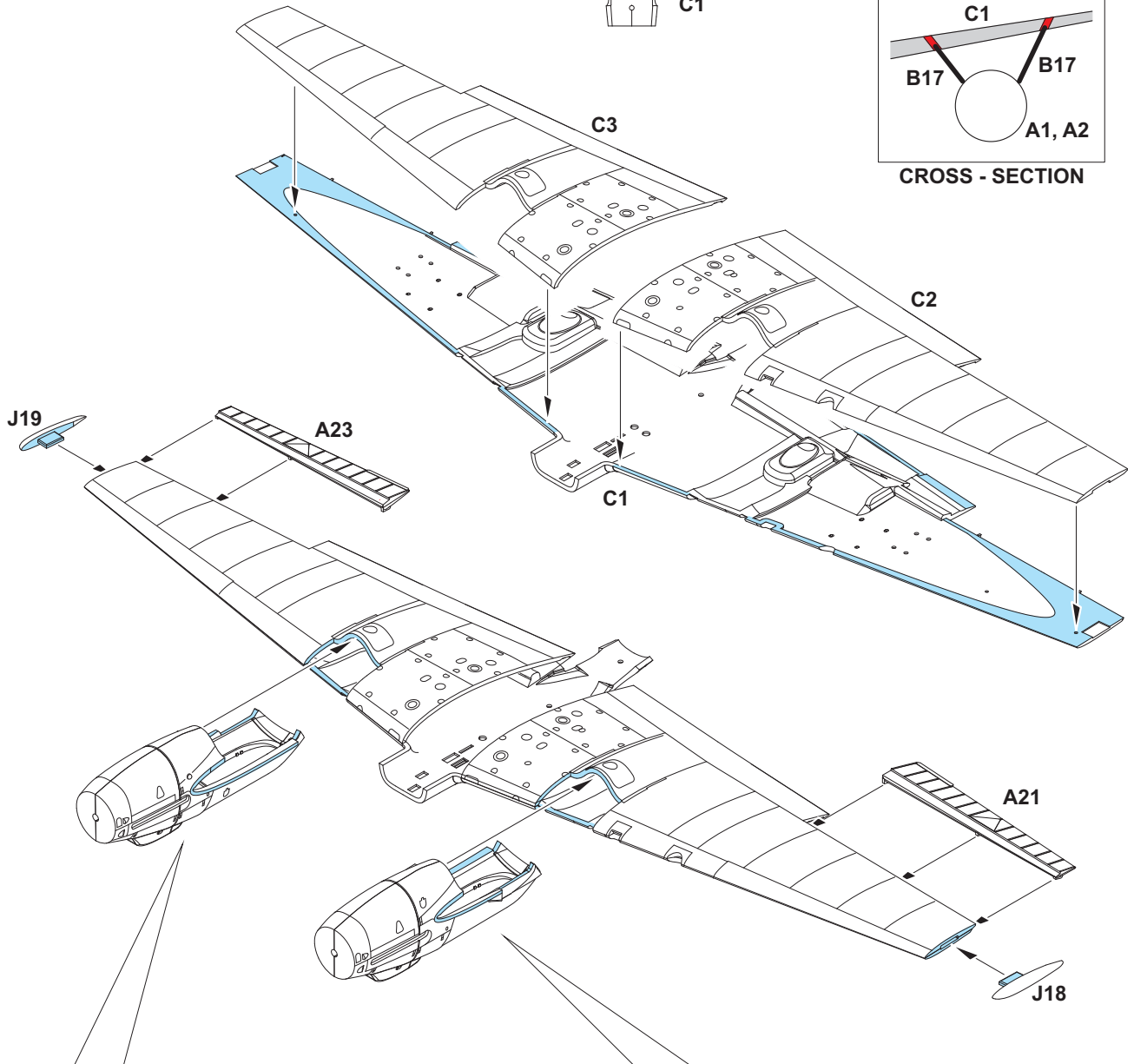
色

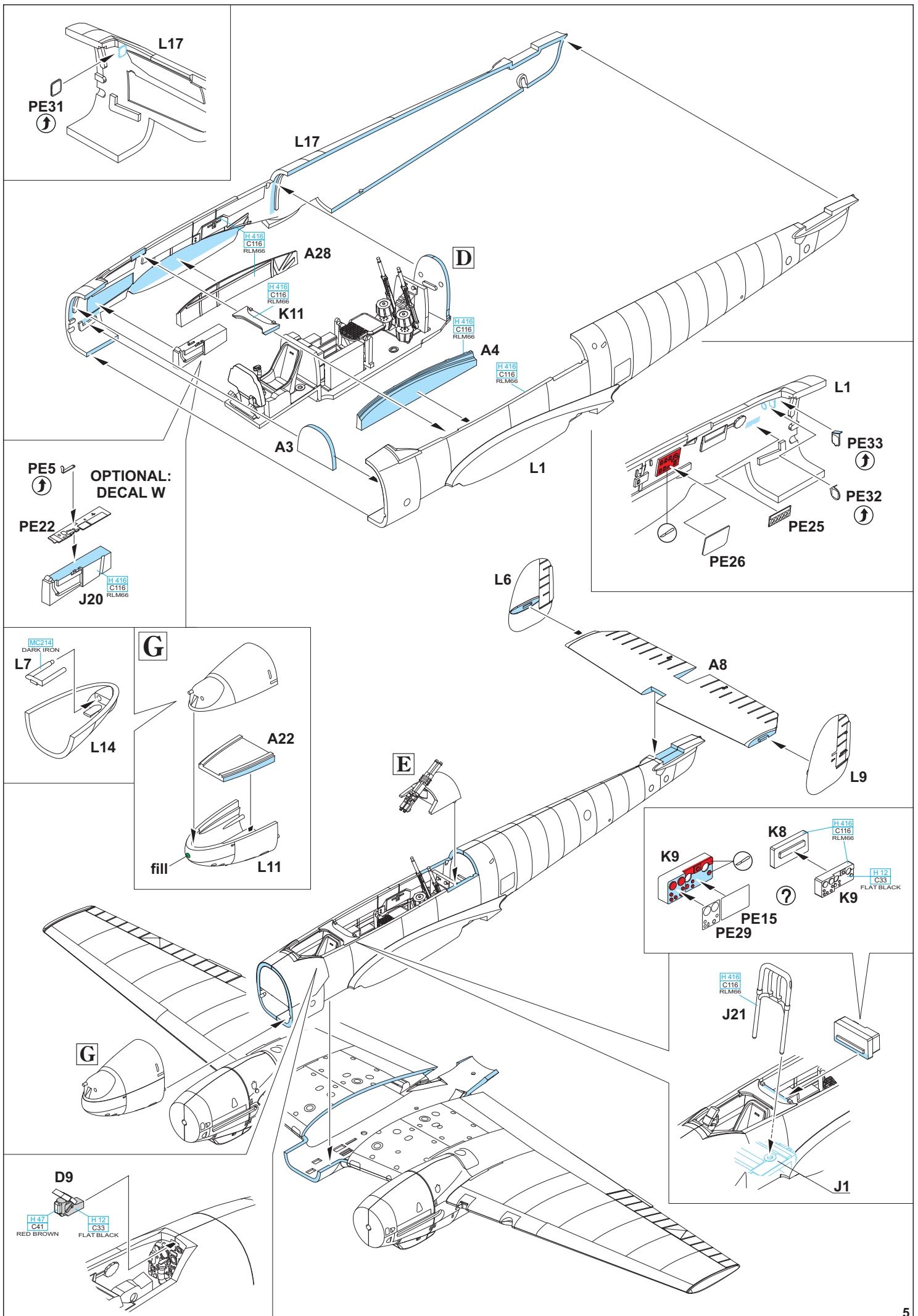
GSI Creos (GUNZE)			
AQUEOUS	Mr.COLOR		
H 4	C 4	YELLOW	
H 11	C 62	FLAT WHITE	
H 12	C 33	FLAT BLACK	
H 13	3	RED	
H 33	81	RUSSET	
H 37	C 43	WOOD BROWN	
H 47	C 41	RED BROWN	
H 65	C 18	BLACK GREEN	RLM70
H 68	C 36	GRAY	RLM74

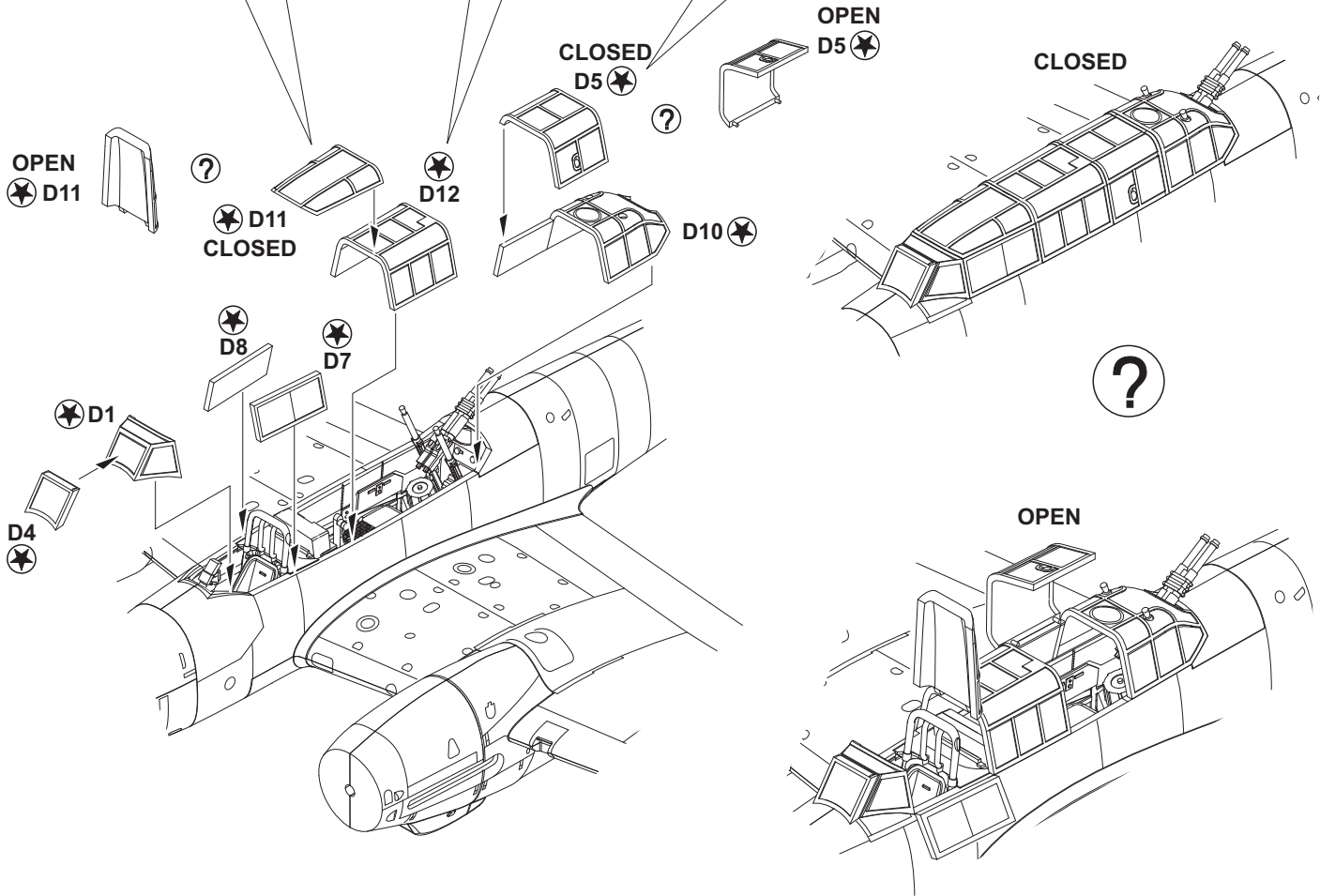
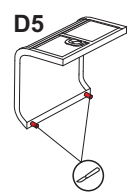
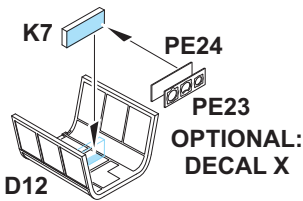
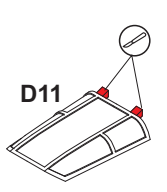
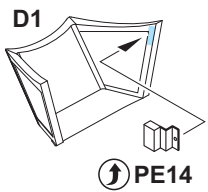
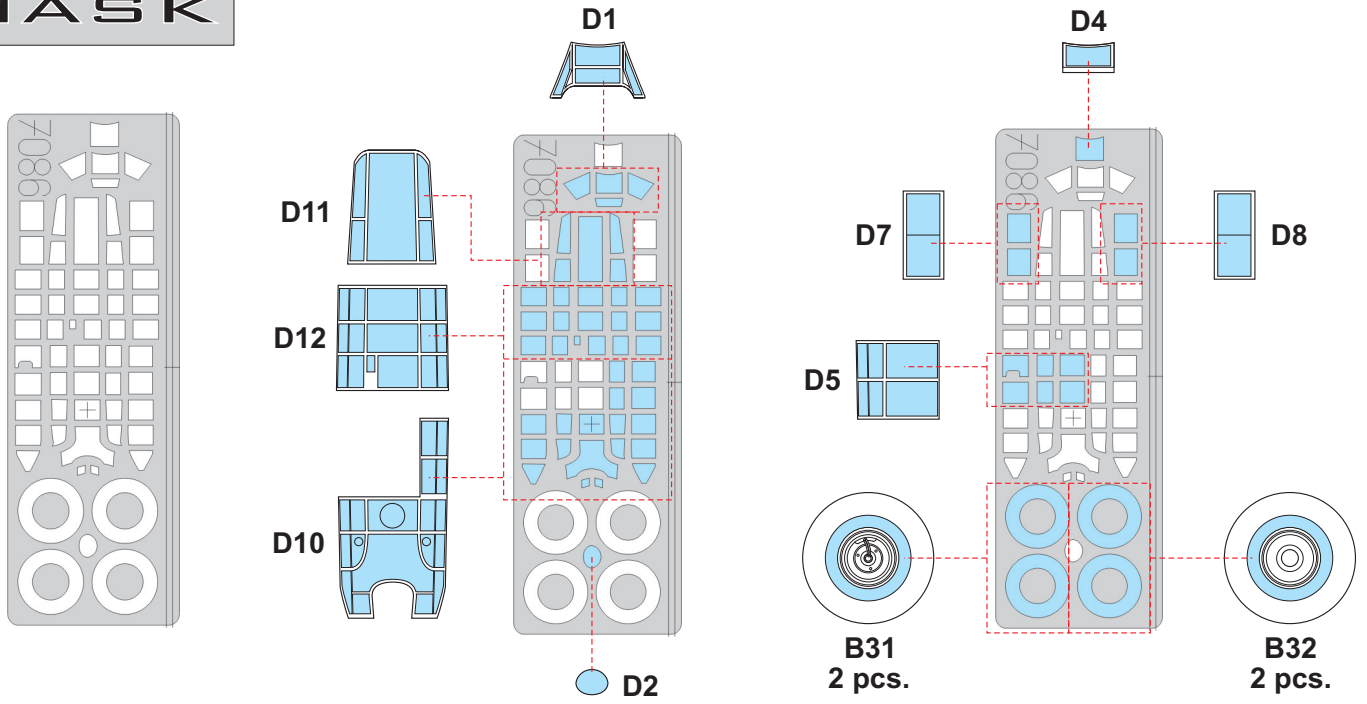
AQUEOUS	Mr.COLOR		
H 69	C 37	GRAY	RLM75
H 70	C 60	GRAY	RLM02
H 77	C 137	TIRE BLACK	
H 416	C 116	BLACK GRAY	RLM66
H 417	C 117	LIGHT BLUE	RLM76
H 423	C 123	DARK GREEN	RLM83
Mr.METAL COLOR			
	MC 214	DARK IRON	
	MC 219	BRASS	

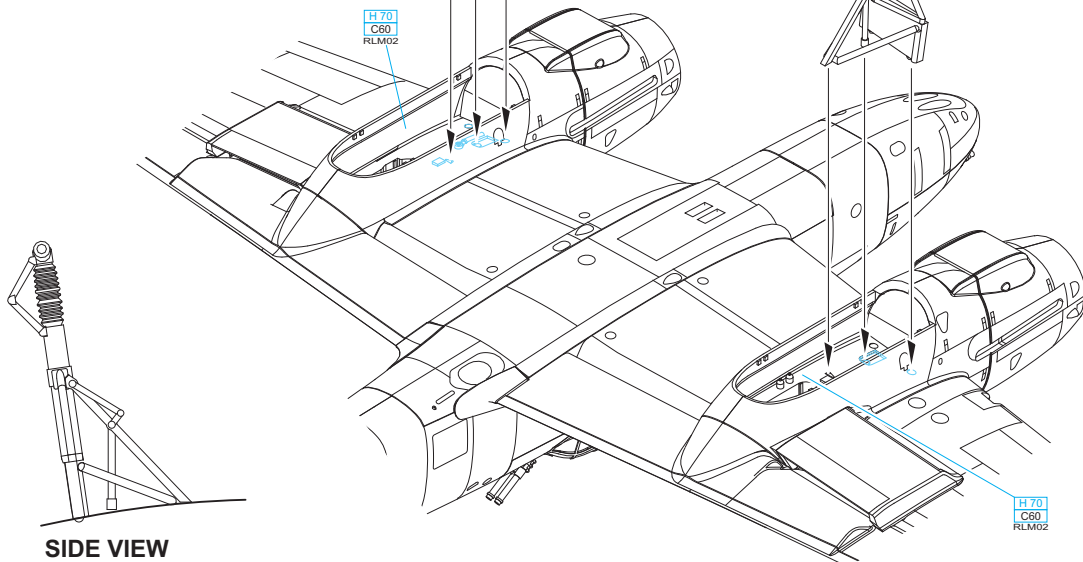
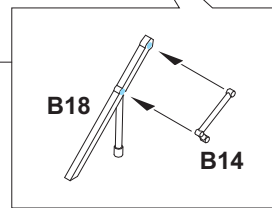
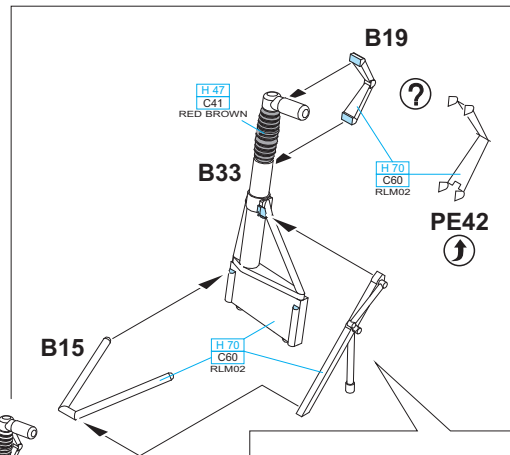
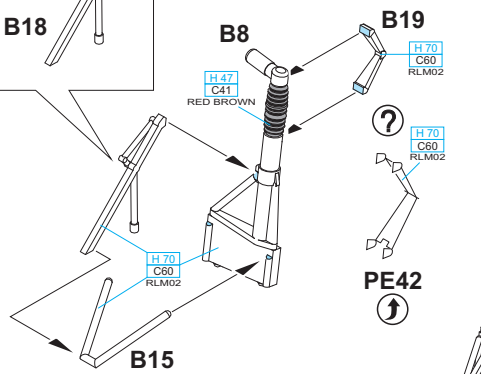
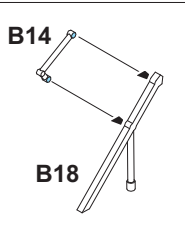
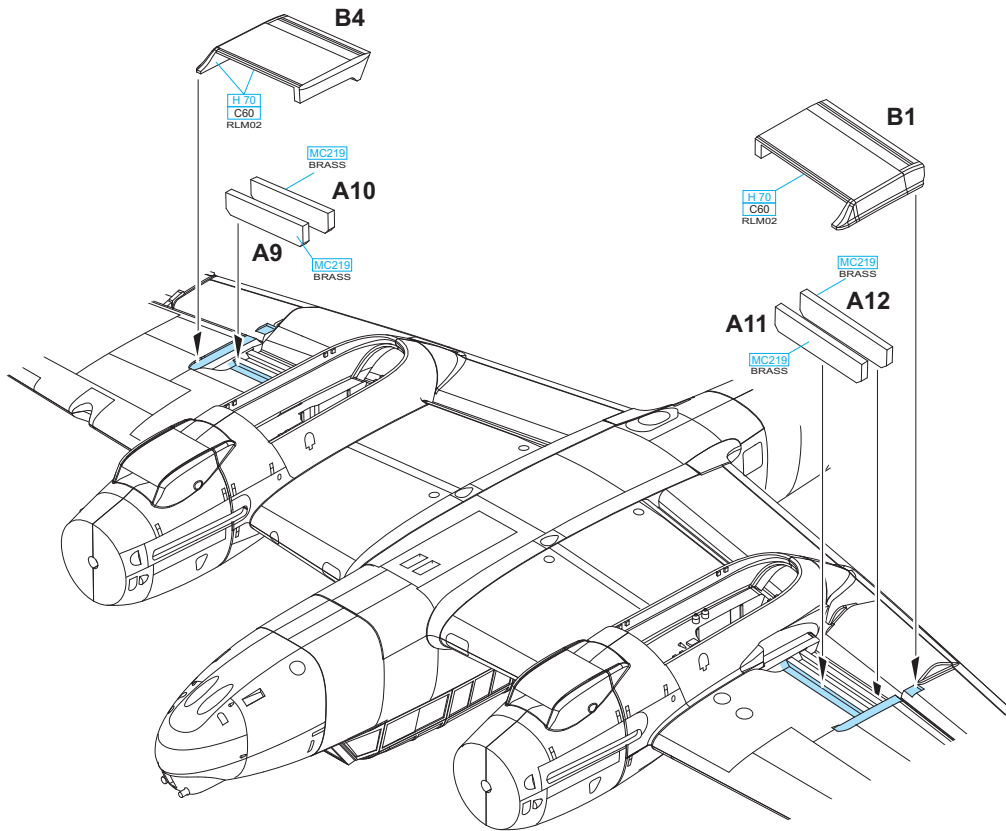


CROSS - SECTION



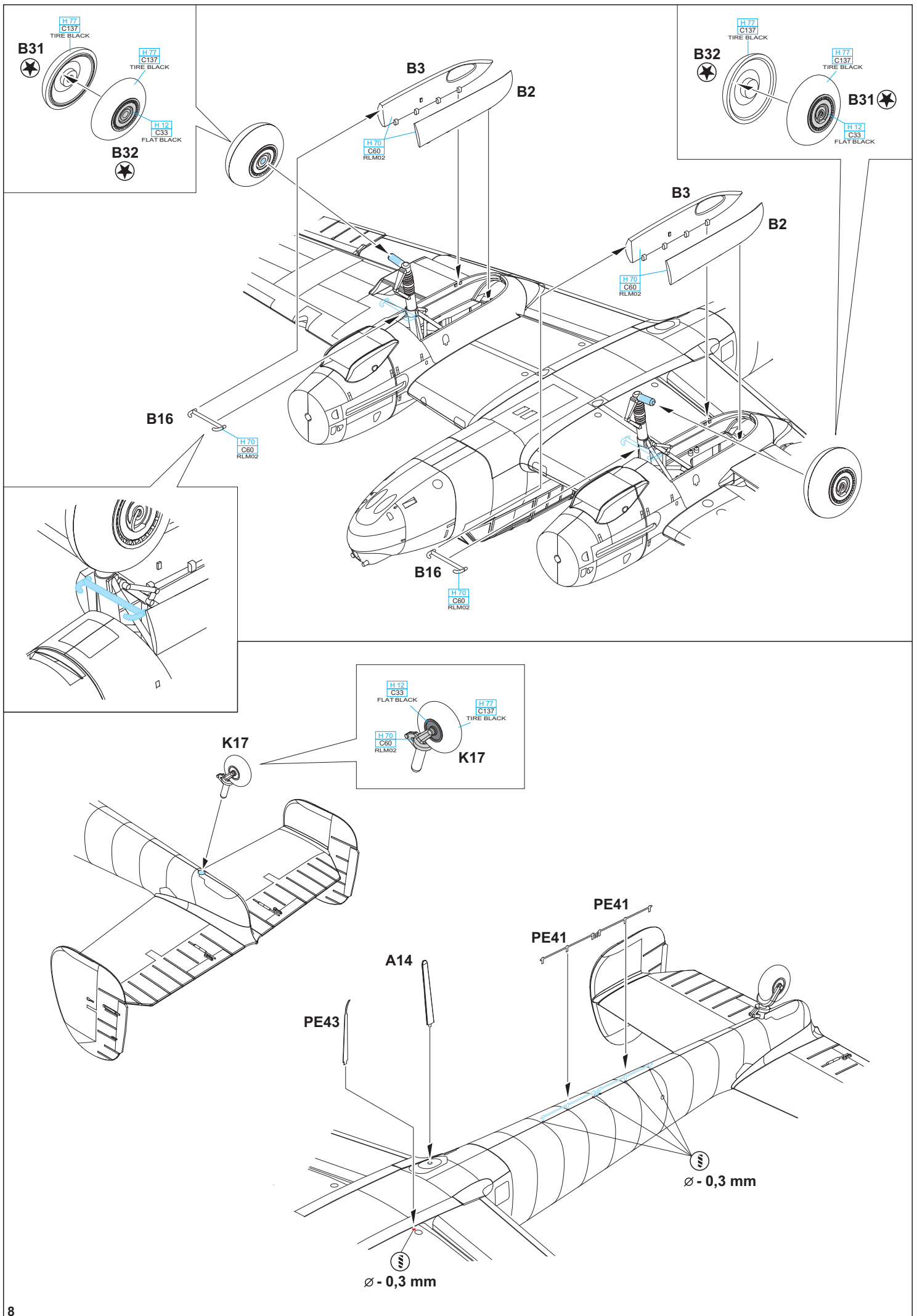


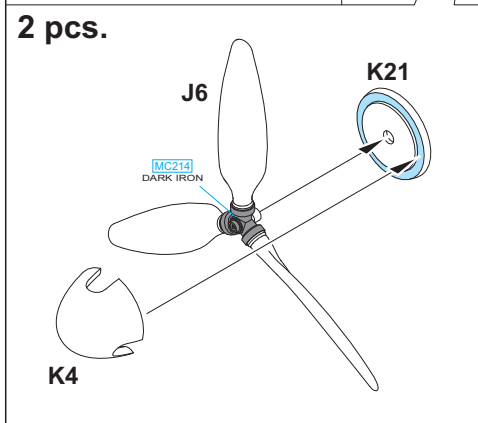
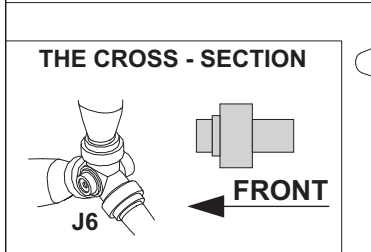
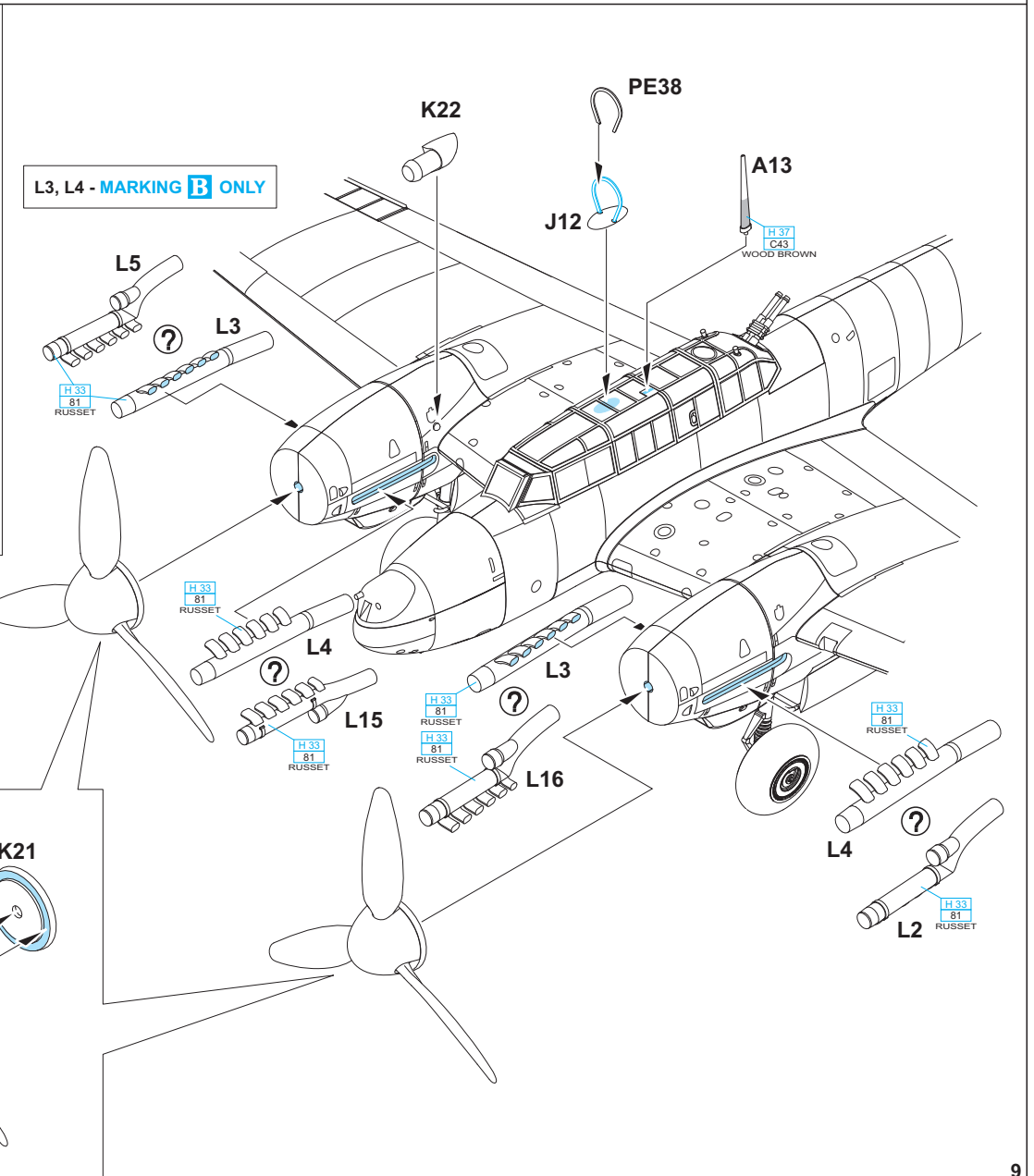
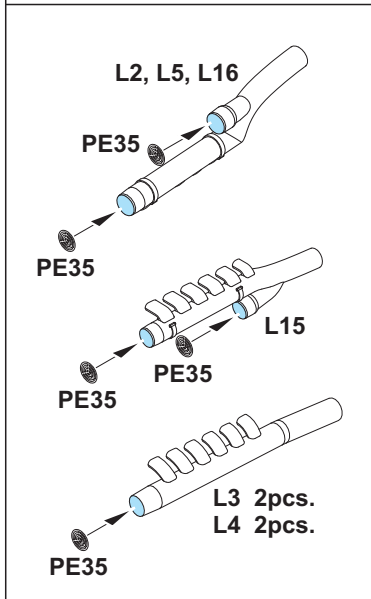
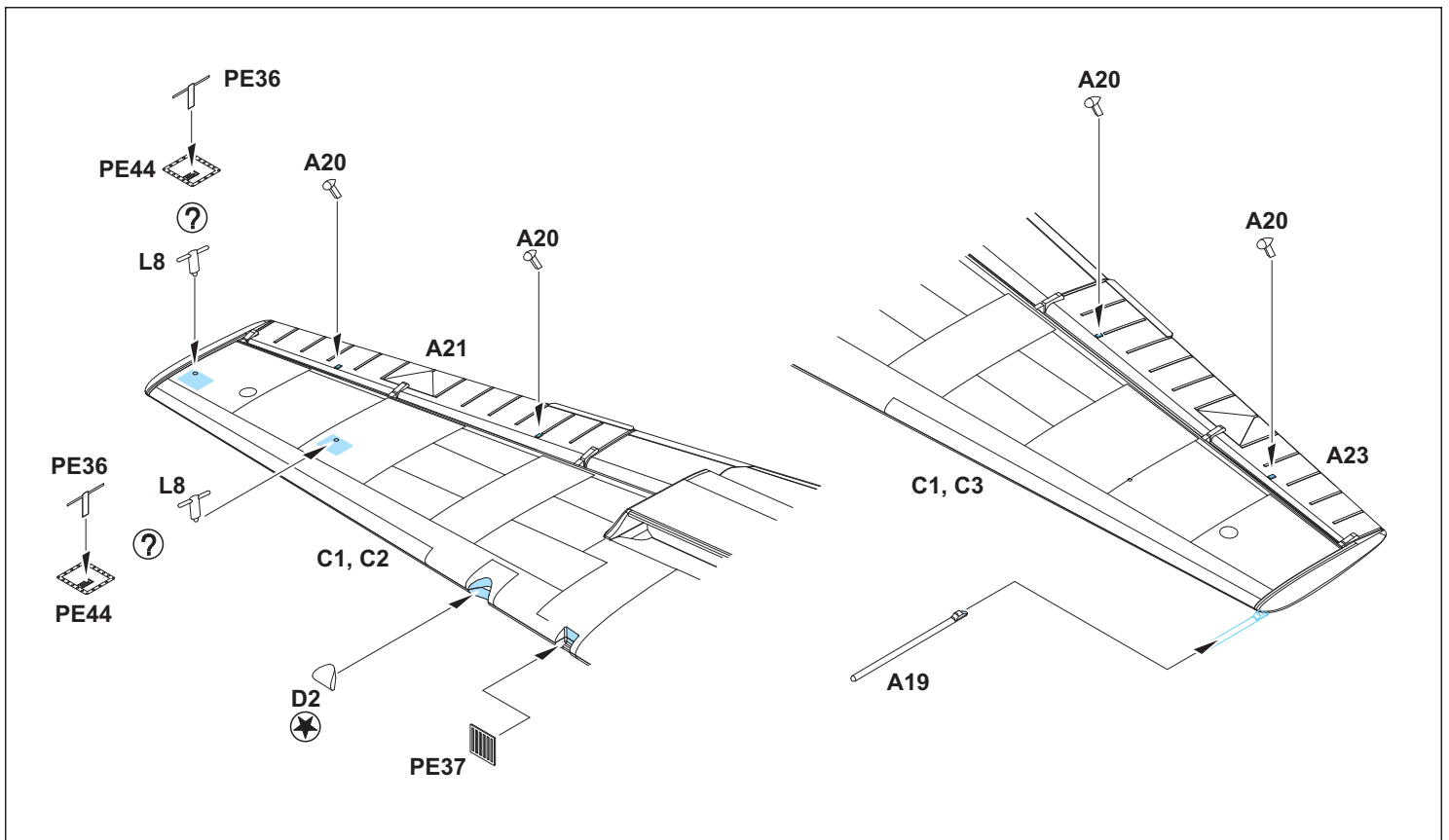


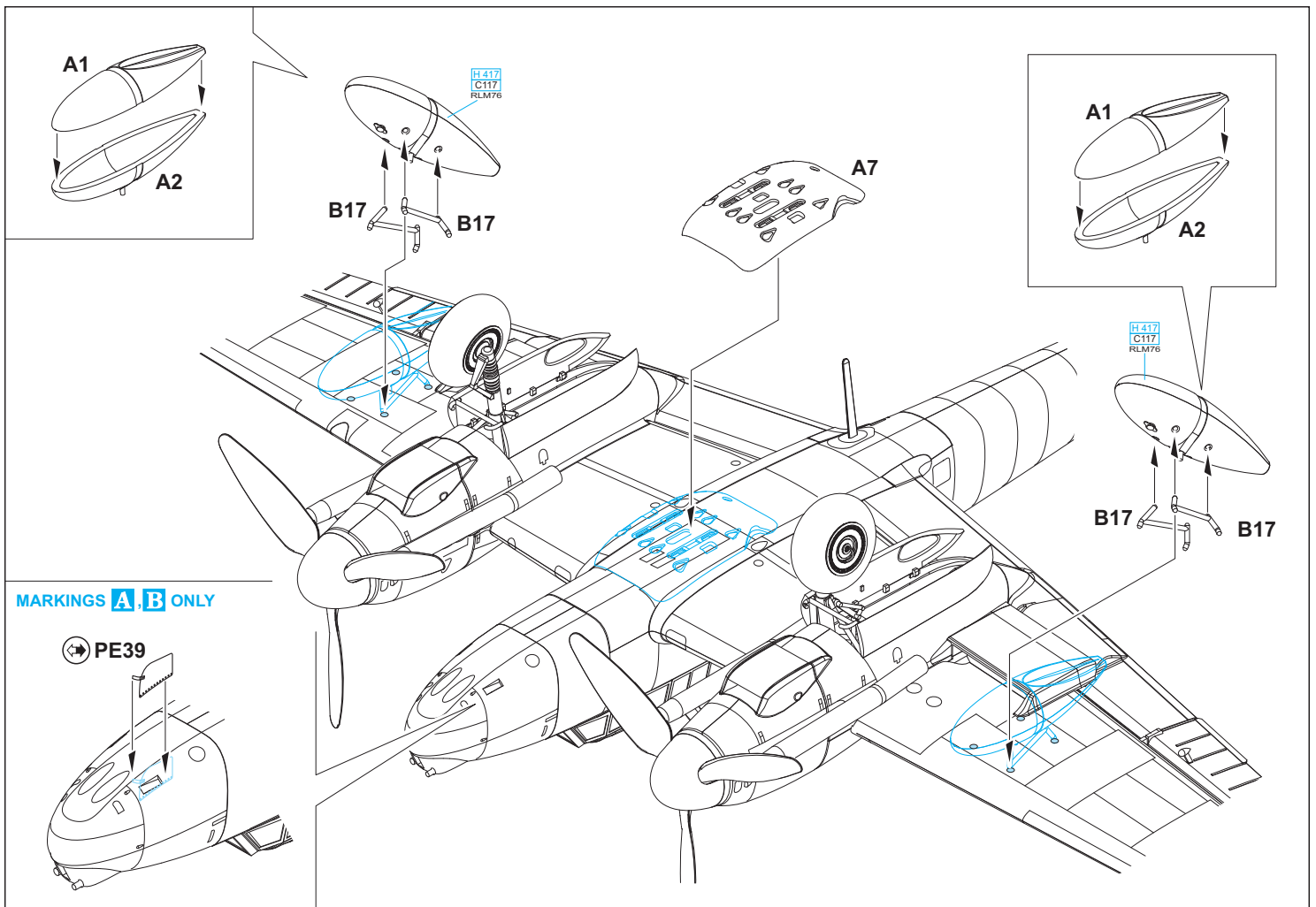


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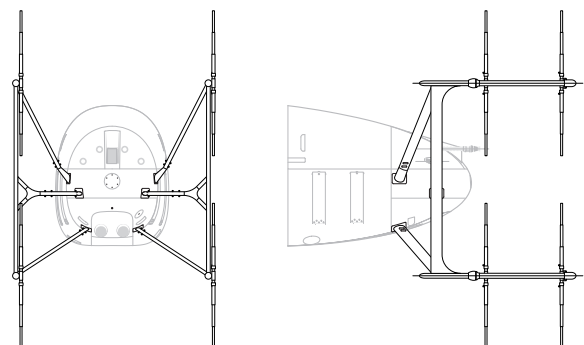
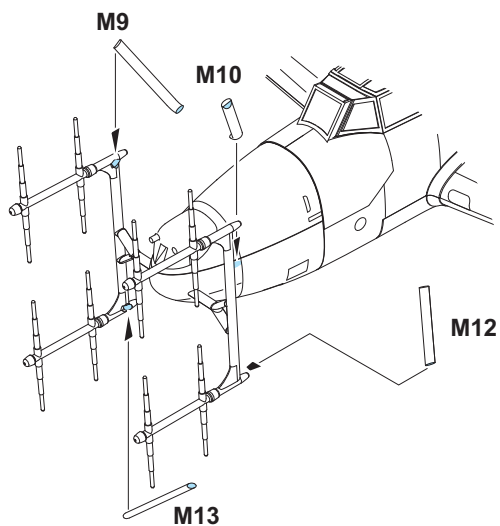
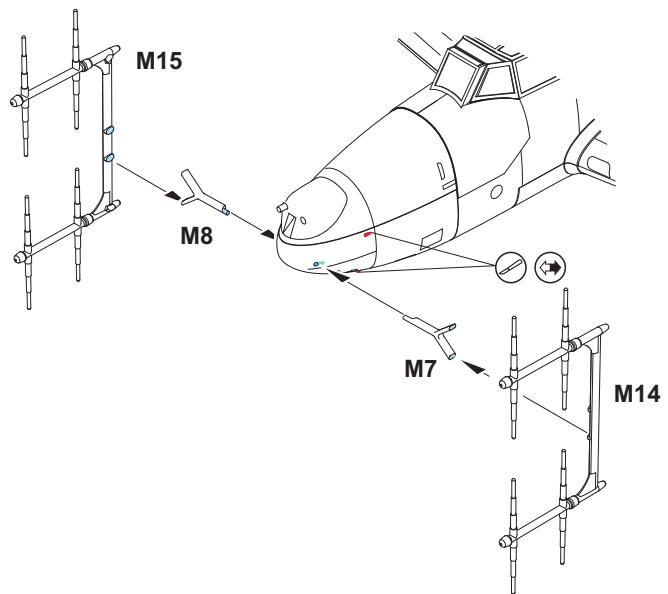
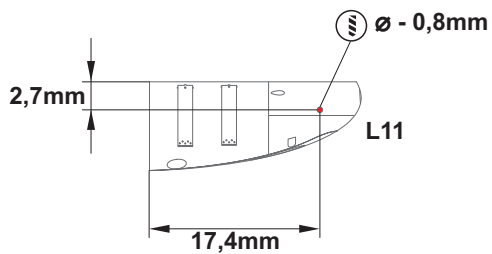
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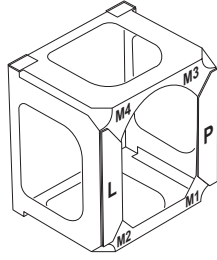




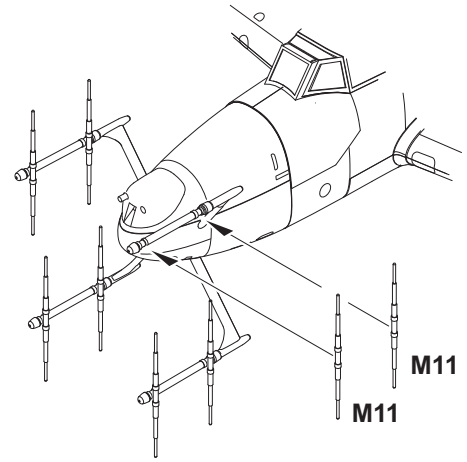
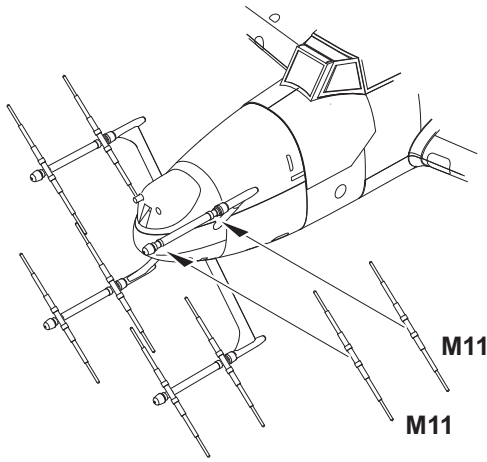
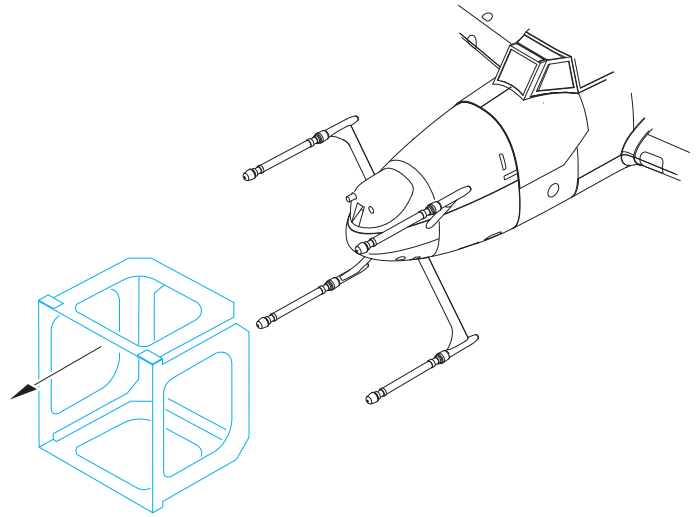
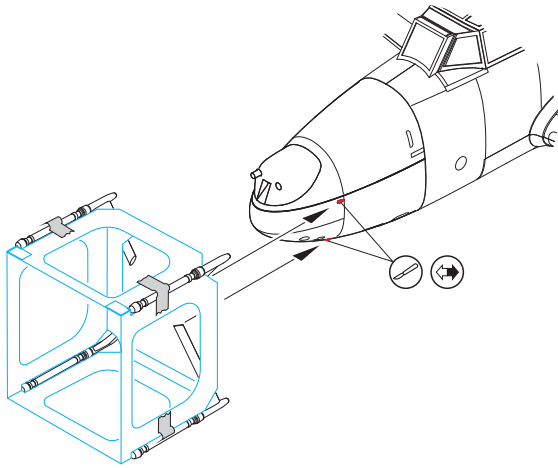
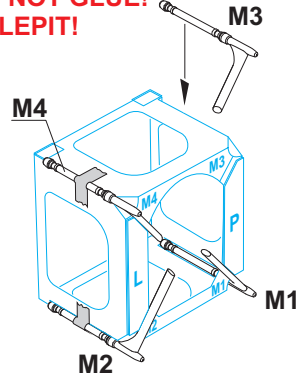
MARKING D



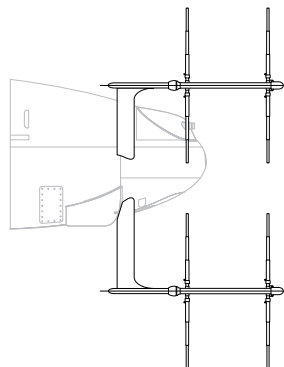
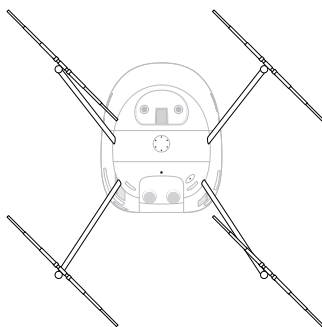
TEMPLATE



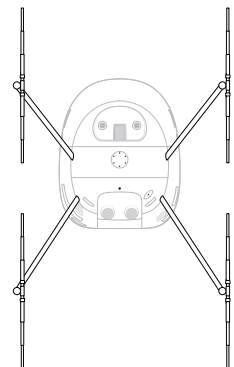
**DO NOT GLUE!
NELEPIT!**



MARKING **B**



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



A 6./NJG101, Fritzlar, Germany, 1945

After occupying the airfield at Fritzlar, the Allies acquired this aircraft, coded 9W+BO. The aircraft in question was equipped with the FuG 220 SN-2c antenna system with vertical dipoles. The camouflage scheme consisted of lower and side surfaces in RLM 76, with upper surfaces in RLM 75. The upper and lower surfaces were complemented with irregular snake patterns of RLM 83, that served to better conceal the aircraft when on the ground from marauding allied fighters. This aircraft carried a yellow fuselage stripe, and probably also yellow markings on the lower surfaces for some time. The port fin carried ten victory marks, the last of which symbolized the downing of a Russian aircraft. This points to this plane serving on the Eastern front.

ČESKOU VERZI TEXTU NALEZNETE NA
www.eduard.com/s/7086

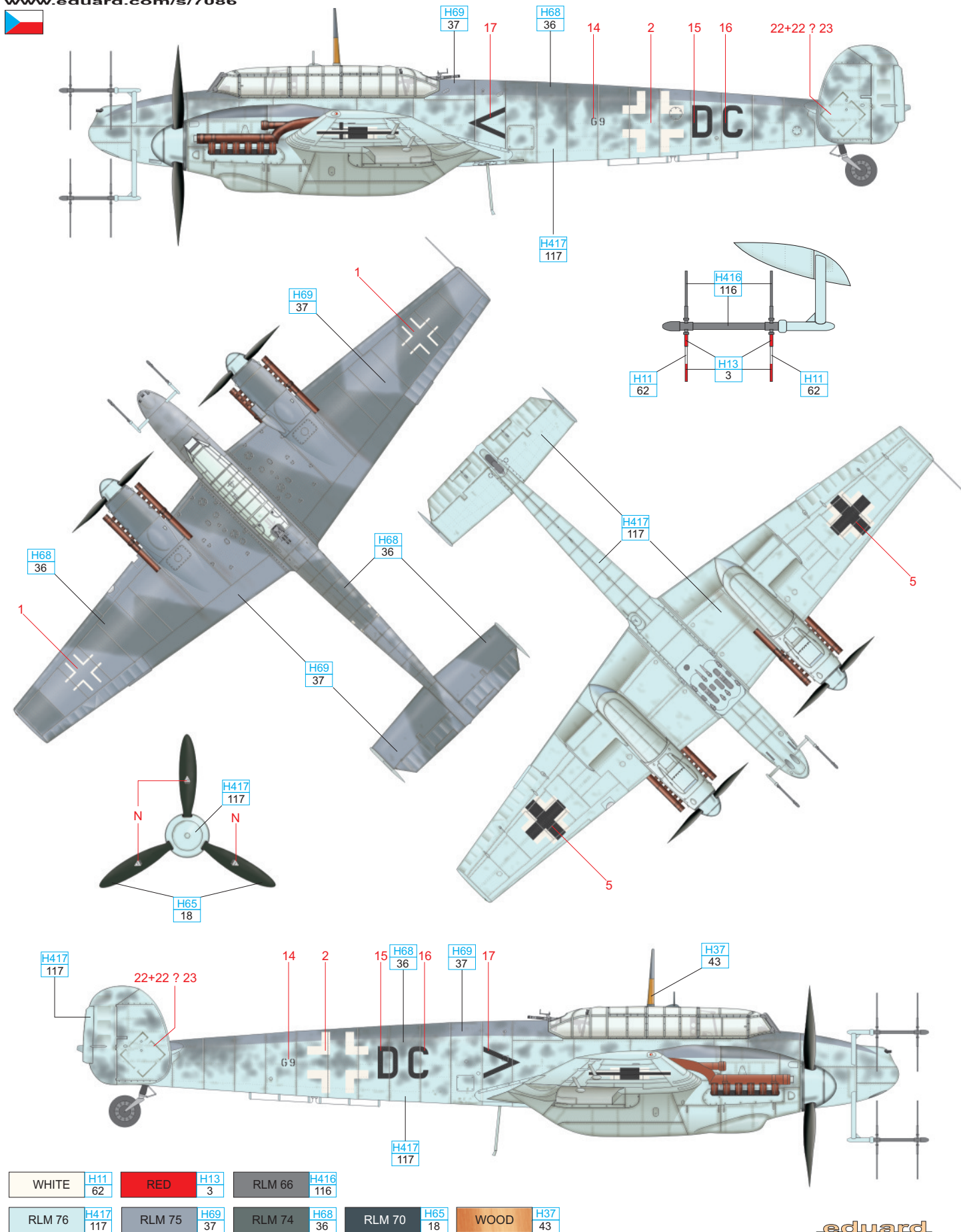


WHITE	H11 62	YELLOW	H4 4	RED	H13 3	RLM 66	H416 116
RLM 76	H417 117	RLM 75	H69 37	RLM 83	H423 123	RLM 70	H65 18
				WOOD	H37 43		

C Stab II./NJG1, Bad Langensalza, Germany, 1945

This aircraft was equipped with FuG 220 SN-2c with vertical dipoles. The camouflage scheme consisted of irregular fields of RLM 74 and 75 on upper surfaces, and RLM 76 on lower, similar to the scheme carried by day fighters. The colors by this time already had less contrasting tones, but the scheme still consisted of three colors. Later, the use of RLM 74 on the upper surfaces was discontinued, and the aircraft began to acquire a simplified scheme of one color on the upper surfaces. G9+DC carried, besides the codes on the fuselage, also a single chevron, indicating rank within the unit. The pilot is recorded as Lt. Dr. Leo Baro.

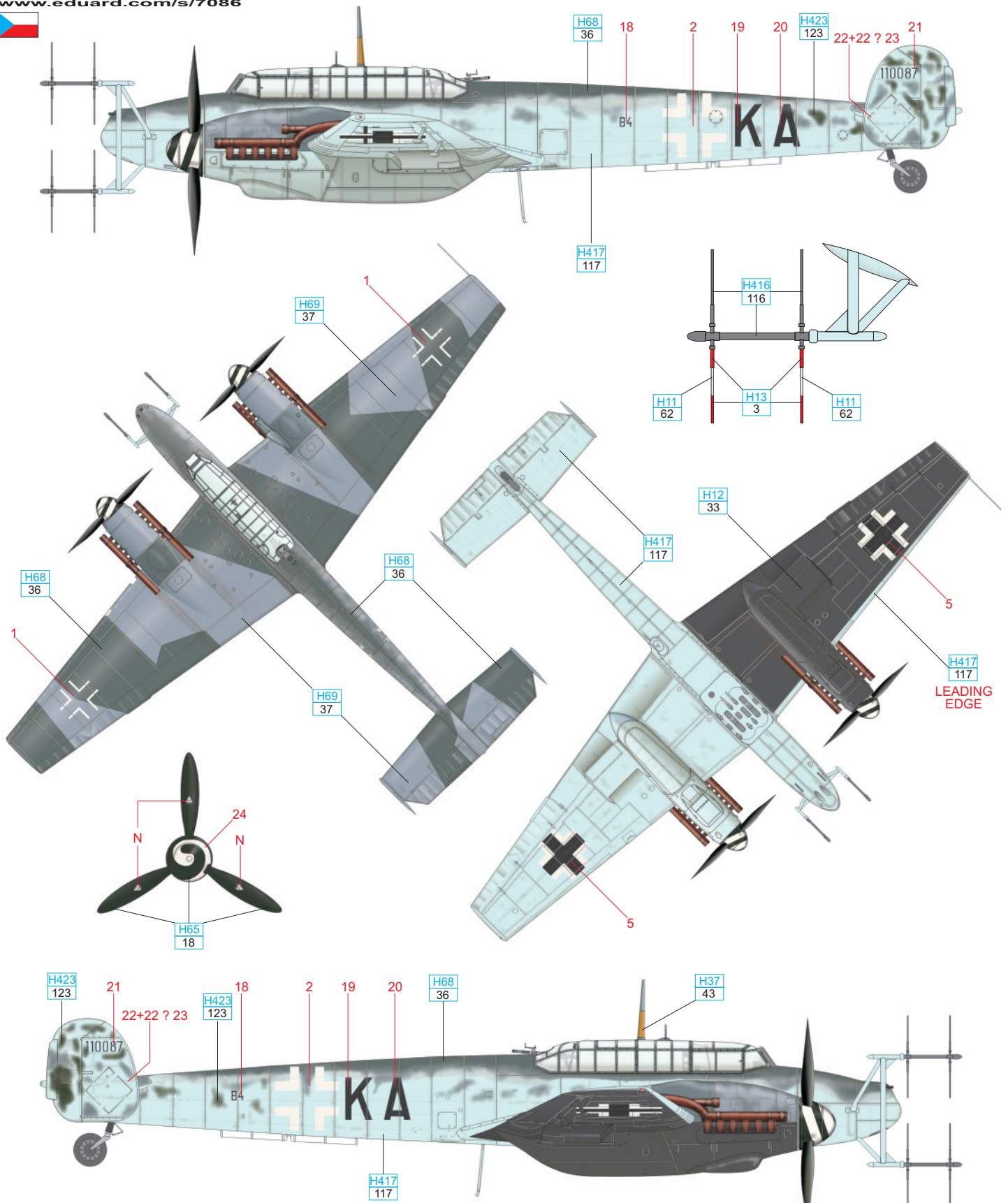
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www.eduard.com/s/7086



D Wr.Nr. 110087, 4./NJG3, Kjevik, Norway, 1945

4./NJG 3 was formed in March, 1945, out of Nachtjagdstaffel Norwegen, a unit that operated independently from Norway. The purpose of the unit was to intercept allied aircraft over Scandinavia. Besides the Bf 110G, the unit also flew the Ju 88G and He 219. Its last function was on May 8, 1945, evacuating German unit officers from the surrounding areas. Aircraft B4+KA probably did not take part in this final action, because the end of the war found the aircraft still at Kjevik, in Norway. The aircraft carried FuG 220 SN-2b with vertical dipoles, and with an older type of mounting. It carried a camouflage scheme of irregular fields of RLM 74 and RLM 75 on upper surfaces, and RLM 76 on the lower surfaces. The lower surface of the starboard wing and engine cowl were oversprayed in black. This aircraft is recorded as crewed by Fw. Kurt Keilig (pilot), Fw Kurt Schroter (radio operator) and Uffz. Karl Stamminger (mechanic).

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WHITE	H11 62	RED	H13 3	RLM 66	H416 116
RLM 76	H417 117	RLM 75	H69 37	RLM 74	H68 36
				RLM 83	H423 123
				RLM 70	H65 18
				WOOD	H37 43
				BLACK	H12 33

