

# GERMAN WW II HEAVY FIGHTER 1:48 SCALE PLASTIC KIT



## Messerschmitt Bf 110

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 Kamfzerstörer 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 Kamfzerstörer 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 Erprobungstelle 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 151s. 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-2 Version

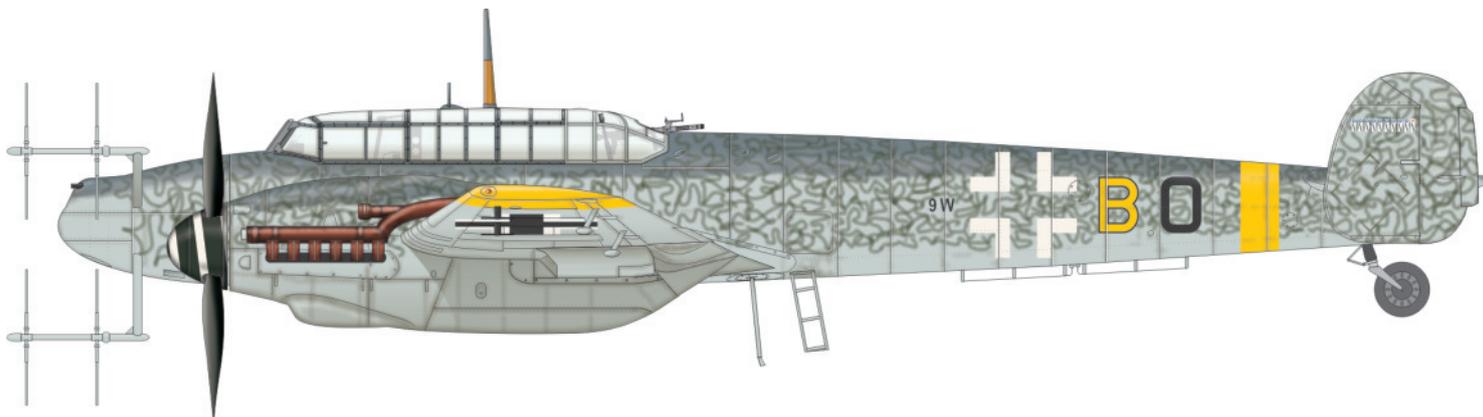
The evolution of the Bf 110 line was to continue in 1941 with the introduction of the Me 210, a result of the development of the original design coupled with combat experience. Major ongoing problems with the prototypes and unspectacular results in combat halted production of Me 210 at under 300. The 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 (Eduard Cat. No. 8205) 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 acrobatic 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 (Eduard Cat. No 1144).

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 (Eduard Cat. No. 8206), Ju 88, Ju 188, He 219, Me 262 (Eduard 4421), 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.



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



lire 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. Gardez 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.



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.



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、破り捨てて下さい。

INSTRUCTION SIGNS \* INSTR. SYMBOL \* 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  
AND PAINT  
POUŽIT EXPRESS MASK  
NABARVIT

PARTS



DÍLY



TEILE



PIÈCES



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



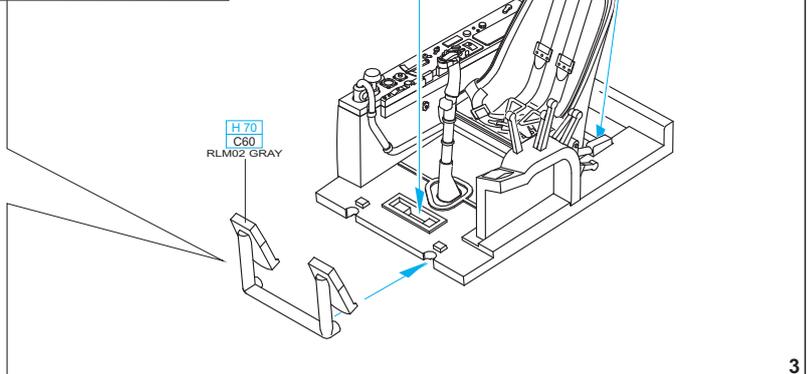
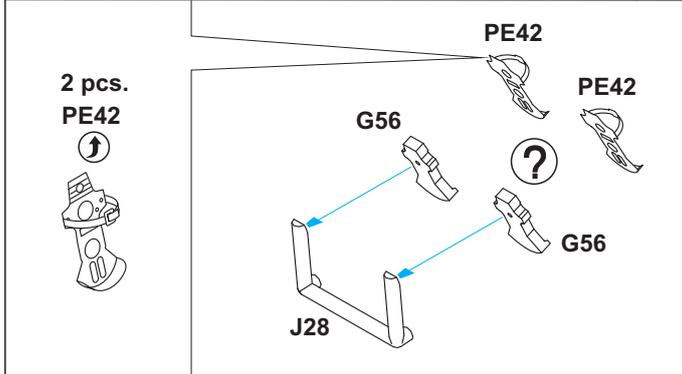
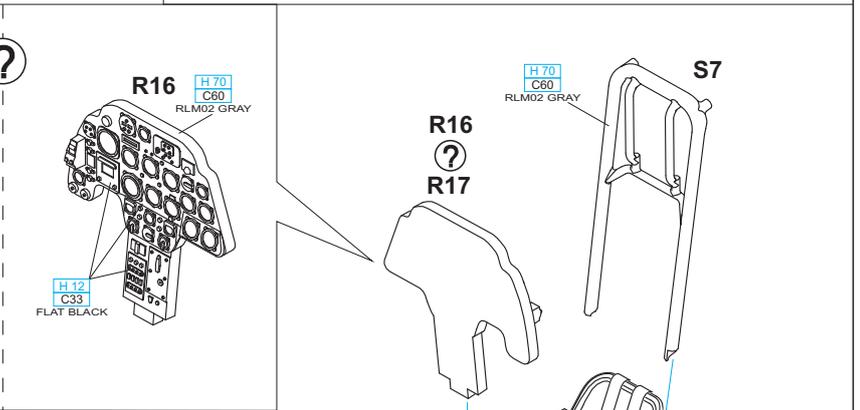
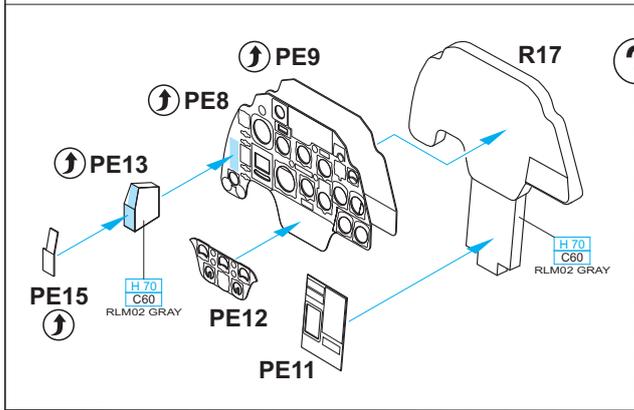
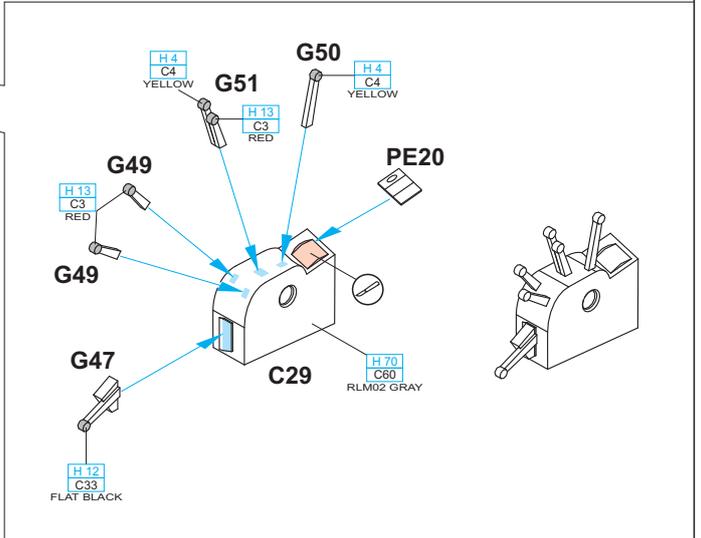
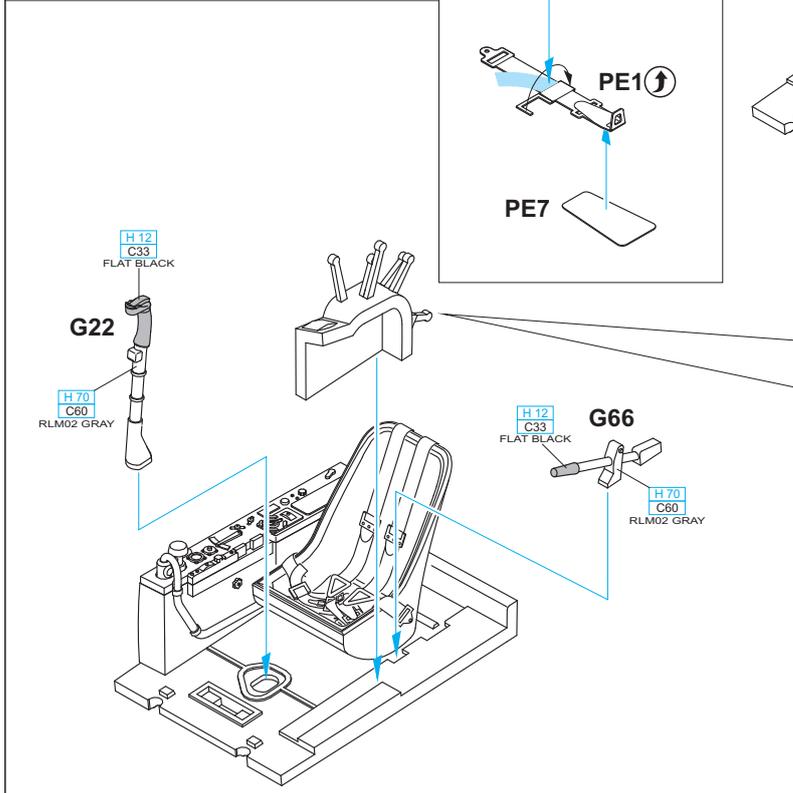
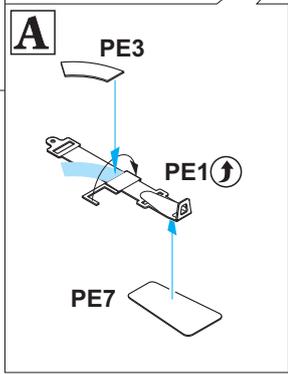
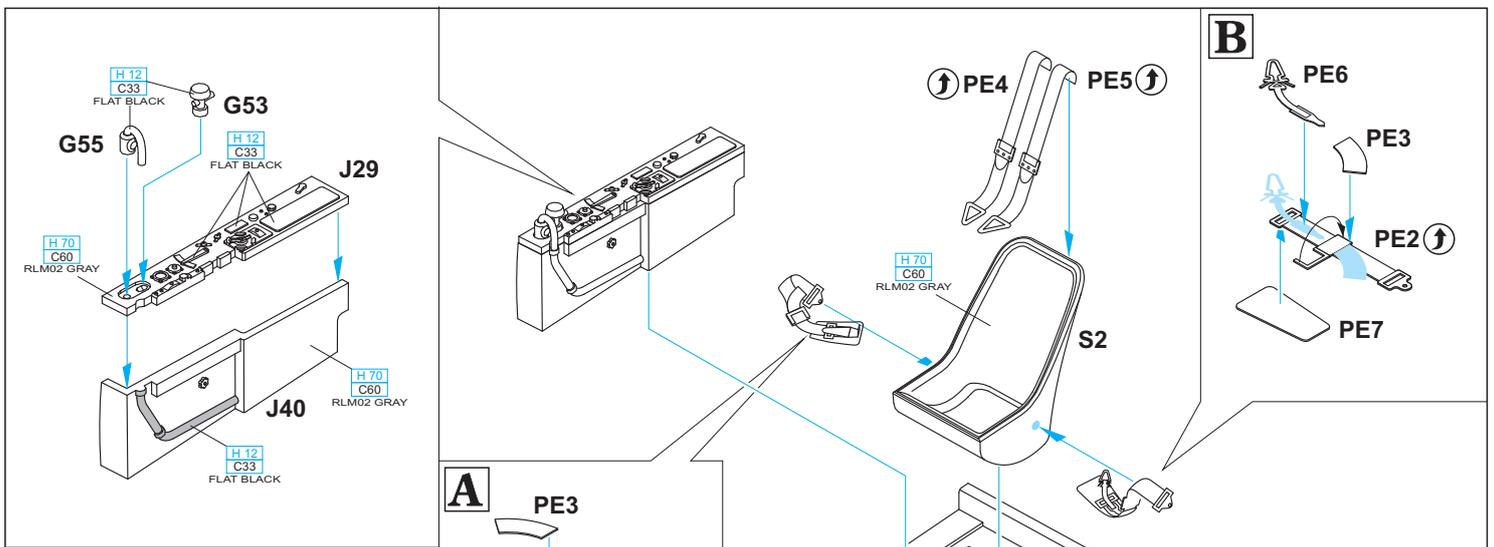
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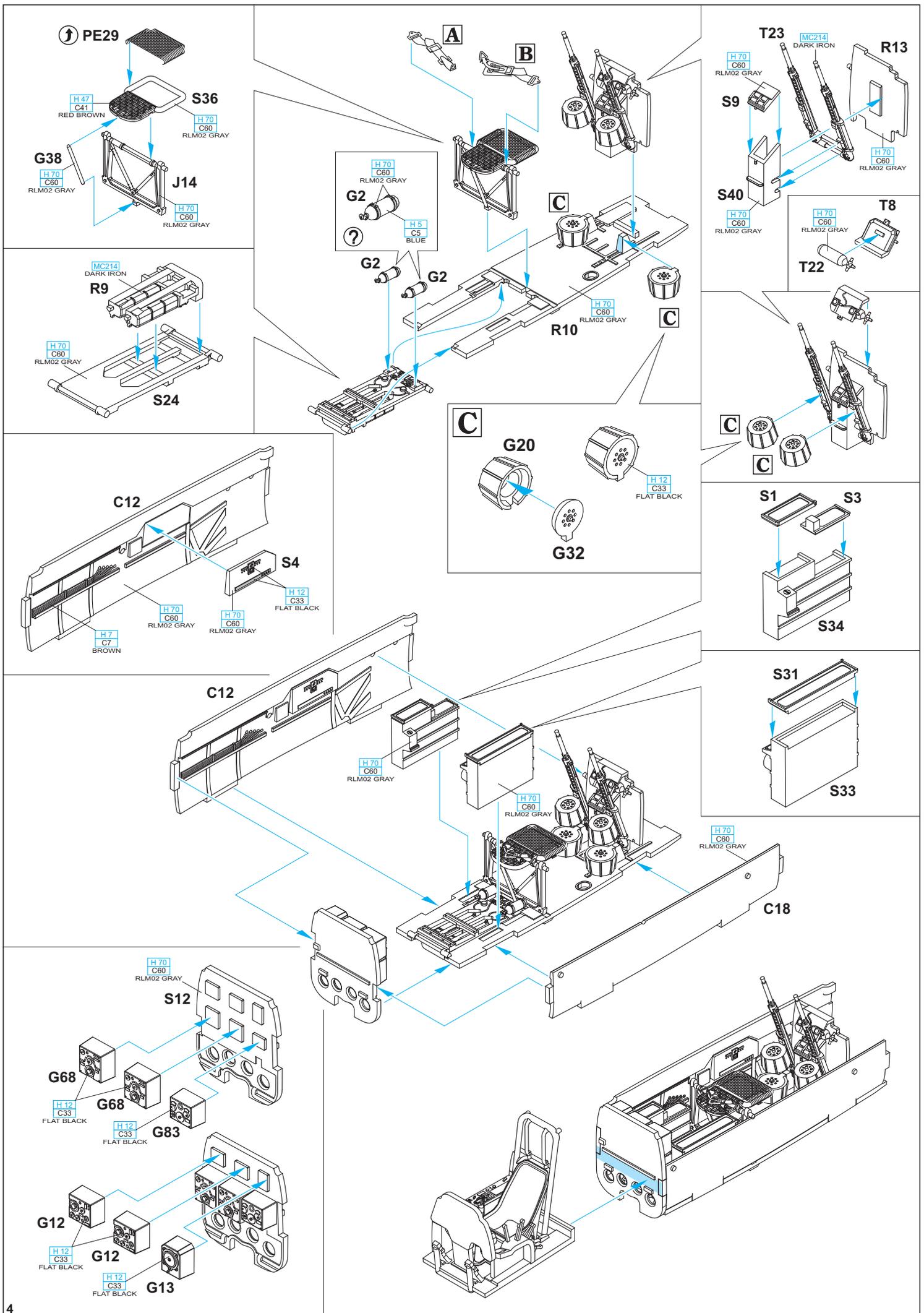


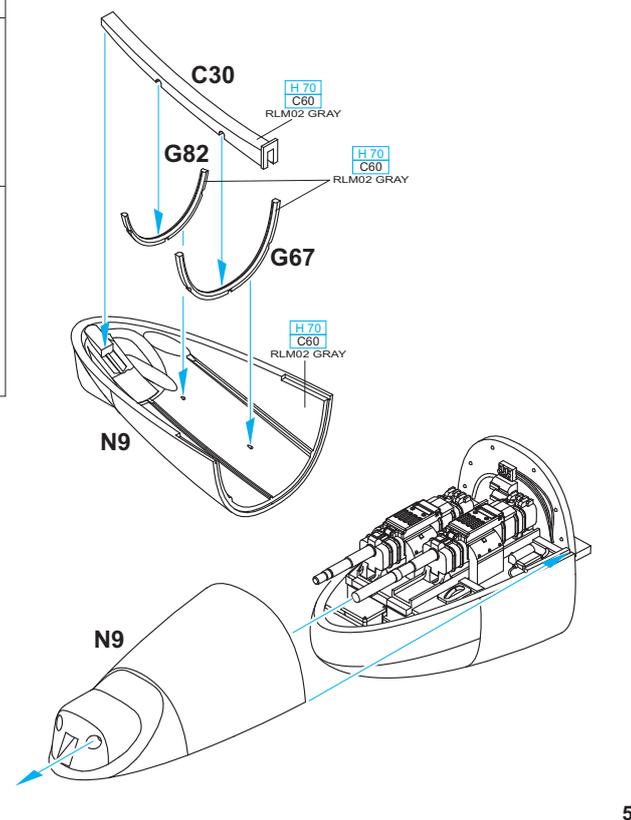
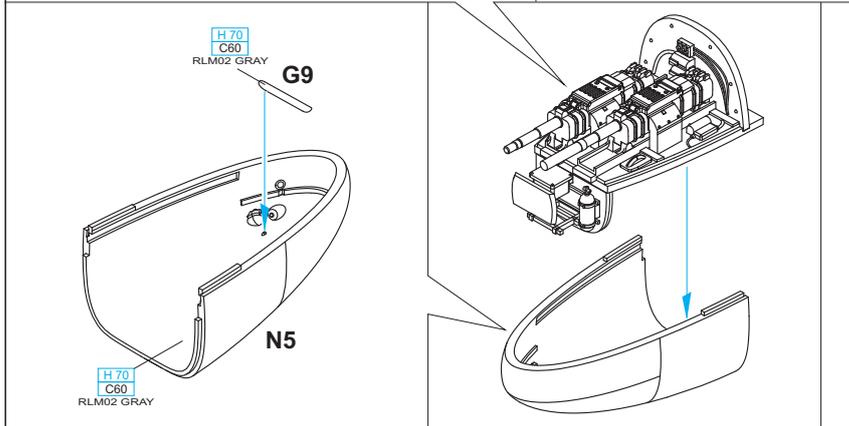
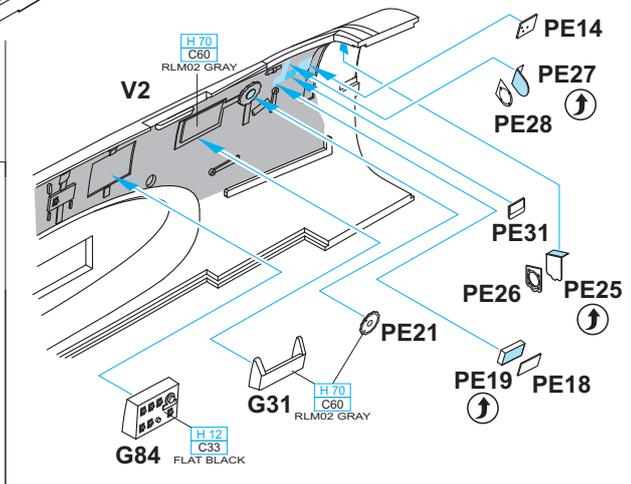
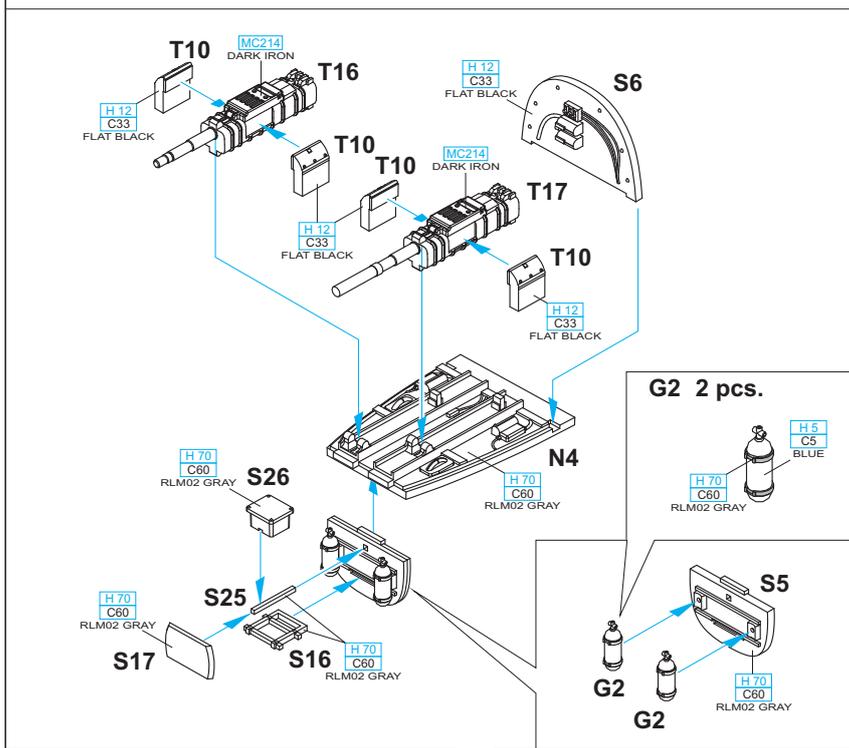
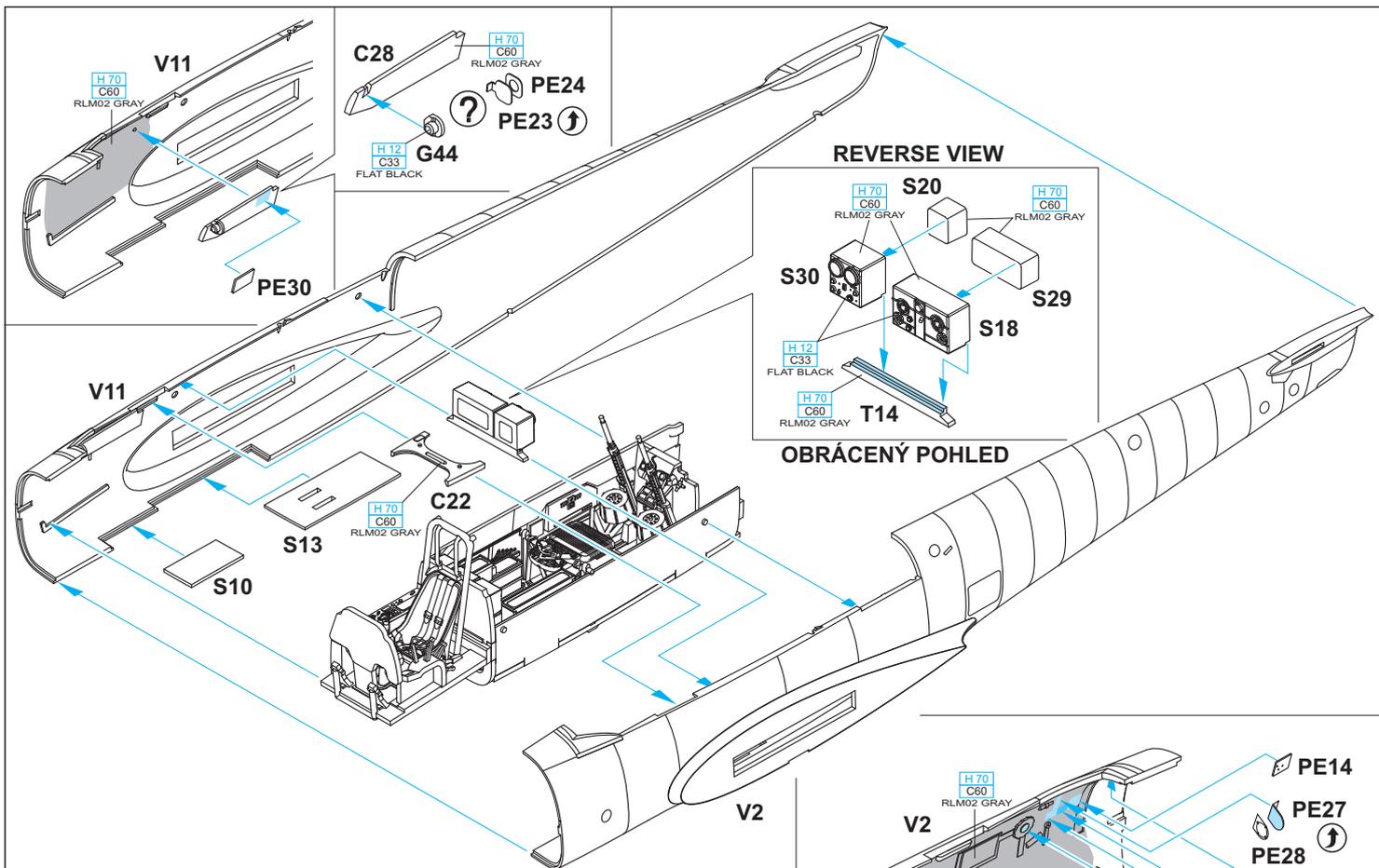
色

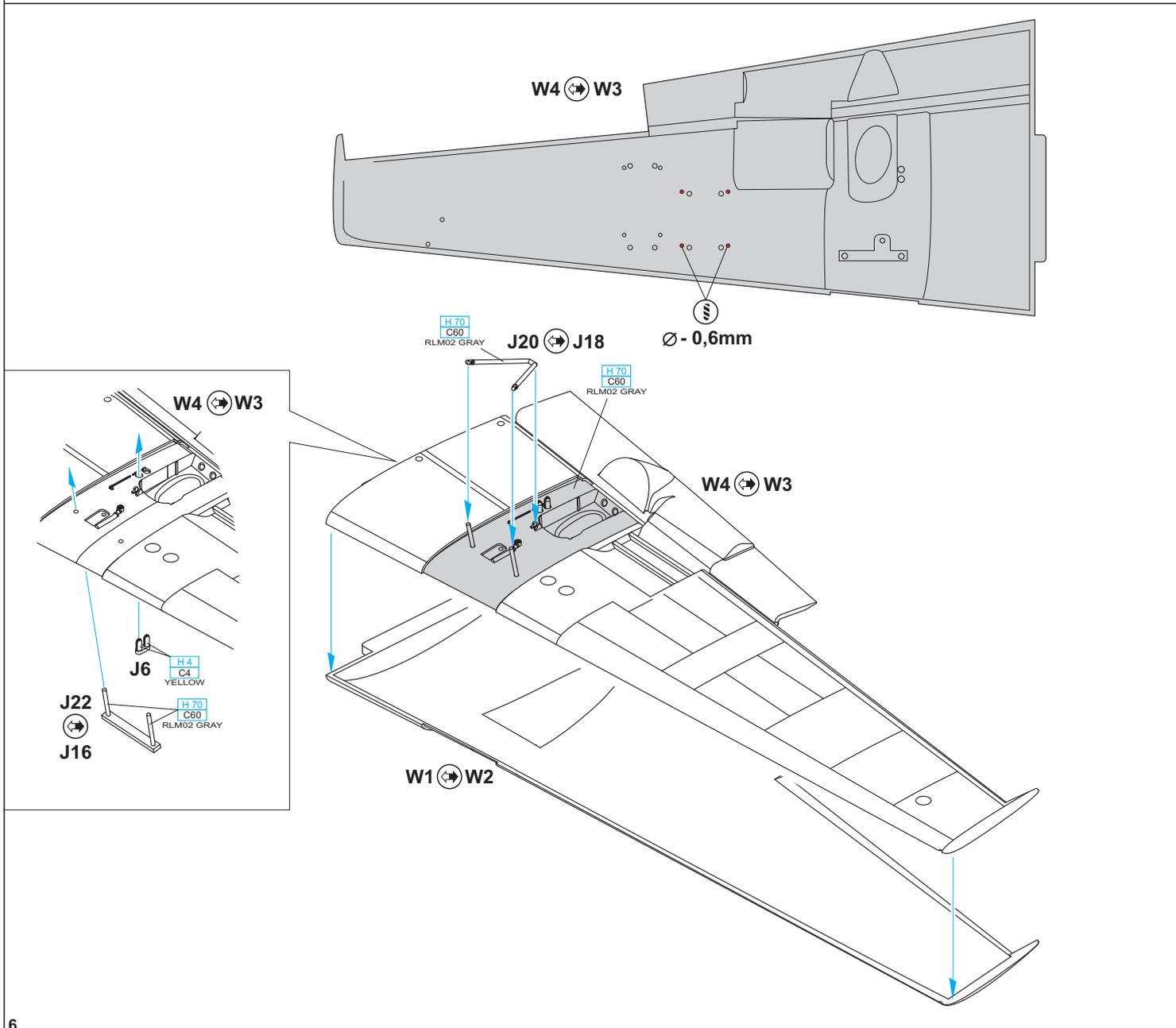
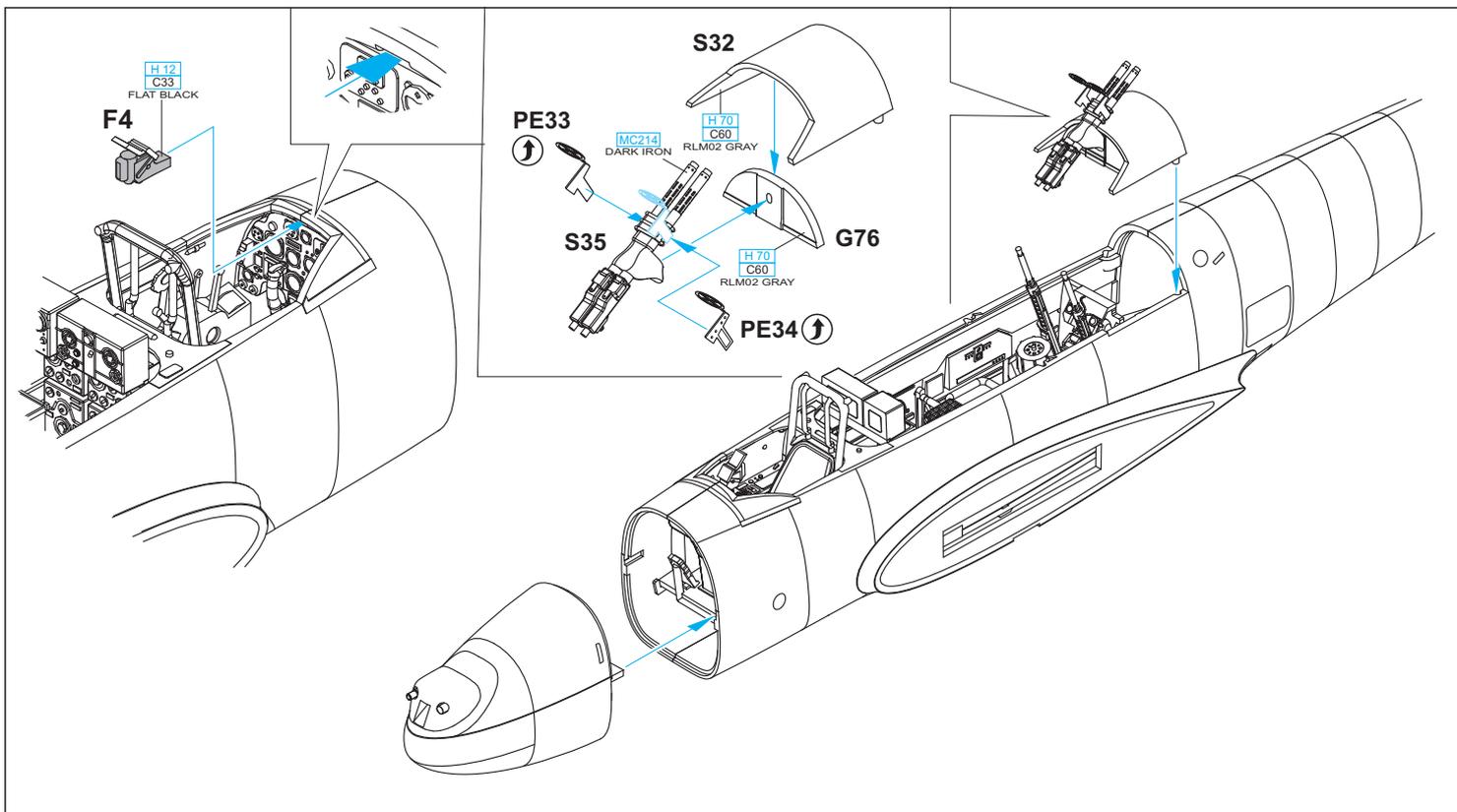
GSI Creos (GUNZE)			
AQUEOUS	Mr.COLOR		
[H 4]	[C4]	YELLOW	
[H 5]	[C5]	BLUE	
[H 7]	[C7]	BROWN	
[H 11]	[C61]	WHITE	
[H 13]	[C3]	RED	
[H 12]	[C33]	FLAT BLACK	
[H 37]	[C43]	WOOD BROWN	
[H 47]	[C41]	RED BROWN	
[H 64]	[C17]	DARK GREEN	RLM71
[H 65]	[C18]	DARK GREEN	RLM70

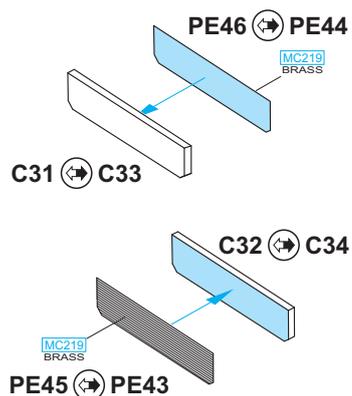
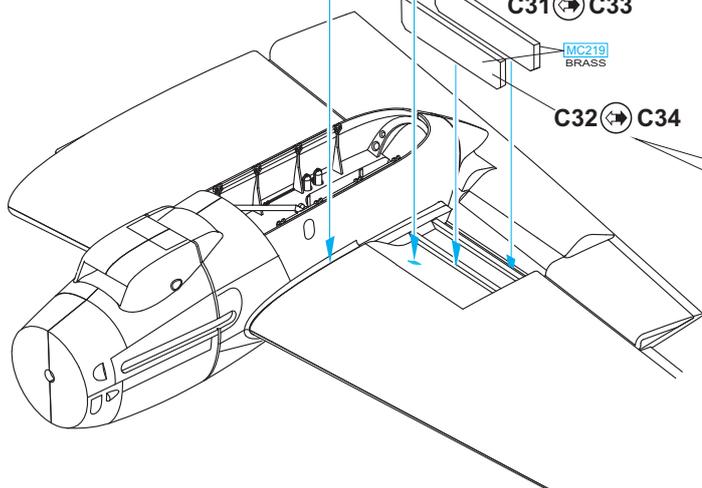
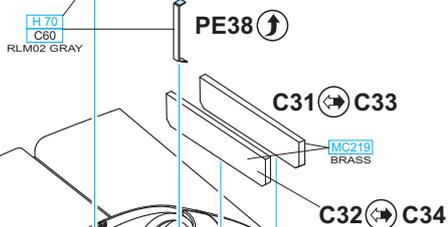
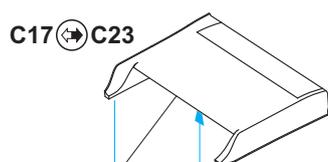
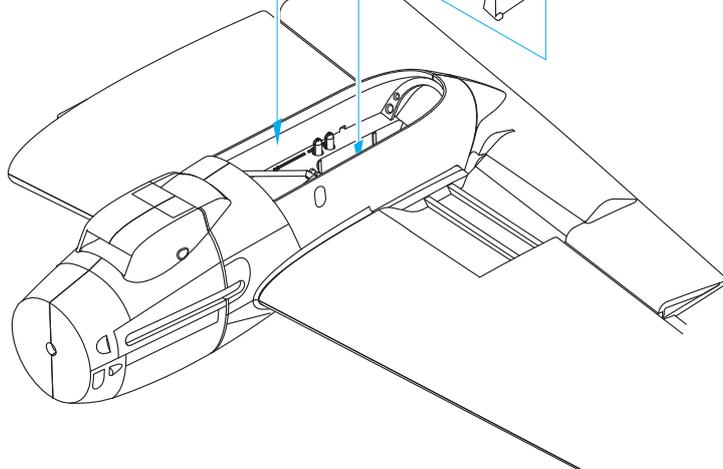
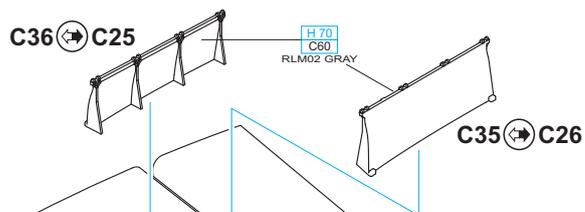
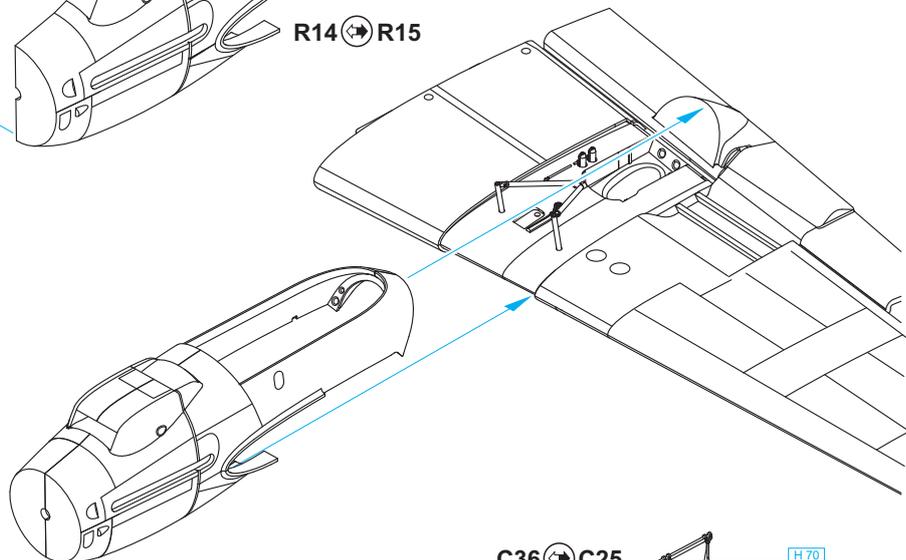
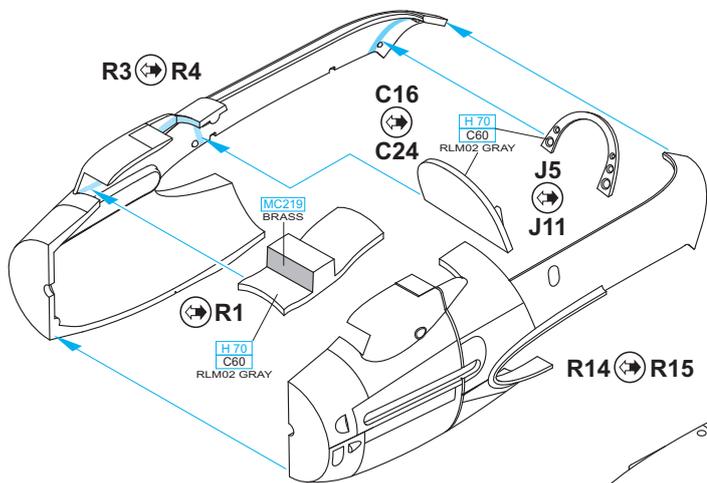
AQUEOUS	Mr.COLOR		
[H 69]	[C37]	GRAY	RLM65
[H 70]	[C60]	GRAY	RLM02
[H 77]	[C137]	TIRE BLACK	
[H 344]	[ ]	RUST	
[H 417]	[C417]	LIGHT BLUE	RLM76
[H 423]	[C423]	DARK GREEN	RLM83
Mr.METAL COLOR			
[MC214]	[ ]	DARK IRON	
[MC218]	[ ]	ALUMINIUM	
[MC219]	[ ]	BRASS	

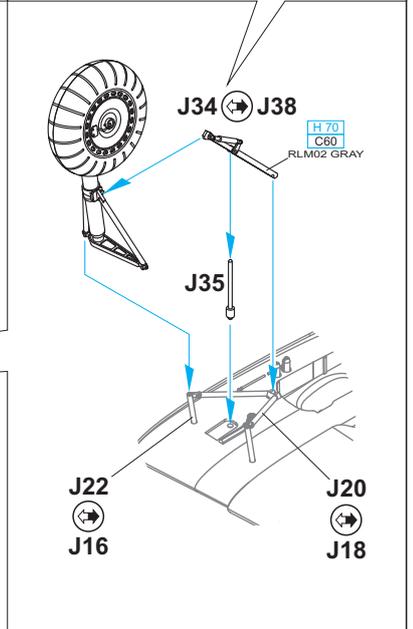
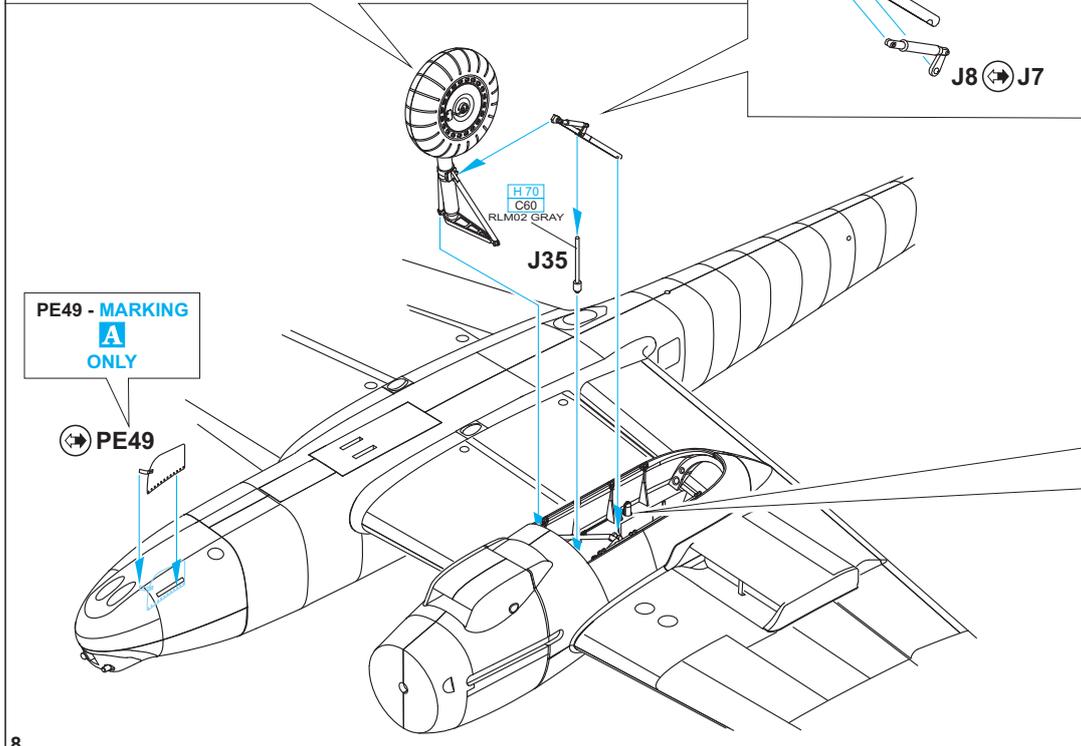
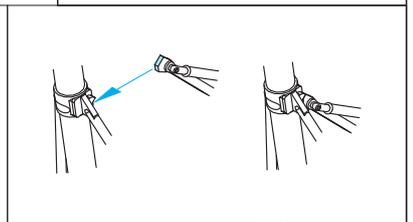
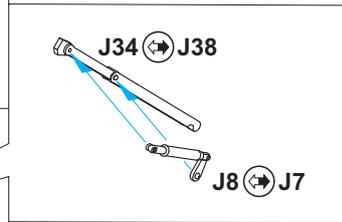
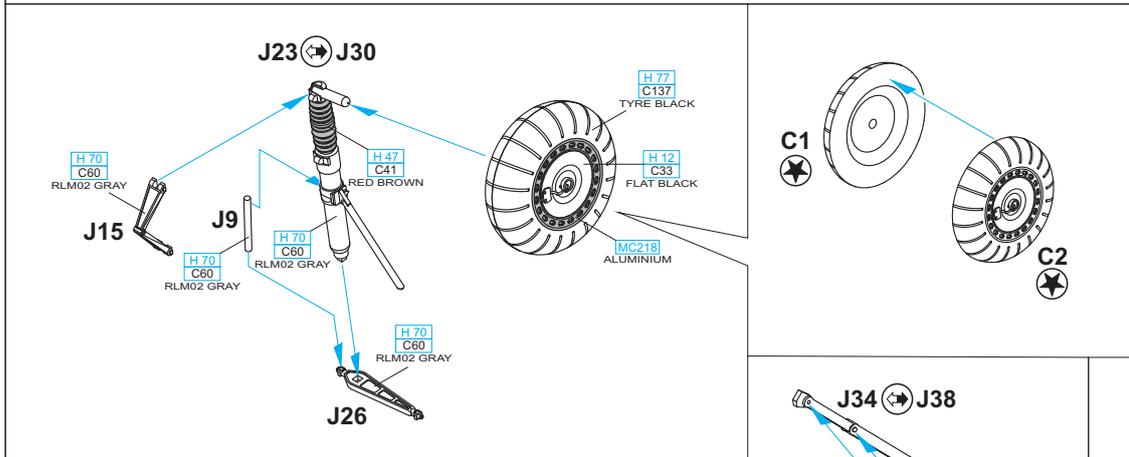
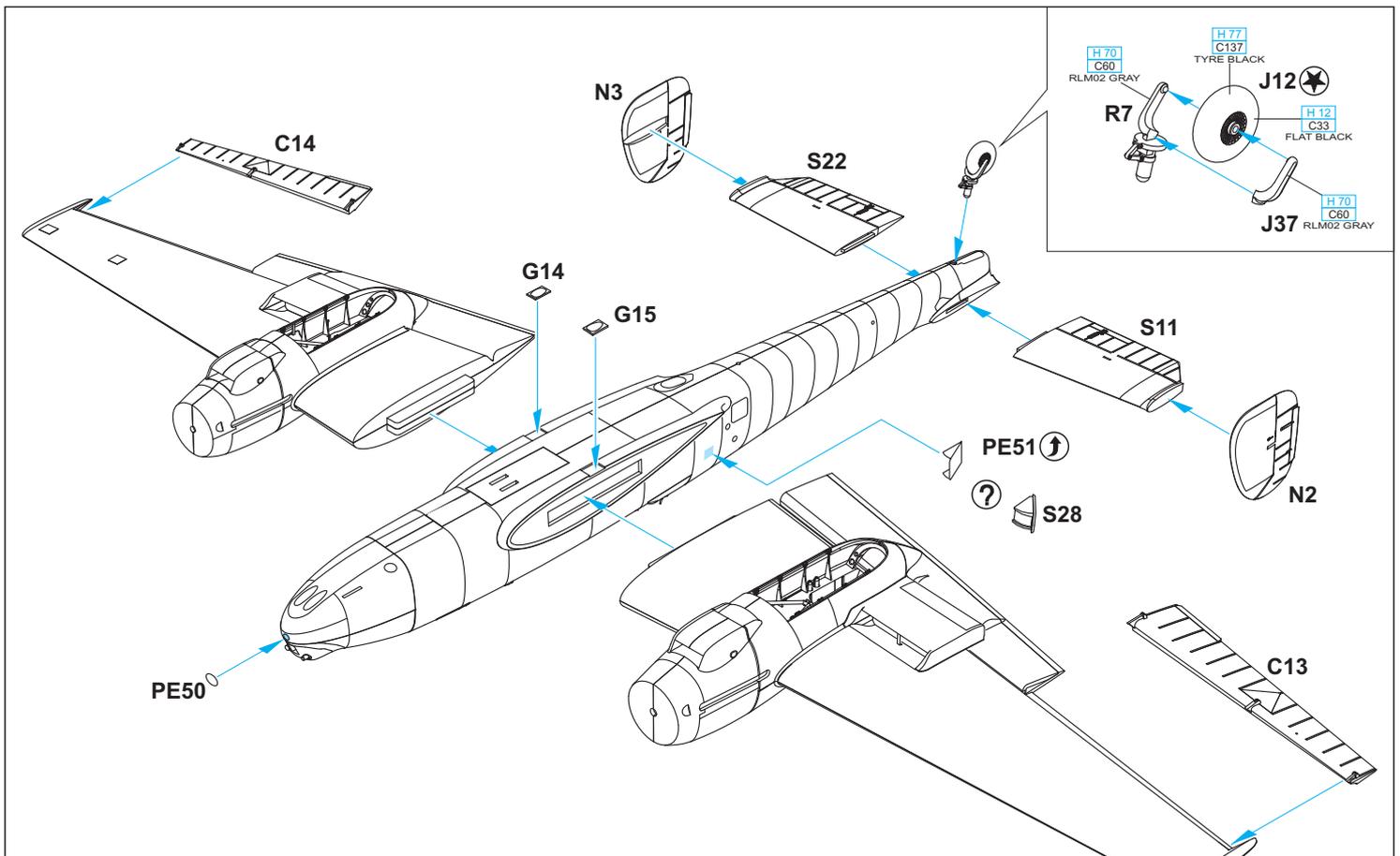


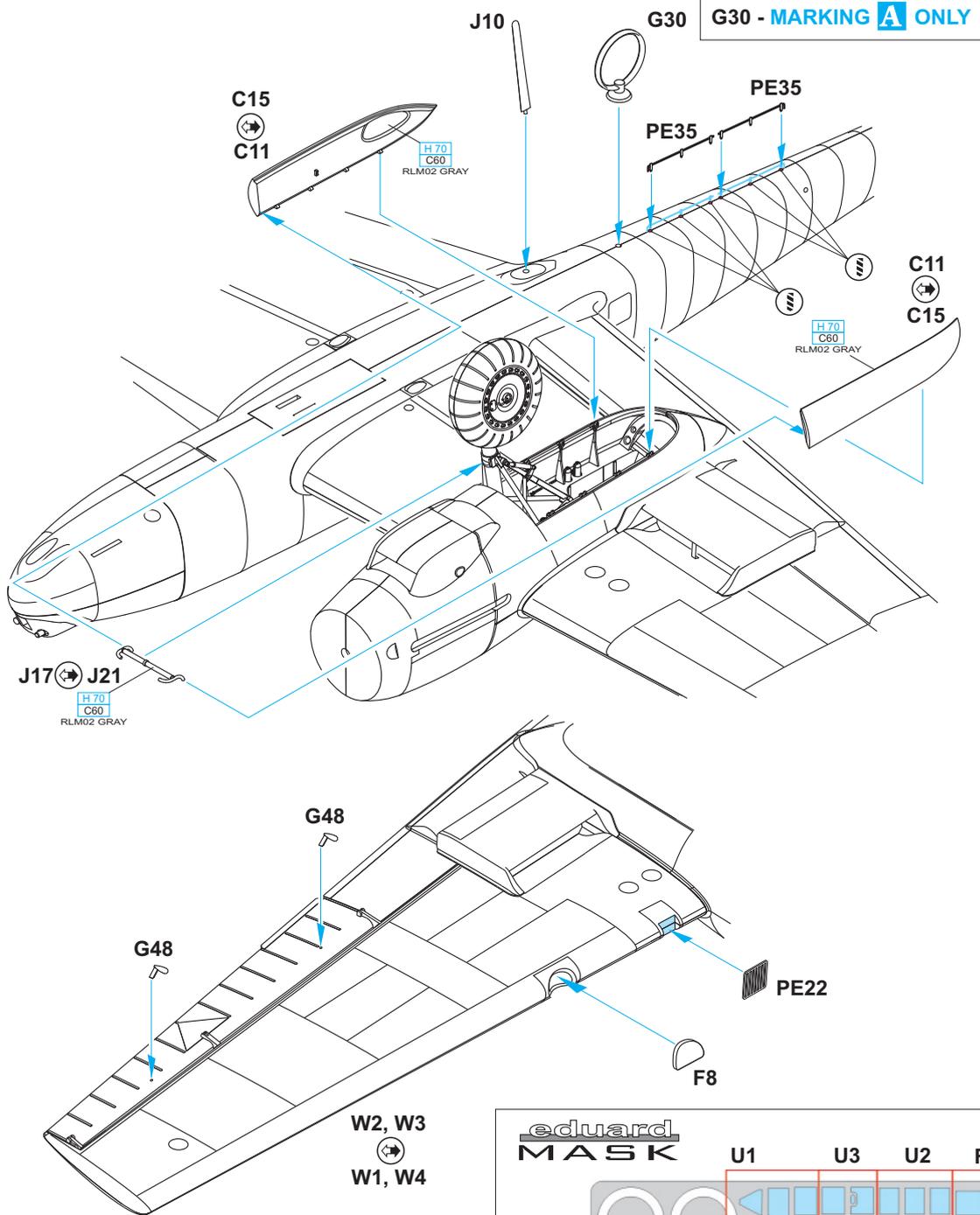






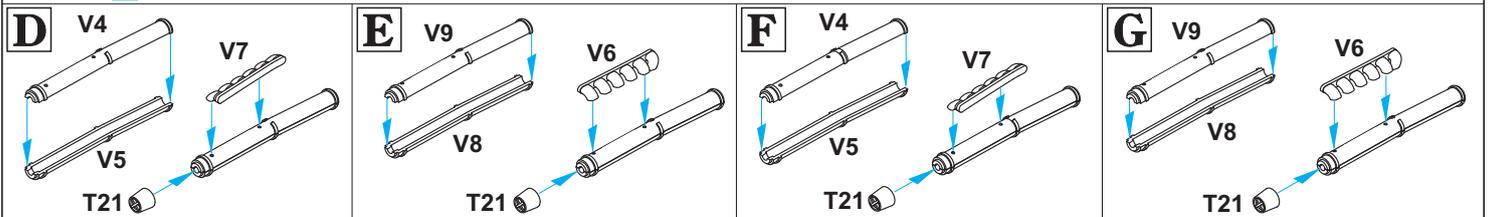




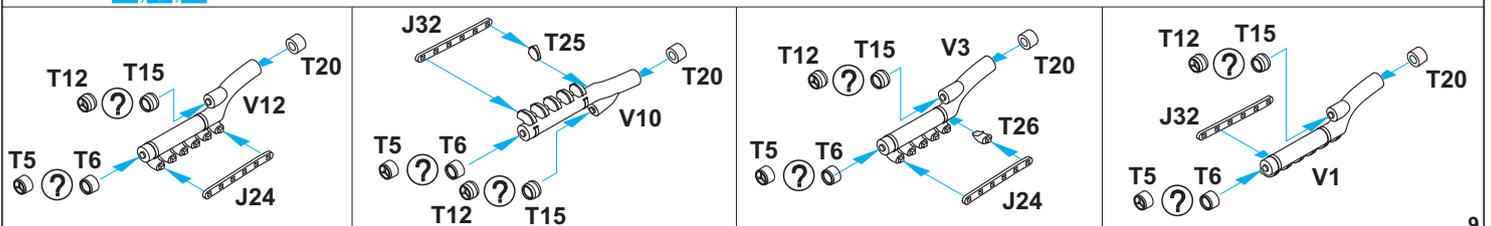


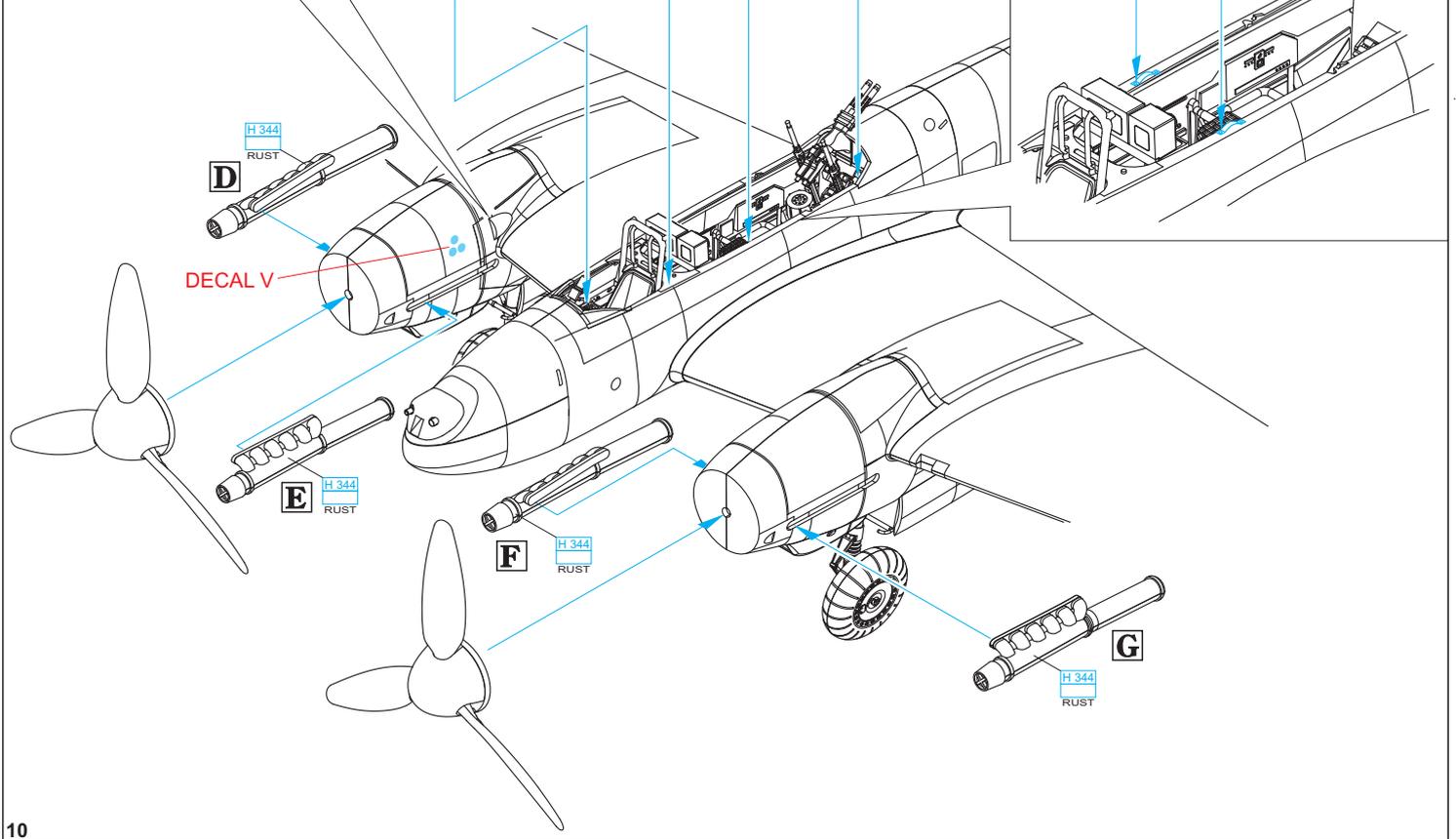
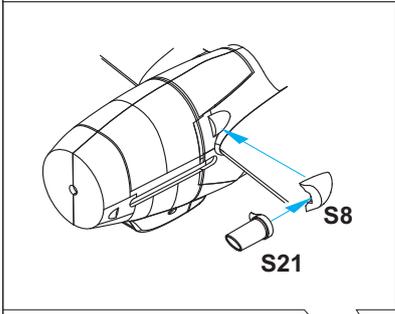
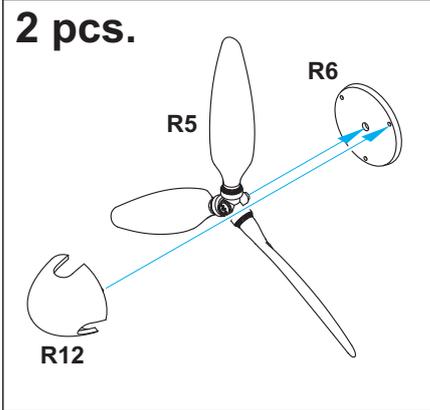
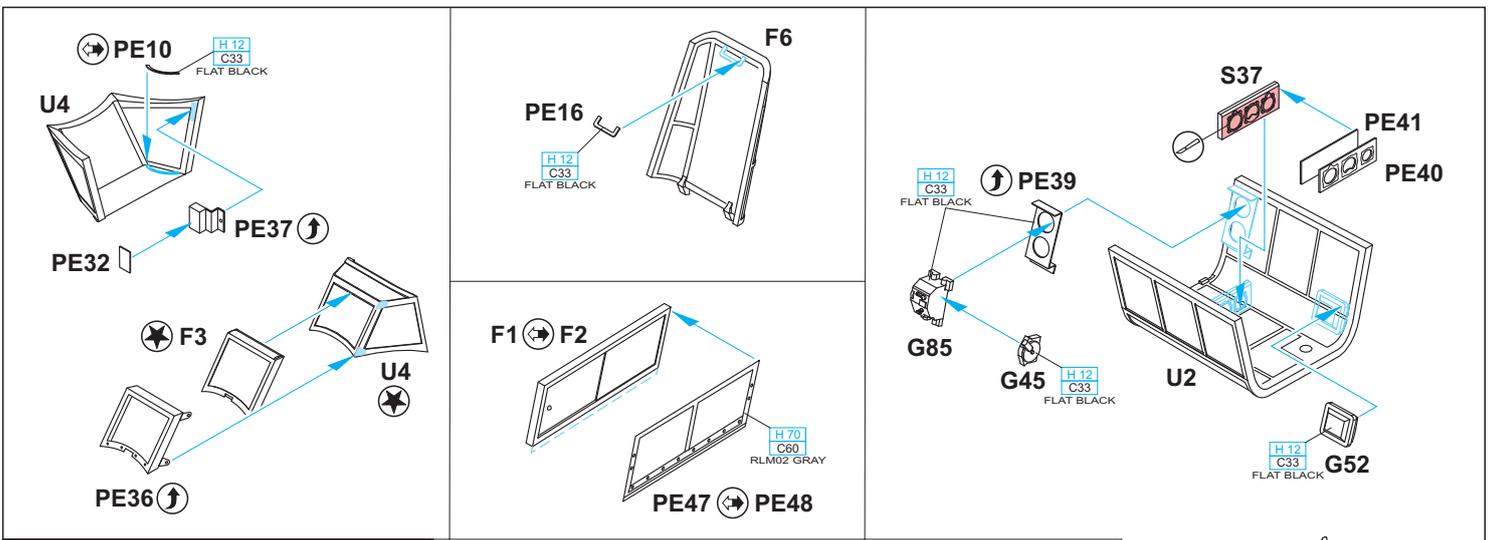
WE RECOMMEND TO GLUE J24/ J32 EXHAUST BESES TO ENGINE NACELLES FIRST, NEXT GLUE THE EXHAUST PIPES TO THE BASES.  
DOPORUČUJEME NEJPRVE NALEPIT ZÁKLADNY VÝFUKŮ J24/ J32 DO MOTOROVÝCH GONDOL, TEPRVE POTÉ VLEPOVAT JEDNOTLIVÉ VÝFUKY.

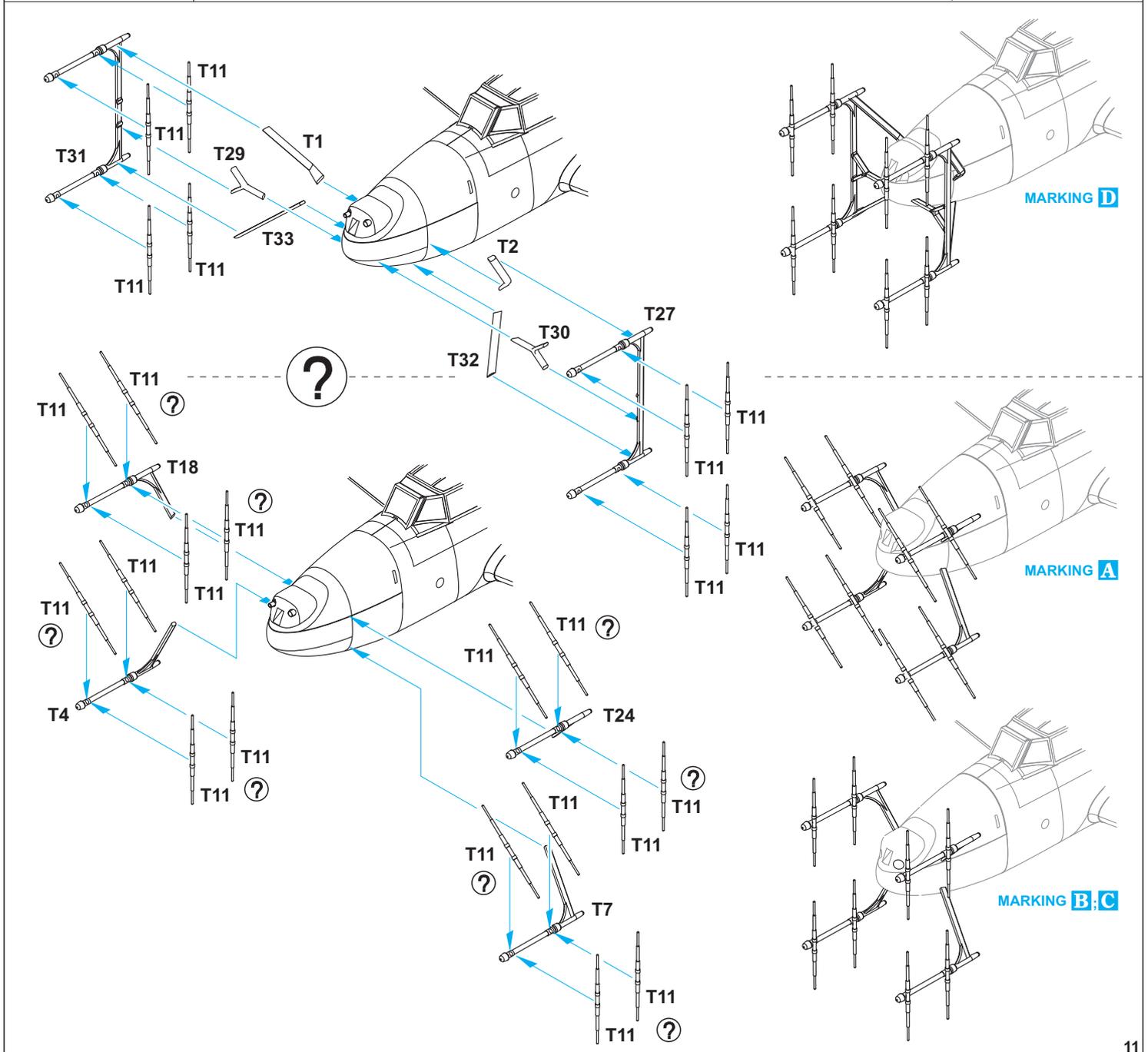
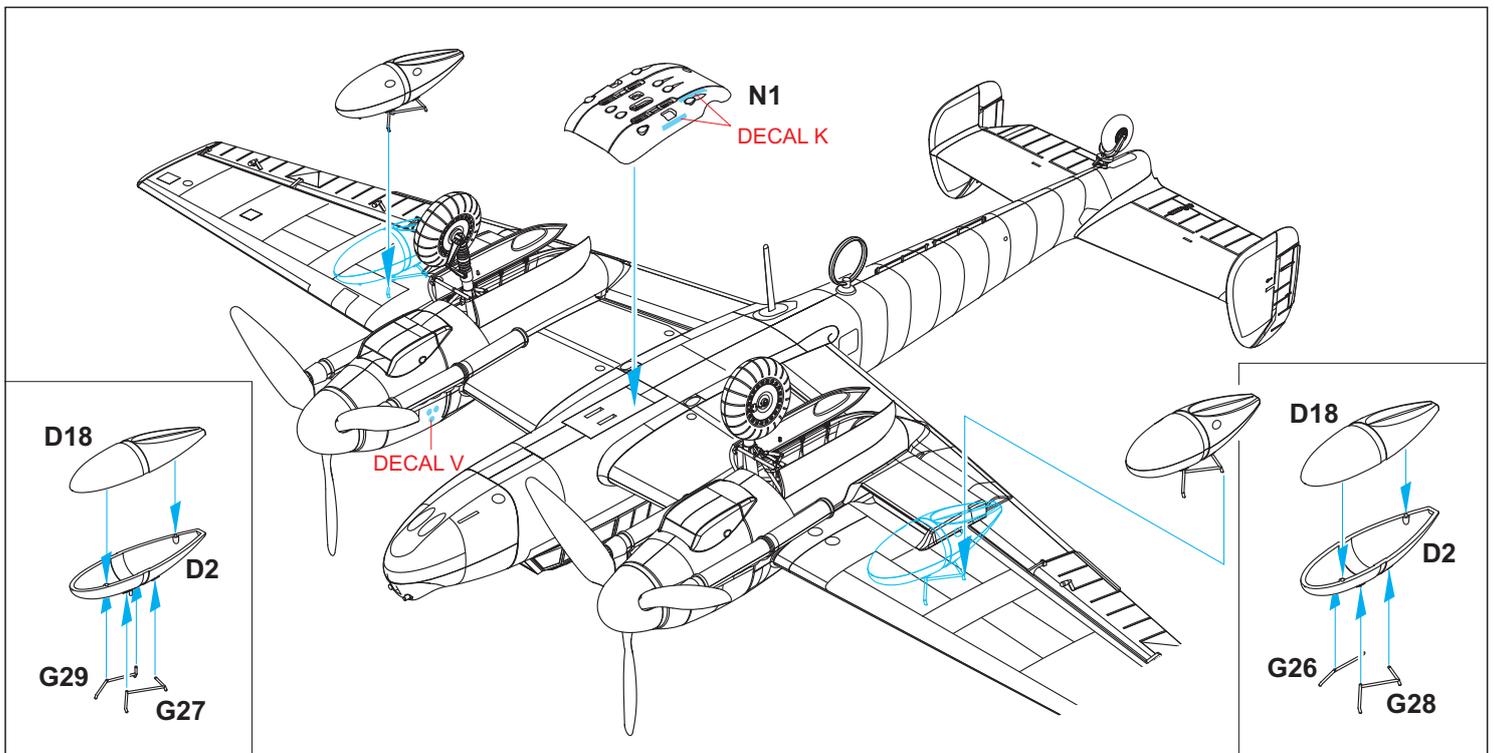
**MARKING A**



**MARKING B, C, D**





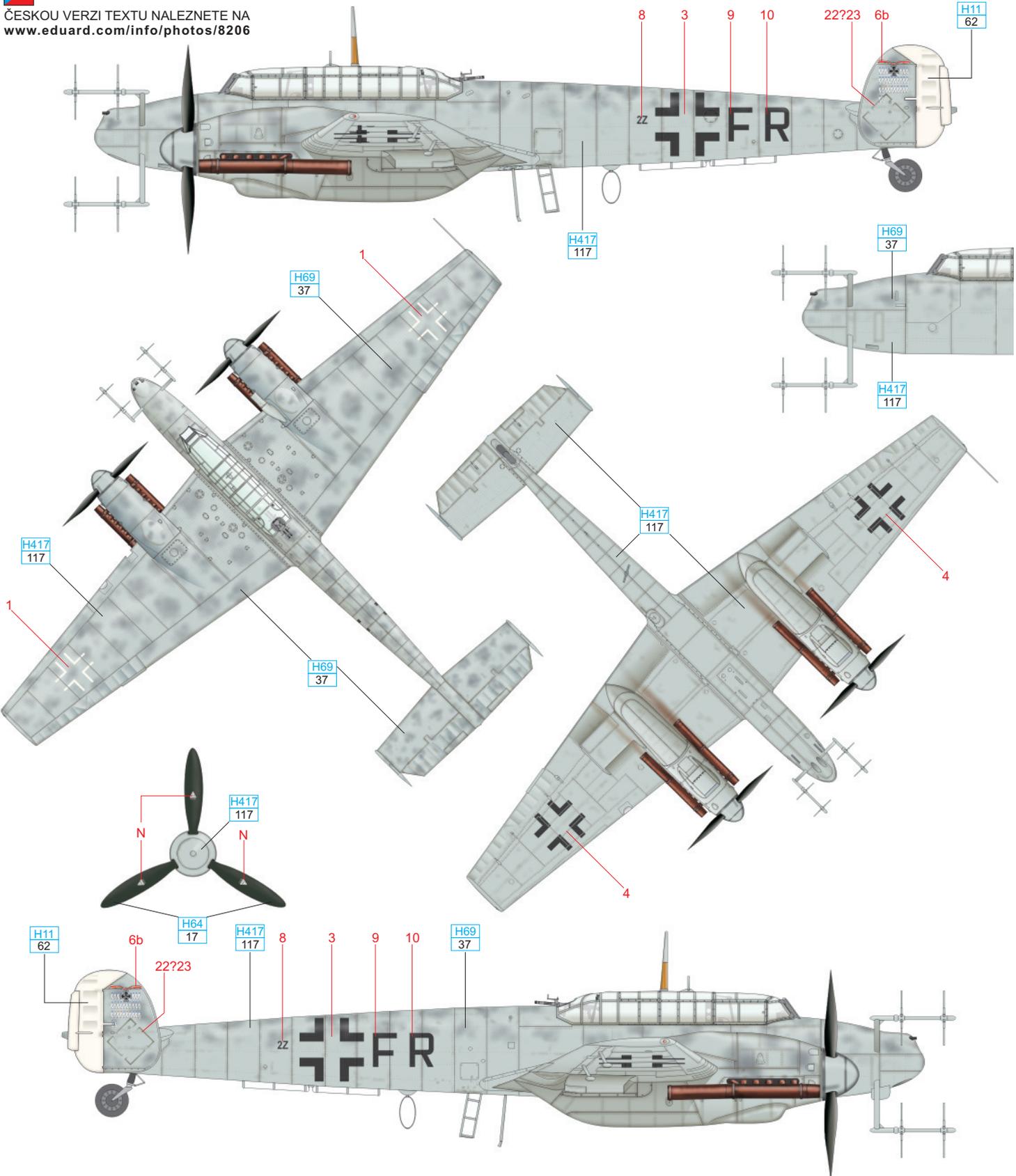


# A. Hptm. Wilhelm Johnen, 7./NJG6, Neubiberg, 1945

Messerschmitt Bf110G-4, 7./NJG6 was among the aircraft found by the allies in the spring of 1945 in Neubiberg. Despite wearing the codes of 7. Staffel, the aircraft in question was the personal mount of the CO of III./NJG 6, Hauptmann Wilhelm Johnen.

This aircraft is not as well known as another one of the aircraft flown by Johnen, C9+EN, in which he was persuaded to conduct an emergency landing following engine damage in Switzerland, on the night of 27/28 April, 1944. The aircraft was his last, from a later series production block, and equipped with the FuG 220 SN-2d antenna system, with the dipoles angled at 45°, exhausts of the Eberspacher type, and equipped with the Schrage Musik cannon arrangement. The camouflage scheme consisted of RLM 76 on the bottom and side surfaces, and RLM 75 on upper surfaces. The upper surface colors were lightened with an irregular snake pattern of RLM 76, such that only traces of the original darker grey color were visible. The aircraft had white rudders, and the vertical fins carried a meticulously rendered Knight's Cross, with 32 bars denoting kills. In total, Wilhelm Johnen claimed 34 kills, the last of which was gained on the night of 15/16 March, 1945.

ČESKOU VERZI TEXTU NALEZNETE NA  
[www.eduard.com/info/photos/8206](http://www.eduard.com/info/photos/8206)



WHITE	H11 62	RLM 76	H417 117	RLM 75	H69 37	RLM 70	H65 18	WOOD	H37 43
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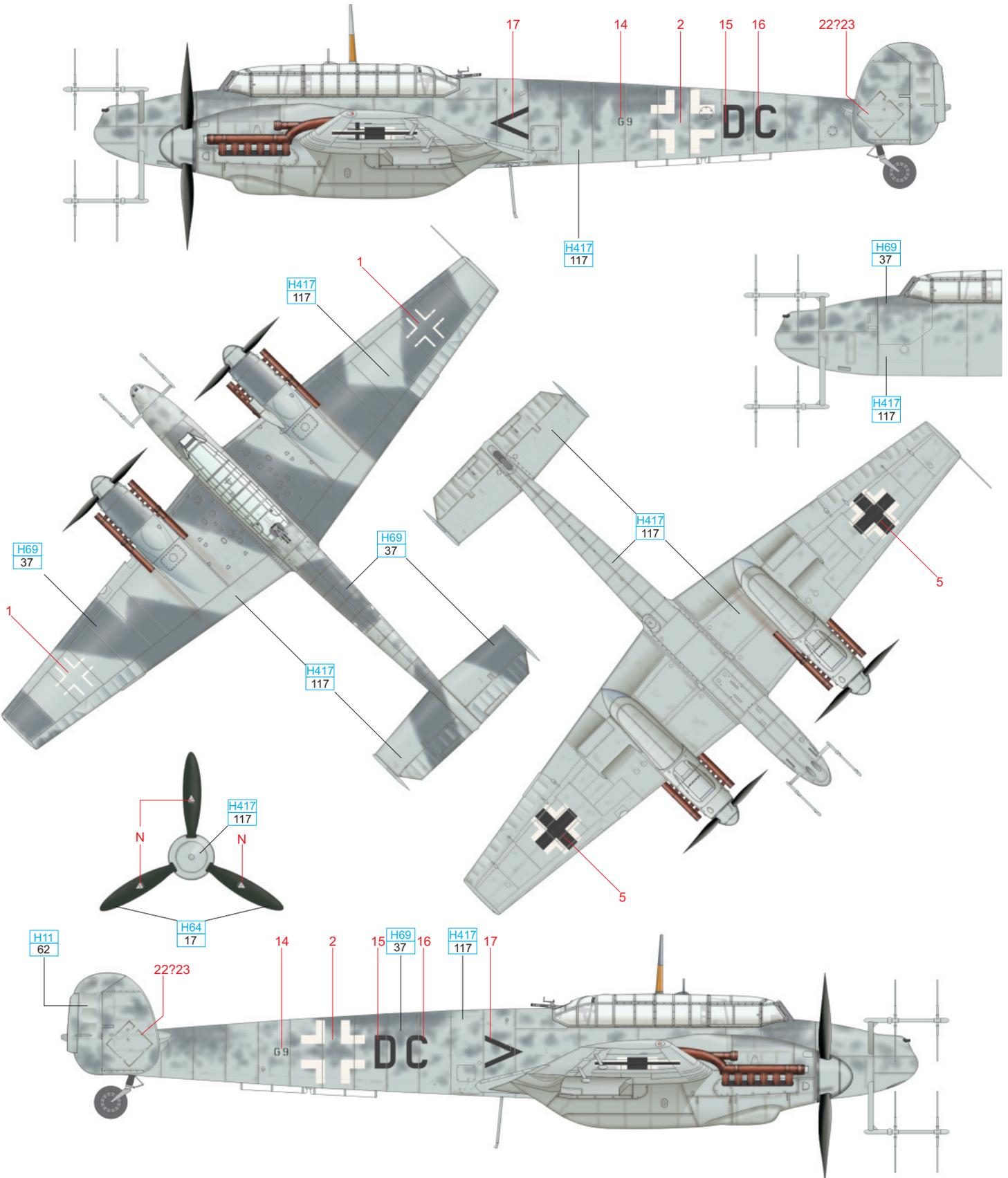


## C. Stab II./NJG1, Langensalza, 1945

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.



ČESKOU VERZI TEXTU NALEZNETE NA  
[www.eduard.com/info/photos/8206](http://www.eduard.com/info/photos/8206)



RLM 76	H417 117	RLM 75	H69 37	RLM 70	H65 18	WOOD	H37 43
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# STENCIL DATA

