

# Bf 110F

eduard

GERMAN WWII HEAVY FIGHTER

1/48 SCALE PLASTIC KIT

ProfiPACK  
edition

#8207



## INTRO

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 Kampferstörer 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 Kampferstörer 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<sup>th</sup>, 1936, and the modified second prototype V2 was submitted to the Erprobungsstelle in Rechlin on January 14<sup>th</sup>, 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 81Z 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, due to the effectiveness of American fighter escorts. 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.

## ÚVODEM

Historie slavného Zerstöreru Bf 110 se začala psát na konci roku 1934, kdy C-Amt RLM (Technický úřad Říšského ministerstva letectví) vydal specifikace pro dvoumístné dvoumotorové letouny kategorie Kampferstörer. Do konkurzu vstoupily firmy Focke-Wulf (Fw 57), Henschel (Hs 124) a BFW (Messerschmitt Bf 110). Na jaře 1935 RLM své názory přehodnotilo, univerzální kategorii Kampferstörer zrušilo ve prospěch dvou specializovaných kategorií Schnellbomber a Zerstörer. Požadavkům RLM na těžký stíhací stroj Zerstörer nejlépe vyhovovala Messerschmittova konstrukce, která se příliš nevázala na původní zadání. První prototyp Bf 110 V1 byl zalétán 12.5.1936, modifikovaný druhý prototyp V2 byl do Erprobungsstelle in Rechlinu předán 14.1.1937. Čtyři stroje zkušební série A-01 až A-04, poháněné motorem JUMO 210Da, byly dodány začátkem roku 1938, v červenci pak začala výroba 45 kusů série Bf 110B, poháněné motory JUMO 210Ga o max.výkonu 500kW (680 k). Na konci roku 1938 se konečně rozběhla výroba výkonných motorů DB 601, které byly montovány do první velkosériové verze C. Verze C, stejně jako předchozí B, měla výzbroj tvořenou dvěma kanóny MG FF, montovanými do trupu pod podlahou prostoru osádky, čtyřmi kulomety MG 17 lafetovanými v nose letounu, a jedním vzad střelícím kulometem MG 15, obsluhovaným radistou/střelcem. Osádka byla dvoučlenná. Do září 1939 dostala Luftwaffe 169 strojů Bf 110C. Již první bojové zkušenosti z Norska a Francie ukázaly na malý operační dolet, nevyhovující pro doprovodné stíhačky. Prvním řešením tohoto problému byla známá velká podtrupová přídavná nádrž zvaná Dackelbauch. Stroje verze C-3, adaptované k nesení této nádrže, byly přeznačeny na D-0. Výsledky nebyly zcela uspokojivé, u verze D proto došlo k rekonstrukci palivové soustavy, po které stroje řady D nesly dvě přídavné nádrže pod křídly a malou přídavnou olejovou nádrž pod trupem. Stroje Bf 110D měly také standardně prodloužený trup, v nástavci za ocasem byl uložen záchranný člun a další vybavení pro přežití posádky při nouzovém přistání. Prodloužené trupy zůstaly i na některých sériích následující verze Bf 110E, která byla vybavena pumovými závěsníky pod trupem a pod křídlem. Většina Bf 110E byla poháněna motory DB 601N. Následující verze Bf 110F dostala nové motory DB 601F v nově tvarovaných kapotách, s novými, mohutnějšími vrtulovými kužely - aerodynamika stroje byla zjemněna ve stylu Bf 109F. Modernizaci prošla i výzbroj, staré kanóny MG FF byly nahrazeny modernějšími MG 151. Významnou změnu přinesly stroje řady Bf 110G, poháněné novými výkonnými motory DB 605. Od verze G-2 byl instalován vzad střelící dvojkulomet MG 81Z, u verze G-4 pak byly čtyři kulomety v přední nahrazeny dvěma 30 mm kanóny MK 108. U G-4 byly také zvětšeny směrovky. Bf 110 prošel během své válečné služby nejen řadou technických změn, k významným změnám došlo také v jeho operačním nasazení. Do války typ vstupoval jako těžký doprovodný a přepadový stíhač. Již v době Bitvy o Anglii bylo zřejmé, že role doprovodné stíhačky je na hranicích možností stroje. Naopak v obranných bojích proti britským bombardérům se Bf 110 velmi osvědčily a jako přepadový těžký stíhač byl Bf 110 smrtelně nebezpečným protivníkem až do konce války. Vzhledem k přesunu bombardovacích operací RAF do nočních hodin pak od roku 1941 Bf 110 přecházely na západě do role nočních stíhaček. Na východní frontě se zase významně prosadily jako rychlé stíhací bombardéry. Svoji původní úlohu těžké denní přepadové stíhačky přesto plnily dál jak na východě (zde po celou válku úspěšně bojovaly i ve své původní roli doprovodných stíhaček), tak na západě až hluboko do léta roku 1944, kdy jí pro těžké ztráty, způsobované především americkými doprovodnými stíhačkami, definitivně opustily. Jako noční stíhačky ve verzi G-4, díky silné hlavňové výzbroji a instalovanému radaru, ovšem efektivně bojovaly až do samotného konce války. Noční stíhání se tak nakonec stalo jednou z nejdůležitějších činností Bf 110 ve 2.světové válce.

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 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  
OHNOUOPEN HOLE  
VYVRTAT OTVORSYMETRICAL ASSEMBLY  
SYMETRICKÁ MONTÁŽREMOVE  
ODRÍZNOUTREVERSE SIDE  
OTOCITAPPLY EDUARD MASK  
AND PAINT  
POUŽIT EDUARD MASK  
NABARVIT

PARTS



DÍLY



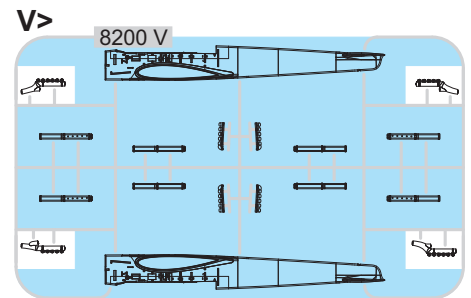
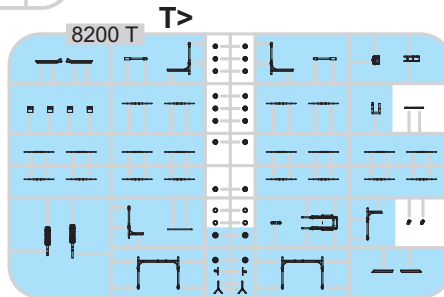
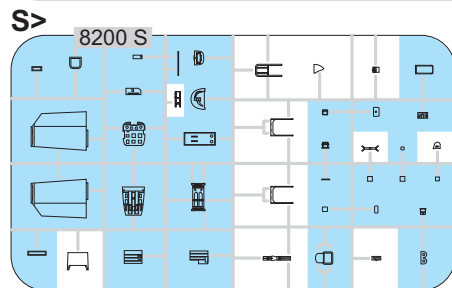
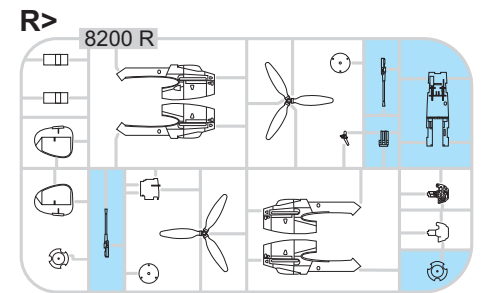
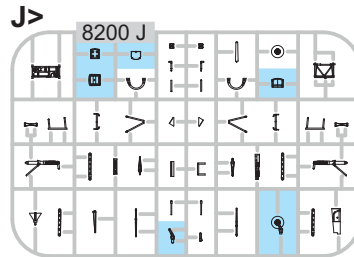
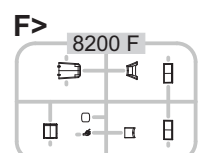
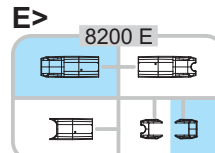
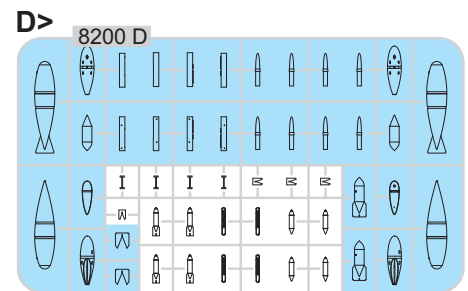
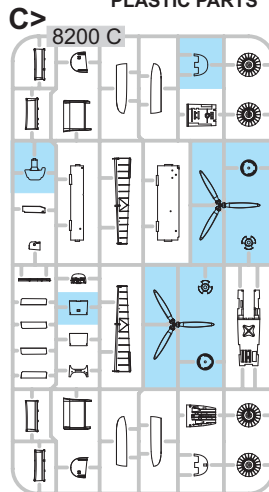
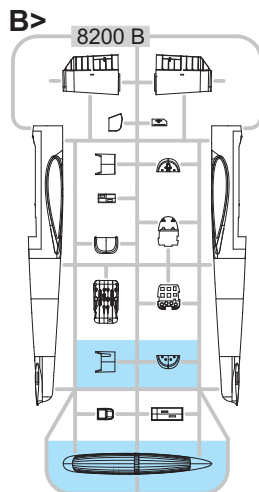
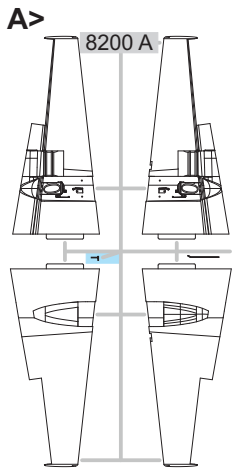
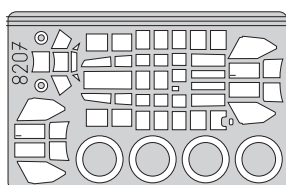
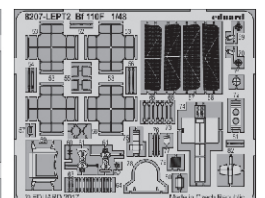
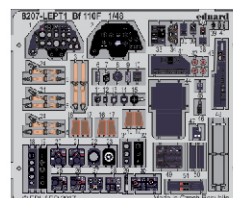
TEILE



PIÈCES



部品

eduard  
MASKPE - 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



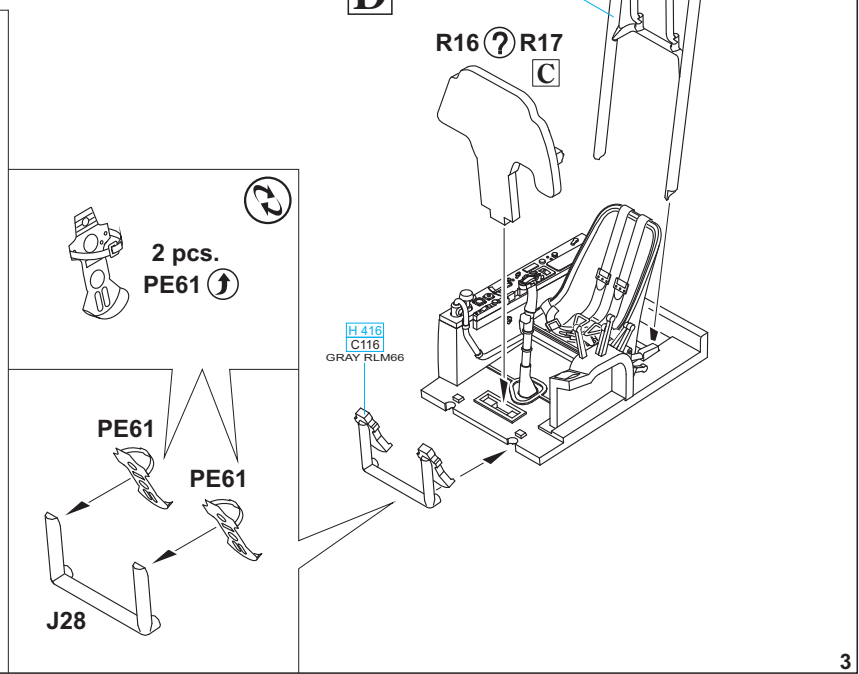
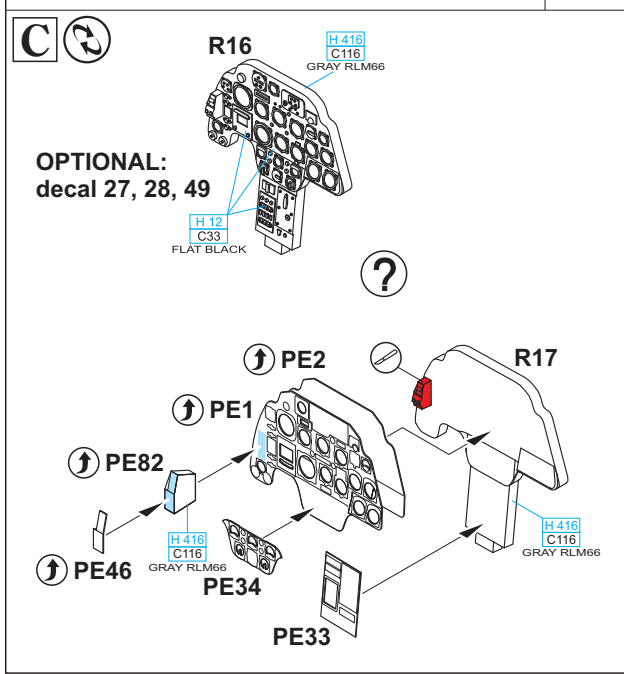
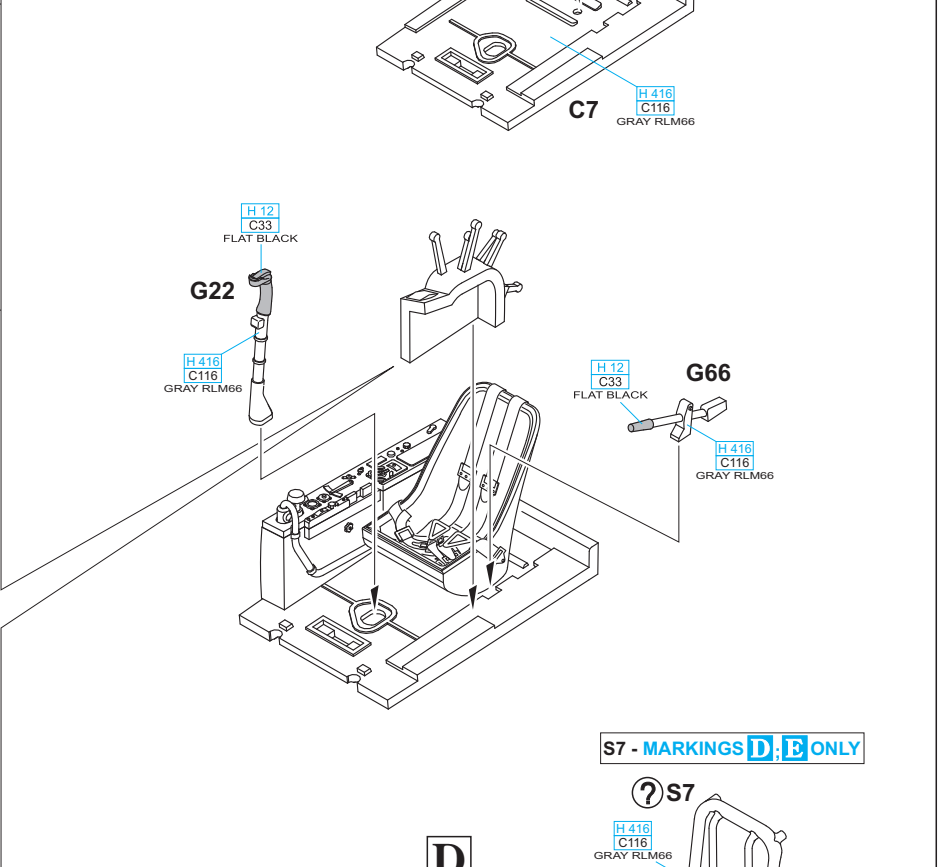
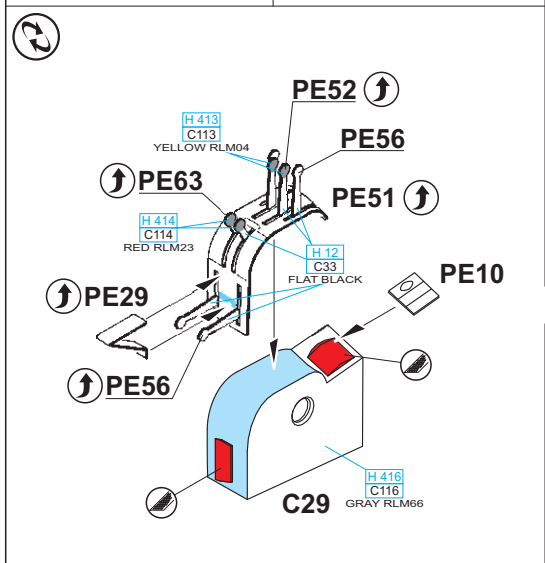
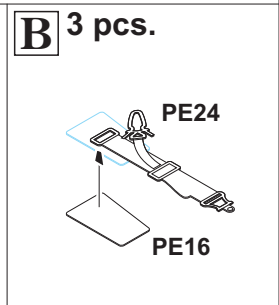
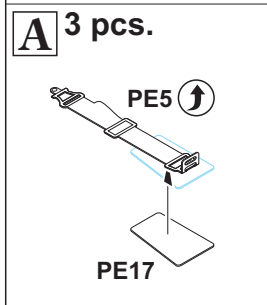
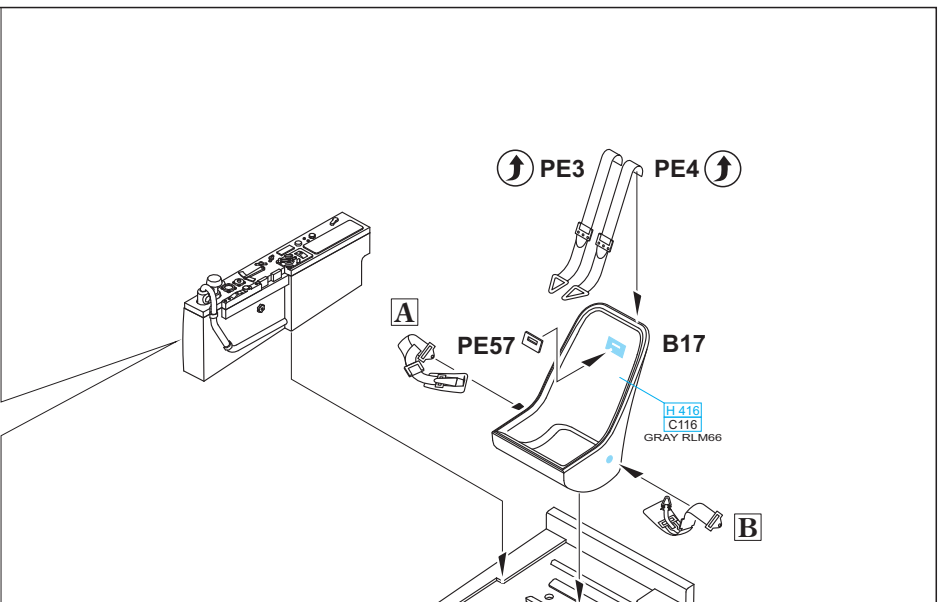
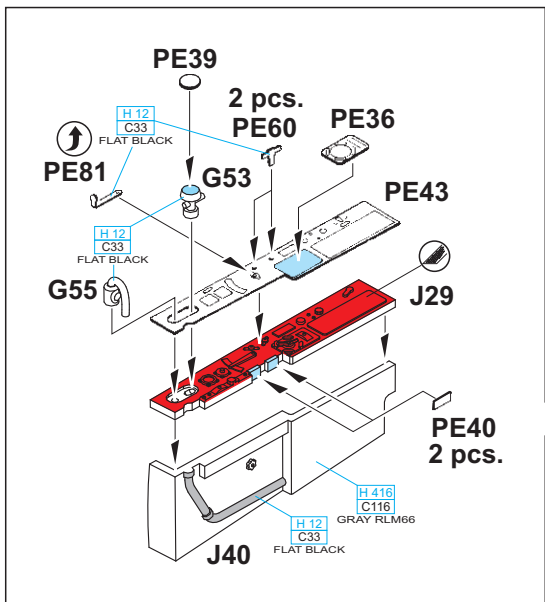
PEINTURE

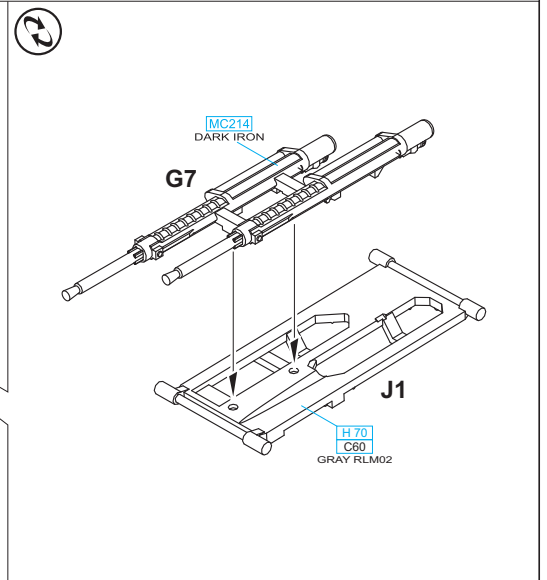
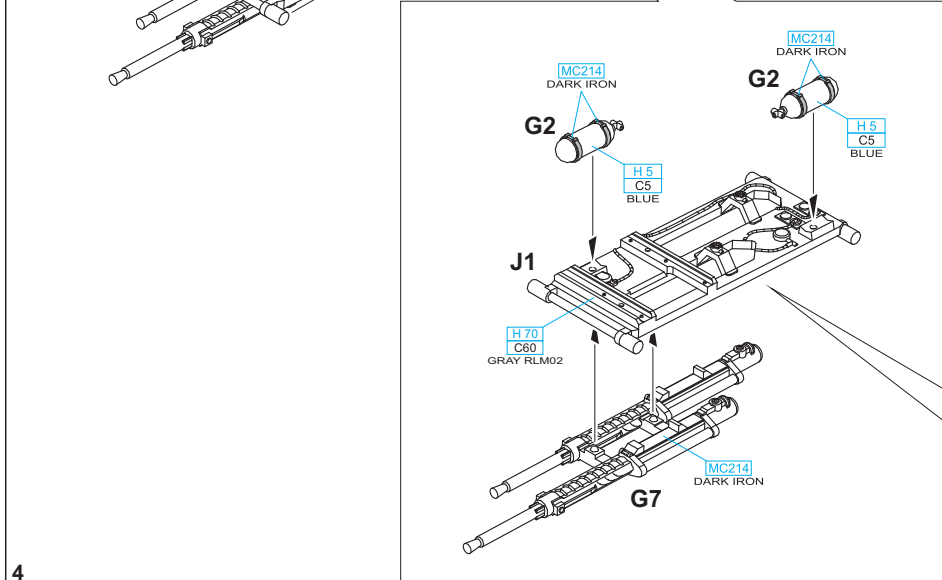
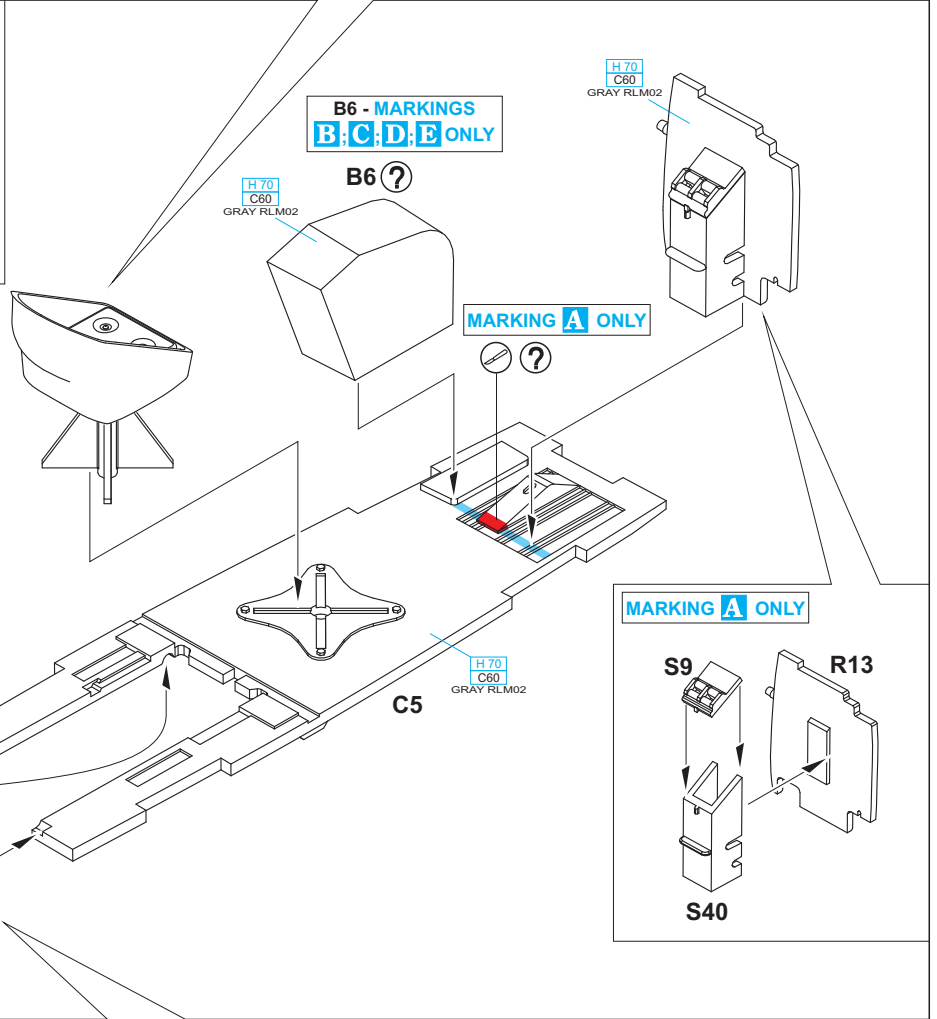
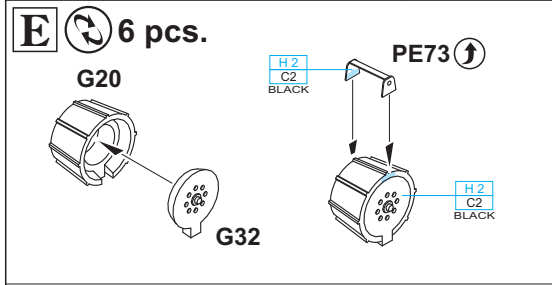
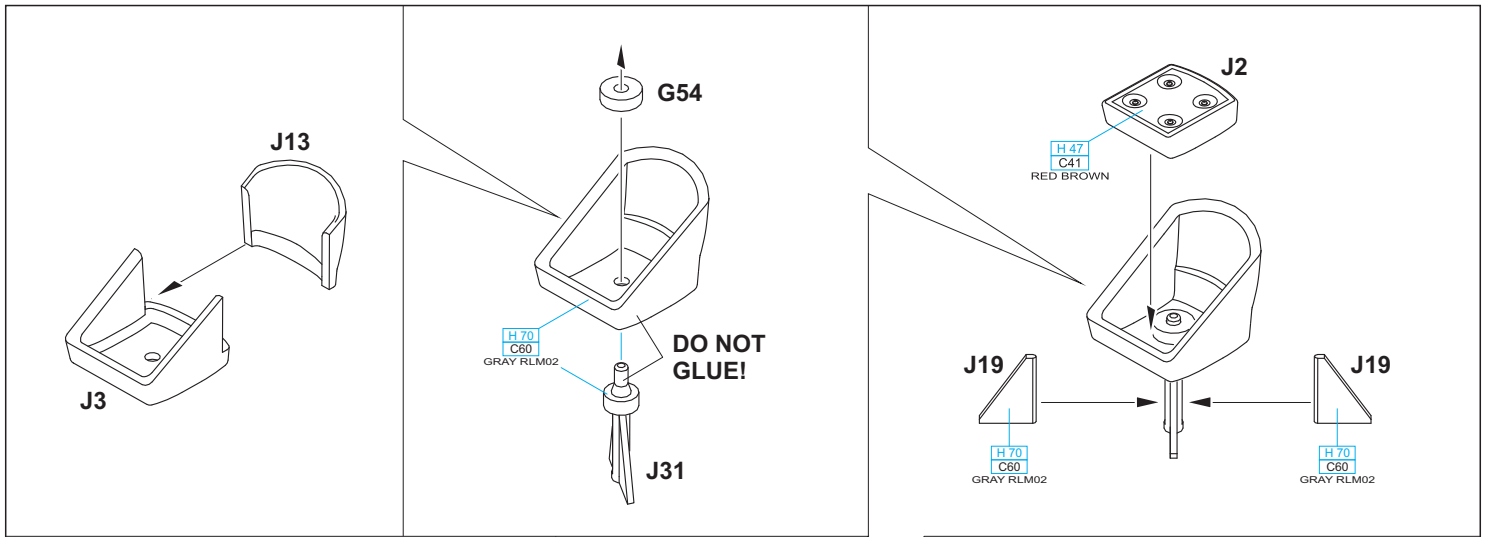


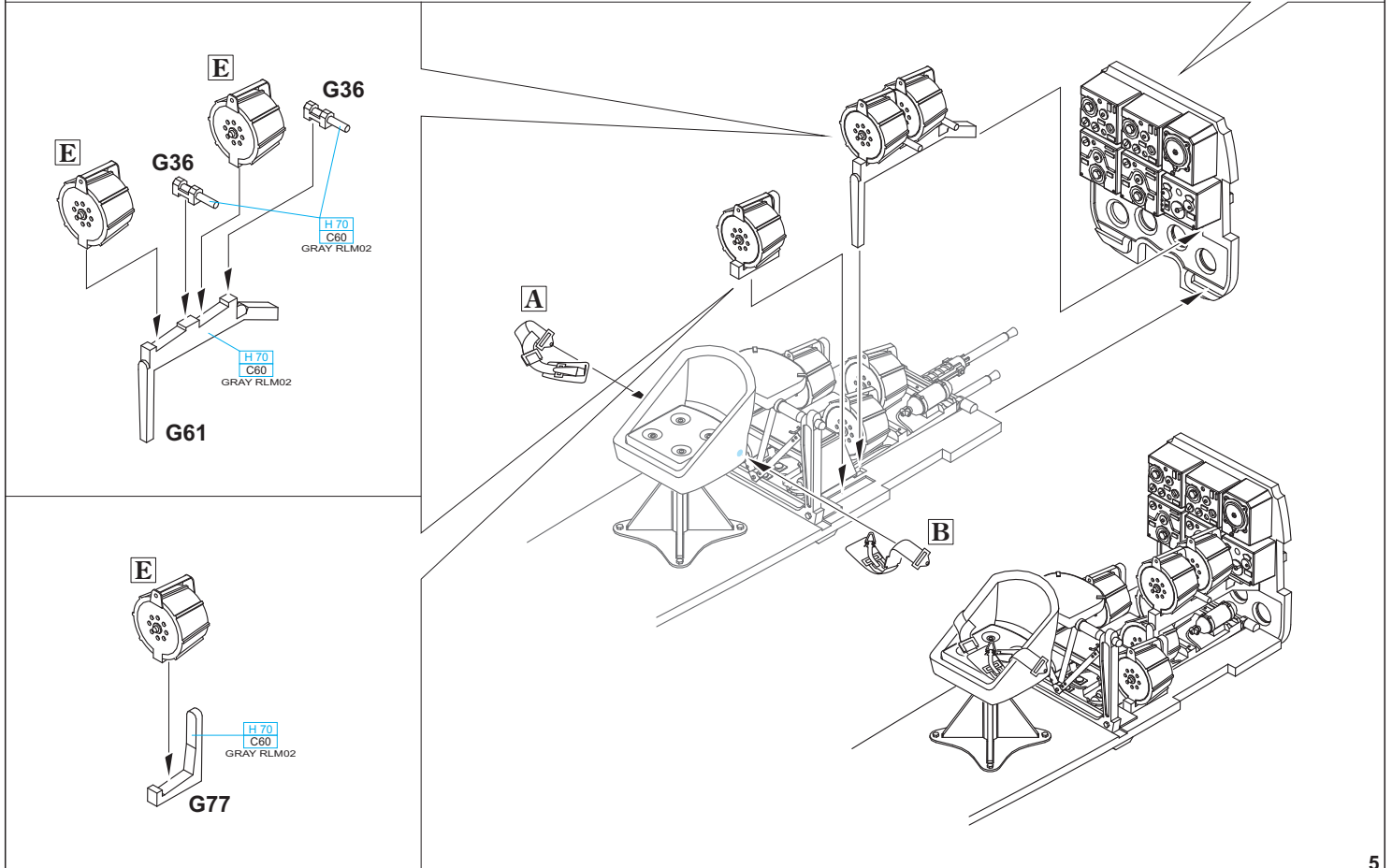
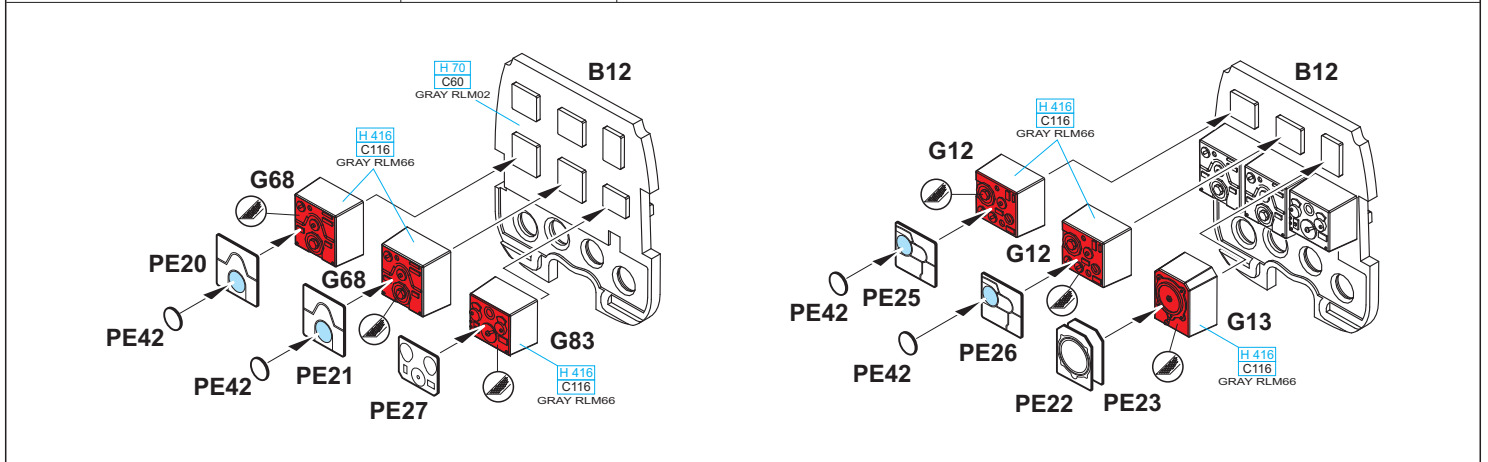
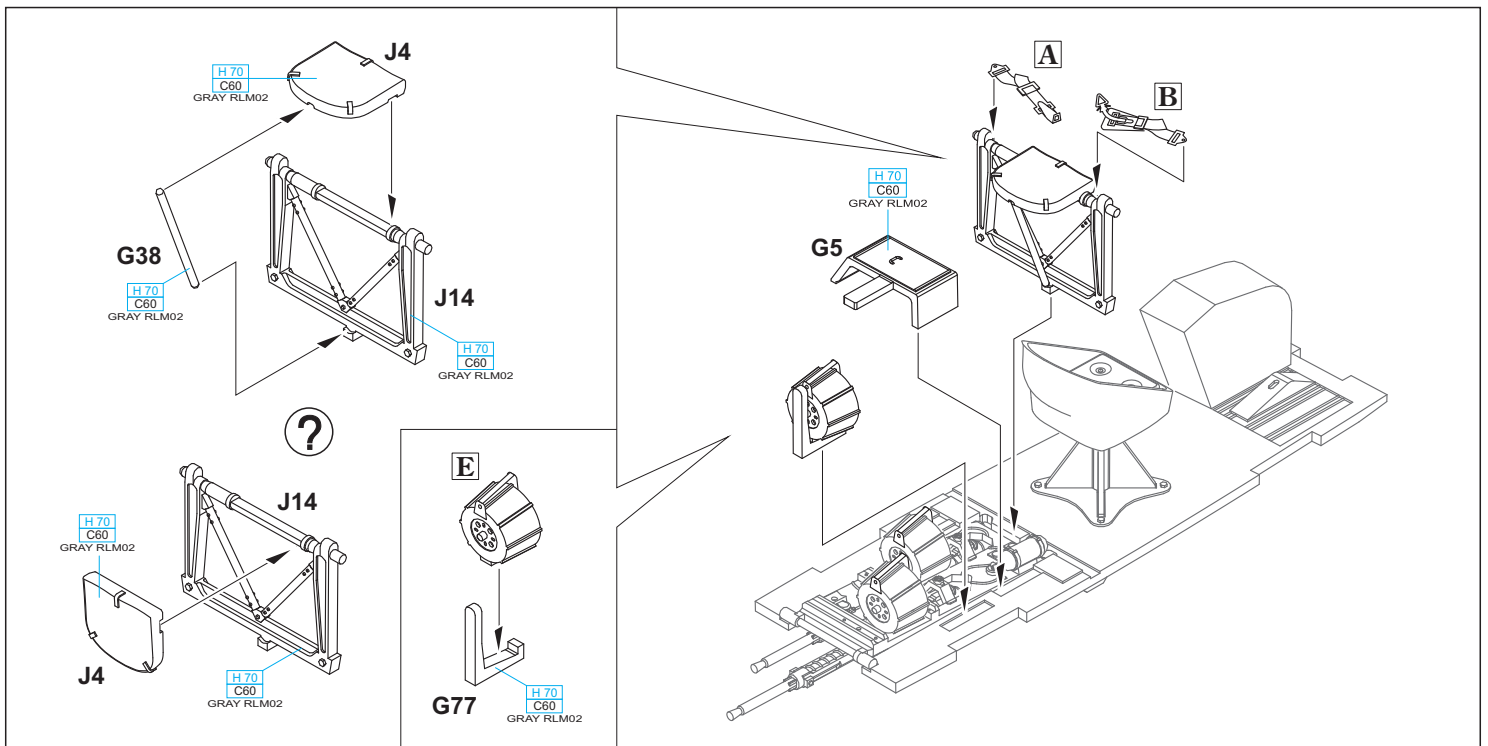
色

GSI Creos (GUNZE)			
AQUEOUS	Mr.COLOR		
H 2	C2	BLACK	
H 5	C5	BLUE	
H 6	C6	GREEN	
H 7	C7	BROWN	
H 11	C62	WHITE	
H 12	C33	FLAT BLACK	
H 37	C43	WOOD BROWN	
H 47	C41	RED BROWN	
H 65	C18	BLACK GREEN	RLM70
H 68	C36	DARK GRAY	RLM74

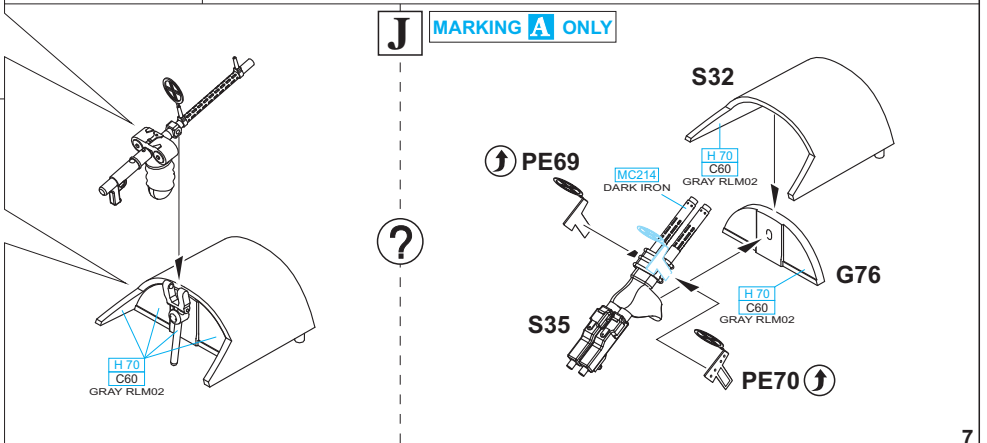
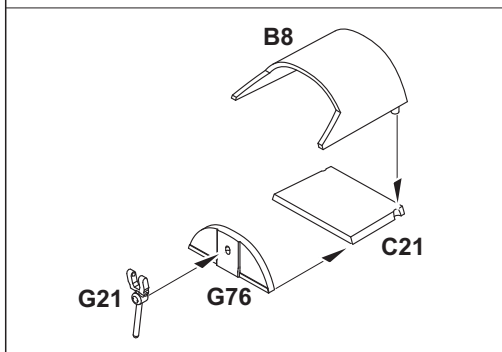
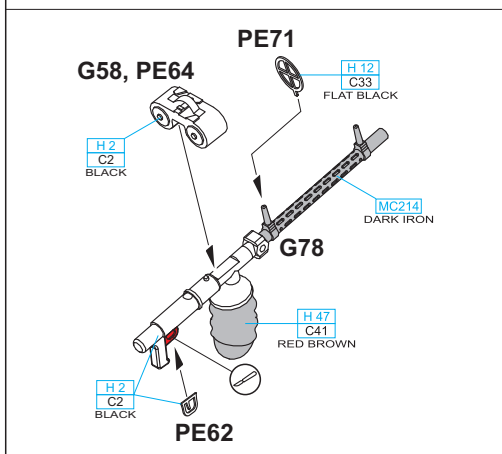
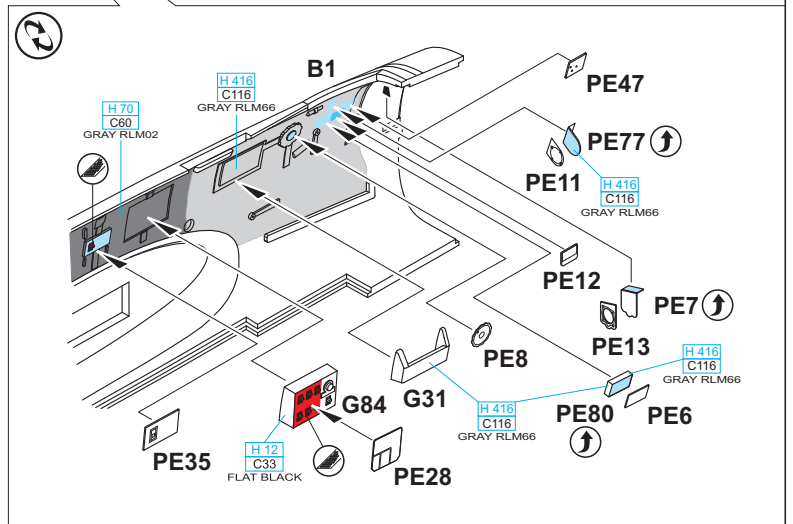
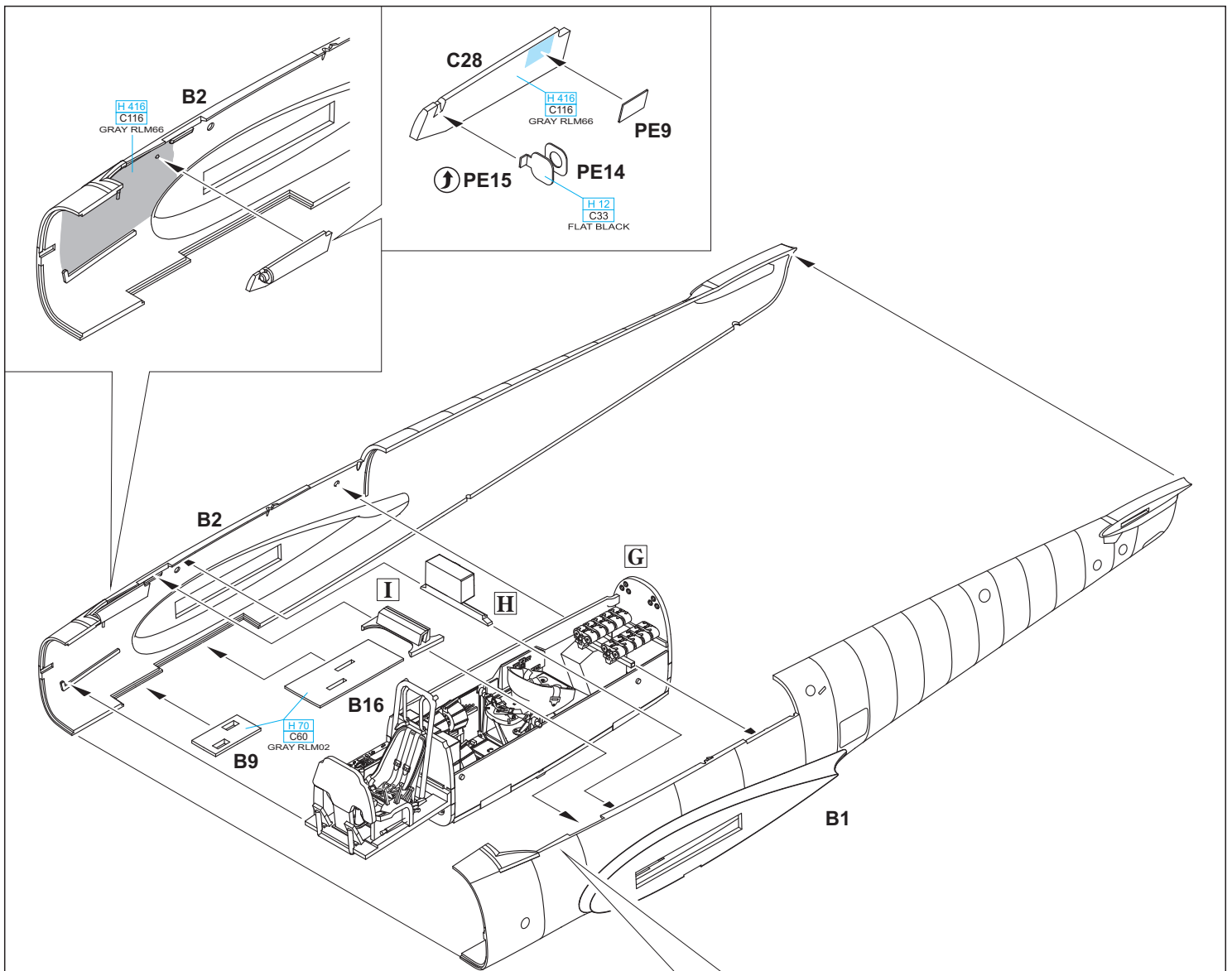
AQUEOUS	Mr.COLOR		
H 69	C37	GRAY	RLM75
H 70	C60	GRAY	RLM02
H 77	C137	TIRE BLACK	
H 81	C55	KHAKI	
H 413	C113	YELLOW	RLM04
H 414	C114	RED	RLM23
H 416	C116	GRAY	RLM68
H 417	C117	LIGHT BLUE	RLM76
Mr.METAL COLOR			
	MC214	DARK IRON	
	MC216	ALUMINIUM	

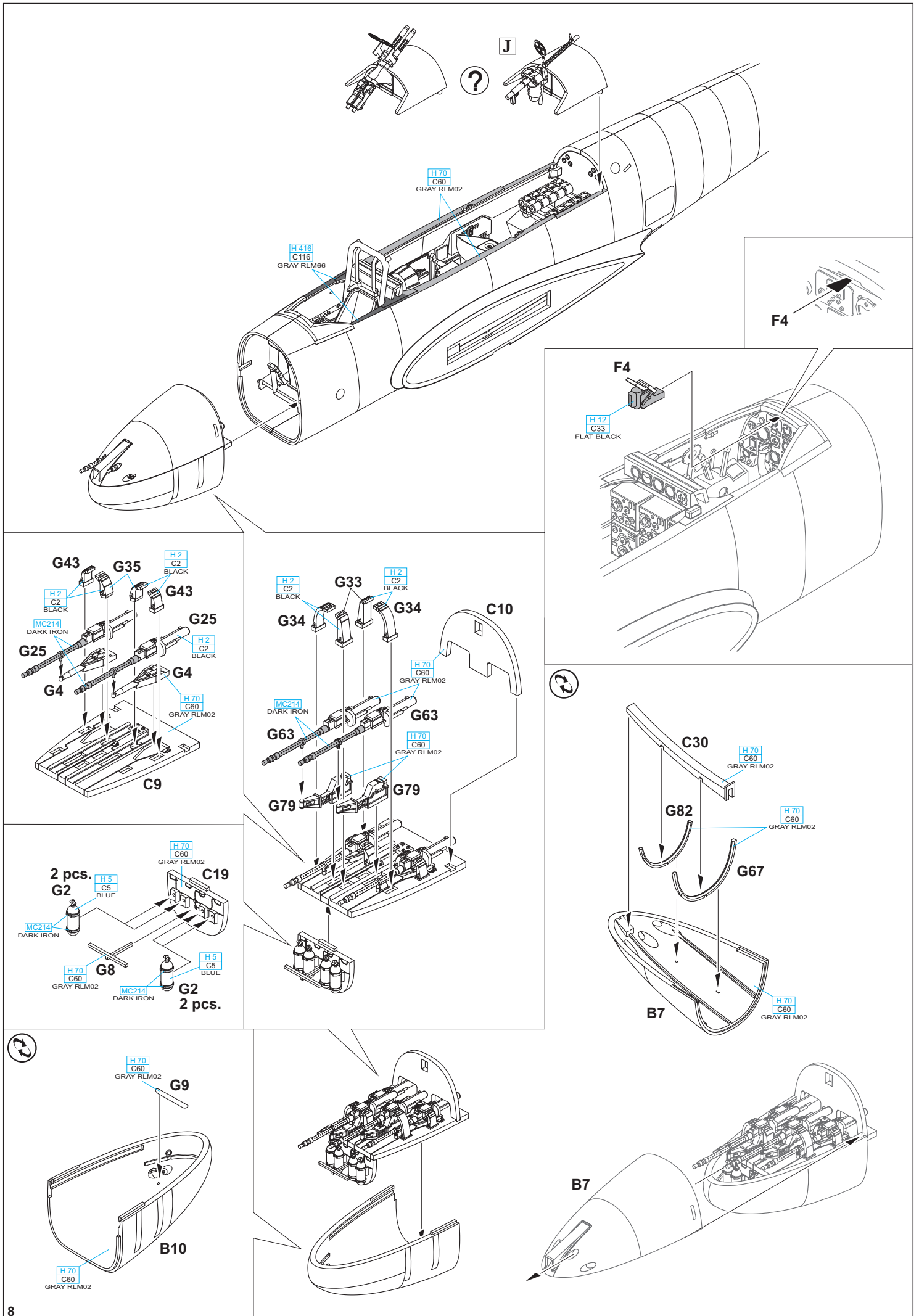




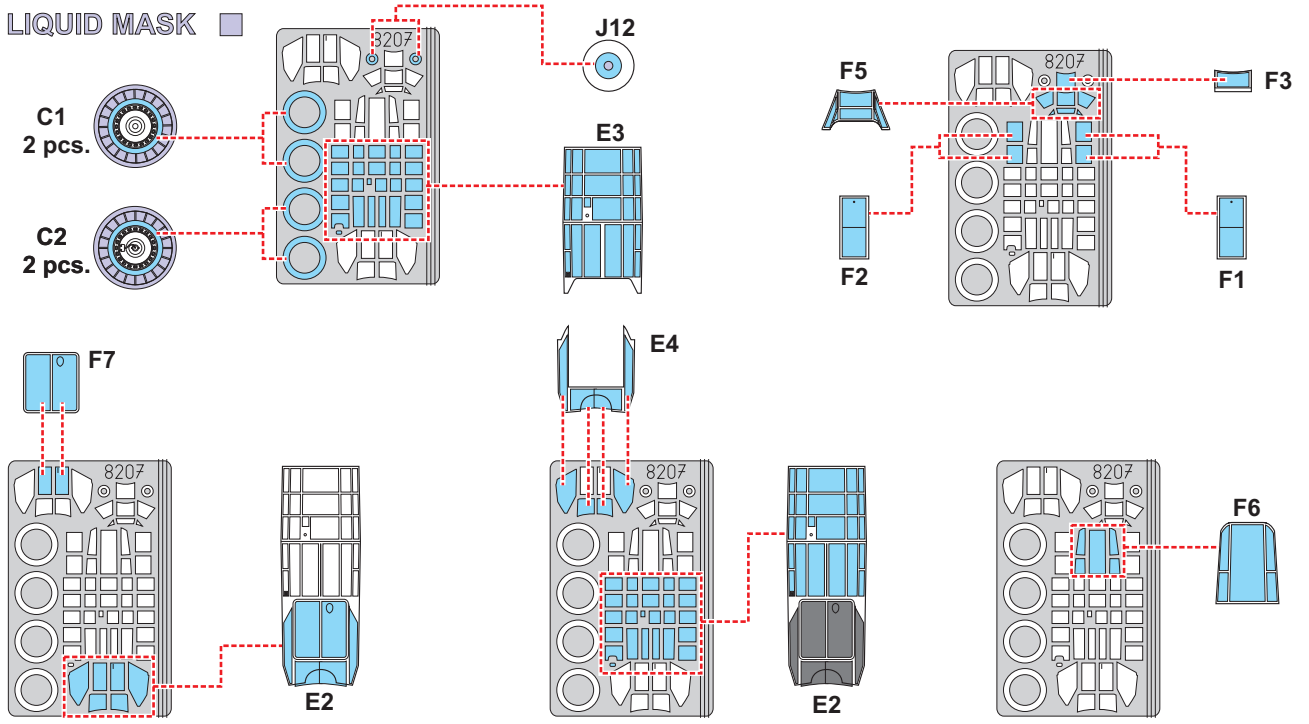






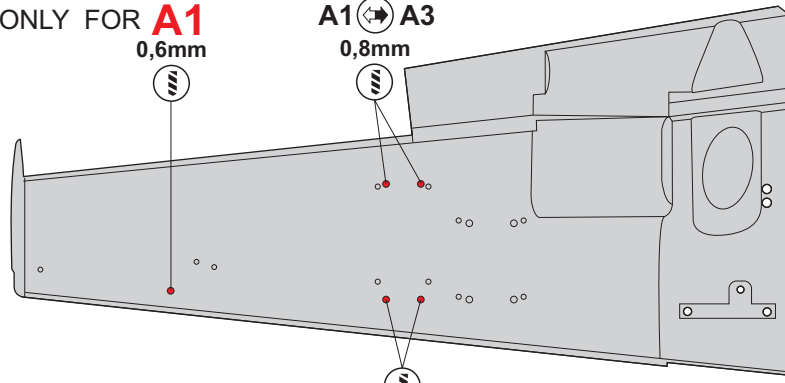


LIQUID MASK ■



ONLY FOR **A1**  
0,6mm

**A1** ↔ **A3**  
0,8mm



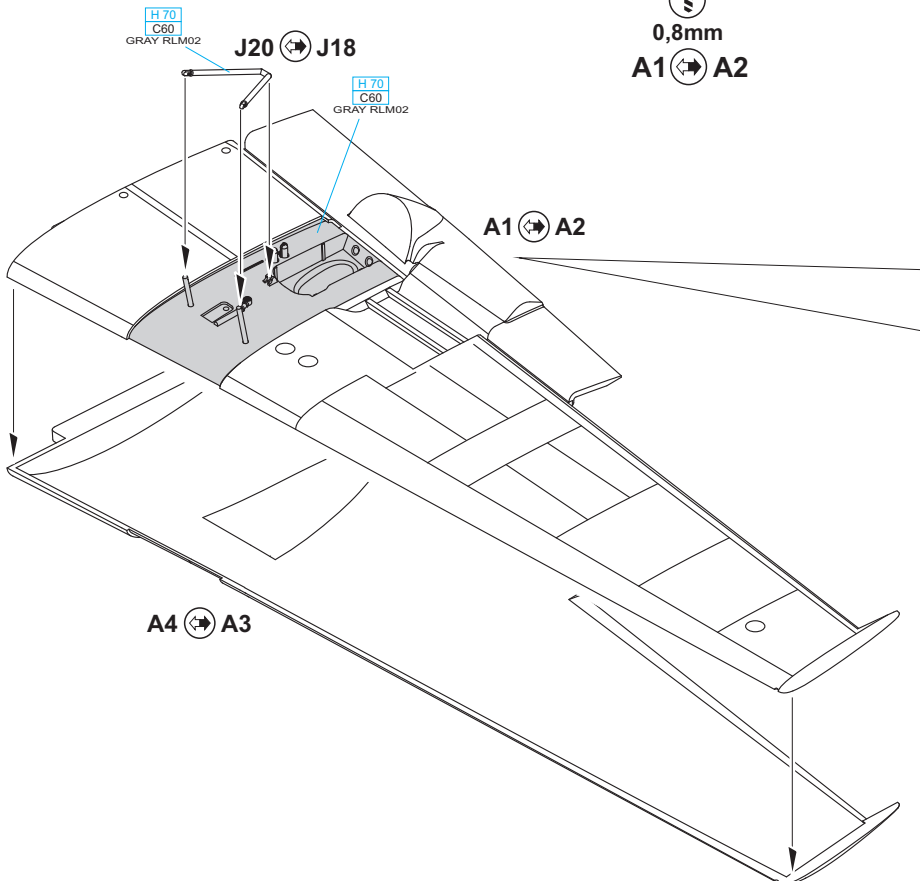
**H 70**  
**C60**  
GRAY RLM02

**J20** ↔ **J18**

**H 70**  
**C60**  
GRAY RLM02

0,8mm  
**A1** ↔ **A2**

**A1** ↔ **A2**

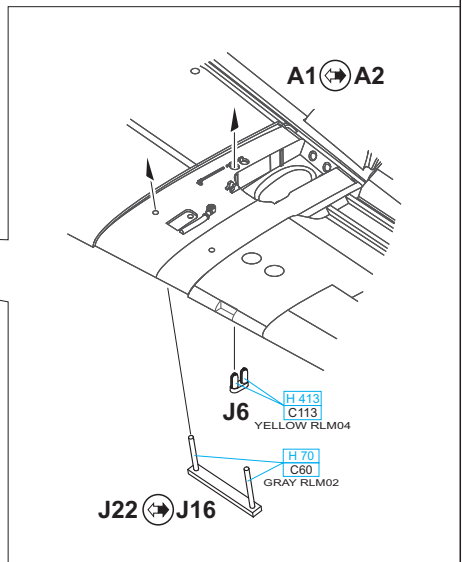


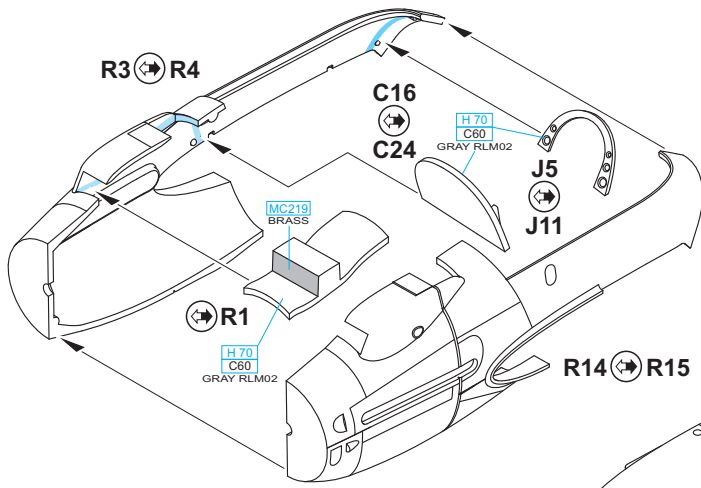
**A1** ↔ **A2**

**J6** **H 413**  
**C113**  
YELLOW RLM04

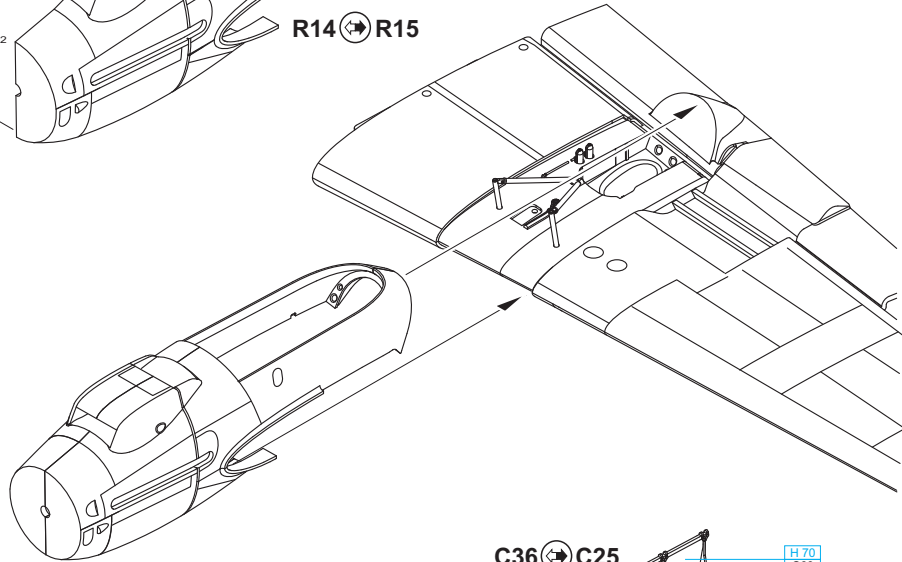
**H 70**  
**C60**  
GRAY RLM02

**J22** ↔ **J16**

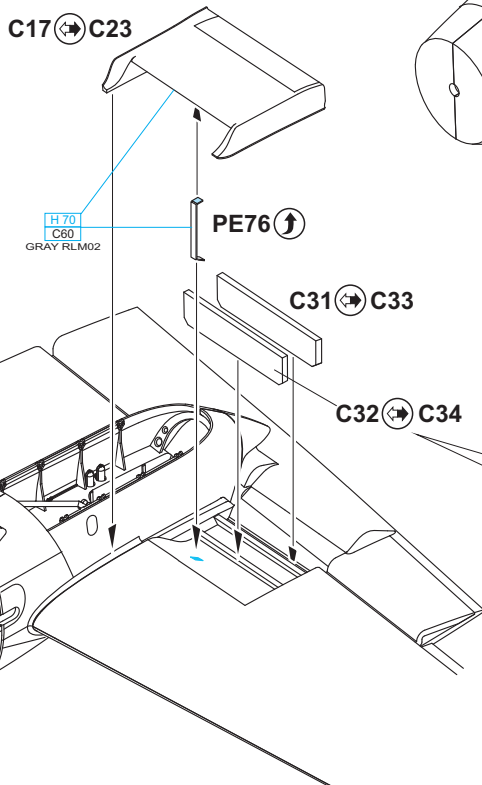
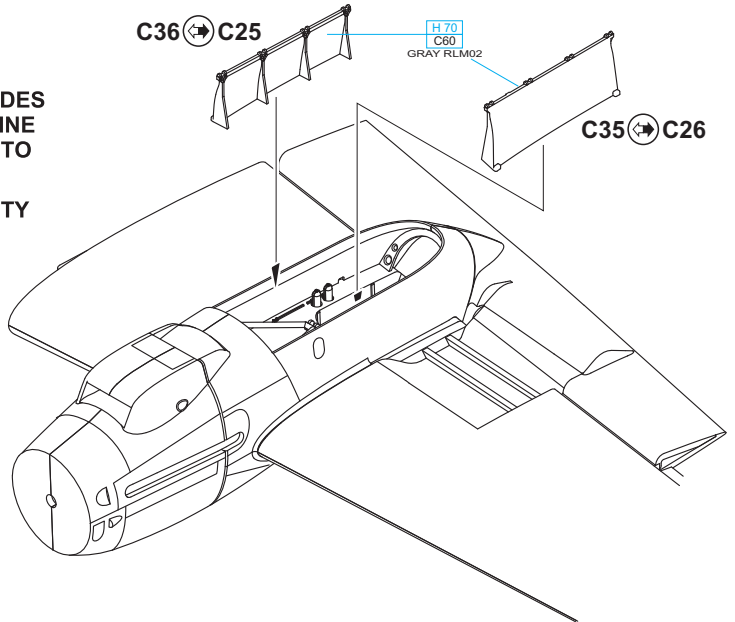
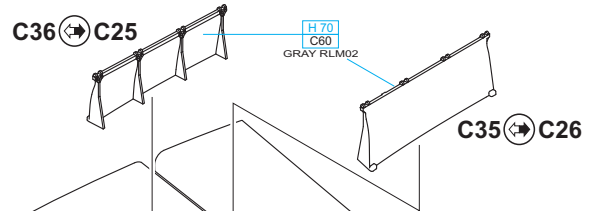


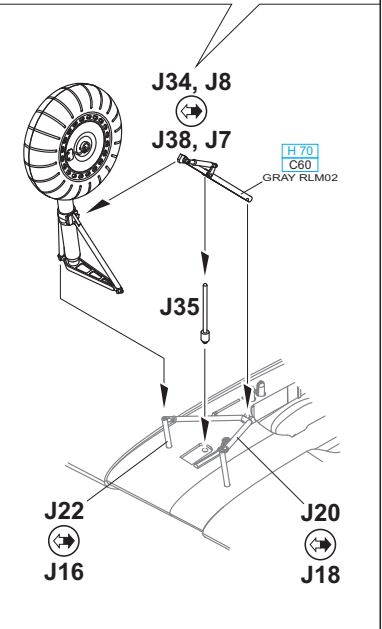
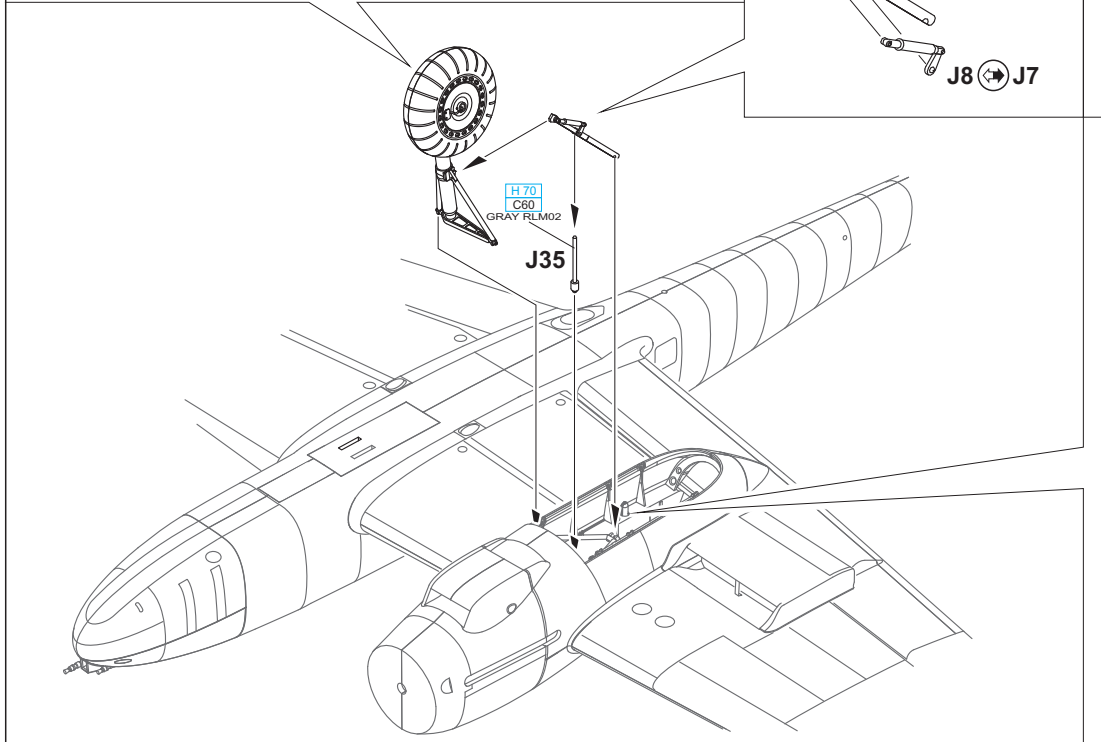
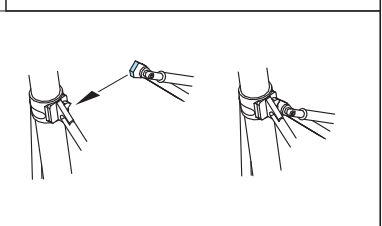
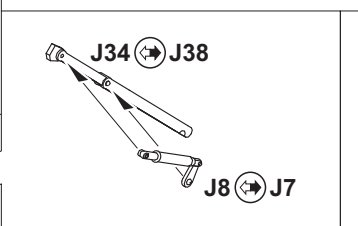
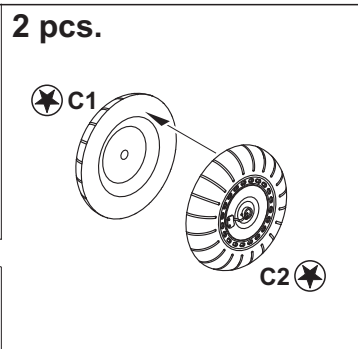
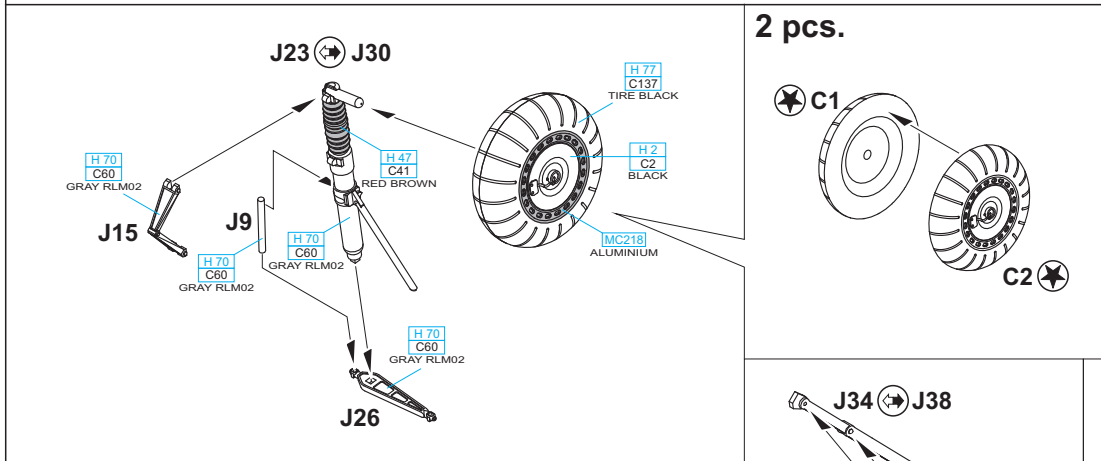
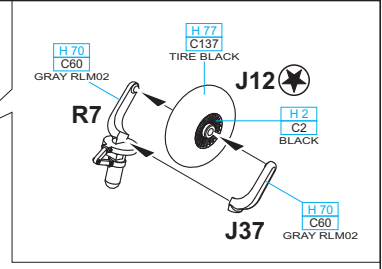
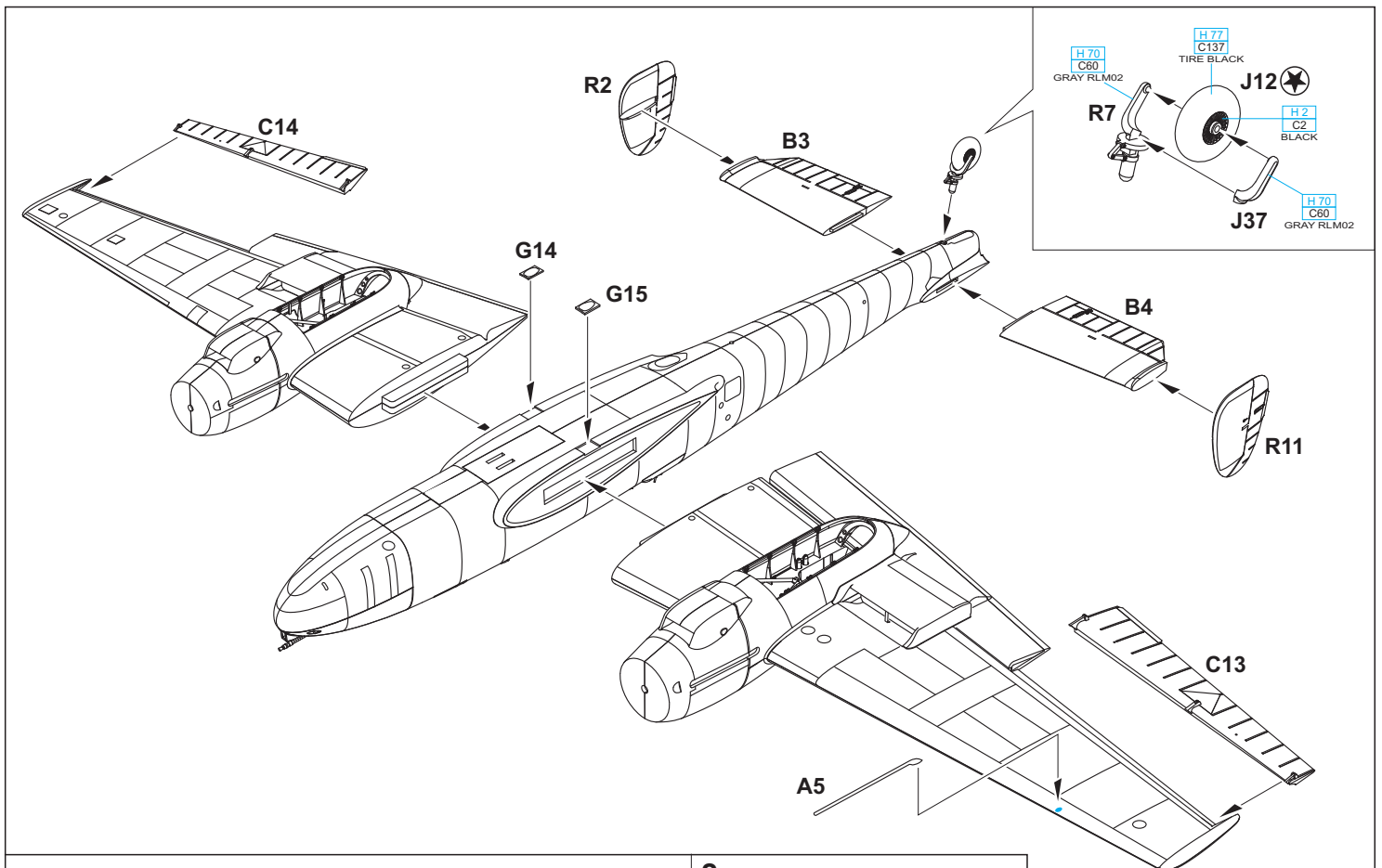


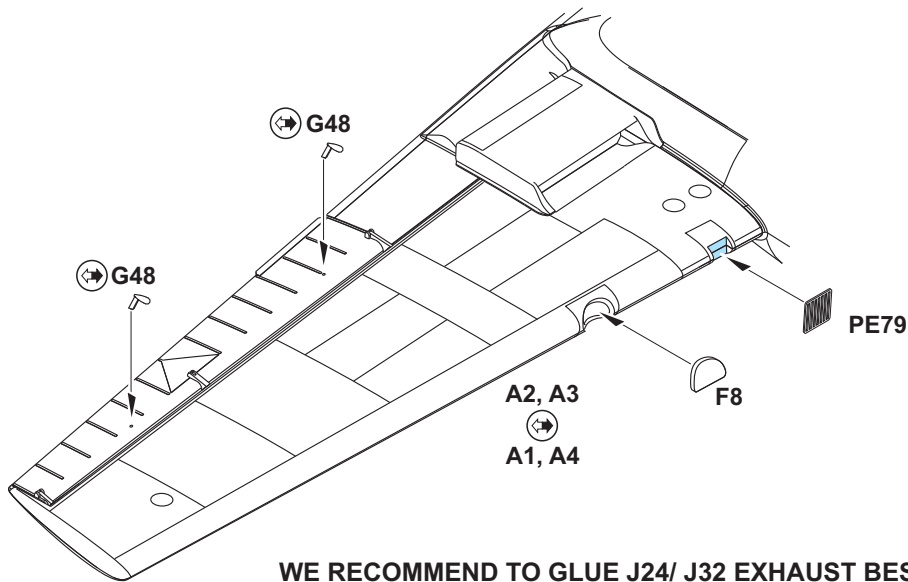
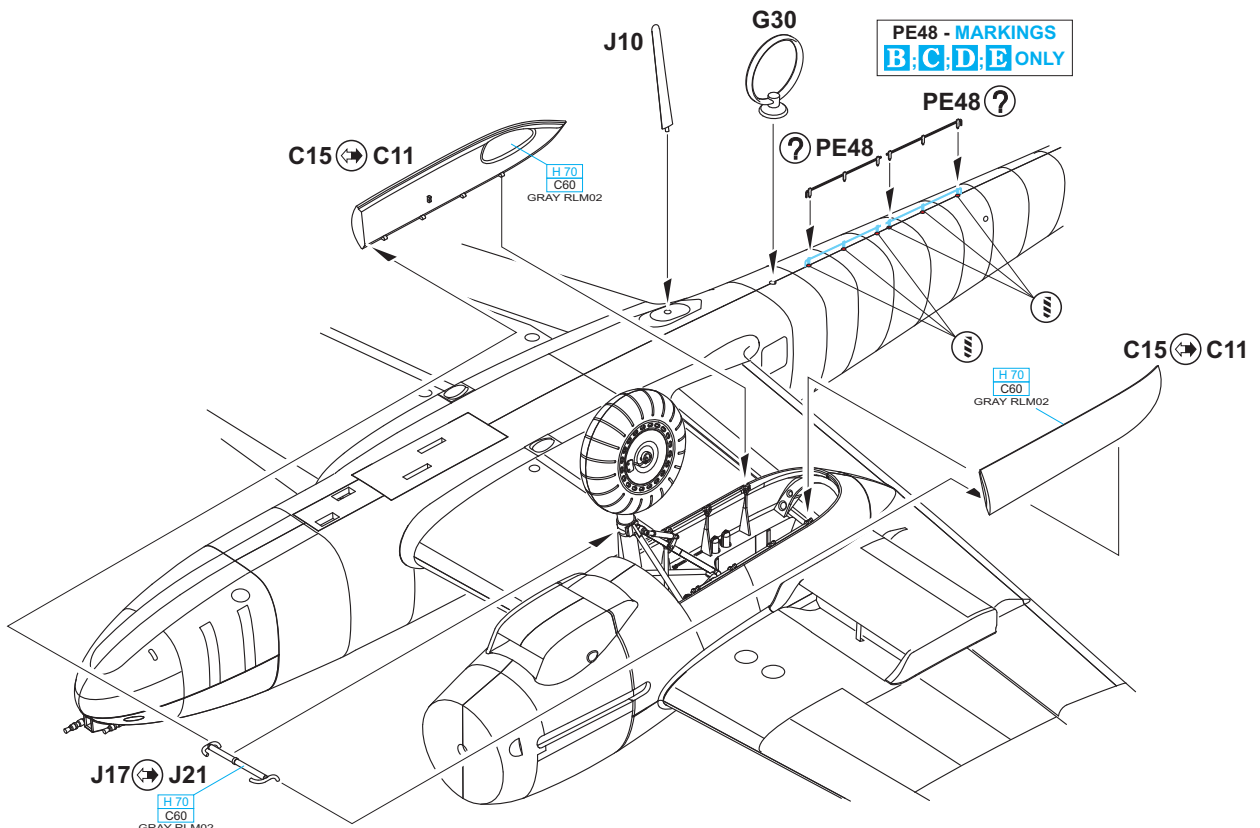
RIGHT - R3+C36  
 R14+C35 > C16+J5+R1  
 LEFT - R4+C25  
 R15+C26 > C24+J11+R1



**GLUE THE WHEEL WELL SIDES STRICTLY AFTER THE ENGINE NACELLES ARE GLUED ONTO THE WING!**  
**BOKY PODVOZKOVÉ ŠACHTY LEPTE AŽ PO NALEPENÍ MOTOROVÉ GONDOLY NA KŘÍDLO!**

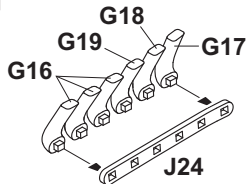




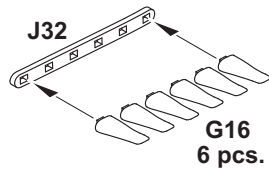


WE RECOMMEND TO GLUE J24/ J32 EXHAUST BESES TO ENGINE NACELLES FIRST, NEXT GLUE THE EXHAUST PIPES TO THE BASES.  
 DOPORUČUJEME NEJPRVE NALEPIT ZÁKLADNY VÝFUKŮ J24/ J32 DO MOTOROVÝCH GONDOL, TEPRVE POTÉ VLEPOVAT JEDNOTLIVÉ VÝFUKY.

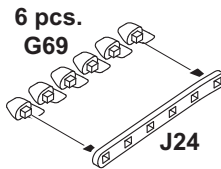
**K** MARKINGS **A;B;C** ONLY



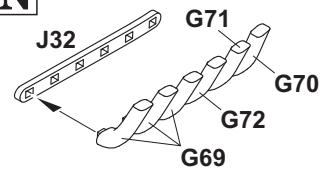
**L**



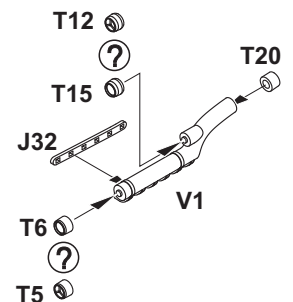
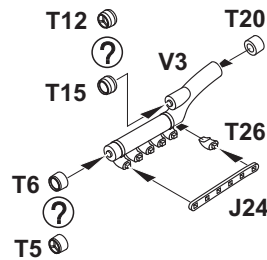
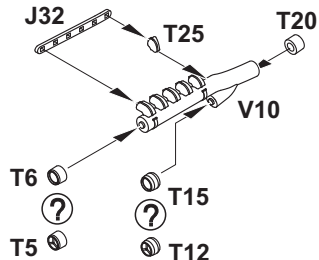
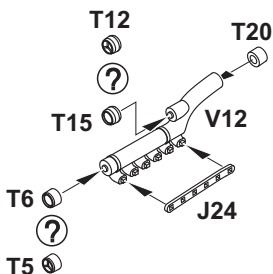
**M**



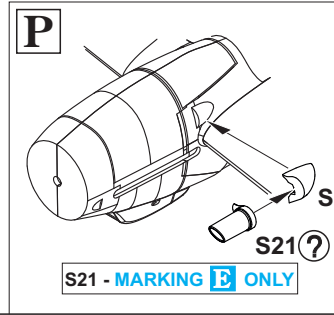
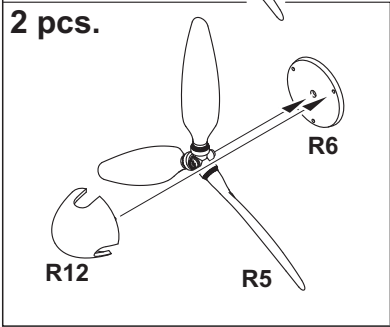
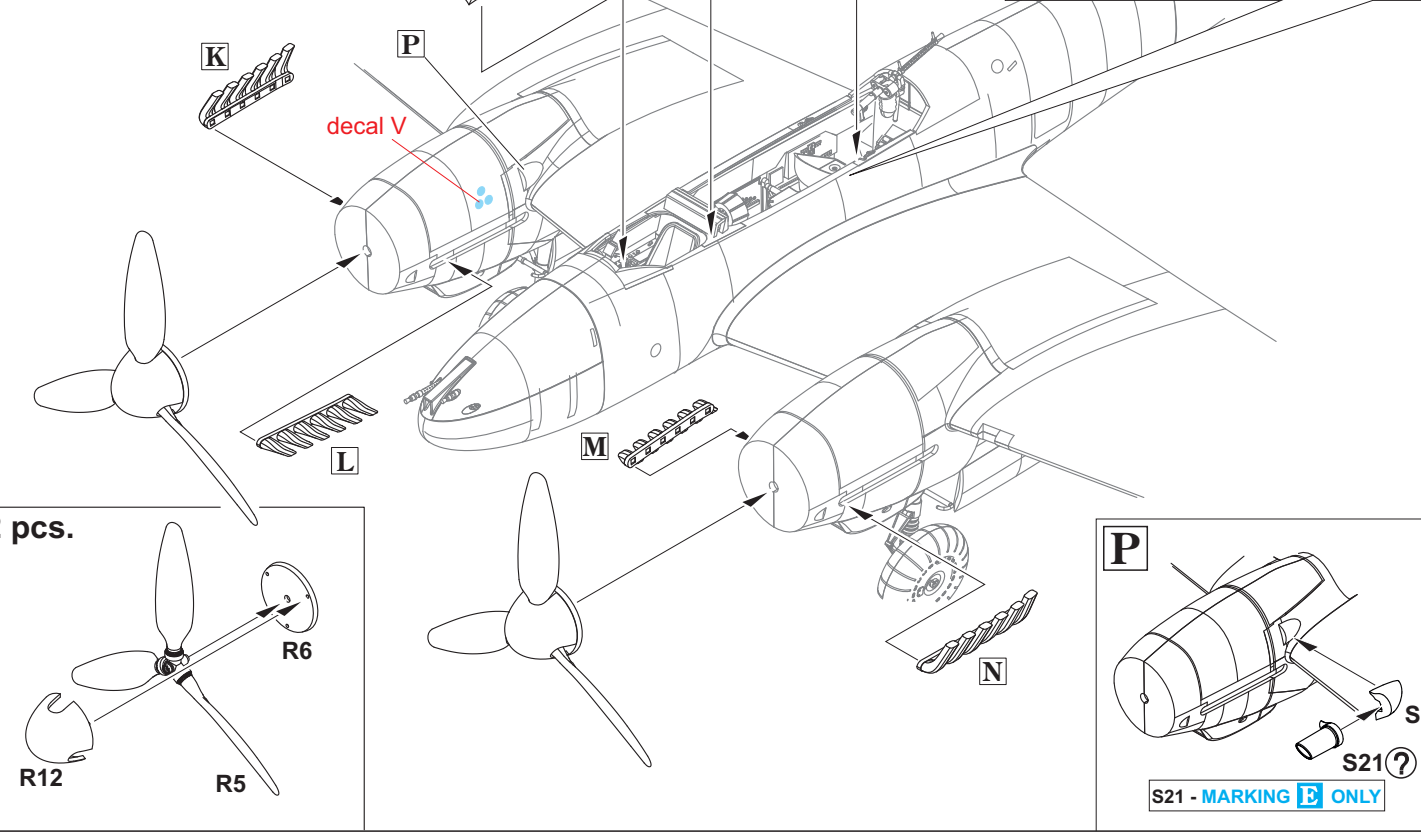
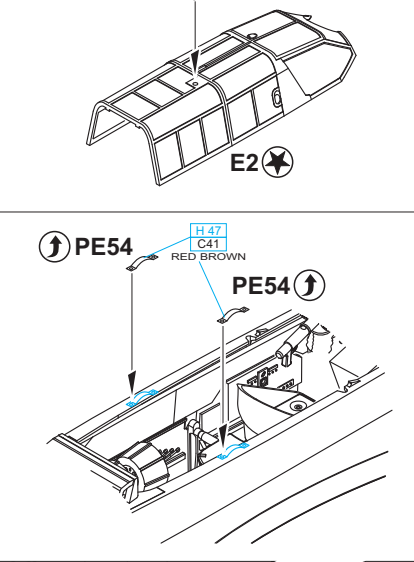
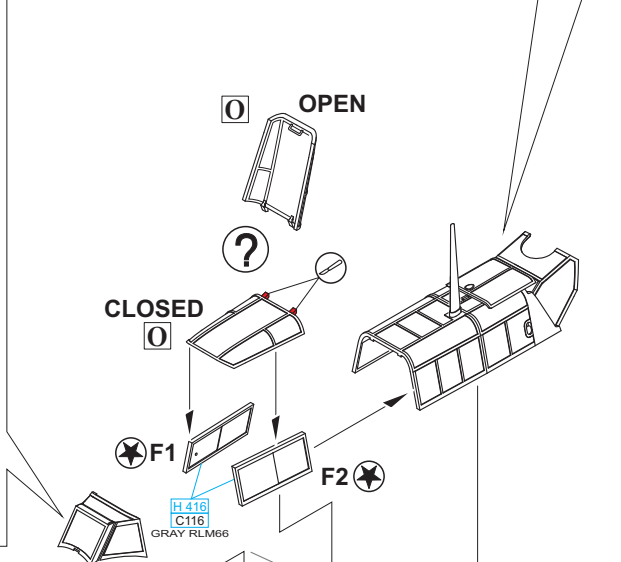
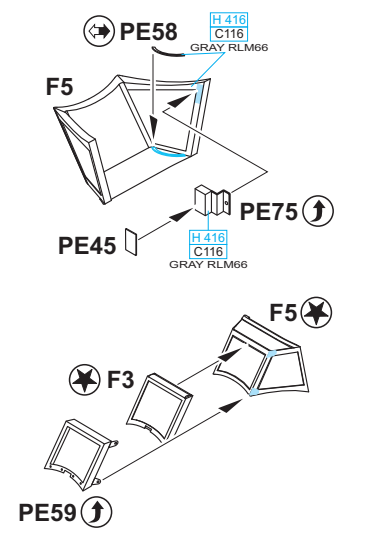
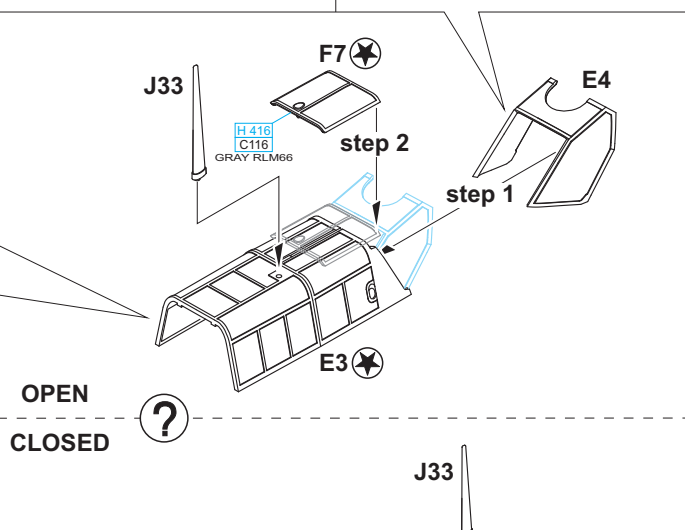
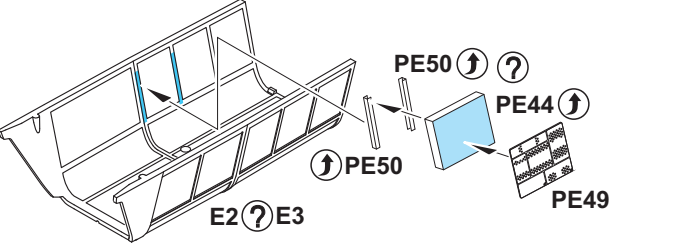
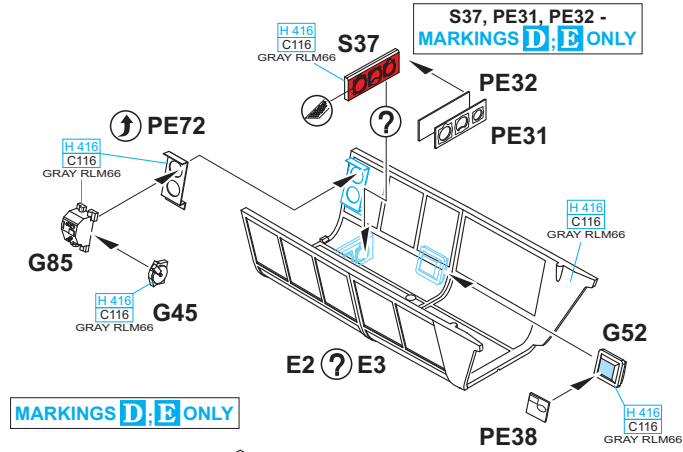
**N**



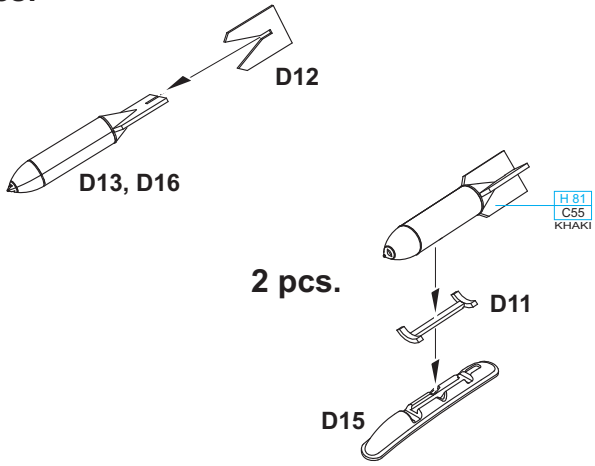
MARKINGS **D;E** ONLY



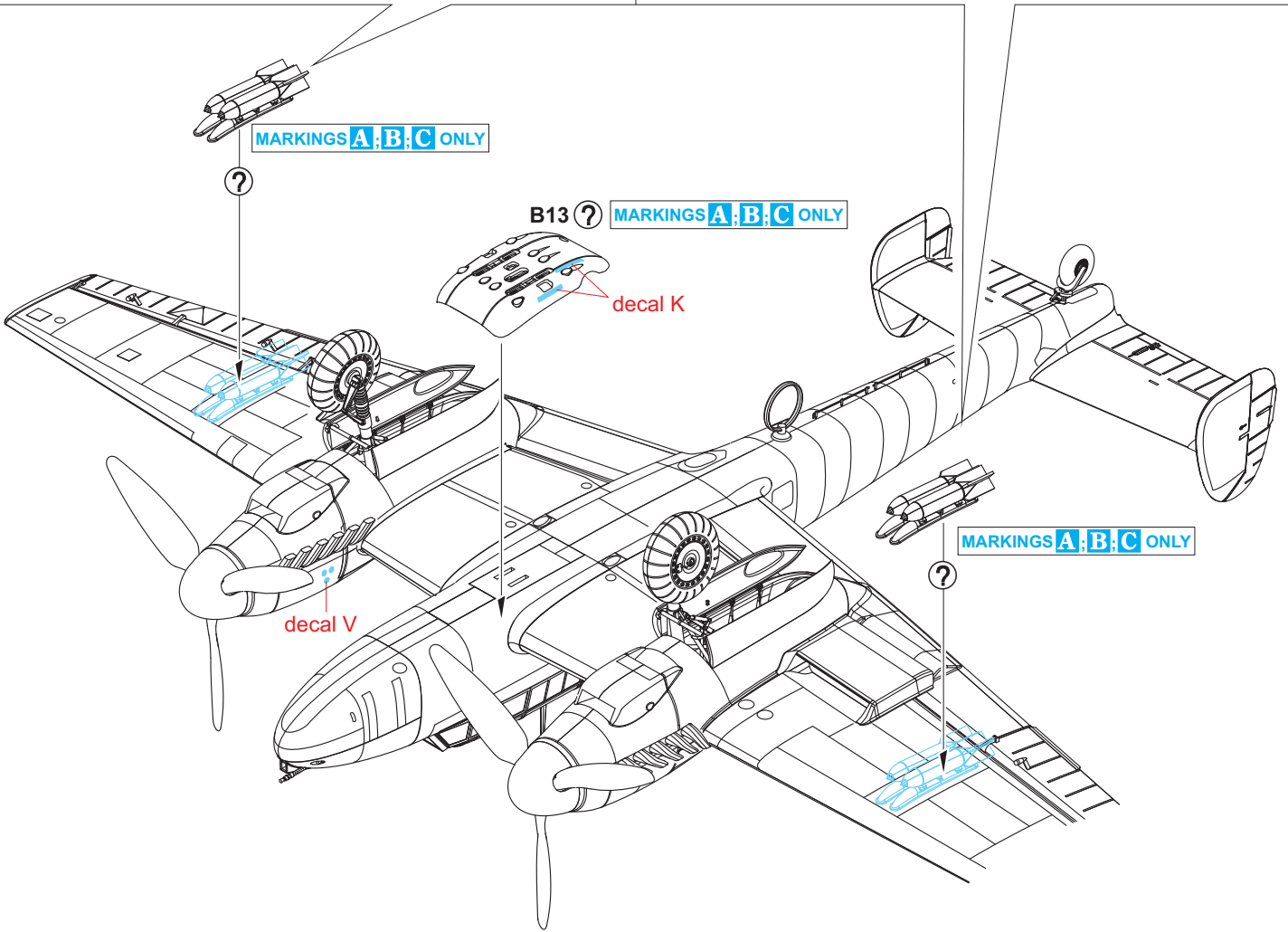
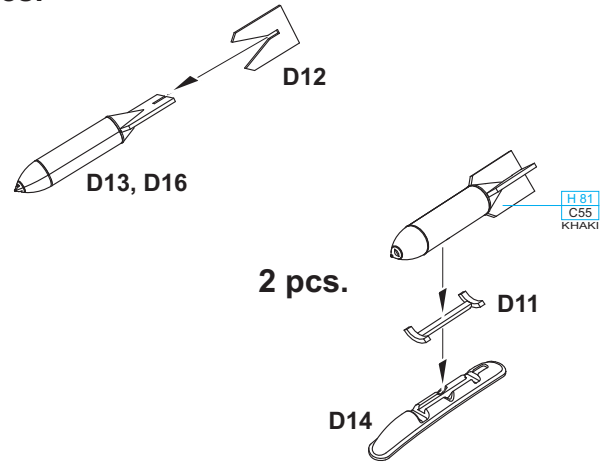
S37, PE31, PE32 - MARKINGS D, E ONLY



2 pcs.

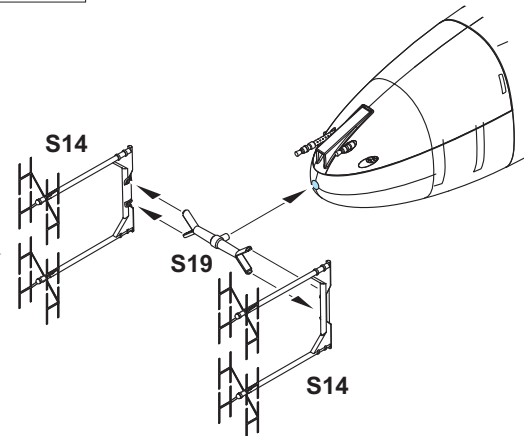
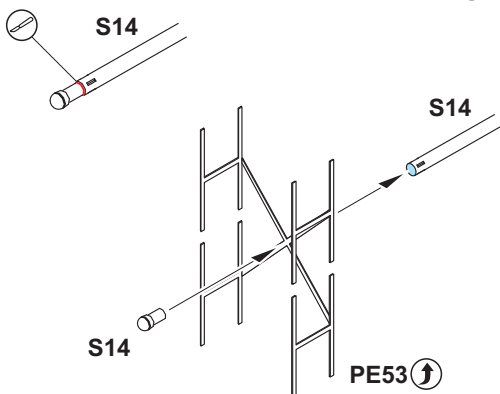


2 pcs.



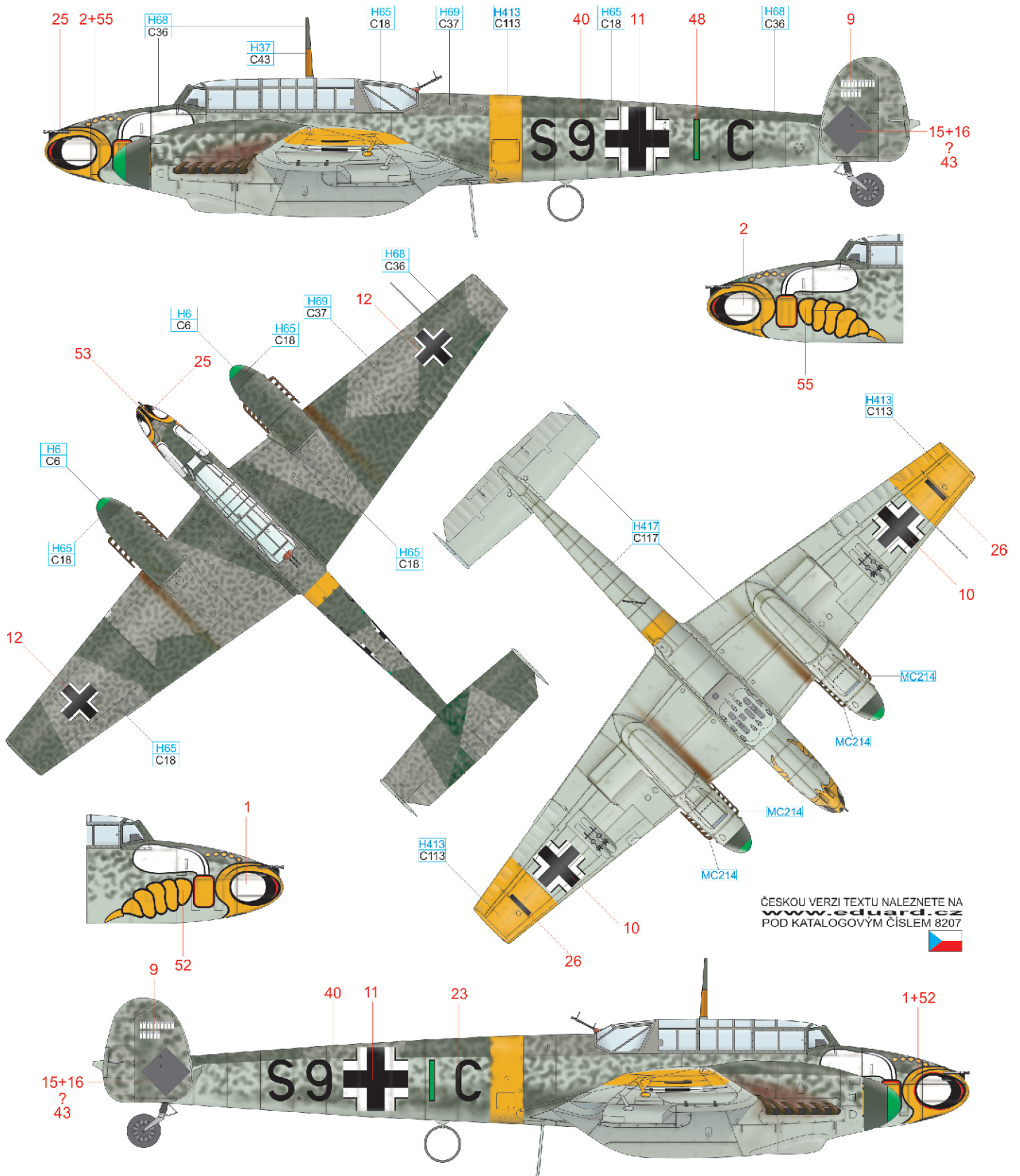
4 pcs.

MARKINGS D, E ONLY



# A Bf 110F-2 flown by Oblt. G. Tonne, CO of II./ZG 1, Belgorod, Soviet Union, June 1942

Gunther Tonne was born on May 21st, 1916 in Frankfurt and in 1935 he joined the German Navy (Kriegsmarine). In 1937 he stepped into the ranks of the Luftwaffe. After undergoing training on Bf 110 heavy fighters, he was assigned to ZG 1. In 1940 he shot down seven British aircraft in combat over the English islands and added a British Blenheim to his score in April 1941 while serving as CO of 6./SKG 210. On January 4th, 1942 this unit was redesignated as 6./ZG 1 and from February 4th, 1942 Tonne commanded its entire II./ZG 1. In December 1942 he took over command of the newly formed SKG 10 armed with Fw 190 fighter-bombers. Engine failure on take off cost him his life while flying an Fw 190A-5 out of Reggio di Calabria on July 15th, 1943. In combat during the Second World War he shot down some twenty enemy aircraft and for his success he was awarded the Knight's Cross on October 5th, 1941, to which were posthumously added Oak Leaves on October 24th, 1944. While serving with II./ZG 1 in 1942 over the Russian plains, Oblt. Tonne flew several Bf 110F-2s. Zerstoregeschwader 1 was named 'Wespe' (Wasp) and the noses of their aircraft carried artwork depicting these aggressive insects. The standard camouflage scheme was sprayed over with squiggles of RLM 70 or 71 on the upper and side surfaces while the yellow surfaces denoted service on the Eastern Front.



ČESKOU VERZI TEXTU NALEZNETE NA [www.eduard.cz](http://www.eduard.cz) POD KATALOGOVÝM ČÍSLEM 8207



RLM 04	H413 C113	RLM 70	H65 C18	GREEN	H6 C6	DARK IRON	MC214
RLM 74	H68 C36	RLM 75	H69 C37	RLM 76	H417 C117	WOOD	H37 C43

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# B Bf 110F-2 W. Nr. 5080, flown by W. Frost, 13.(Z)/JG 5, Kemijärvi, Finland, Winter 1942/ 1943

In preparation for the invasion of the Soviet Union, 1.(Z)/JG 77 was moved to northern Norway, a unit equipped with Bf 110 heavy fighters. Their main task was to attack the strategically important railway line to the port of Murmansk. In the spring of 1942 it was moved under the command of JG 5 and at first redesignated 6.(Z)/JG 5 in June 1942 and then as 13.(Z)/JG 5. During the winter period, the upper surfaces of both warring sides' aircraft were sprayed over with a white washable paint for obviously better concealment. This applied also to this Bf 110F-2 who's code letters were also partially painted over by the ground crew (except the individual aircraft letter). The yellow wingtips indicated service on the Eastern Front.



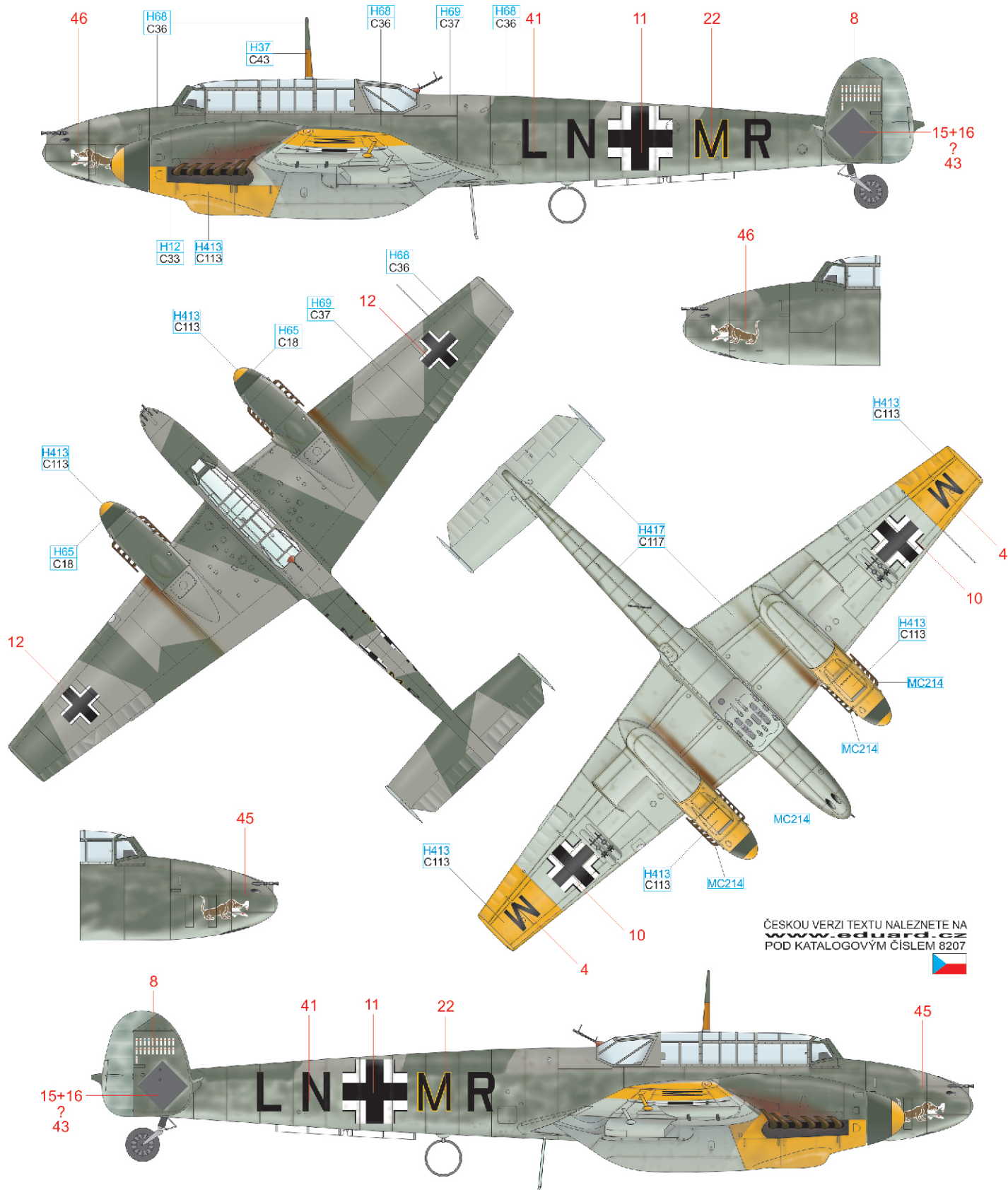
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RLM 04	H413 C113	RLM 70	H65 C18	WHITE	H11 C62	DARK IRON	MC214
RLM 74	H68 C36	RLM 75	H69 C37	RLM 76	H417 C117	WOOD	H37 C43

# C Bf 110F-2 flown by Ofw. T. Weissenberger, 6.(Z)/JG 5, Kirkenes, Norway, June 1942

German fighter ace with 208 kills to his credit and holder of the Knight's Cross with Oak Leaves Theodor Weissenberger was involved in flying from an early age on gliders. He joined the Luftwaffe in 1936. After completing fighter training, he became an instructor and in 1941 he was assigned to 1.(Z)/JG 77 (on March 16th, this unit was redesignated 10.(Z)/JG 5). In September 1942 Weissenberger was transferred to 6./JG 5, where he flew single engined Bf 109s. On October 24th, 1944 he took over command of the newly formed I./JG 7, equipped with the Me 262. On January 1st, 1945 he took over the entire JG 7 and remained in this function up to the end of the war. He was killed on June 11, 1950 during an automobile race in Nurnburg. Weissenberger's Bf 110F was sprayed RLM 74/75/76, the standard used to camouflage fighter aircraft. The sides of the fuselage received a heavy and irregular overspray of RLM 74 and 75. The aircraft carries his kills depicted on the tail surfaces and on the nose is the Zerstoror unit's of JG 5 emblem, a dachshund with an I-16 in its mouth.



ČESKOU VERZI TEXTU NALEZNETE NA [www.eduard.cz](http://www.eduard.cz) POD KATALOGOVÝM ČÍSLEM 8207

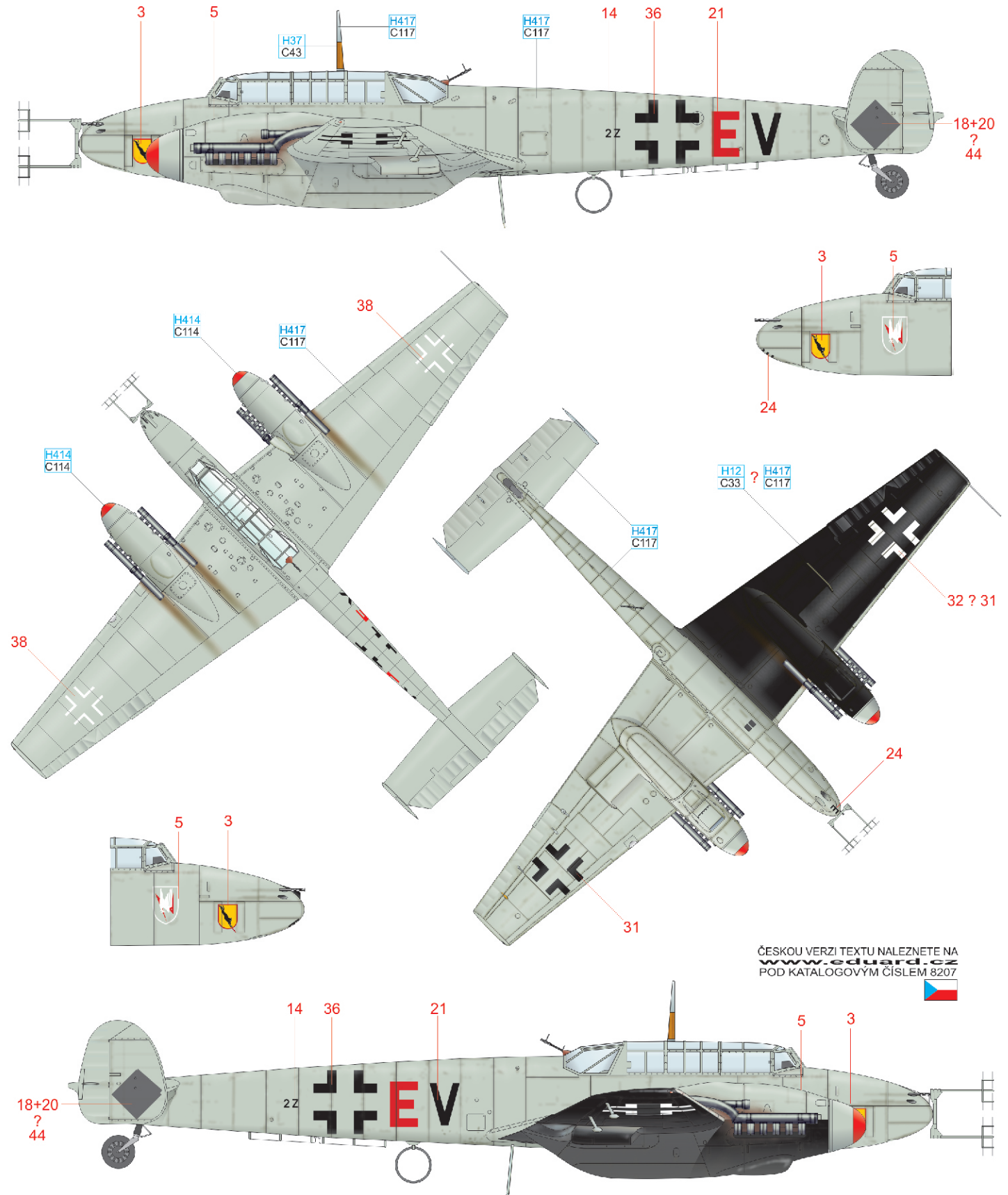


RLM 04	H413 C113	RLM 70	H65 C18	BLACK	H12 C33	DARK IRON	MC214
RLM 74	H68 C36	RLM 75	H69 C37	RLM 76	H417 C117	WOOD	H37 C43

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# D Bf 110F-4 flown by Oblt. M. Bauer, CO of 11./NJG 6, Zilistea, Romania, June 1944

After the completion of pilot training in March 1941 Martin Bauer continued in blind flying instruction, and was subsequently assigned to Nachtjagdgeschwader 1. At the beginning of June he was transferred to NJG 6, with which he would serve out the war. His final tally of aerial victories is not precisely known, and historians place it at between seven and nine. Night fighter Bf 110s of NJG 6 from the beginning carried a monotone RLM 76 scheme on all surfaces and gradually, the starboard wing bottom began to be painted black.



ČESKOU VERZI TEXTU NALEZNETE NA  
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RED	H414 C114	BLACK	H12 C33
RLM 76	H417 C117	WOOD	H37 C43

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