

# Bf 110D

eduard

1/48 Scale Plastic Model Kit

**WEEKEND**  
edition



item # 8409

**The Bf 110 soldiered throughout the WWII in the fighter, fighter-bomber or night fighter role. Although not so maneuverable as single engine fighters, it was quite 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 of successful dogfight with single engine fighters. Apart of the long range and high speed, the heavy armament was also to be an advantage of the new aircraft. Hermann Göring, the Luftwaffe commander, was the "heavy weight" behind the concept and strong proponent of the new Kampfzerstörer (Combat Destroyer).

The concept was intended to overrun troubles the designers were running into with first generation of monoplane fighter designs. They lacked range and some power as well.

The RLM thus 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.

## The engine and armament

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

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

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

The development then proceeded with the D version to 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.

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 was rear firing for self-defensive fire. Later variants would replace the MG FFs with 15 mm MG 151s and the rear gunner's station would be armed with the twin-barreled MG 81Z (7.92 mm). Some Bf 110Gs got the 30 mm Mk 108 cannons instead of MG 17s. 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 from underneath. These were usually two 20 mm MG FF, but field installations of the MG 151/20 or 30 mm MK 108 cannons were also used. The Bf 110G-2/R1 could employ the 37 mm (1.46 in) BK 3,7 Bordkanone mounted in a conformal ventral gun pod under the fuselage.

## The kit: Bf 110D

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. canopy was slightly changed as well as the wing plan view shape with angular wingtips, which slightly decreased wingspan. Thanks to the new units, the maximum speed raised to 336 mph (541 km/h). A lifeboat was placed in the extended fuselage aft section, as the units with these aircraft often operated over the sea from Norway.

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  
ODRÍZNOUTREVERSE SIDE  
OTOČITAPPLY EDUARD MASK  
AND PAINT  
POUŽÍT EDUARD MASK  
NABARVIT

**PLEASE CHECK THE LATEST VERSION OF THE INSTRUCTIONS ON [www.eduard.com](http://www.eduard.com)**

PARTS



DÍLY



TEILE

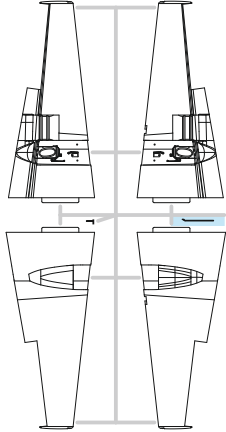


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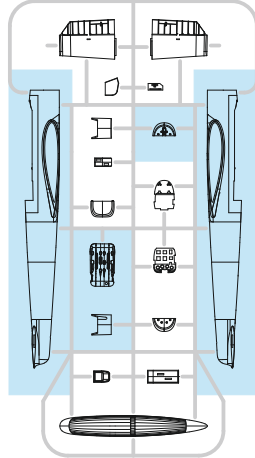


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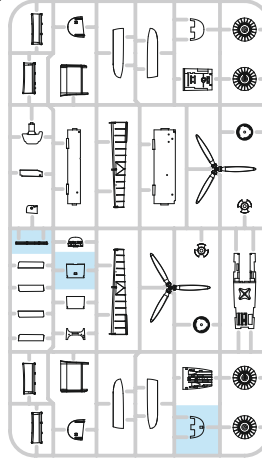


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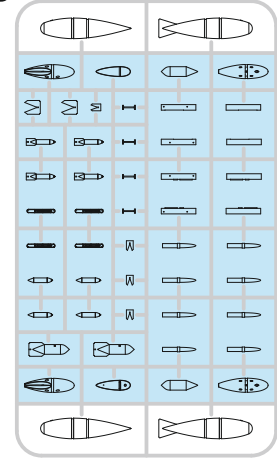


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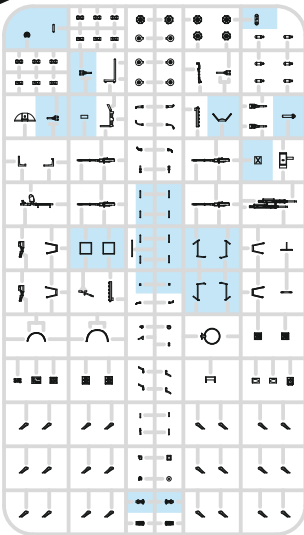
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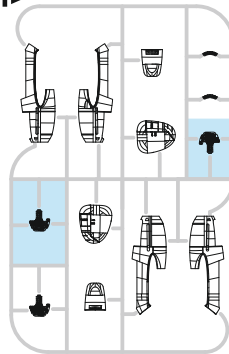
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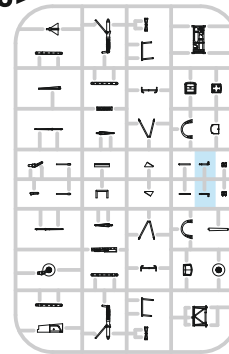
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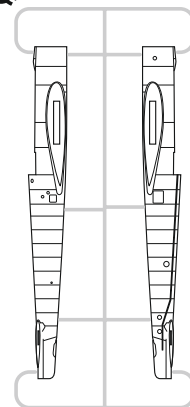
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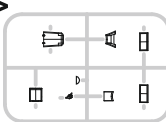
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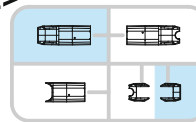
Q&gt;



F&gt;



E&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











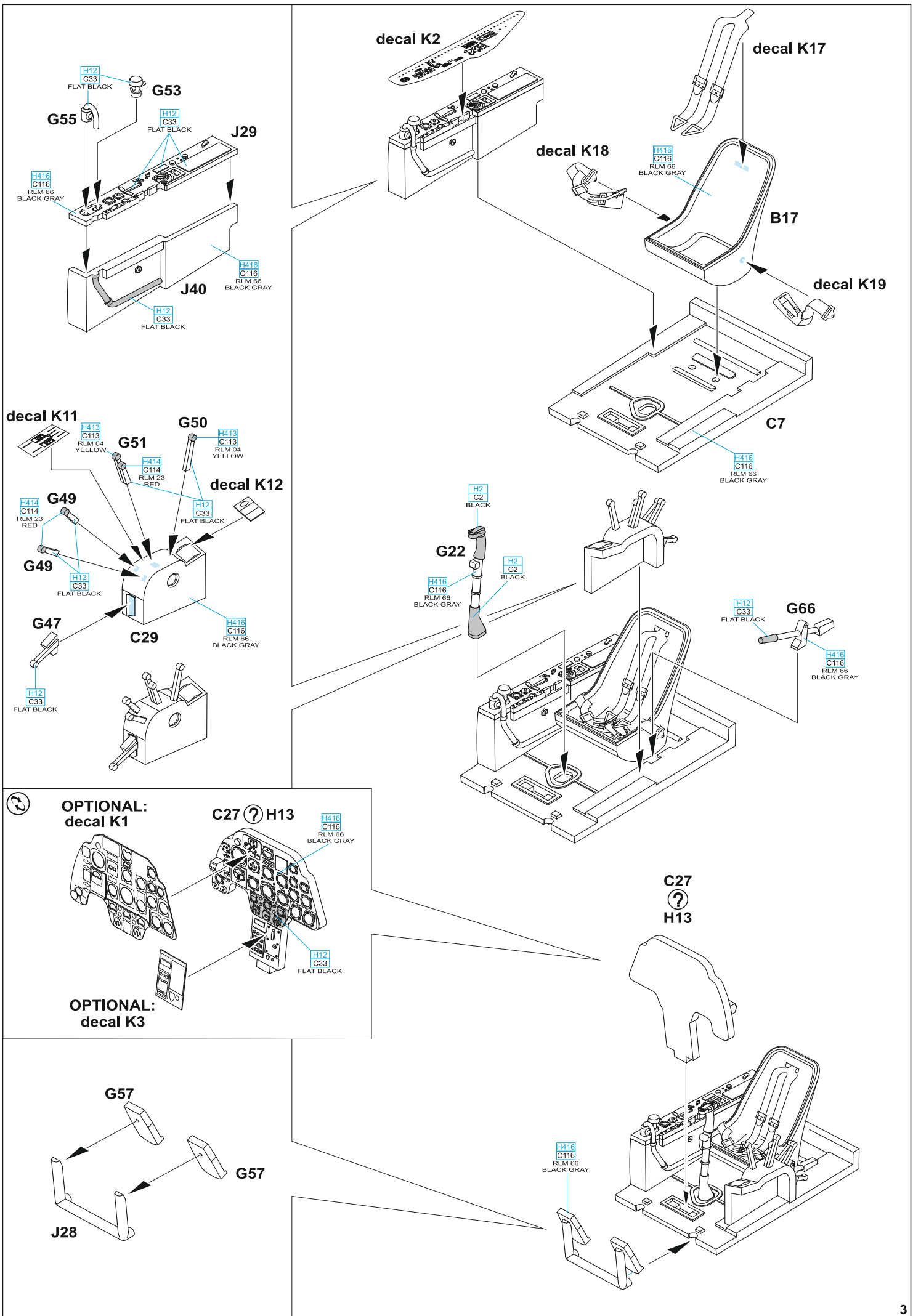
PEINTURE

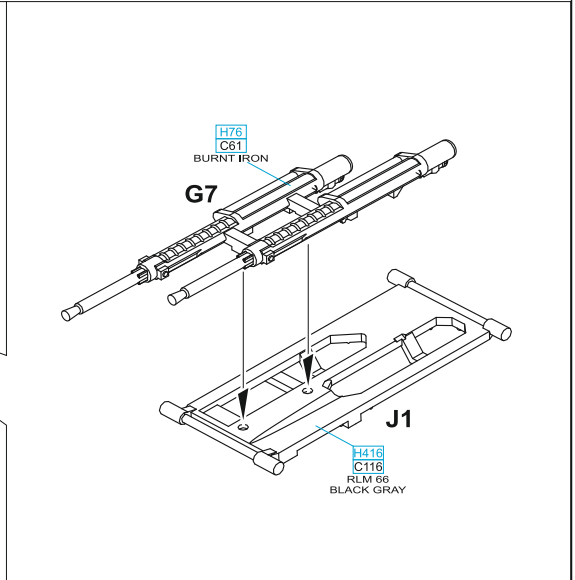
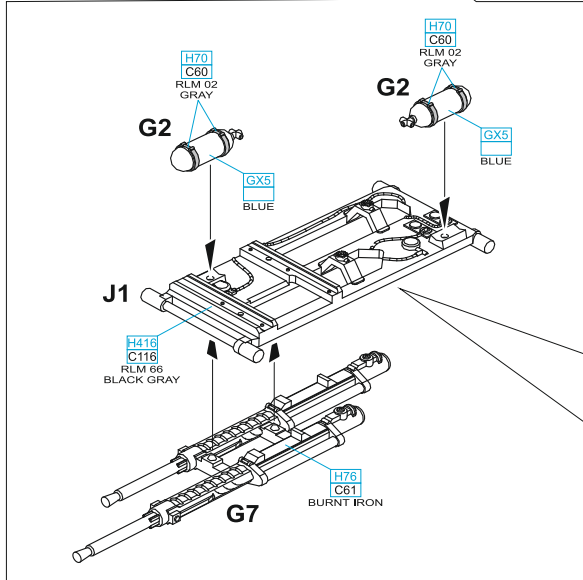
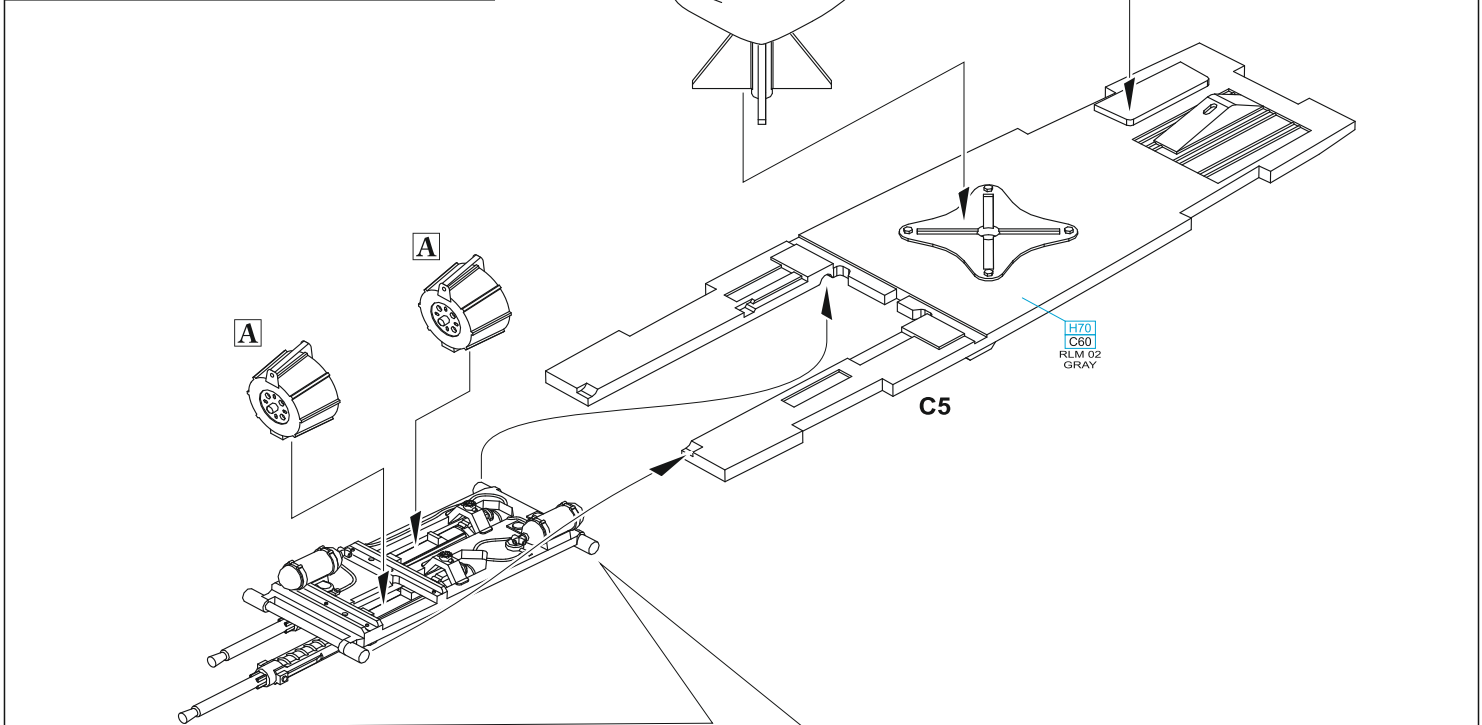
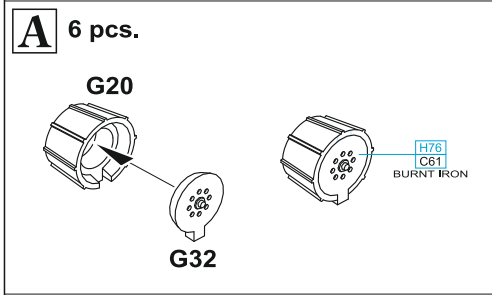
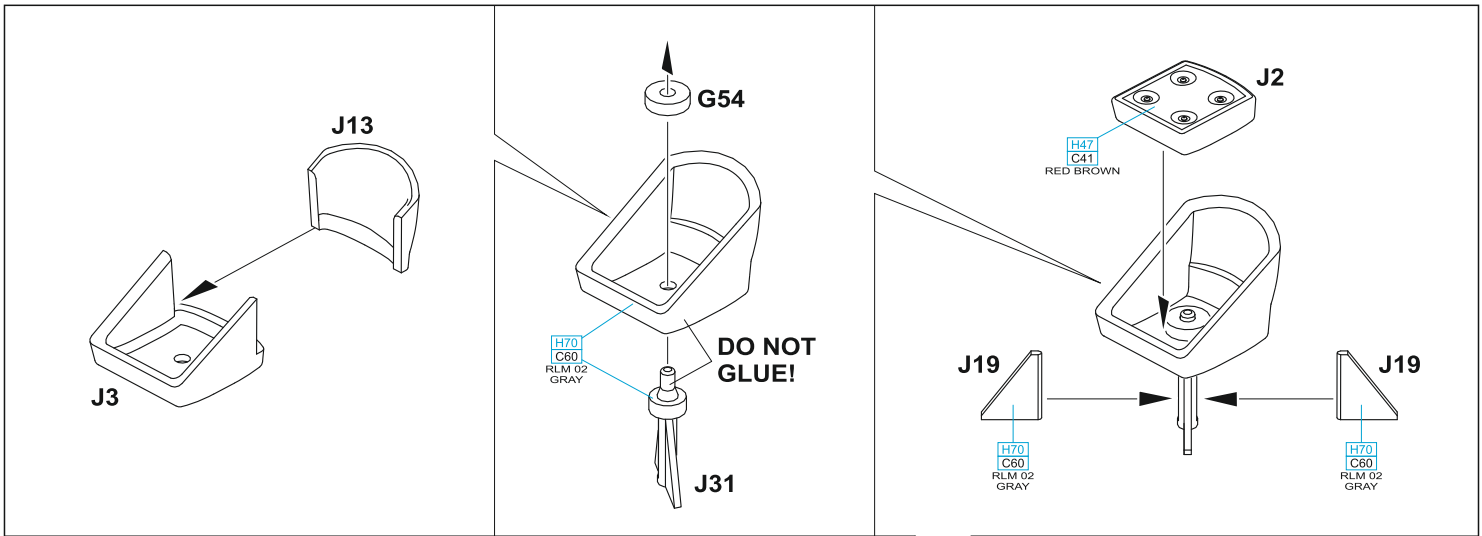


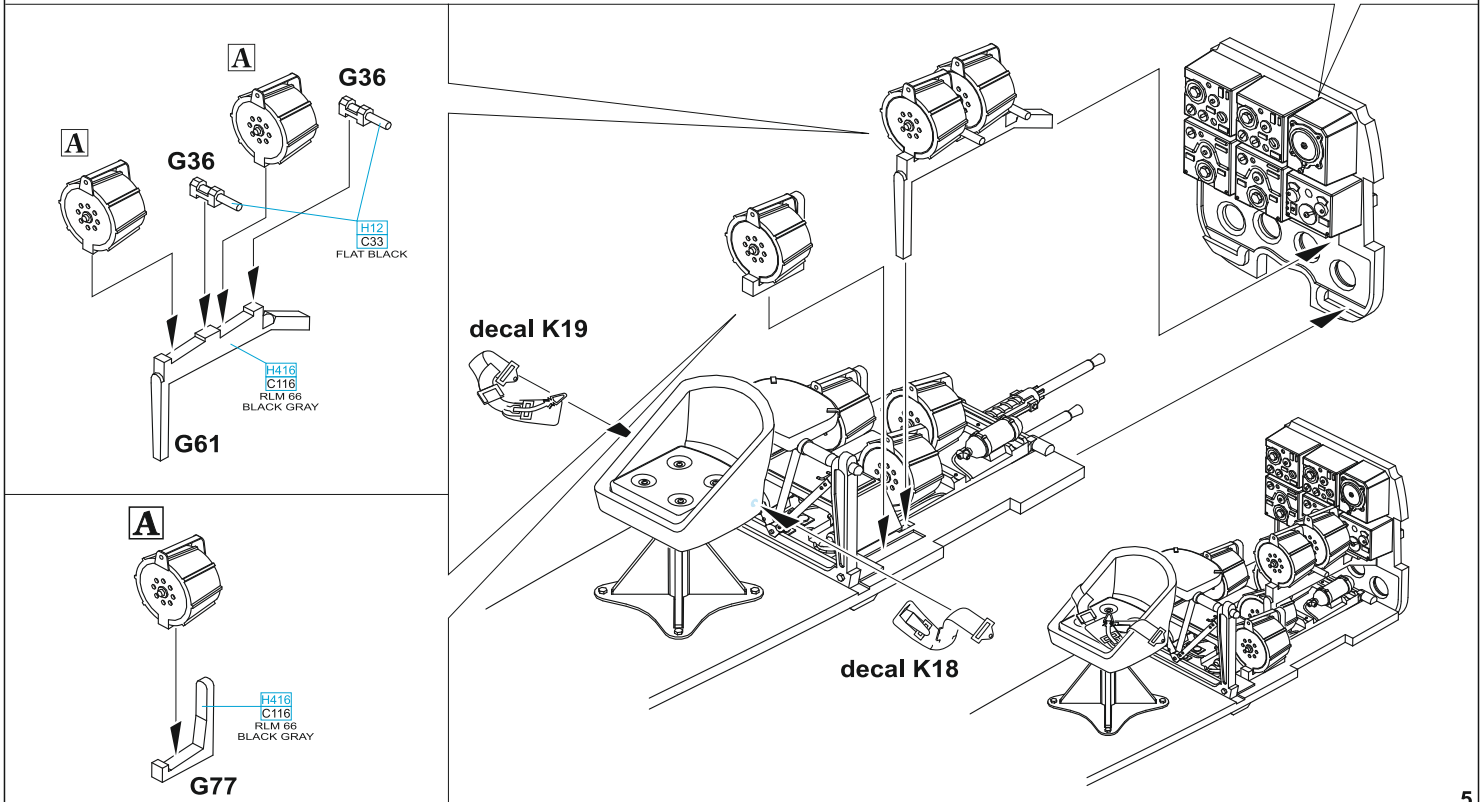
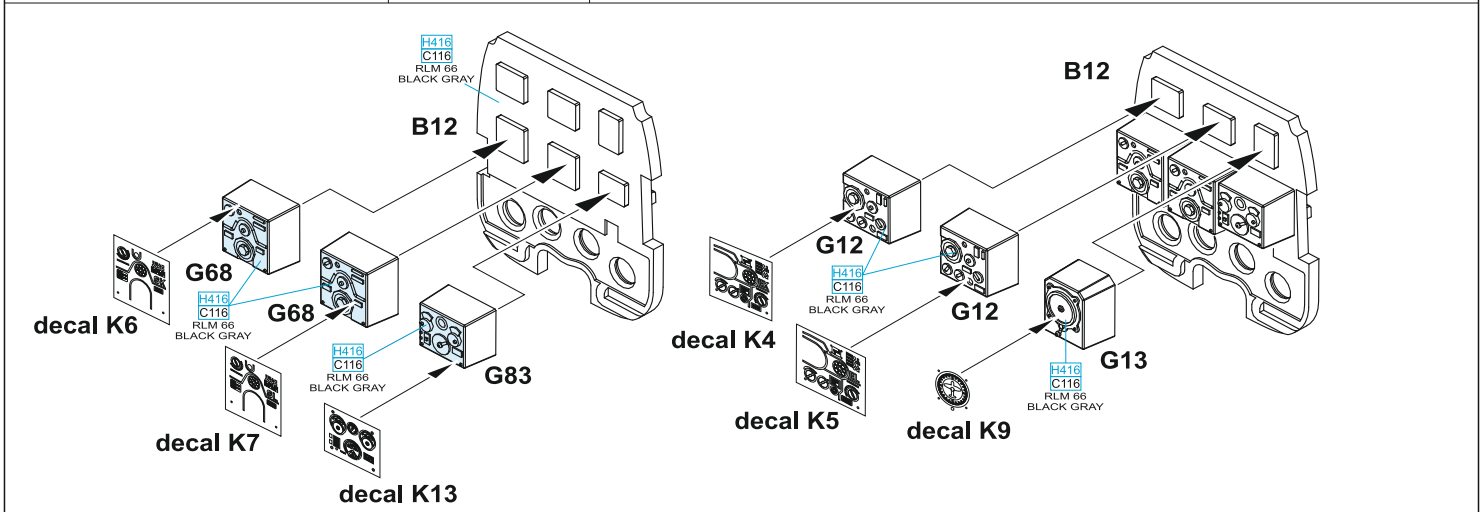
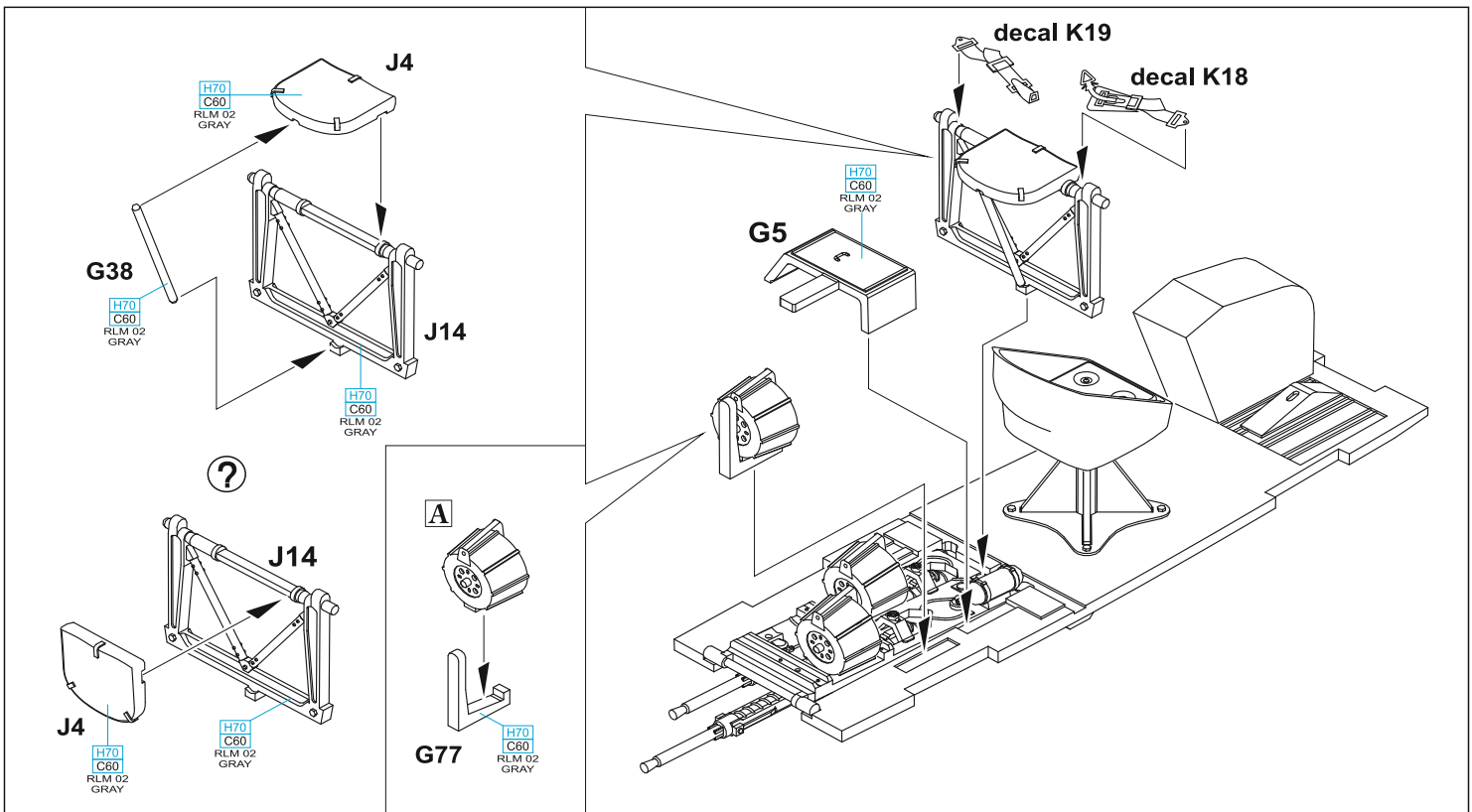
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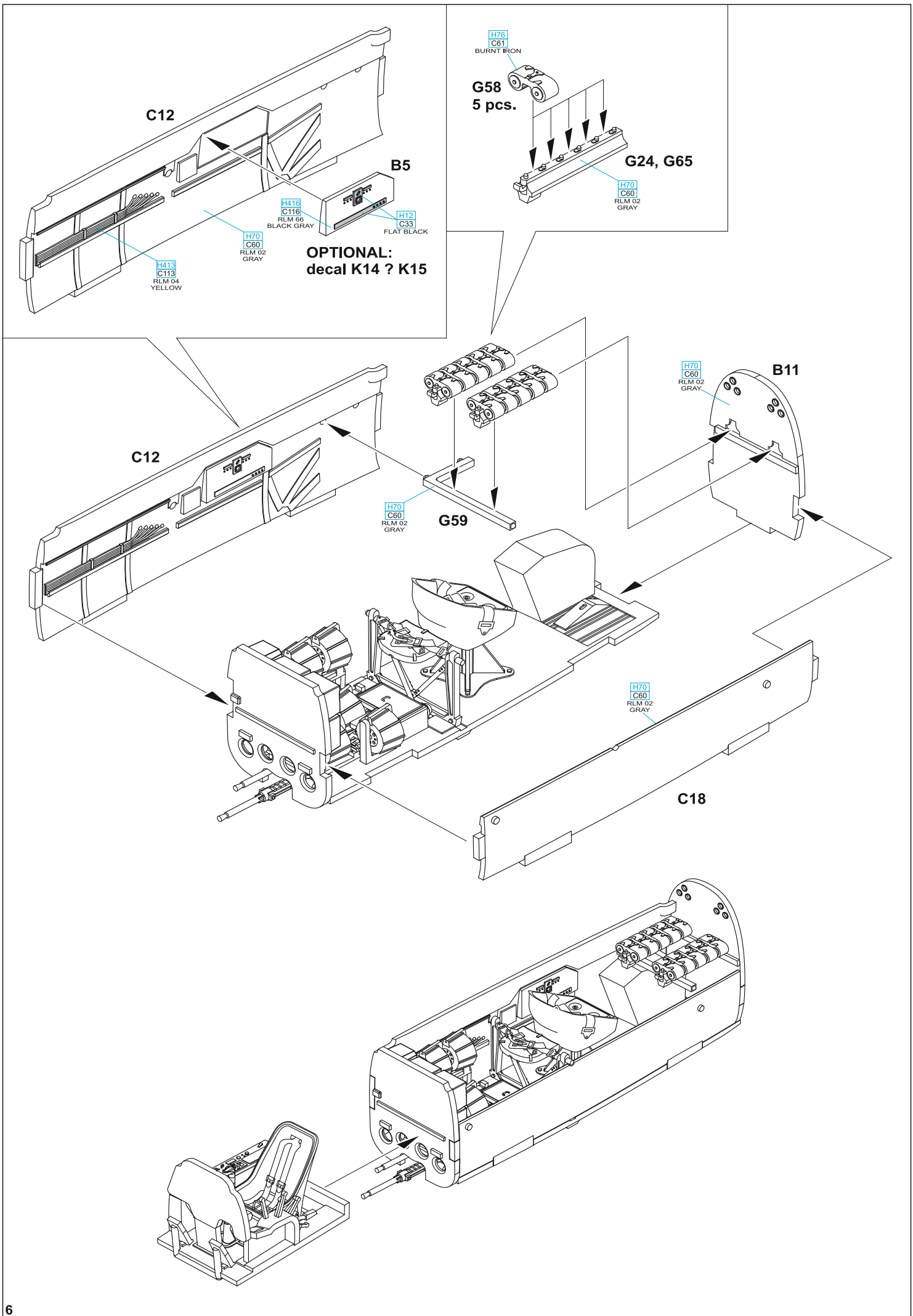
GSI Creos (GUNZE)		
AQUEOUS	Mr.COLOR	
 H2	C2	BLACK
 H11	C61	WHITE
 H12	C33	FLAT BLACK
 H37	C43	WOOD BROWN
 H47	C41	RED BROWN
 H64	C17	RLM71 BLACK GREEN
 H65	C18	RLM70 BLACK GREEN
 H67	C115	RLM65 LIGHT BLUE
 H70	C60	RLM02 GRAY
 H76	C61	BURNT IRON
 H77	C137	TIRE BLACK
 H90	C47	CLEAR RED

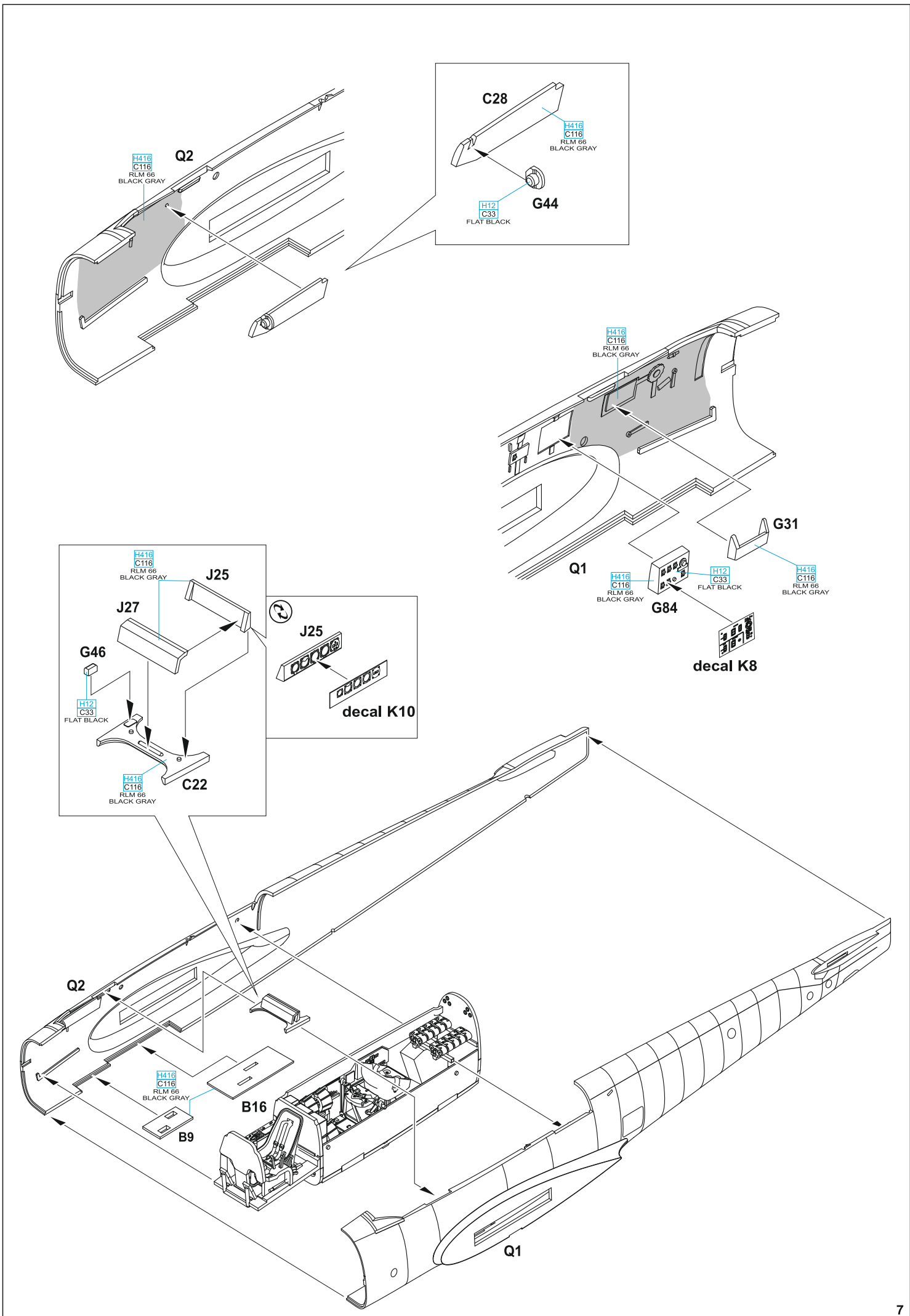
GSI Creos (GUNZE)		
AQUEOUS	Mr.COLOR	
 H94	C138	CLEAR GREEN
 H319	C319	LIGHT GREEN
 H413	C116	RLM04 YELLOW
 H414	C114	RLM23 RED
 H416	C116	RLM66 BLACK GRAY
Mr.COLOR SUPER METALLIC		
 SM201		SUPER FINE SILVER
 SM204		SUPER STAINLESS
 SM212		ALUMINIUM
Mr.COLOR GX		
 GX5		SUSIE BLUE



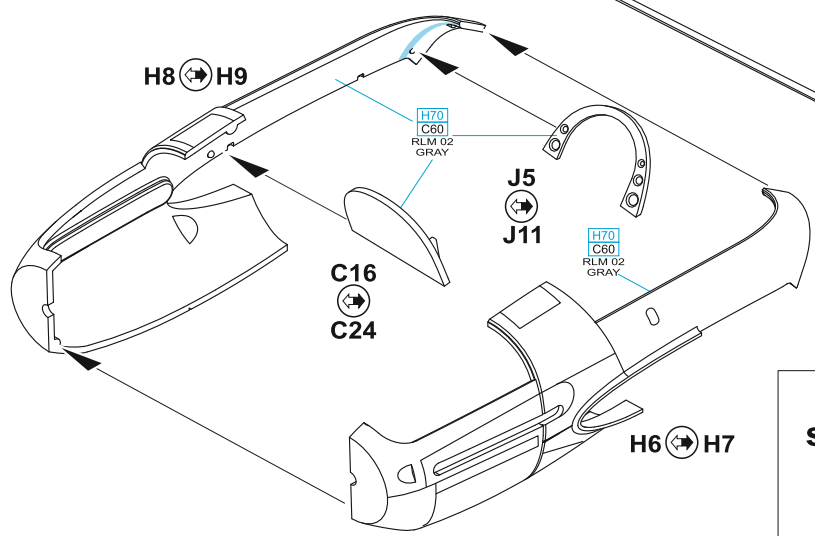
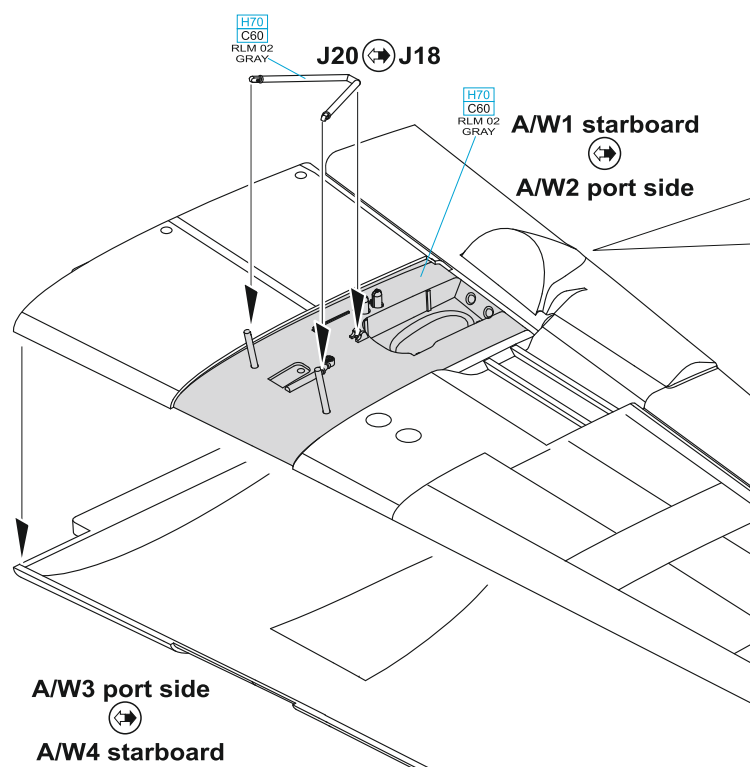
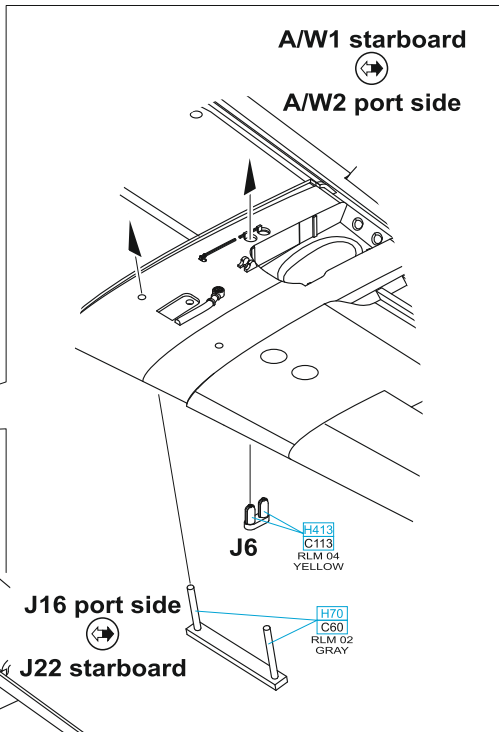
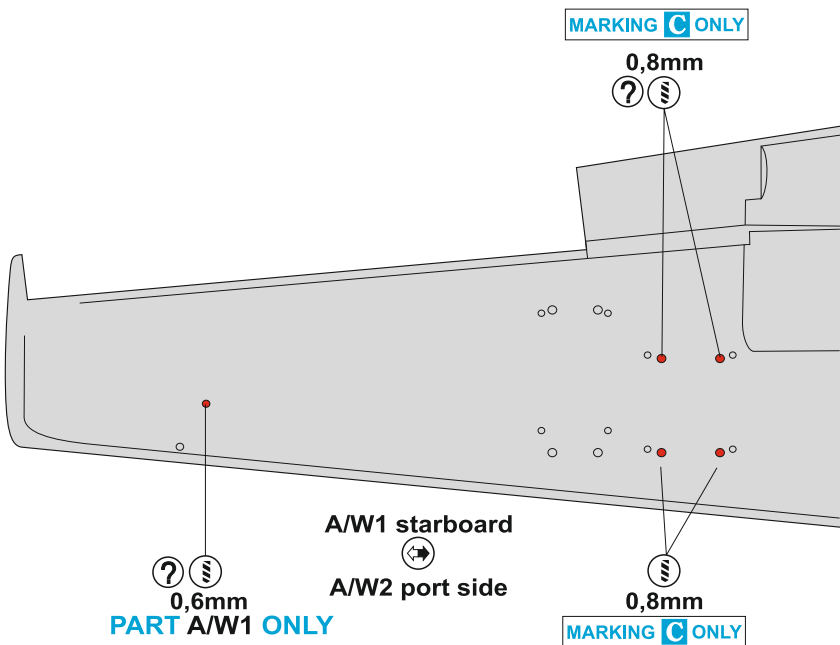




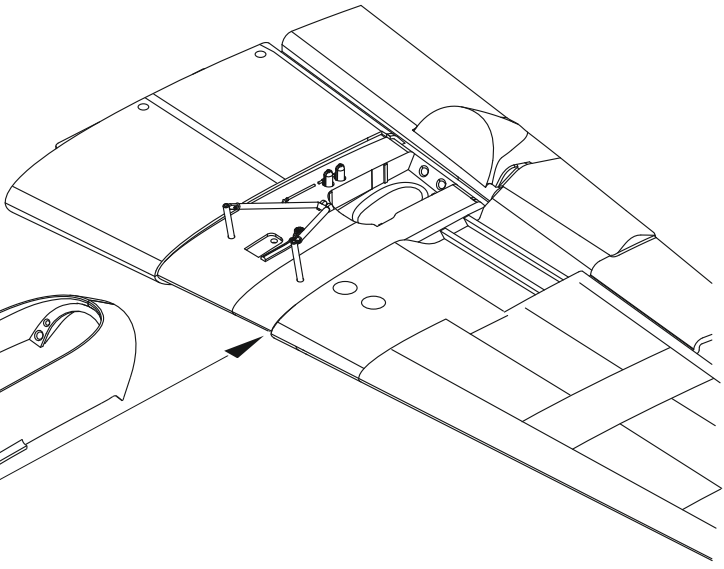
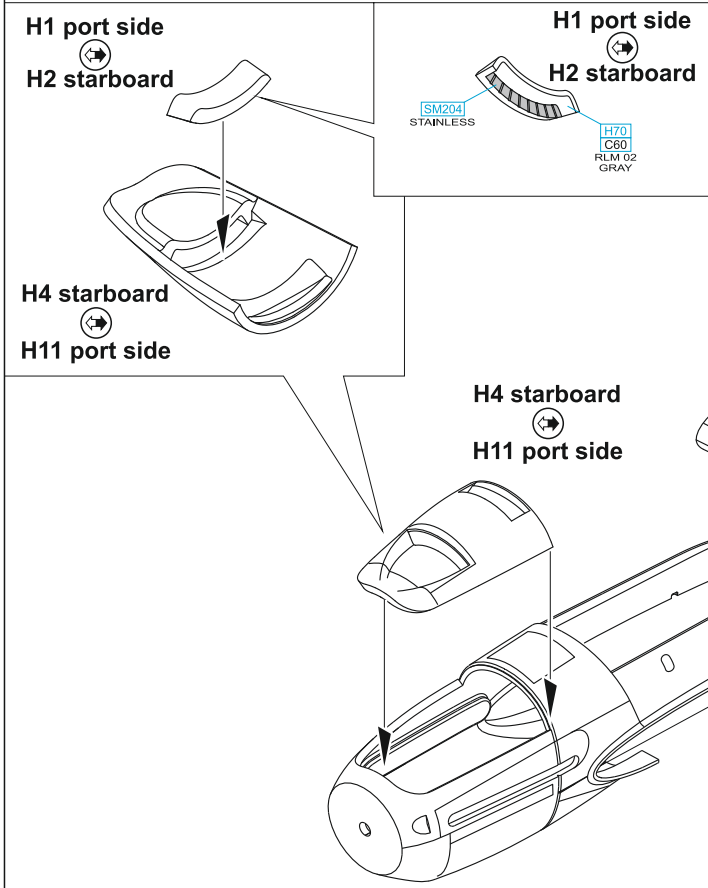




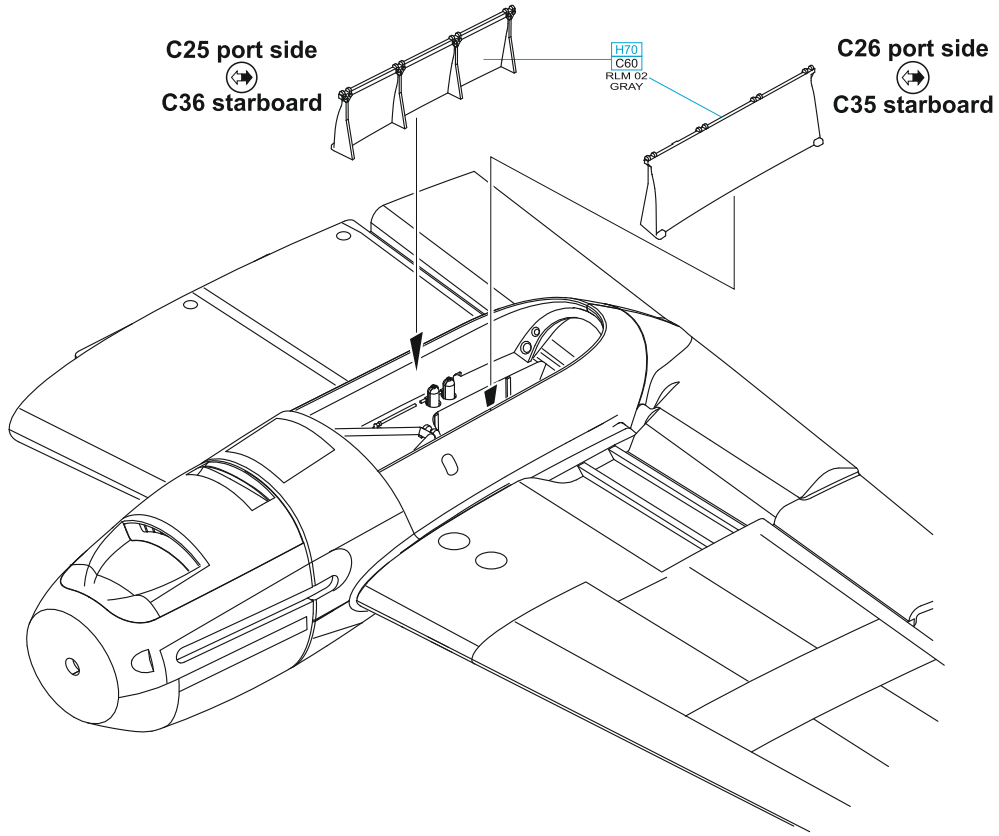


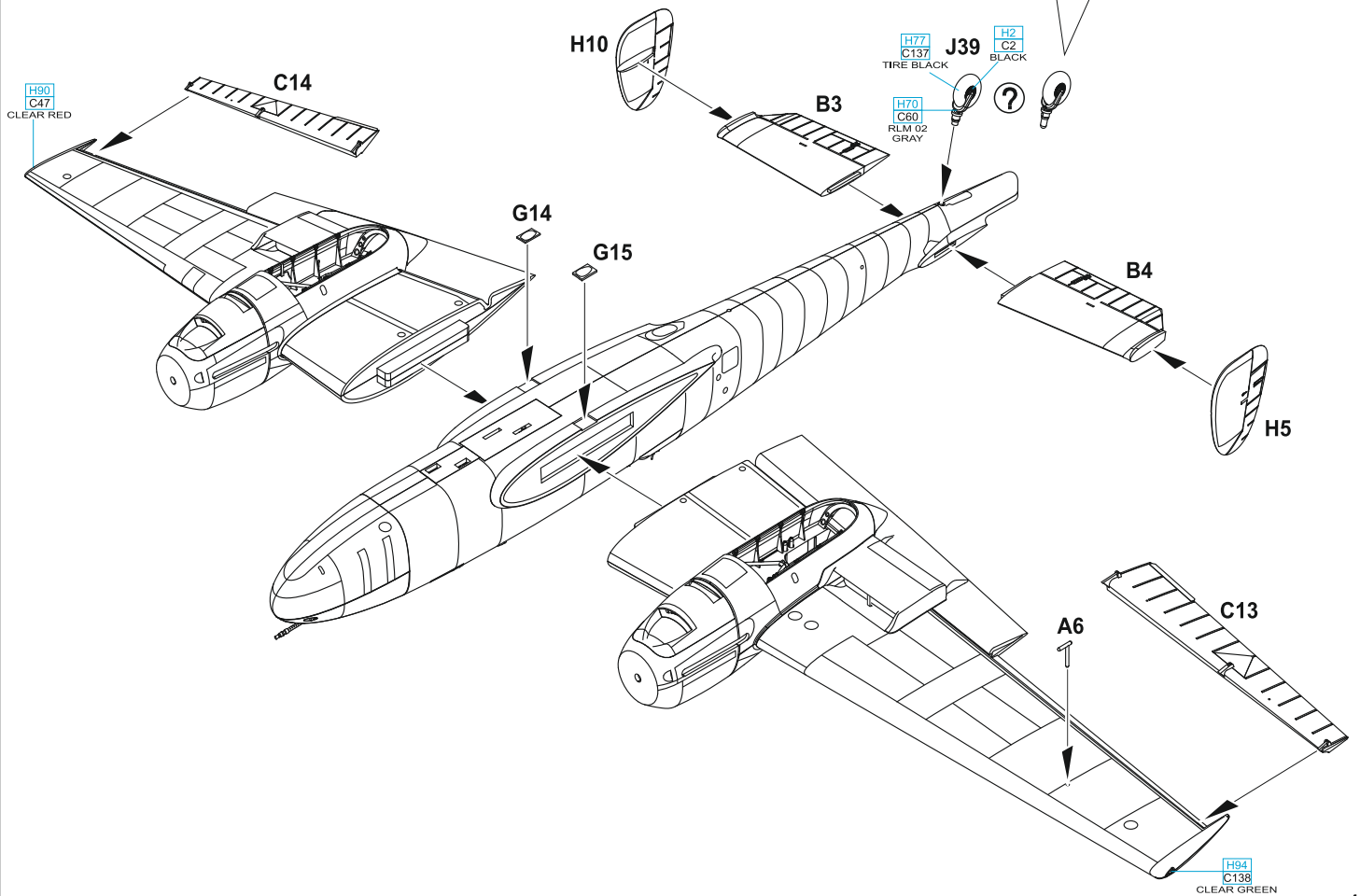
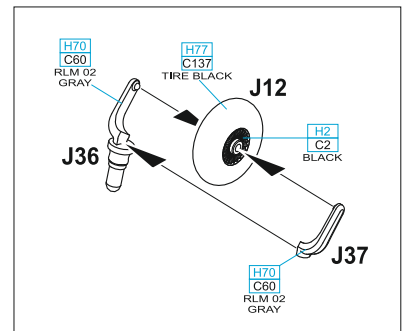
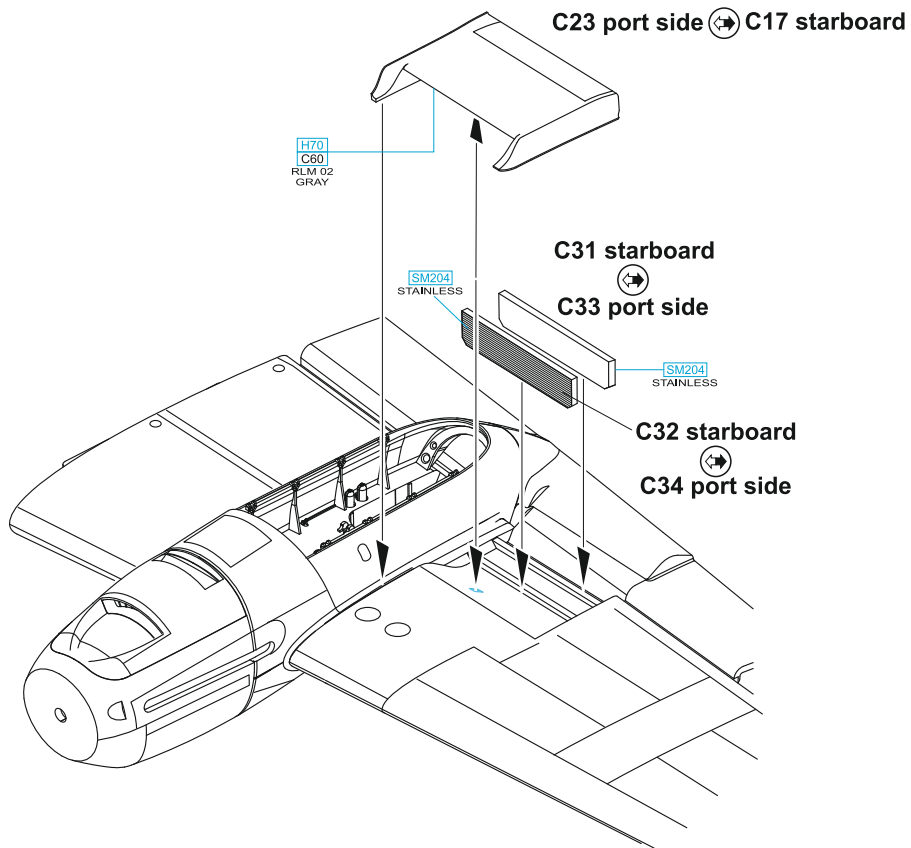


starboard - H8+ C36 > C16+ J5  
               H6+ C35 >  
 portside - H9+ C25 > C24+ J11  
               H7+ C26 >



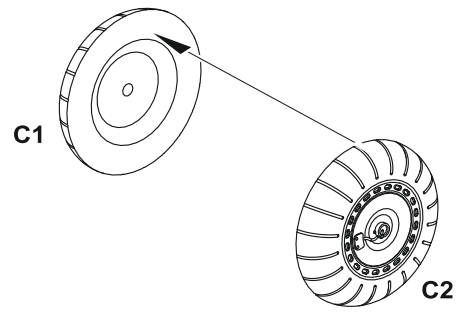
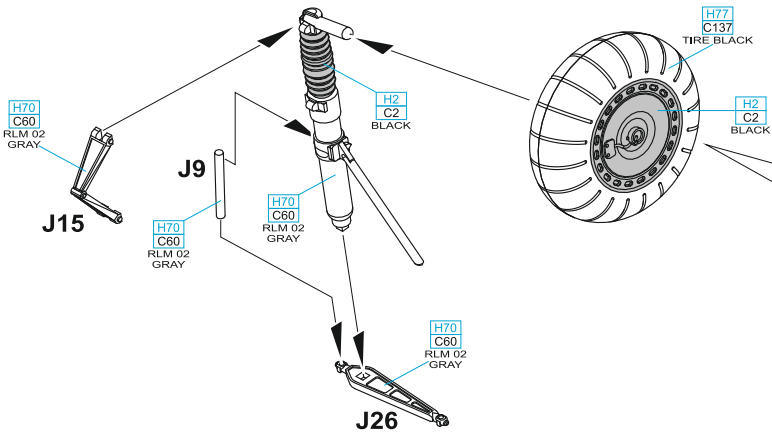
**GLUE THE WHEEL WELL SIDES STRICTLY AFTER THE ENGINE NACELLES ARE GLUED ONTO THE WING!**



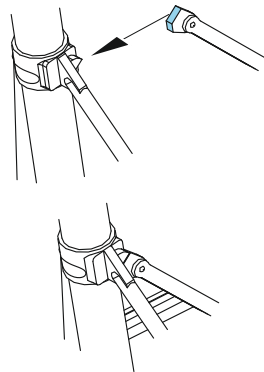
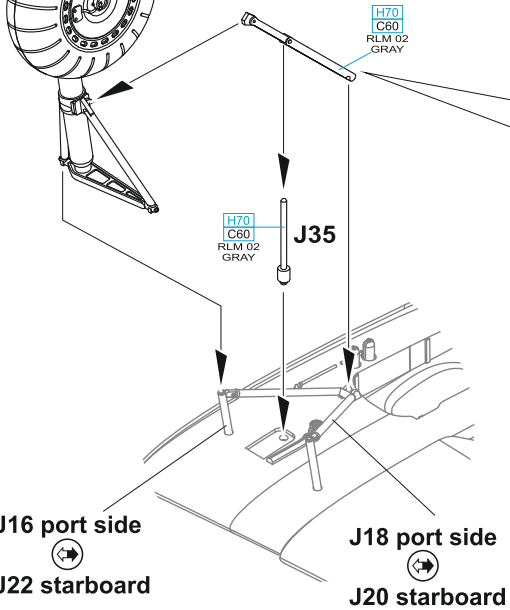


2 pcs.

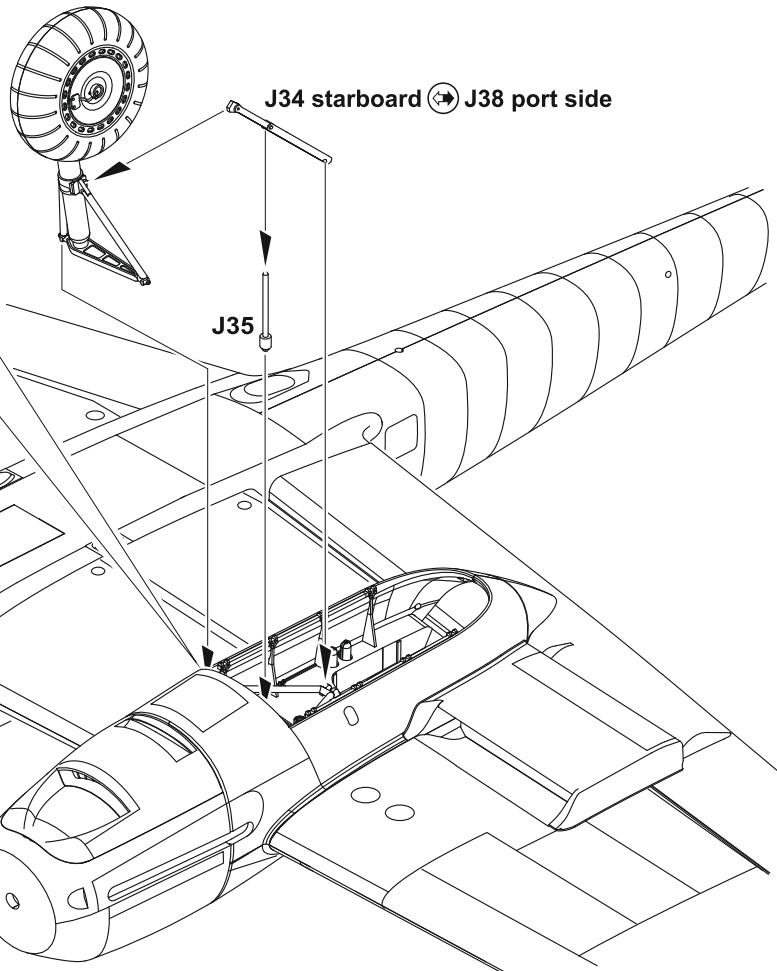
J23 starboard ↔ J30 port side

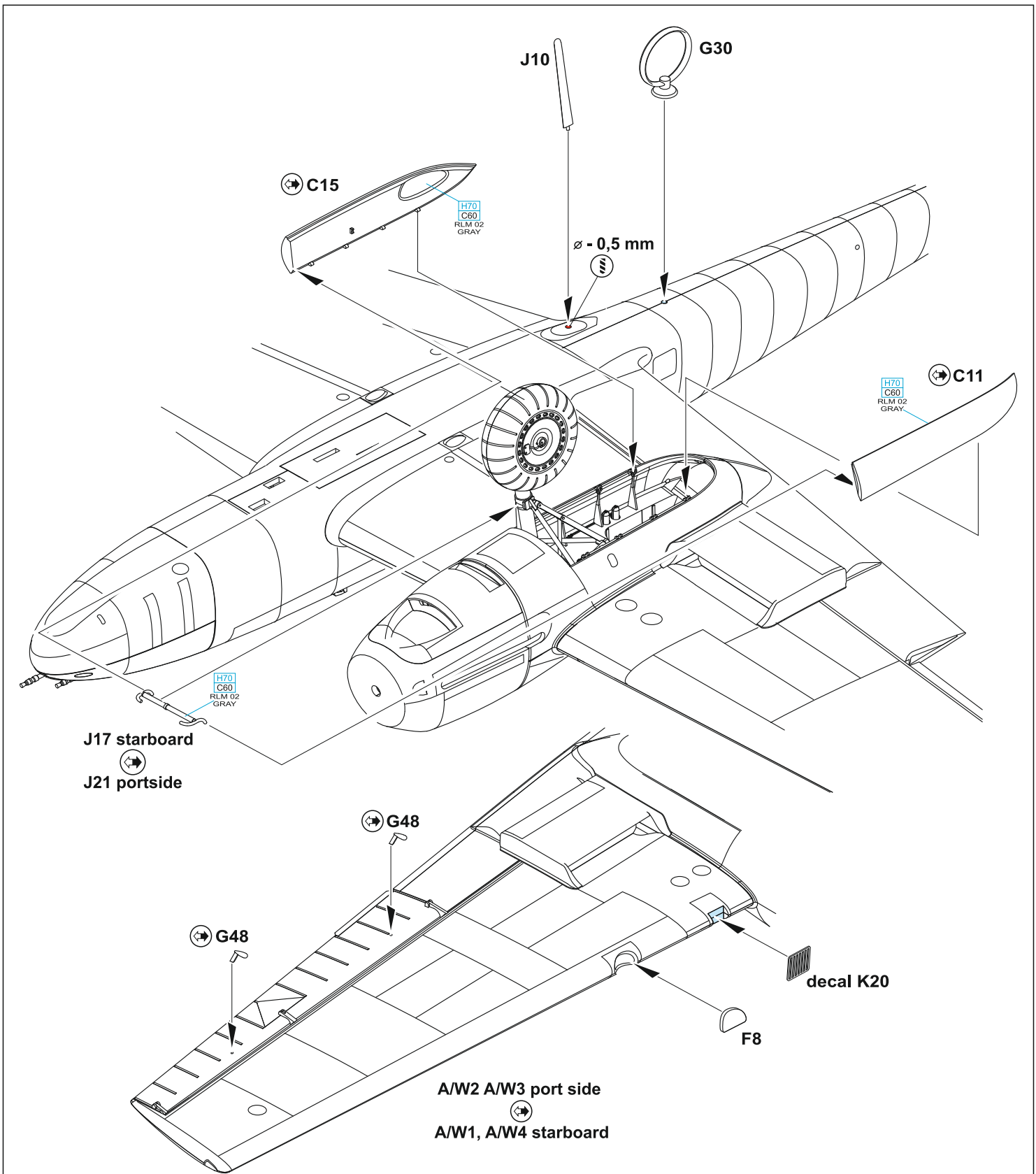


J34 starboard ↔ J38 port side

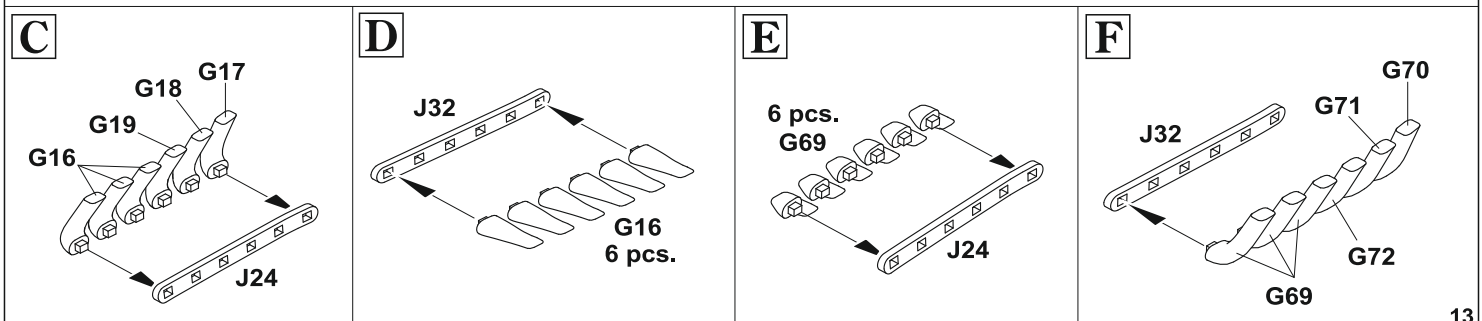


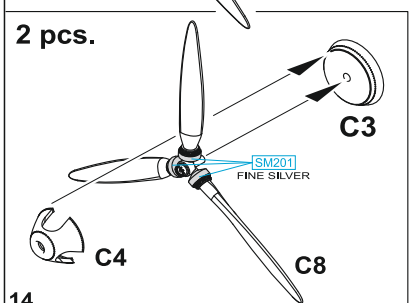
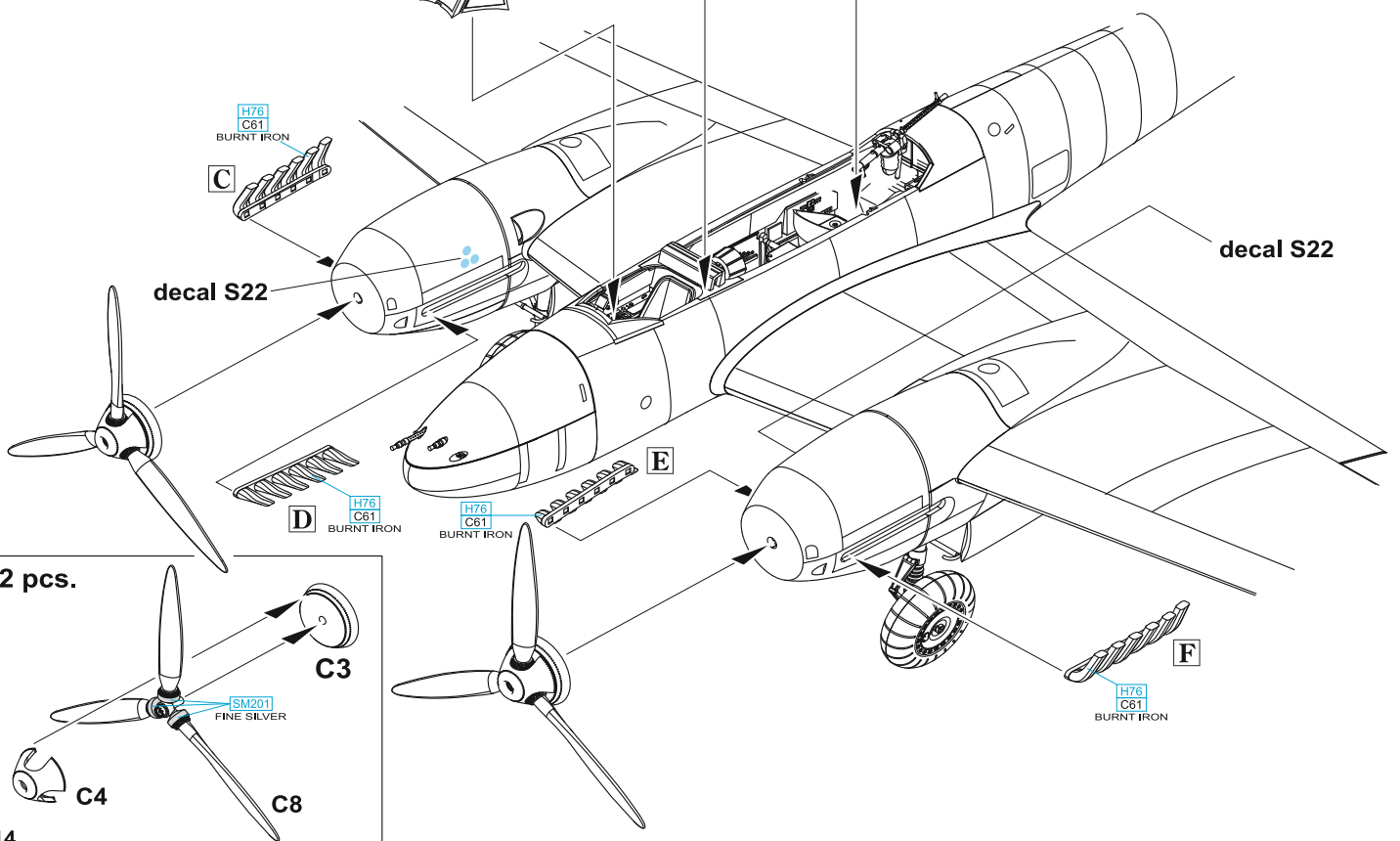
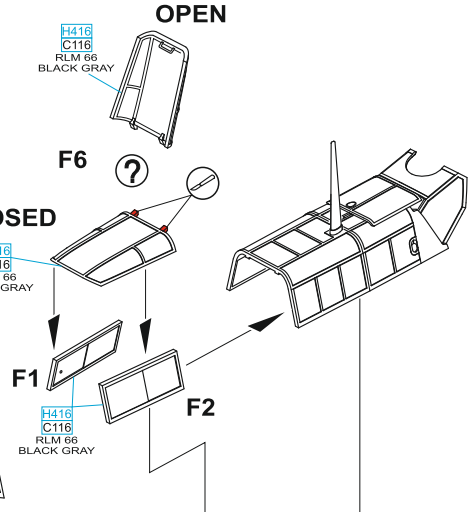
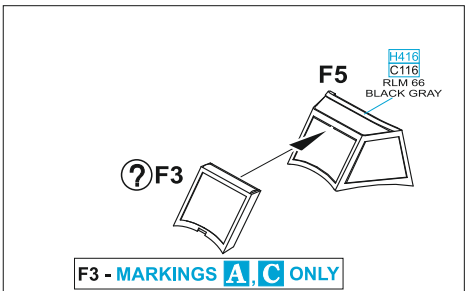
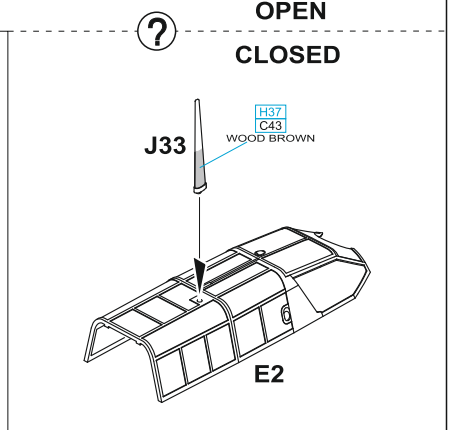
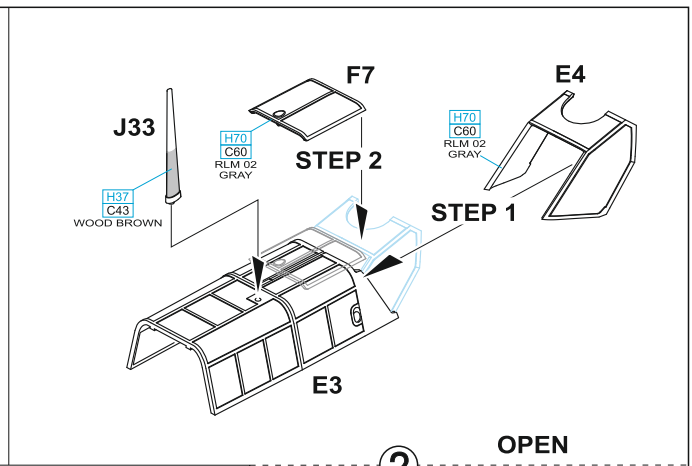
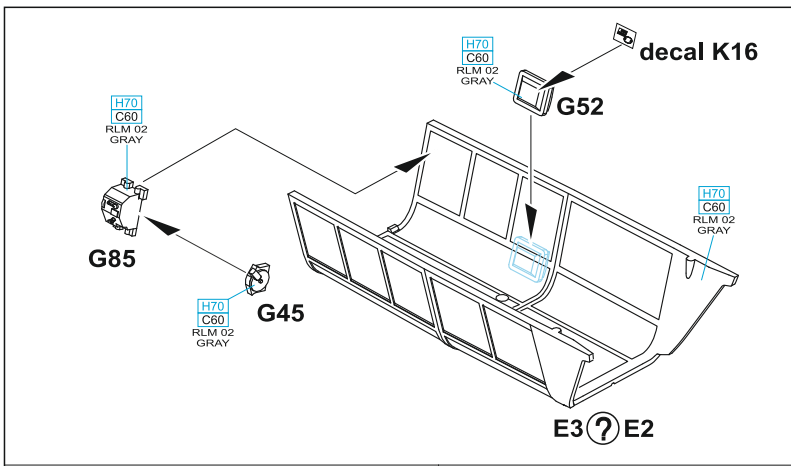
J34 starboard ↔ J38 port side





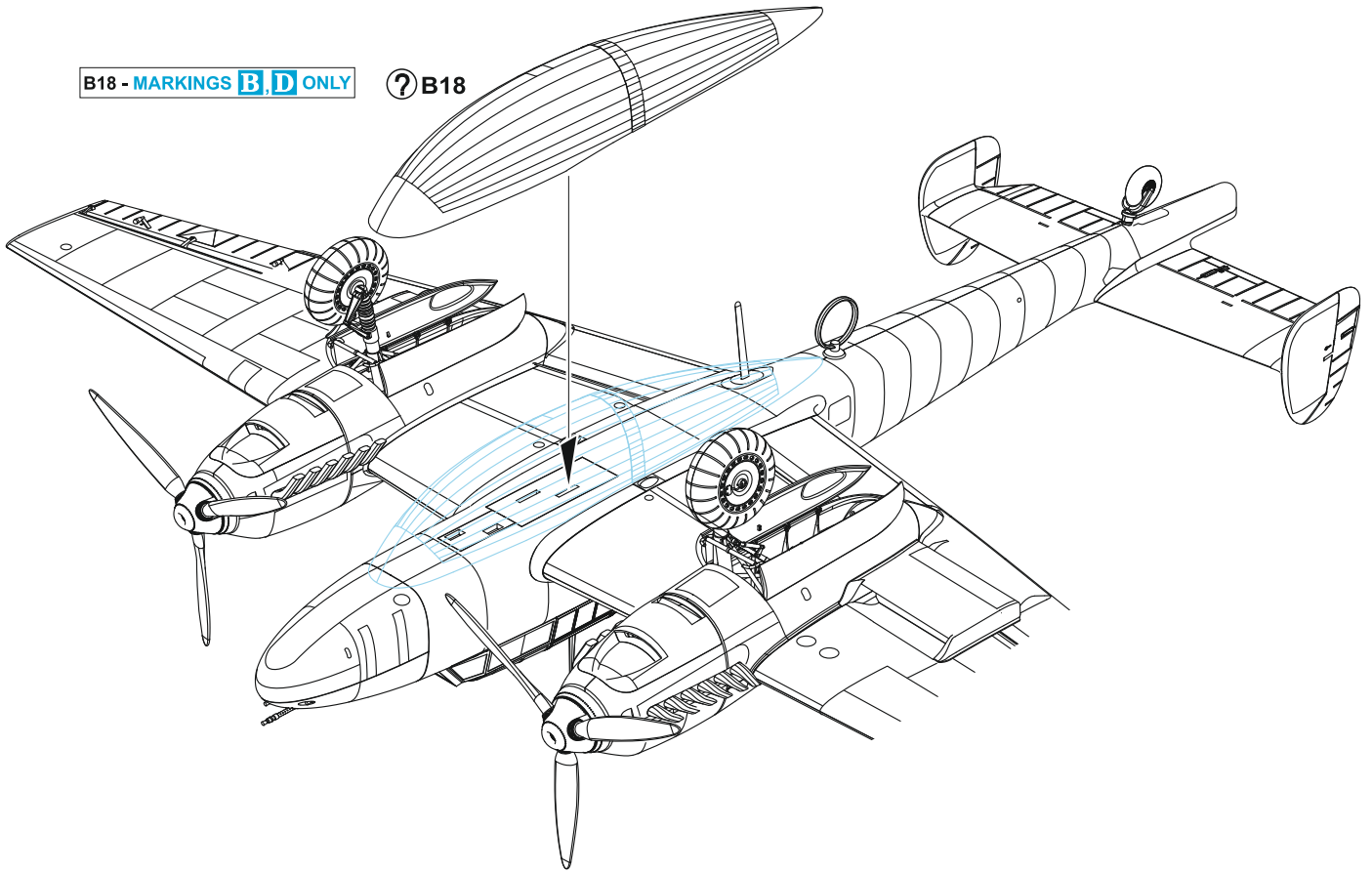
**WE RECOMMEND TO GLUE J24/J32 EXHAUST BASES TO ENGINE NACELLES FIRST, NEXT GLUE THE EXHAUST PIPES TO THE BASES.**



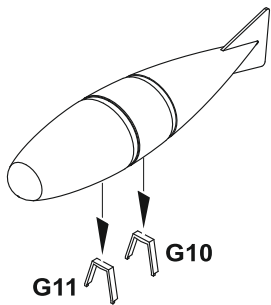
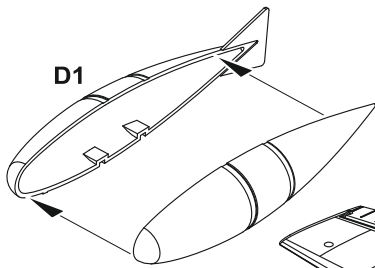


B18 - MARKINGS B, D ONLY

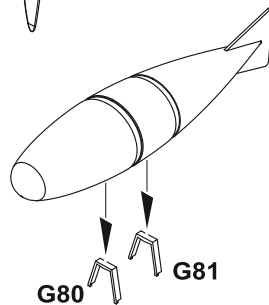
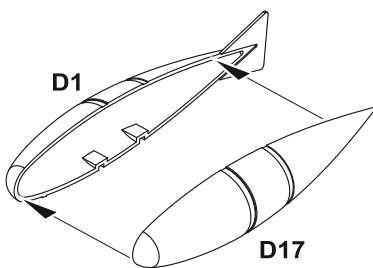
? B18



MARKING C ONLY



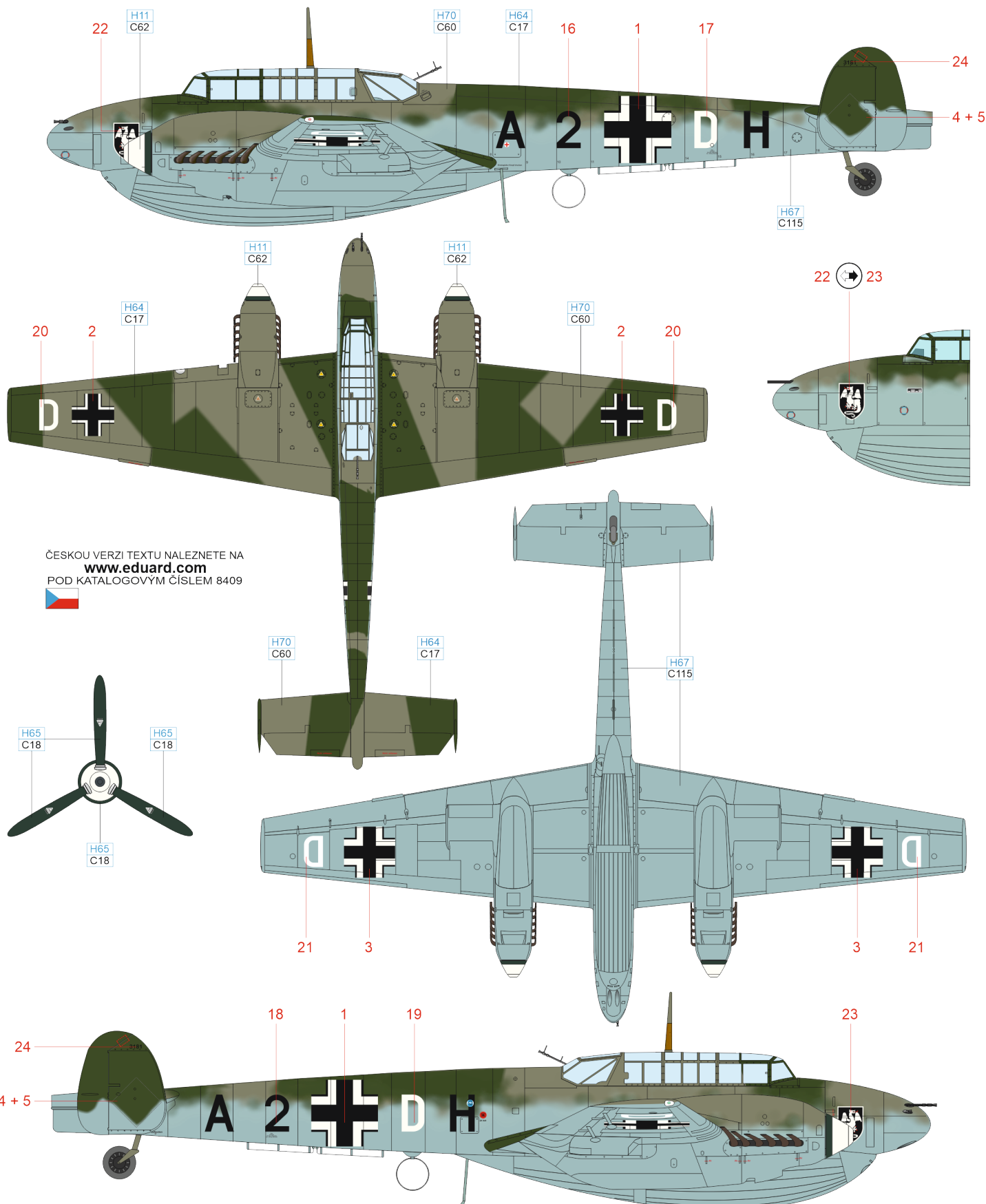
MARKING C ONLY





# B Bf 110D-0, W.Nr. 3181, 4./ZG 2, Gyancourt, France, July 1940

This is so far the only known example of a Bf 110D belonging to II./ZG 2 equipped with the additional fuel tank under fuselage, so called Dackelbauch. The II./ZG 2 was created in July 1940 from I./ZG 52 and kept its original emblem, a white dragon in black shield. The unit also kept its original fuselage codes of I./ZG 52. Camouflage consisted of RLM 71, 02 and 65. Unit lost its Gruppenkommandeur, Major Harry Carl, on August 16 after combat with RAF fighters over the Channel. He got killed together with his gunner Uffz. W. Maier in a crash landing near Beauzeville, France. The commander of the 4. Staffel was Hptm. Hans Peter Külbel, former policeman and pre-war commander of military flying school. On August 11, 1940, he was appointed temporary commander of I./ZG 2. However, on next day he was shot down and killed alongwith his gunner Uffz. F. Budig by RAF fighters off Portsmouth. His body was washed ashore on September 18 near Boulogne. Due to heavy losses the II./ZG 2 was disbanded in September 1940, including 4./ZG 2.



ČESKOU VERZI TEXTU NALEZNETE NA  
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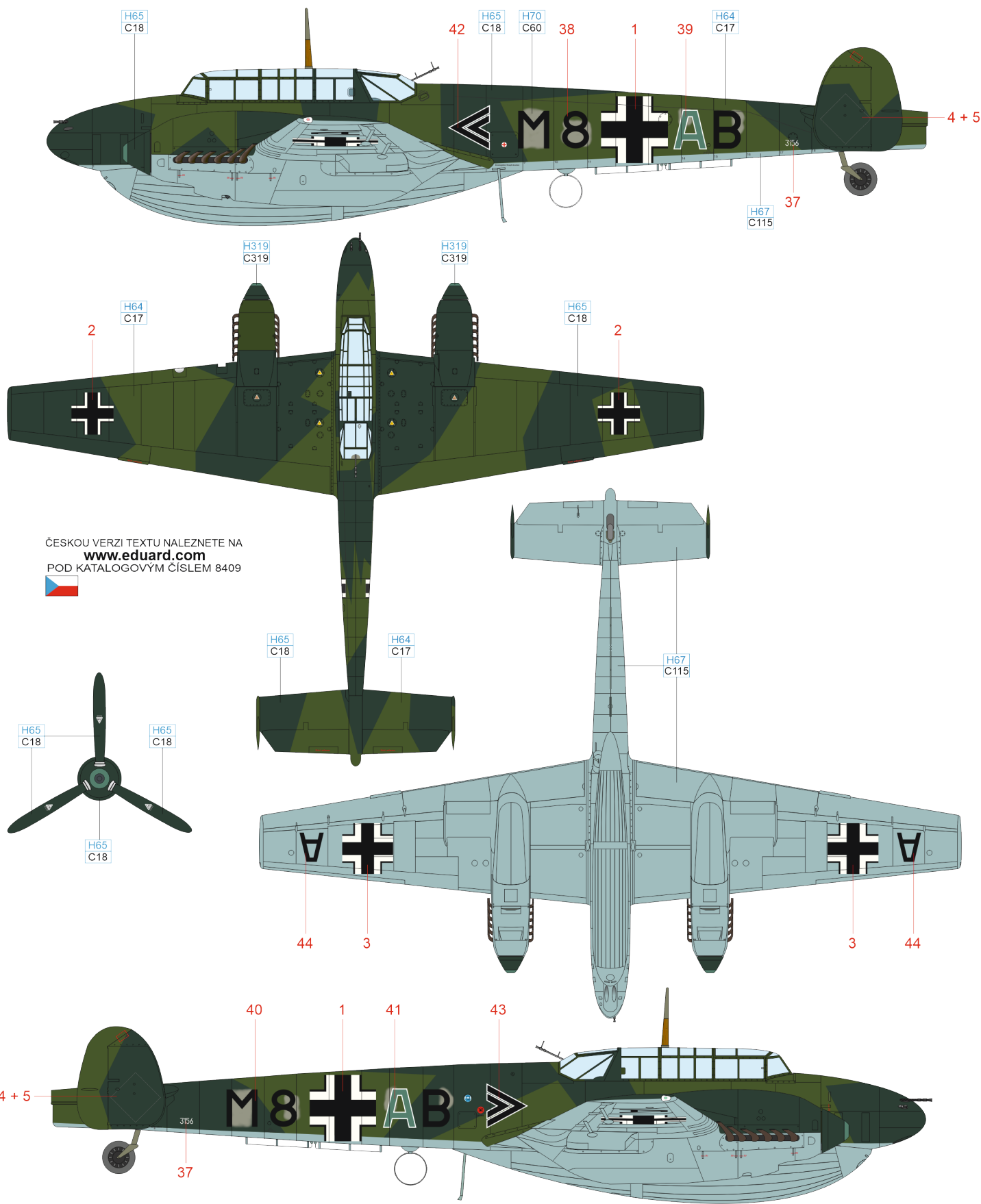


WHITE	H11 C62	RLM 02	H70 C60	RLM 65	H67 C115	RLM 70	H65 C18	RLM 71	H64 C17
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# D Bf 110D-0, W.Nr. 3156, Hptm. Werner Restemeyer, Stab/ZG 76, Stavanger-Sola, Norway, May-June 1940

The first unit equipped with Bf 110Ds during the Norwegian campaign was I./ZG 76. The aircraft carried an older variant of the camouflage with sharply bordered areas of RLM 70/71 on the upper surfaces and RLM 65 on the lower ones. The aircraft shown used an under-fuselage external tank, after which the aircraft were nicknamed Dackelbauch (dachshund belly). On August 15, 1940, the M8+AB, flown by Hptm. Werner Restemeyer, Uffz. Werner Eichert and radio specialist Hptm. Hartwich, escorted He 111 in a raid on Dishforth and Linton-Upon-Ouse. At 12.30pm it was intercepted and shot down by Spitfires from No. 72 Squadron. The Bf 110D M8+AB crashed in flames into the sea off the coast of Durham, killing the crew.



ČESKOU VERZI TEXTU NALEZNETE NA  
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- RLM 02 H70  
C60
- GREEN H319  
C319
- RLM 65 H67  
C115
- RLM 70 H65  
C18
- RLM 71 H64  
C17

