

A6M2-N Rufe

eduard

1/48 Scale Plastic Model Kit

ProfiPACK
edition



item No. 82219

The light and maneuverable Zero fighter became the symbol of the Japanese WW II air power. During the war, other versions of the Zero came along, one of the most iconic being its floatplane version, known by the Allied codename Rufe.

In 1940 the IJN decided to convert the Mitsubishi A6M2, which was currently undergoing combat test deployment in China, to a fighter seaplane. Mitsubishi was fully occupied with the production of Zeros and other types of aircraft. Therefore, the IJN turned to Nakajima, which began licensed production of A6M2 fighters at its Koizumi plant in late 1941. The company had some free design and production capacity and was therefore awarded with works on the seaplane.

Shinobu Mitsutake was appointed chief designer. His team tried to make the most of the A6M2 design. Some authors state that standard fighter seaplane was based on the A6M2 Type 11, which did not have folding wingtips. In fact, at least the first few dozen production machines had folding wingtips. On captured Rufes, this design feature is still documented on the 37th aircraft produced.

The designers added a metal central float to the fuselage. The pylon was mounted to the main wing spar and attached to the rear wing spar by a "V" shaped strut. The pylon with incorporated oil cooling system was located roughly where the Zero had the auxiliary tank attached. The absence of the auxiliary tank was replaced by tanks in the float. Hatches were added to the wing skin to allow access to the internal wing structure and pylons.

This elegant solution of central float with wing-mounted outboard ones was already used on the F1M Pete biplane and contributed to the high aerodynamic cleanliness of Mitsutake's design. The central float and its dynamic effects on the fuselage structure during take-off, high-G maneuvers and landing necessitated the reinforcement of the fuselage structure in the cockpit area by additional metal sheets.

On the first few dozen aircraft a system for purging the fuel tanks was installed on top of the central float. The fittings of this system, which protruded from the float at the top, were protected by a hemispherical cover. The float was also fitted with a rudder. The last significant change from the Zero was an increase in the vertical tail area for the improved longitudinal stability of the aircraft.

Surprisingly maneuverable

Testing of the prototype began on the day of the Japanese attack on Hawaii and continued intensely during early 1942. The prototype was converted from the land-based version of the Zero fighter, the A6M2 Type 11 c/n (6)69. The next nine A6M2-N aircraft were to be produced at Nakajima by conversion from Mitsubishi A6M2 Type 21 carrier fighters including the aircraft c/n (5)159 and (3)312 which took part in the attack on Hawaii aboard the aircraft carrier *Shōkaku*. However, the converted seaplanes suffered from corrosion. Therefore, the conversions of A6M2-N Nos. 8 and 9 were not carried out and No. 10 was already completely manufactured as a new aircraft.

The floatplane fighter did not exceed comparable seaplanes in performance. On one hand, the weight increased due to the floats and design changes, on the other hand the landing gear and tailhook were missing. All in all, the empty weight increased by approximately 14 % over the A6M2 Type 21 and its speed was reduced to 234 kts (434 km/h) at 5,000 m altitude from the original 275 kts (509 km/h) at 4,400 m of the Type 21. The seaplane had a range of 962 nautical miles (1780 km) and a maximum endurance of six hours. The Rufe had excellent maneuverability as well as stability at medium and high altitudes and retained reasonably good flight characteristics even at low altitudes.

Armament was the same as of A6M2, meaning two 20 mm cannons in the wing and two 7.7 mm machine guns in the fuselage. The aircraft could carry two 30 kg or 60 kg bombs carried under the wing. However, unlike the Zero Type 21, seaplane was not equipped with a circular directional antenna at the rear of the cockpit and did not have a headrest behind the pilot's seat.

The new seaplane fighter was first designated *Rei-Shiki Ichi Gata Suijō Sentōki* (Type 0 Mk.1 Seaplane Fighter). In July, the aircraft was accepted by the IJN and entered service under the designation *Ni-Shiki Suijō Sentōki*, or Type 2 Seaplane Fighter. It bore the abbreviated designation A6M2-N. Nakajima considered preparing another fighter seaplane, which was to reach a speed of 250 knots, but eventually abandoned the idea.

Series production began in April 1942 and ended in July 1943, as production of the *Kawanishi N1K Kyōfū* (Rex) fighter seaplane began a month earlier. Nakajima produced a total of 258 A6M2-N seaplanes with the highest number of aircraft (24) in a single month leaving the gates of the Koizumi plant in April 1943. As soon as the Allies observed this type in aerial encounters, they assigned it the code name Rufe.

Colors and markings

Rufes had a grey paint coating on all surfaces, which was sprayed over a reddish-brown base paint. To prevent corrosion, the interior surfaces of the flap area were painted in aluminum color instead of the Aotake paint that was common on A6M Zero fighters. In February 1943, naval fighter units were instructed to spray the aircraft with dark green on the upper surfaces. Ground personnel usually made use of paint that was available for maintenance on aircraft of other categories that already had green paint. In the case of the seaplane units, these were the Aichi, Mitsubishi and Kawanishi aircraft. The shades of camouflage paint varied slightly depending on the paint supplier. The use of war booty paints, for example in Rabaul, or the use of paint designed for warships cannot be ruled out. In the final months of production, the new A6M2-N aircraft received a coat of D1 dark green paint on the upper surfaces, a shade specific to the Nakajima paint supplier.

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 lepidla pracujte v dobře větrané místnosti. Lepidla ani barvy nepoužívejte v blízkosti otevřeného ohně. Model není určen malým dětem, mohlo by dojít k požití drobných dílů.

INSTRUCTION SIGNS * INSTR. SYMBOLS * INSTRUKTION SINNBILDEN * SYMBOLES * 記号の説明

OPTIONAL
VOLBABEND
OHNOUTSAND
BROUSITOPEN HOLE
VYVRTAT OTVORSYMETRICAL ASSEMBLY
SYMETRICKÁ MONTÁŽREMOVE
ODŘÍZNOUTREVERSE SIDE
OTOČITAPPLY EDUARD MASK
AND PAINT
POUŽIT EDUARD MASK
NABARVITPLEASE, CHECK THE LATEST VERSION OF THE INSTRUCTIONS ON www.eduard.com

PARTS



DÍLY



TEILE

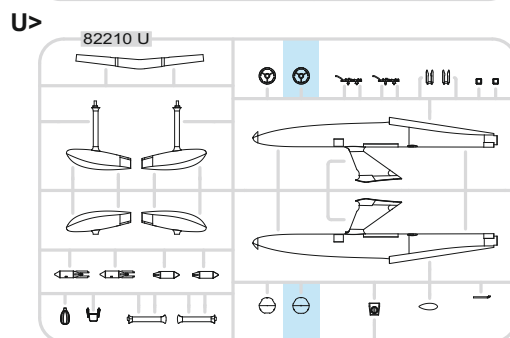
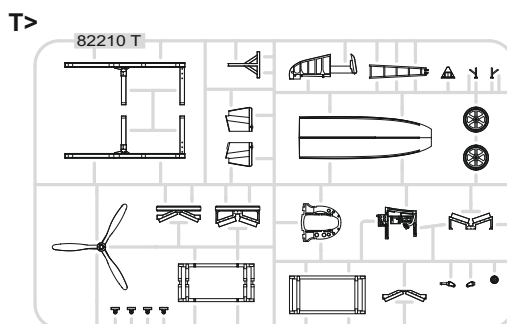
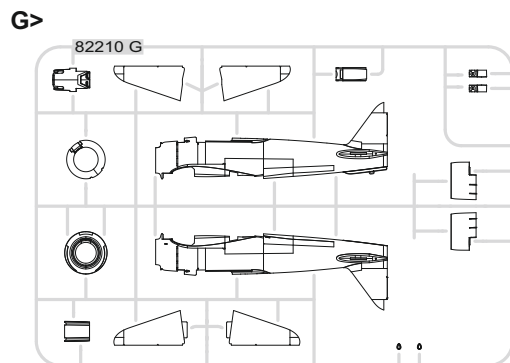
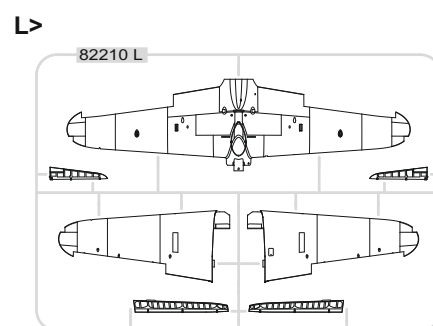
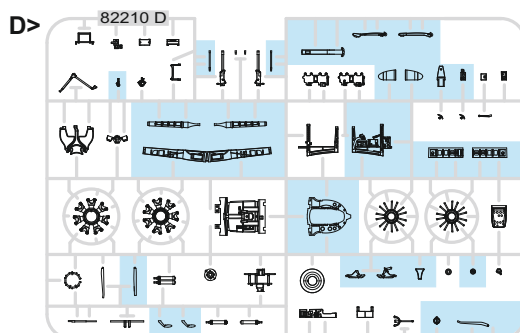
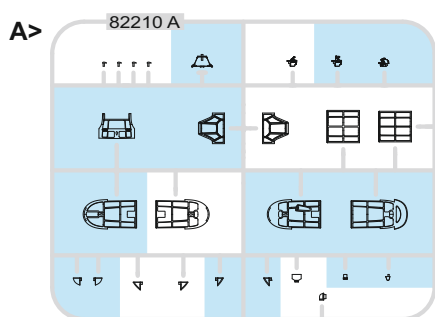


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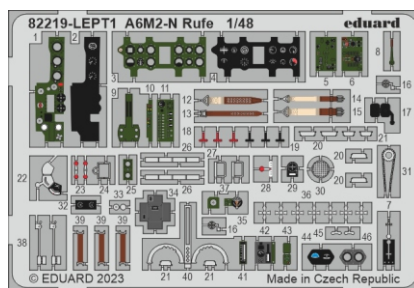
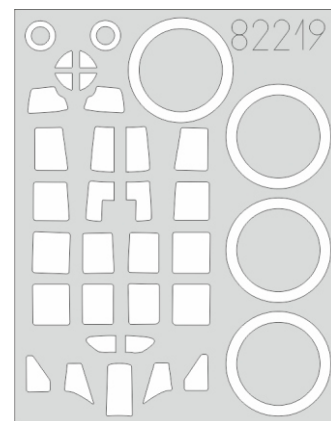


部品

PLASTIC PARTS



PE - PHOTO ETCHED DETAIL PARTS

eduard
MASK

-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



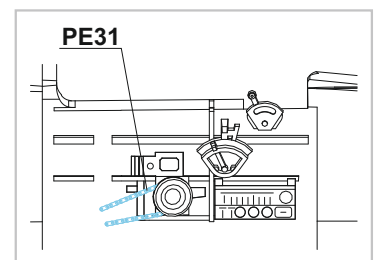
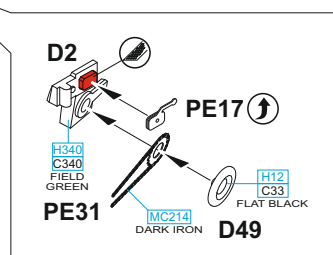
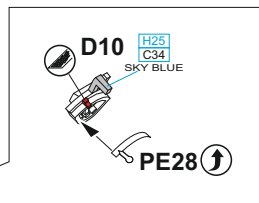
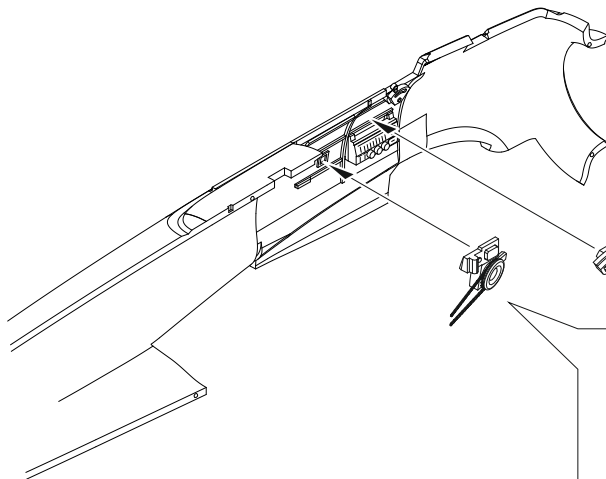
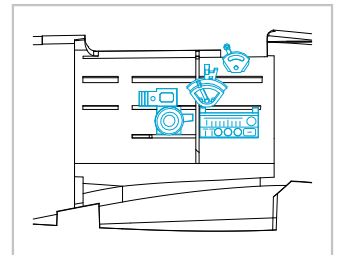
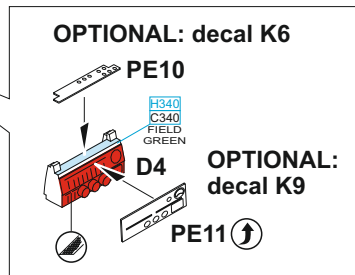
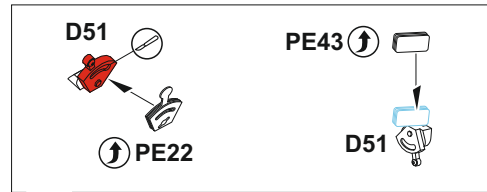
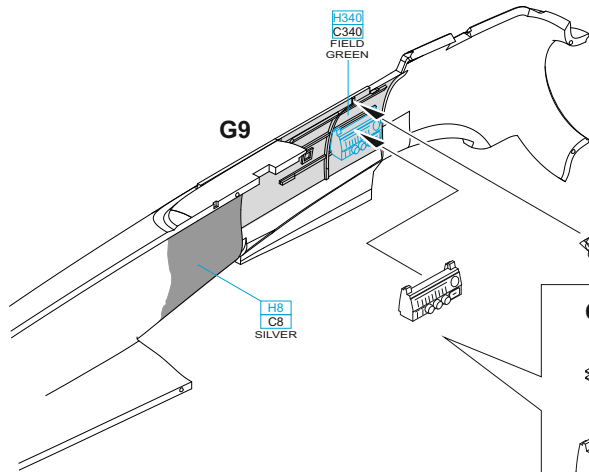
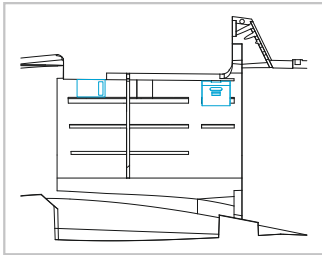
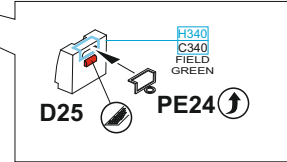
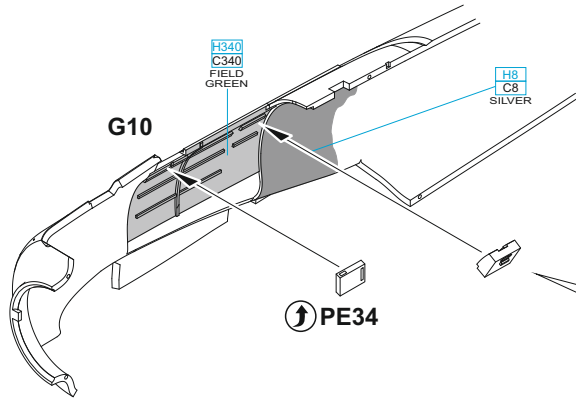
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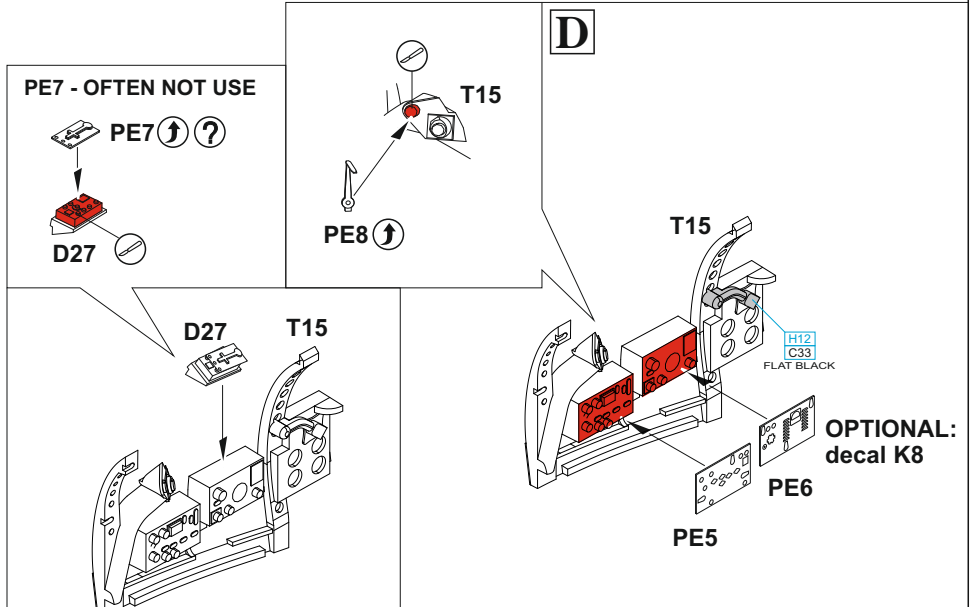
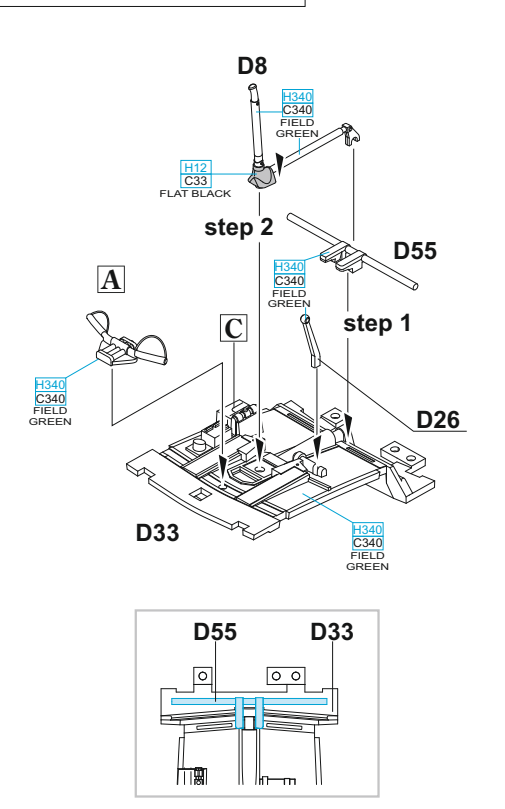
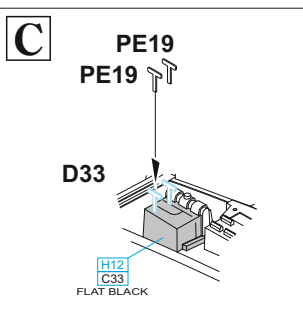
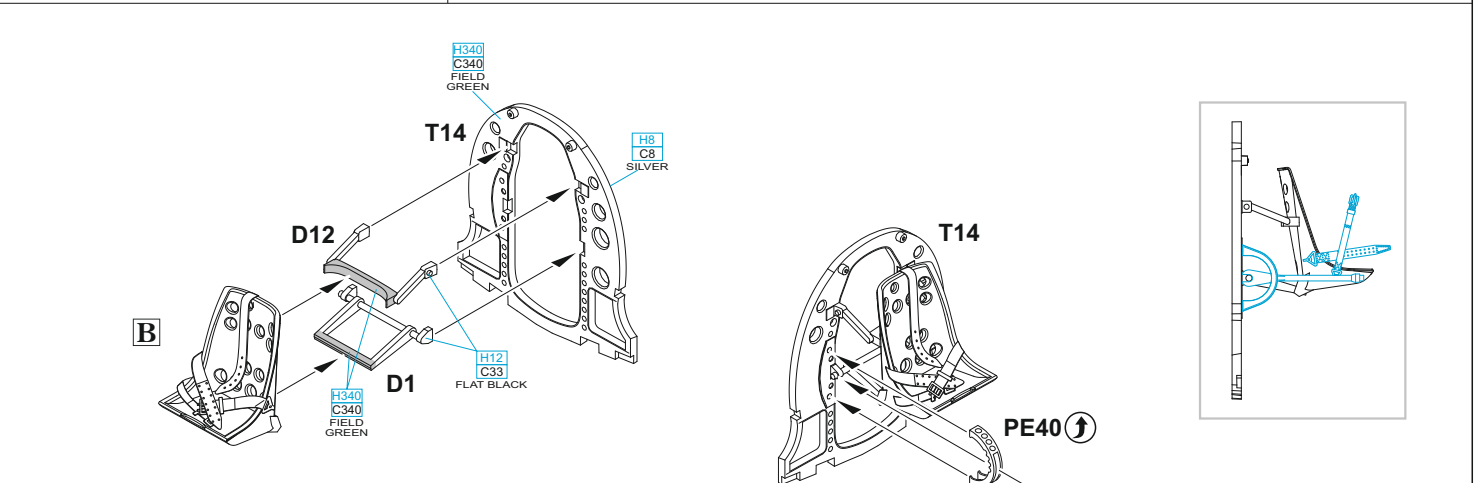
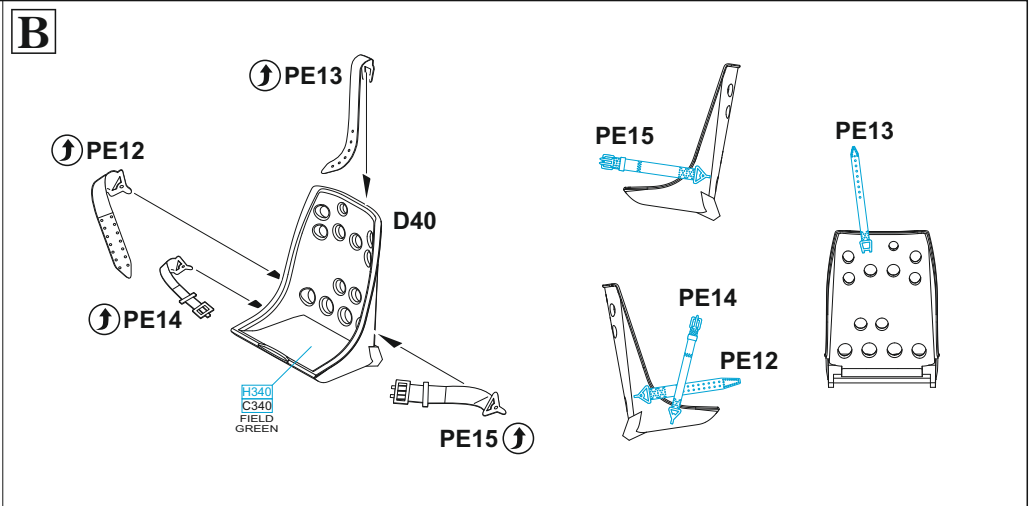
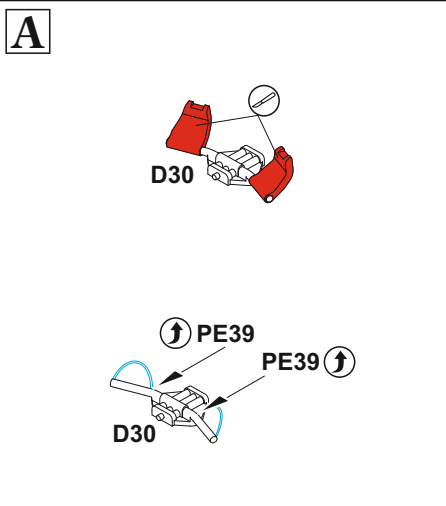


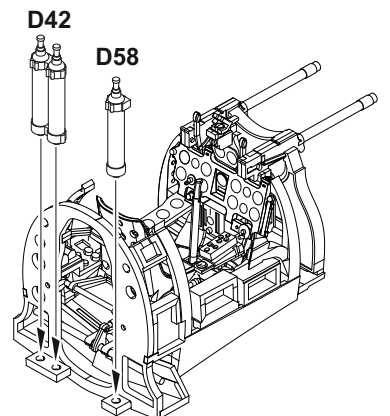
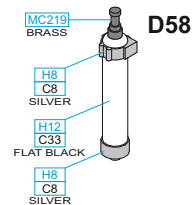
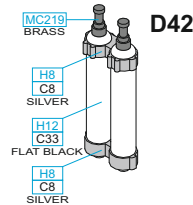
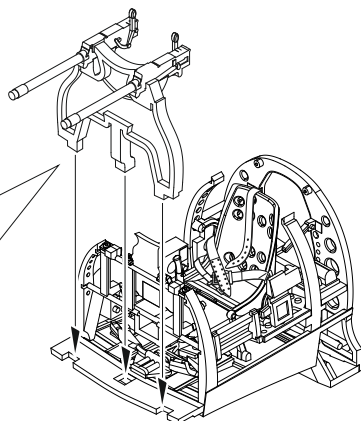
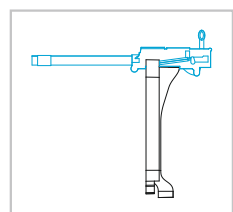
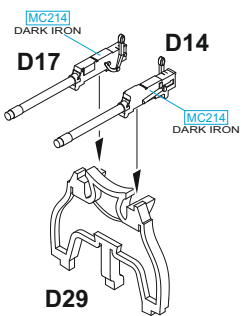
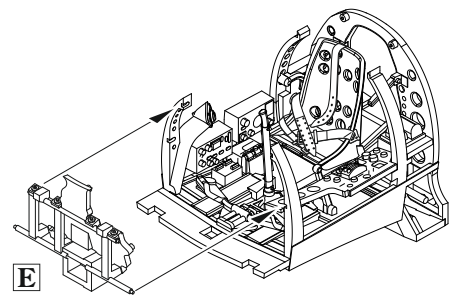
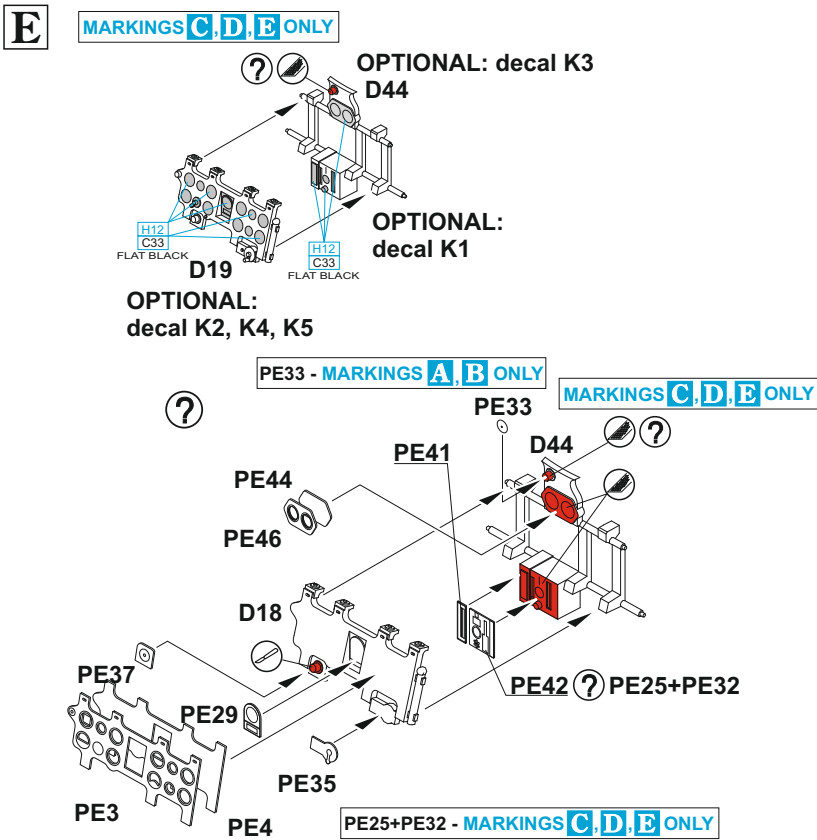
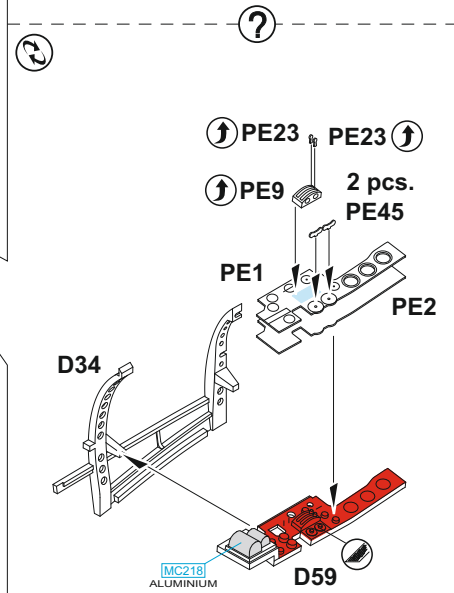
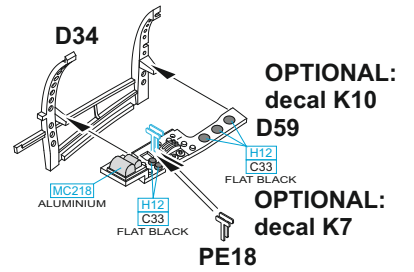
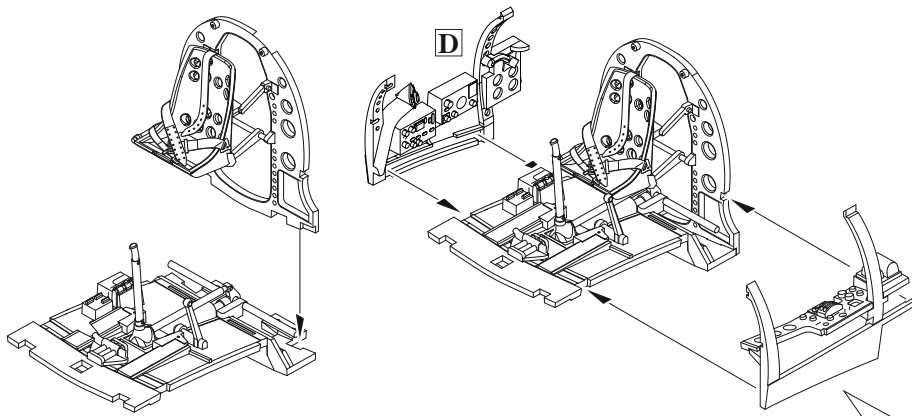
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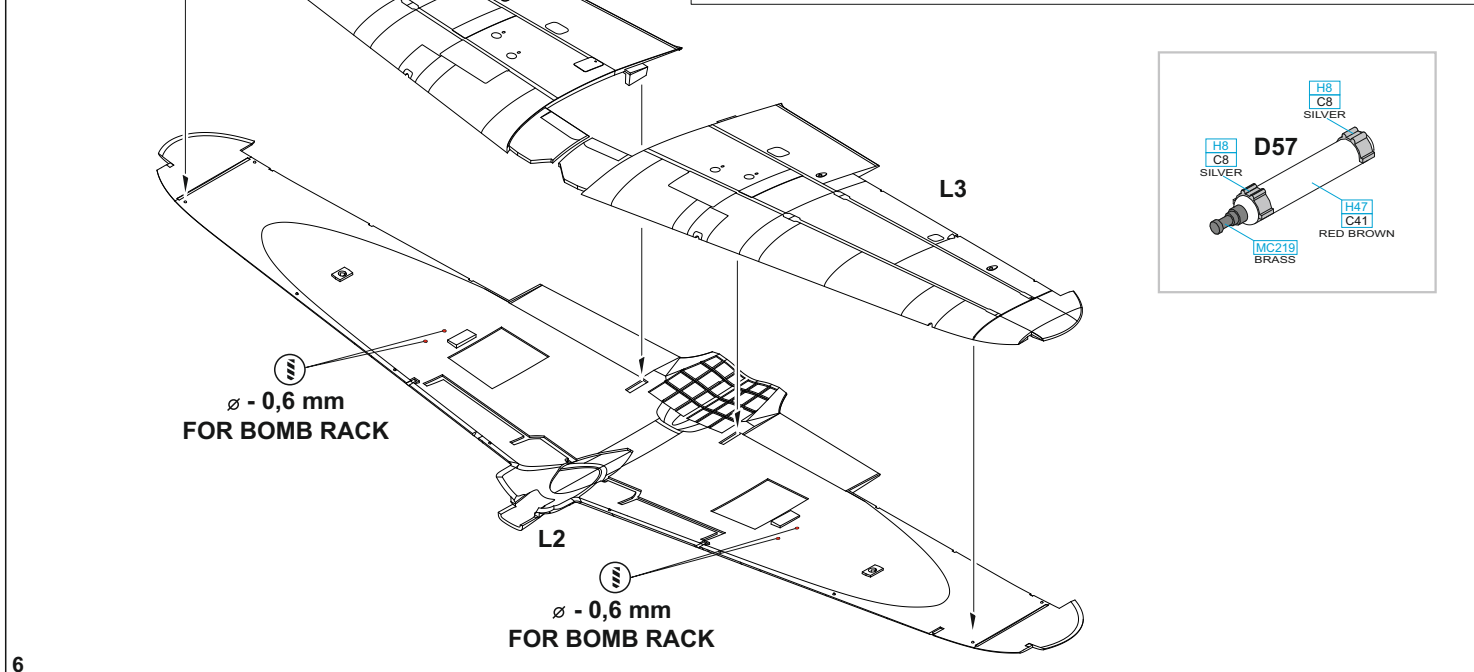
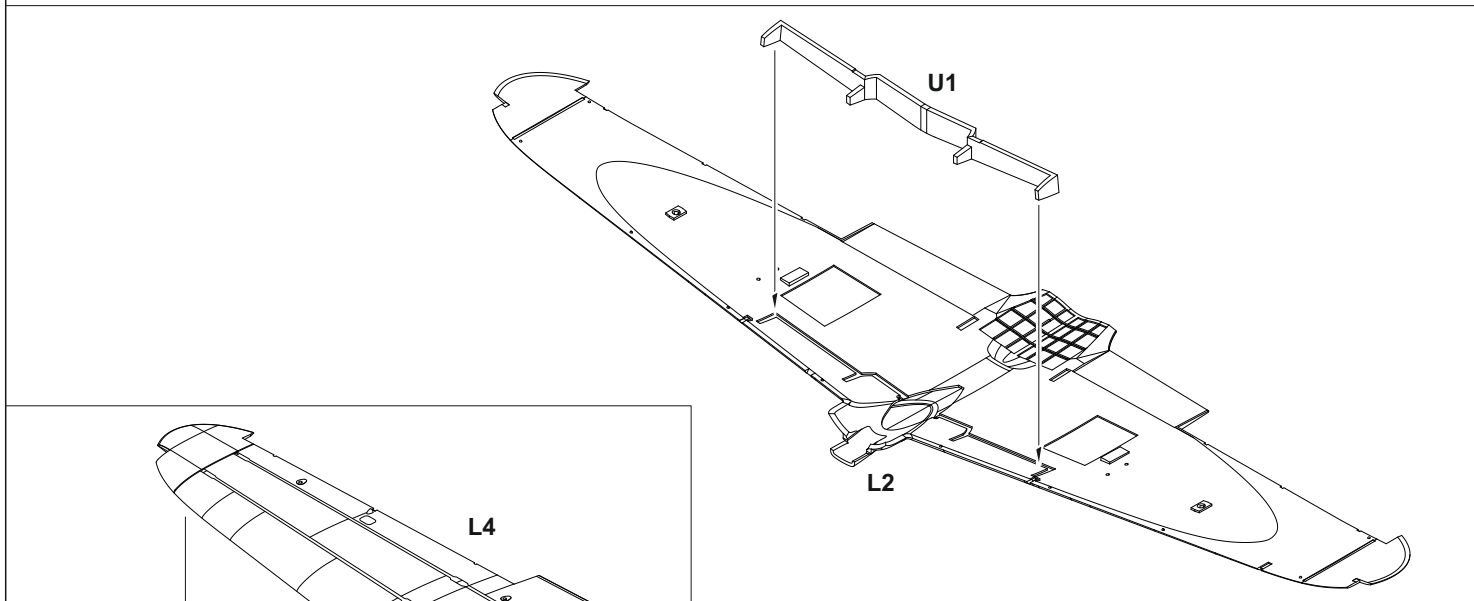
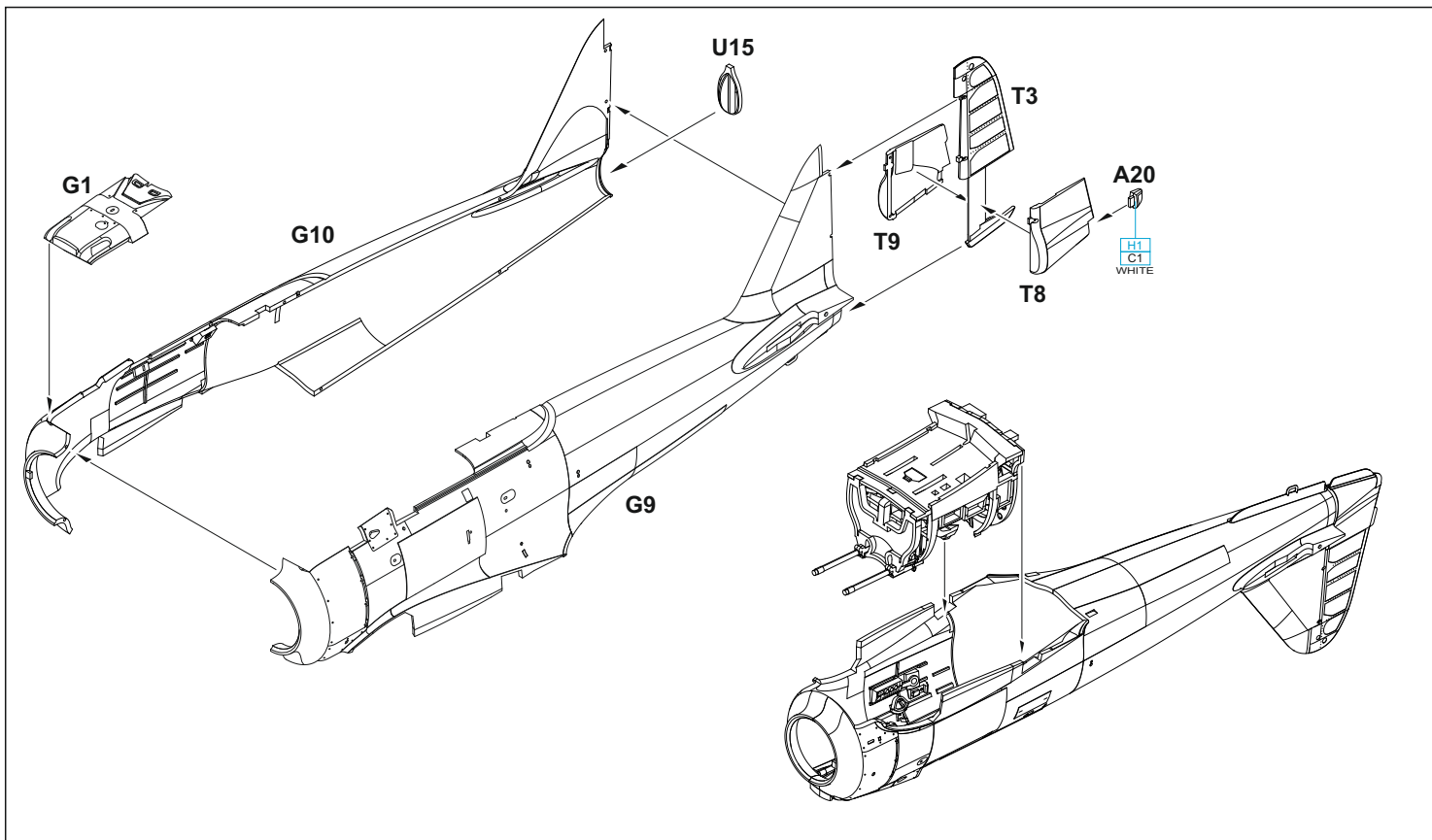
GSI Creos (GUNZE)		
AQUEOUS	Mr.COLOR	
H1	C1	WHITE
H2	C2	BLACK
H6	C6	GREEN
H8	C8	SILVER
H12	C33	FLAT BLACK
H24	C58	ORANGE YELLOW
H25	C34	SKY BLUE
H33	C81	RUSSET
H47	C41	RED BROWN
H53	C13	GRAY
H59	C15	IJN GREEN
H70	C60	GRAY
H77	C137	TIRE BLACK
H90	C47	CLEAR RED

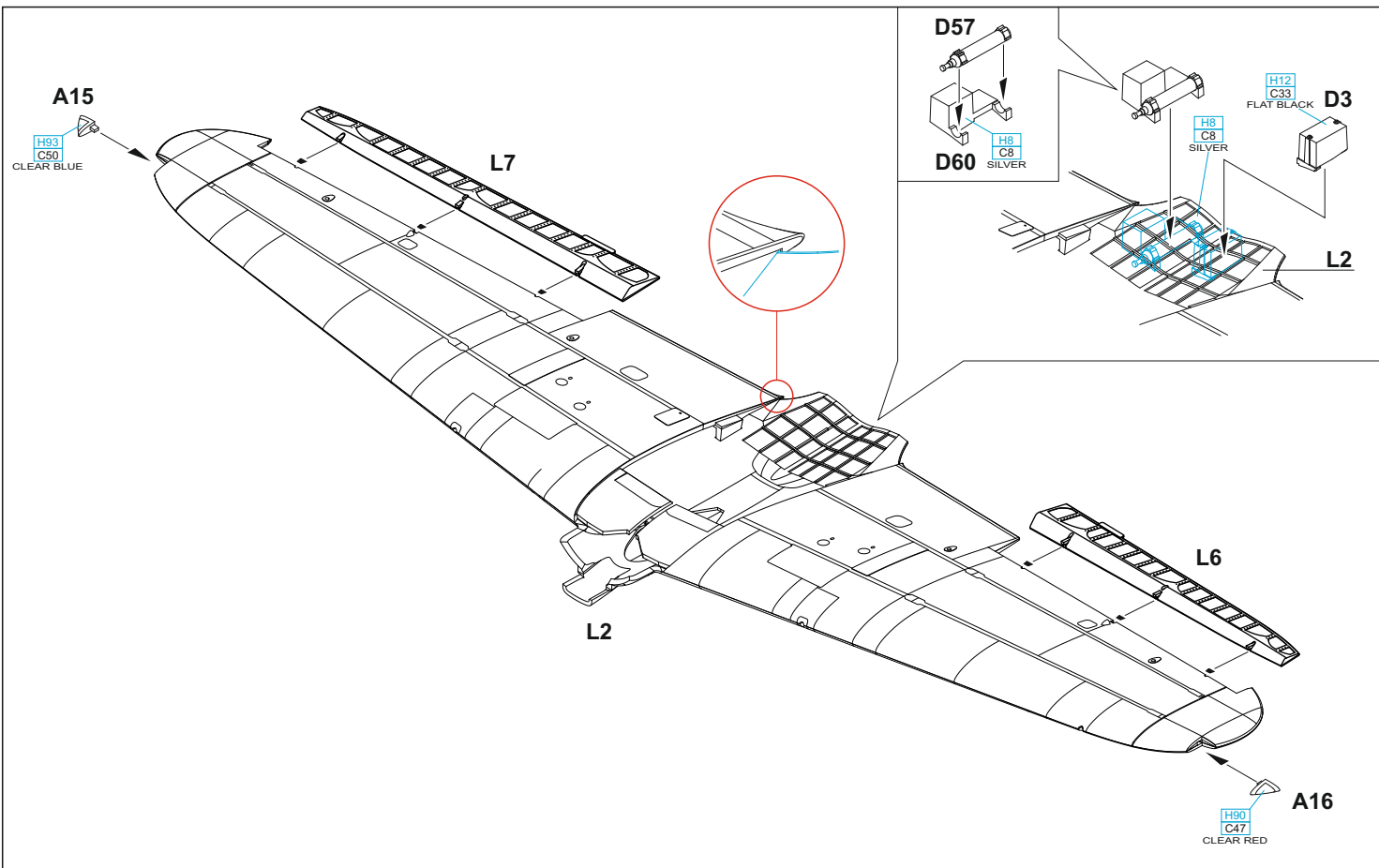
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H324	C324	LIGHT GRAY
H336	C336	HEMP
H340	C340	FIELD GREEN
H417	C117	LIGHT BLUE
	C125	COWLING COLOR
	C131	RED BROWN
Mr.METAL COLOR		
	MC214	DARK IRON
	MC218	ALUMINIUM
	MC219	BRASS
Mr.COLOR SUPER METALLIC		
	SM201	SUPER FINE SILVER



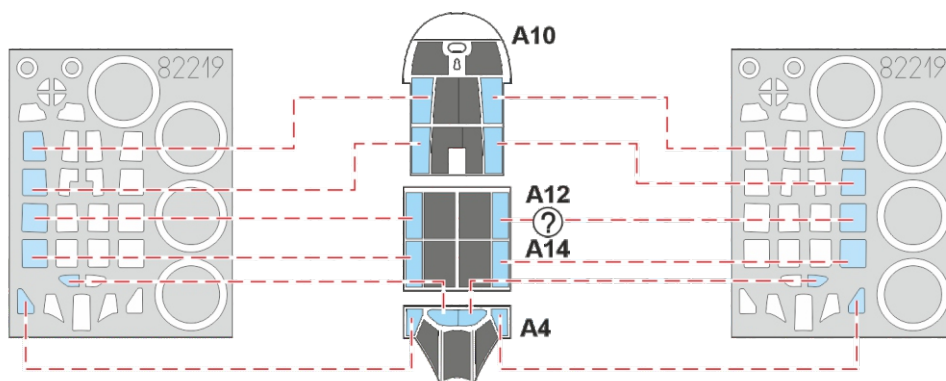
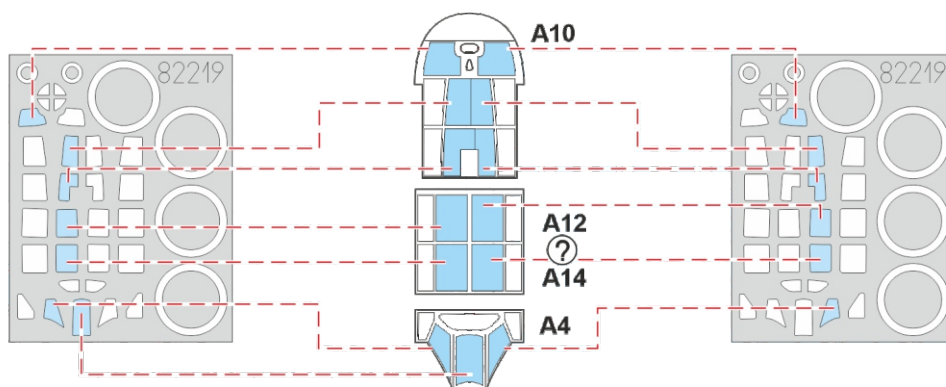
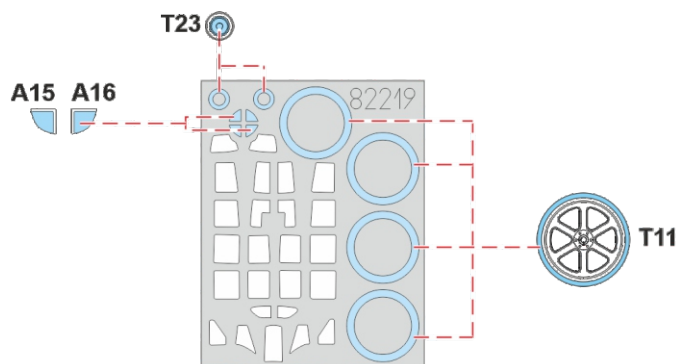


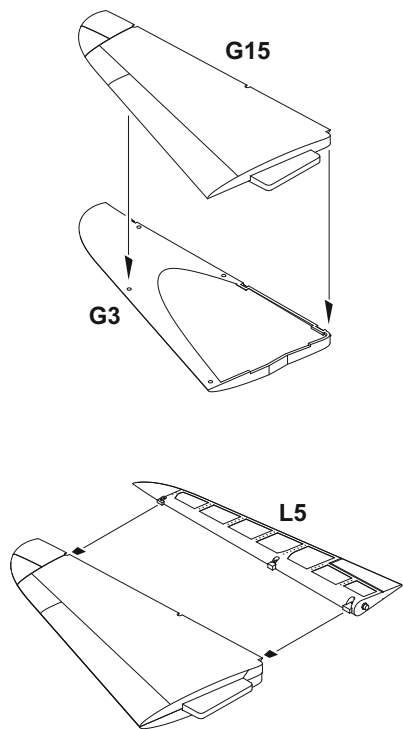
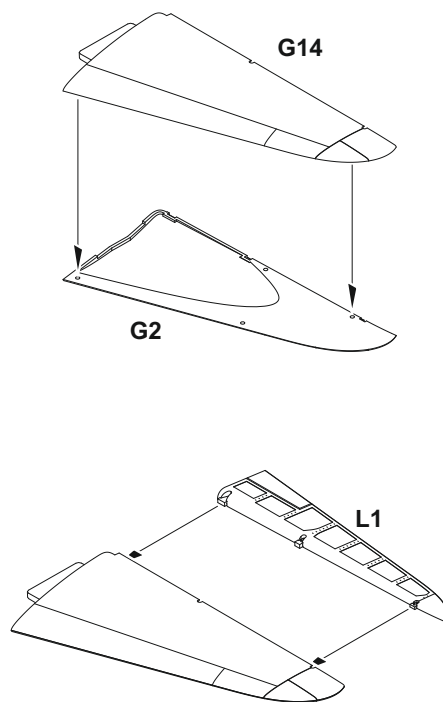
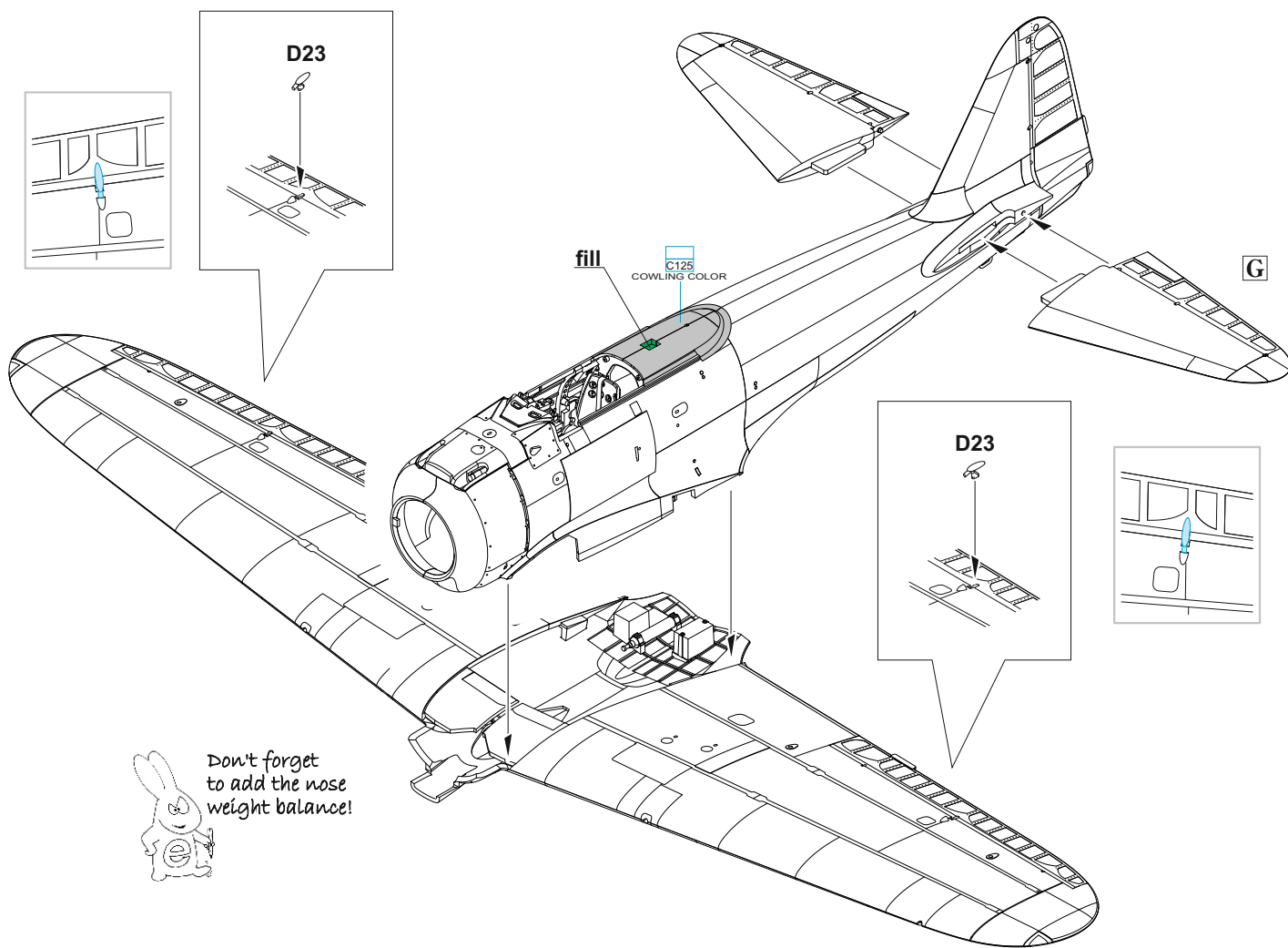






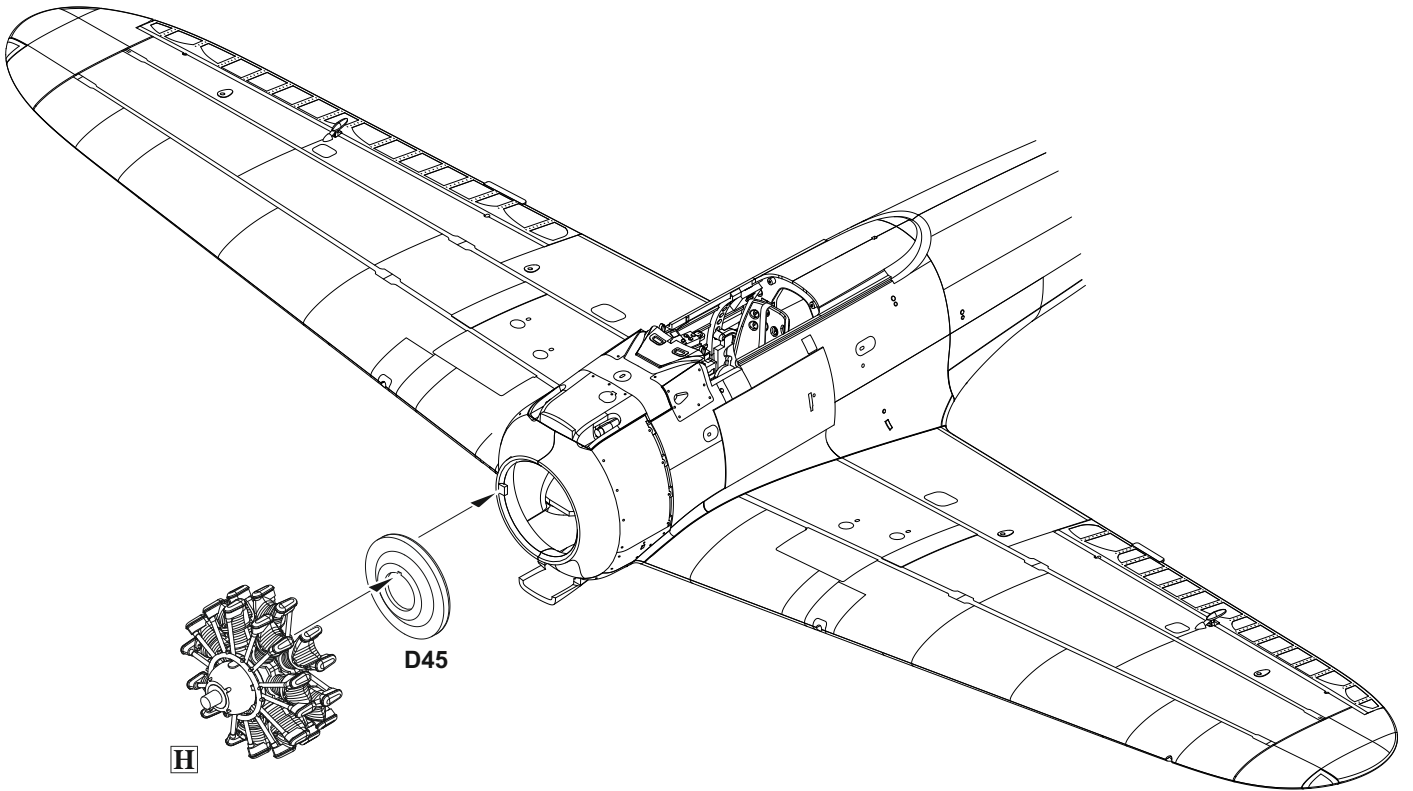
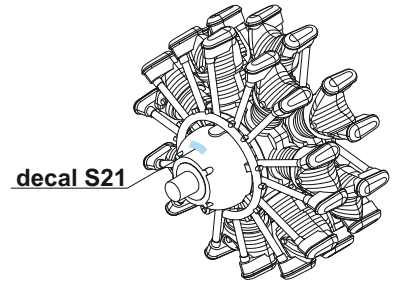
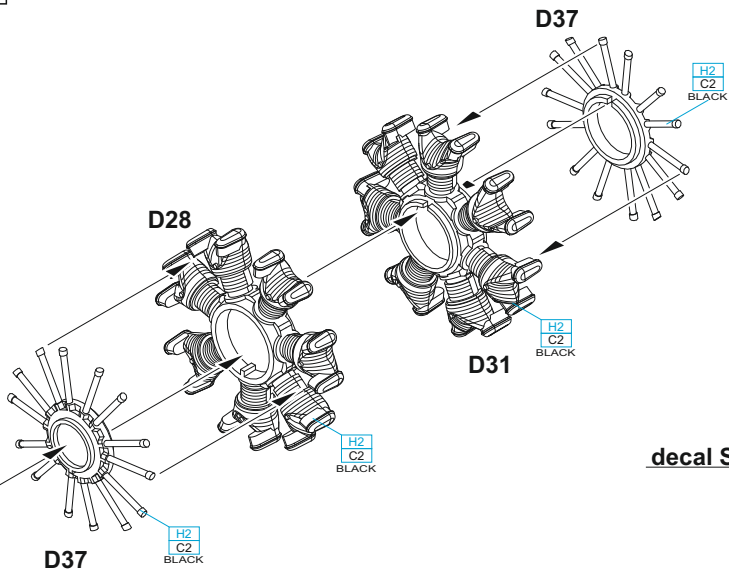
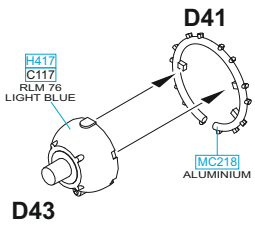
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MASK
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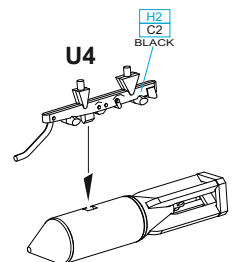
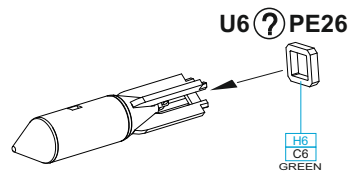
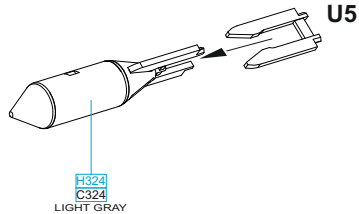
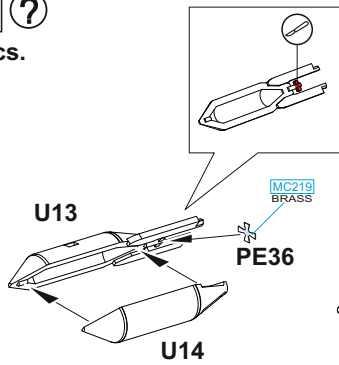
F**G****F**

Don't forget
to add the nose
weight balance!

H

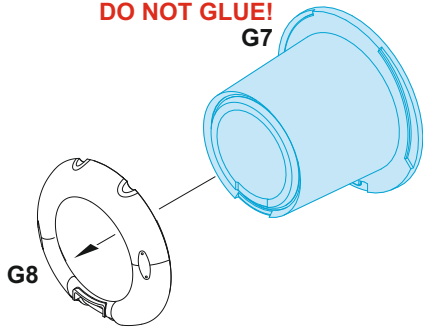


I ?
2 pcs.



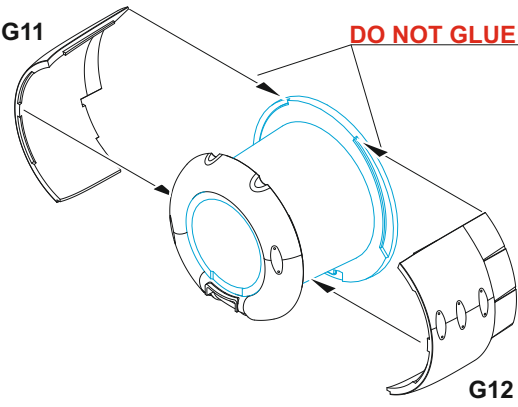
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DO NOT GLUE!



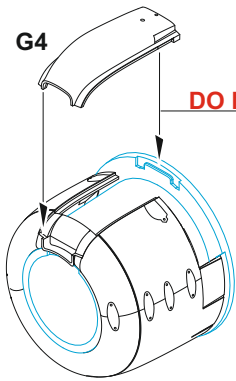
G11

DO NOT GLUE!

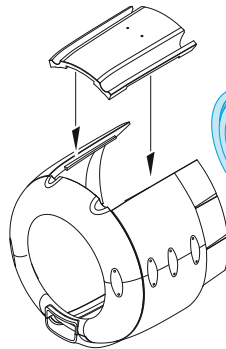


G4

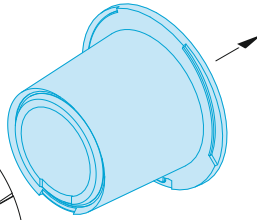
DO NOT GLUE!



step 2
G13



step 1
G7



G16

MC214
DARK IRON

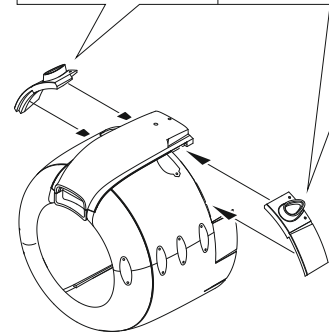
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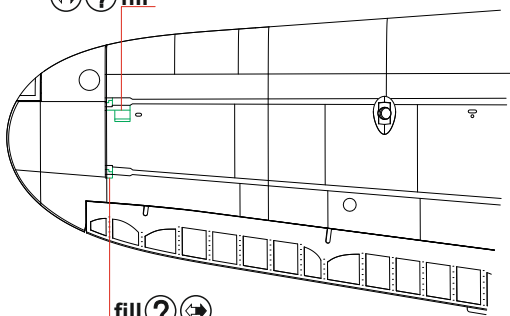
G17

MC214
DARK IRON

G5



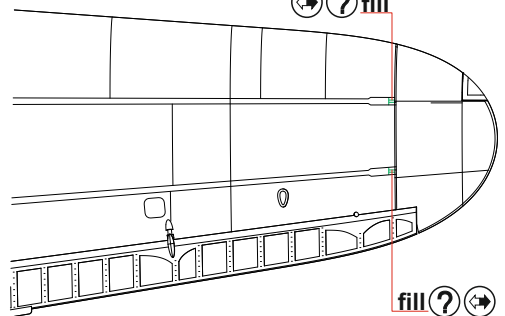
fill ?



fill - MARKINGS **C, D, E** ONLY

BOTTOM

fill ?



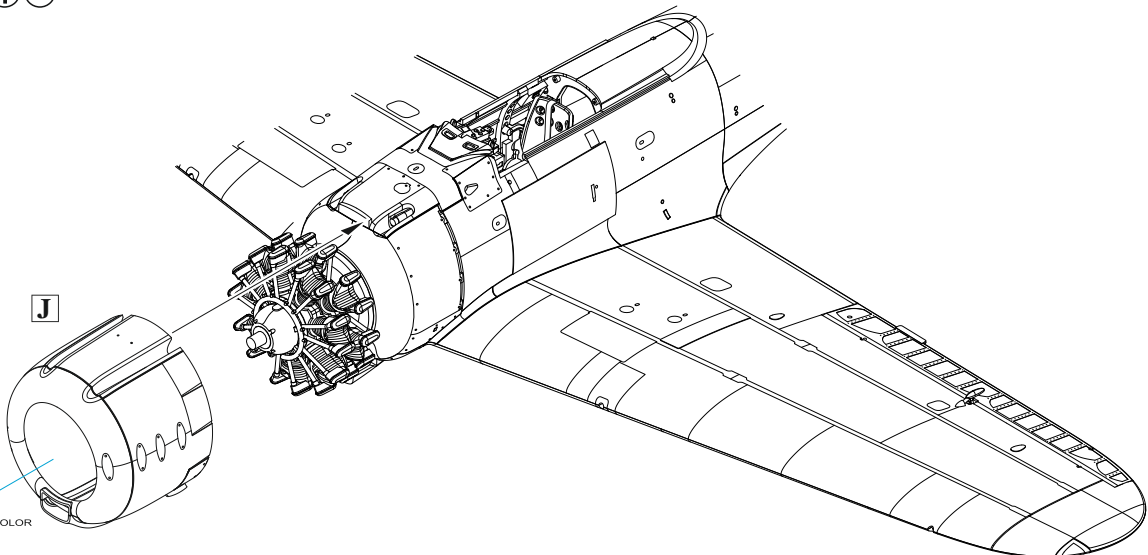
TOP

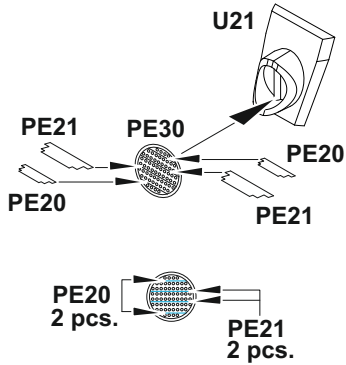
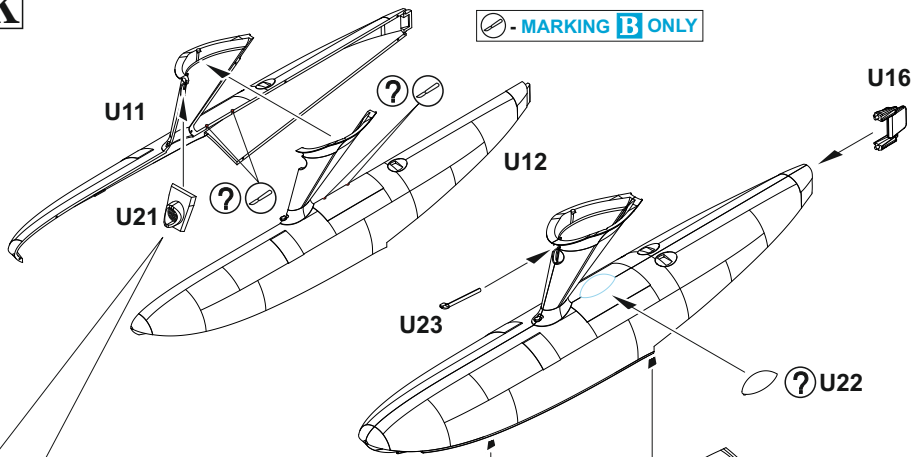
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fill ?

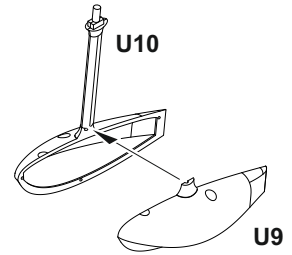
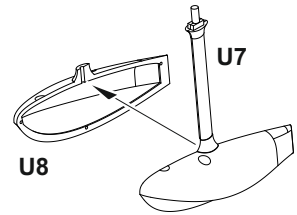
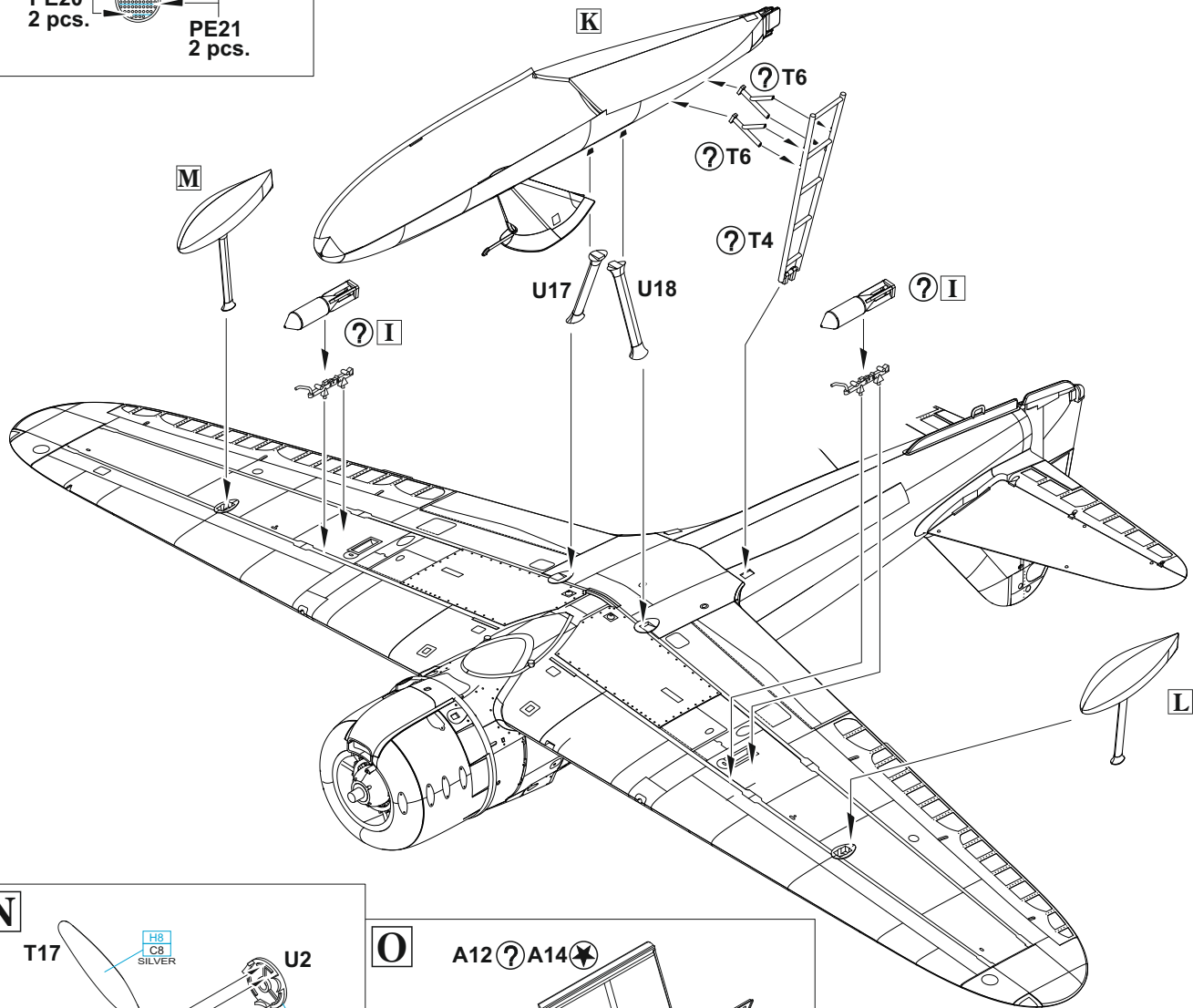
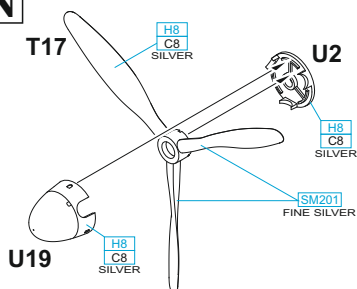
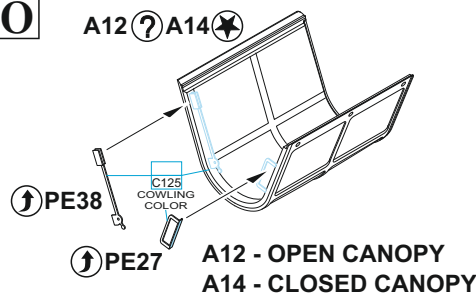
J

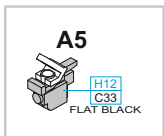
C125
COWLING COLOR



K
 - MARKING **B** ONLY


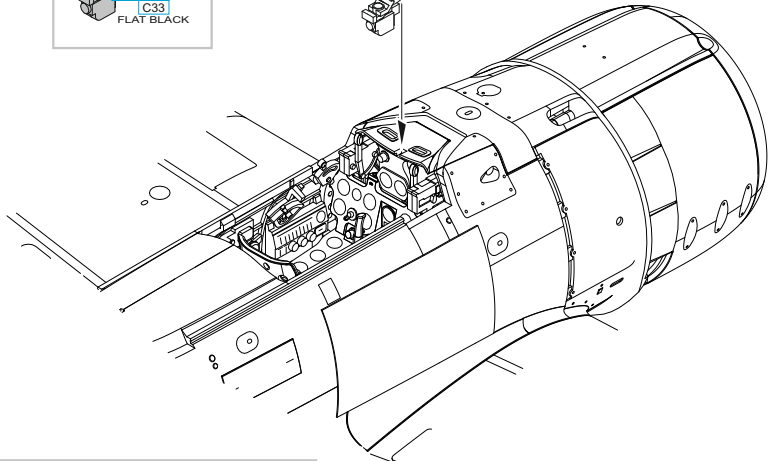
Don't forget
to add the nose
weight balance!

 - MARKING **B** ONLY
L**M****K****N****O**

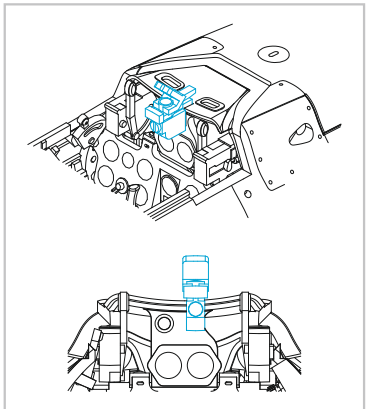
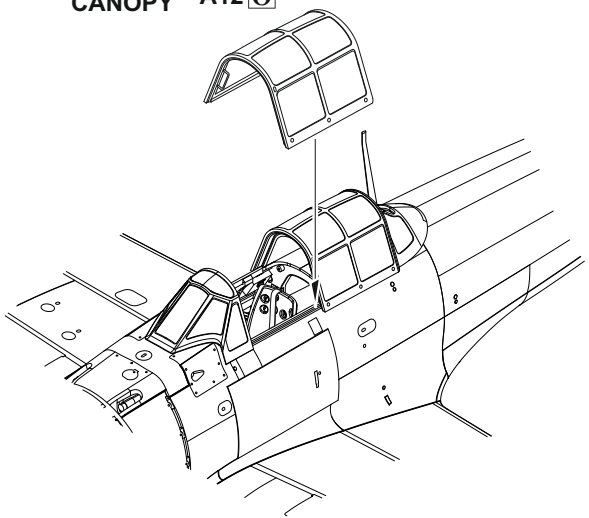


PE16
H12
C33
FLAT BLACK

A5

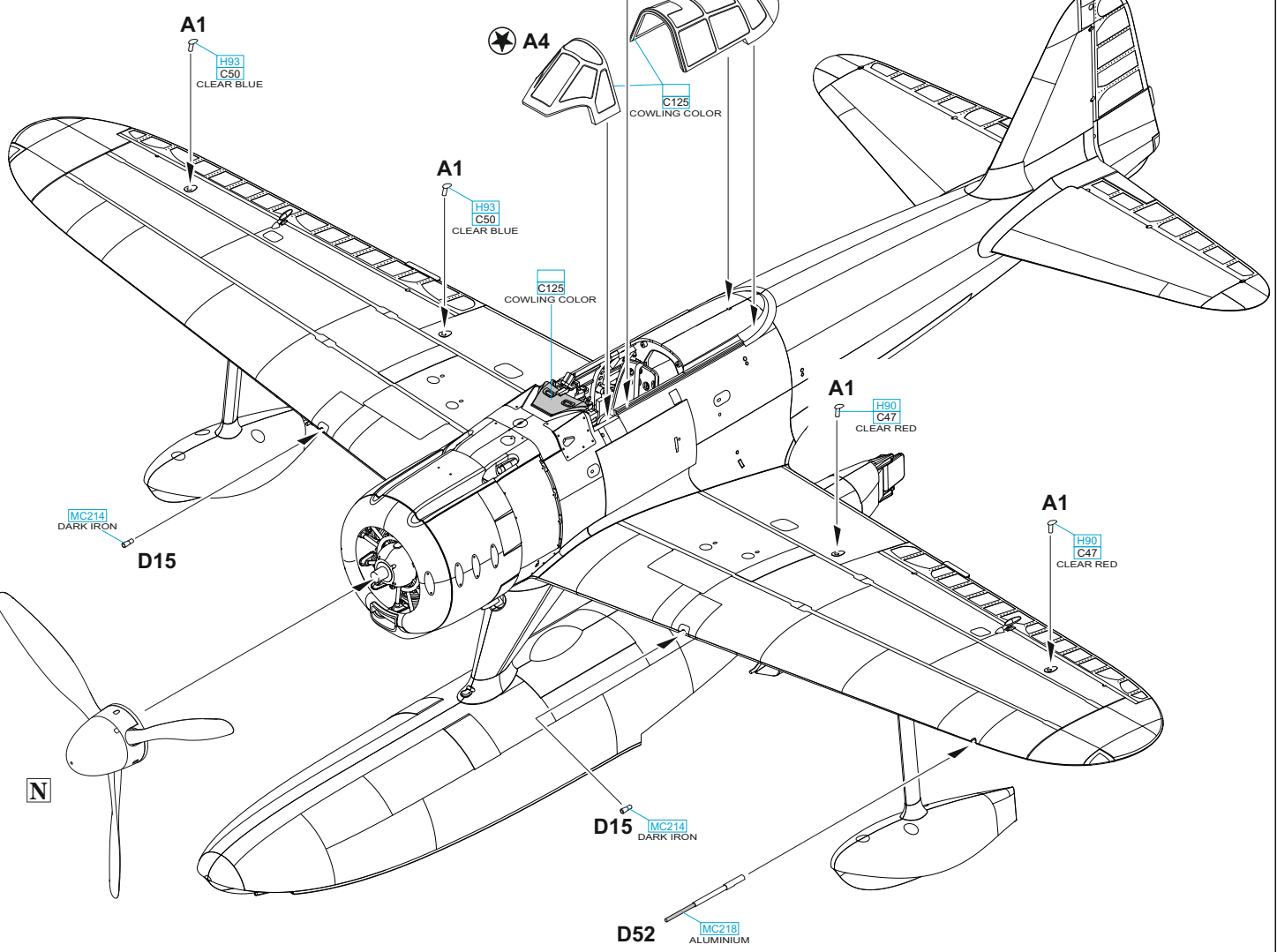
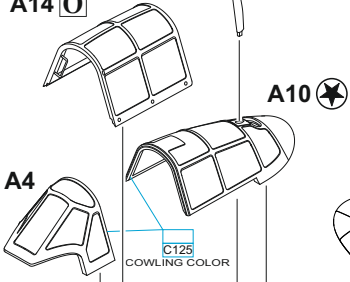


OPEN CANOPY A12 O



CLOSED CANOPY D53

A14 O



A1
H93
C50
CLEAR BLUE

A1
H93
C50
CLEAR BLUE

A4
C125
COWLING COLOR

A1
H93
C50
CLEAR BLUE

A1
H90
C47
CLEAR RED

A1
H90
C47
CLEAR RED

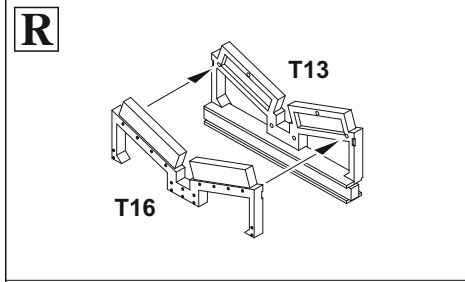
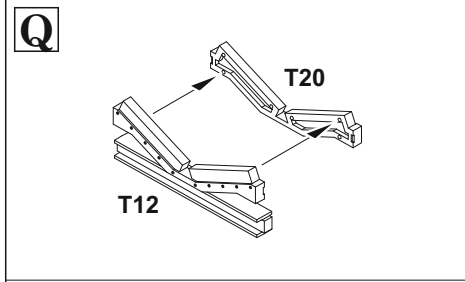
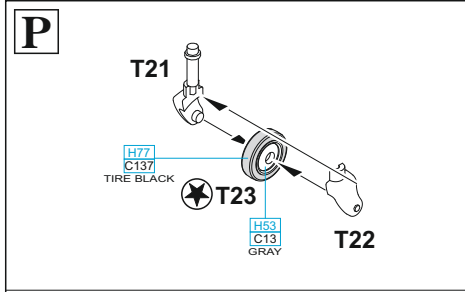
MC214
DARK IRON

D15

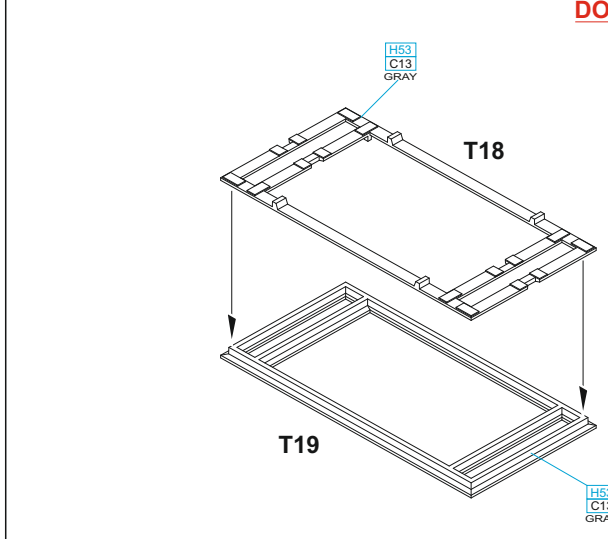
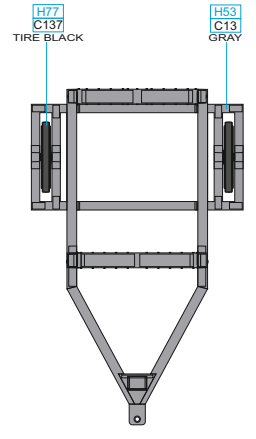
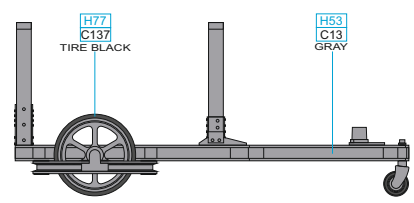
D15
MC214
DARK IRON

D52
MC218
ALUMINIUM

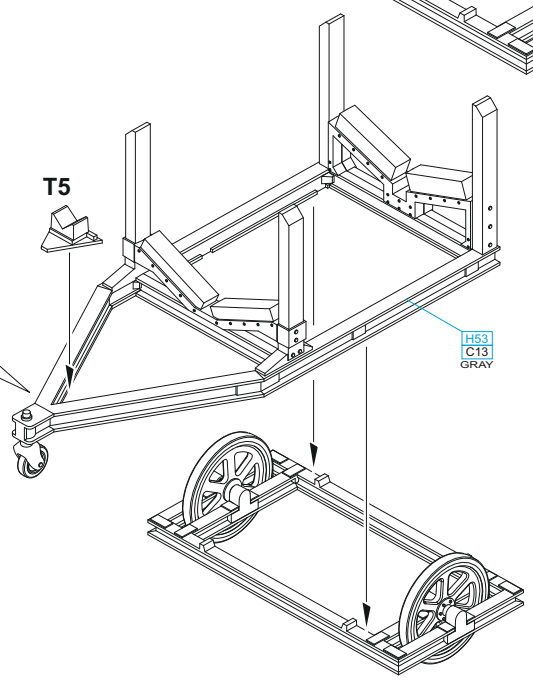
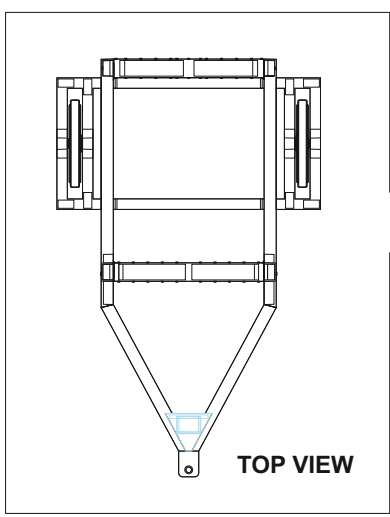
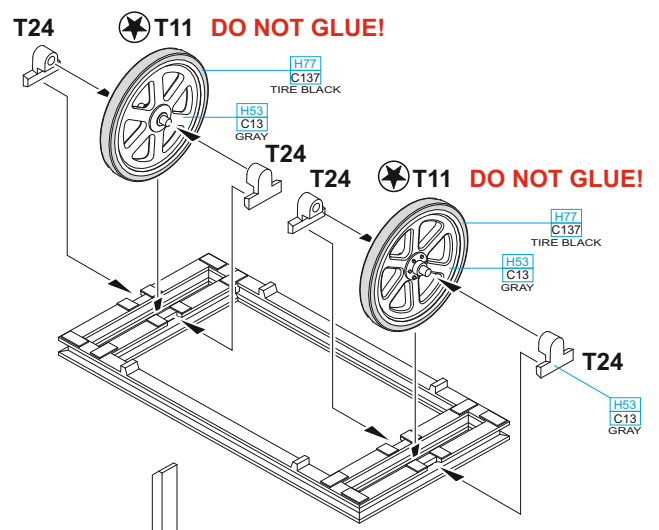
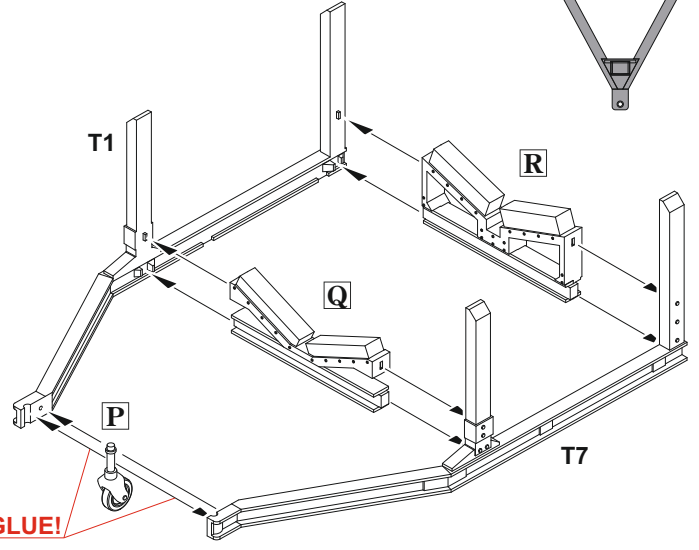
N

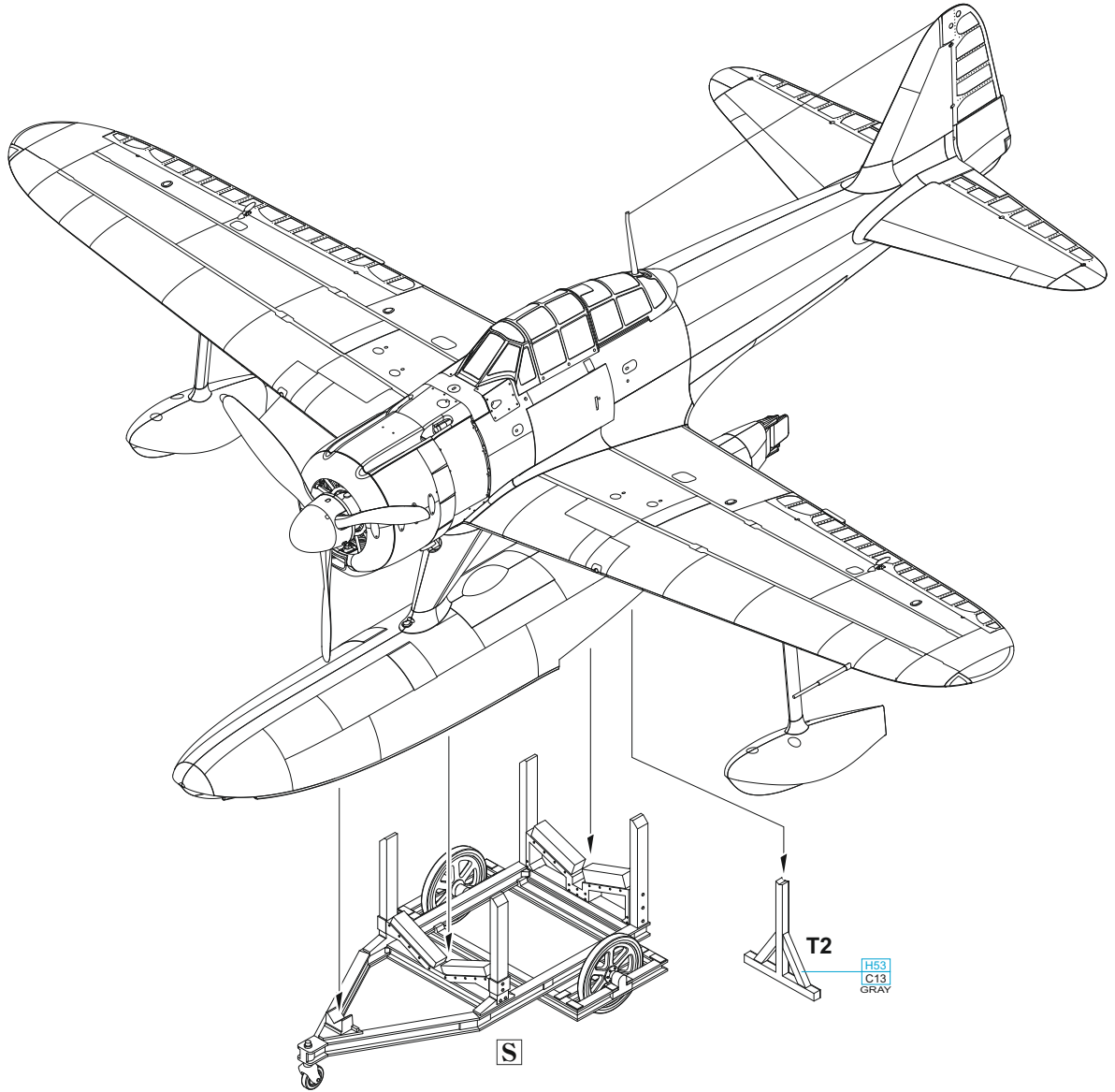
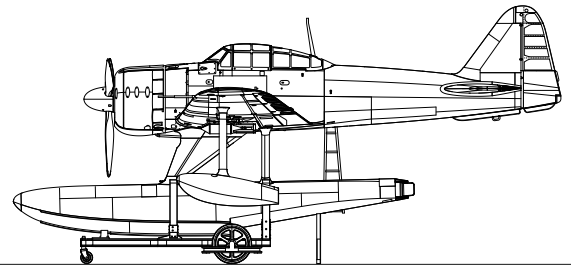
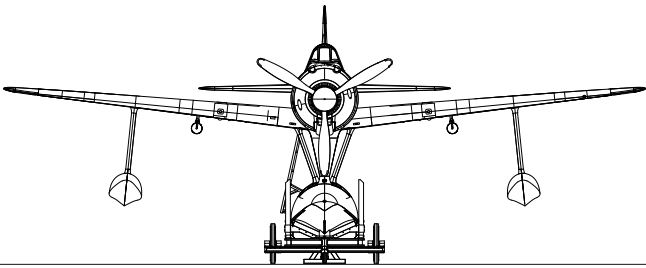


NEUTRAL GRAY H53 C13 TIRE BLACK H77 C137

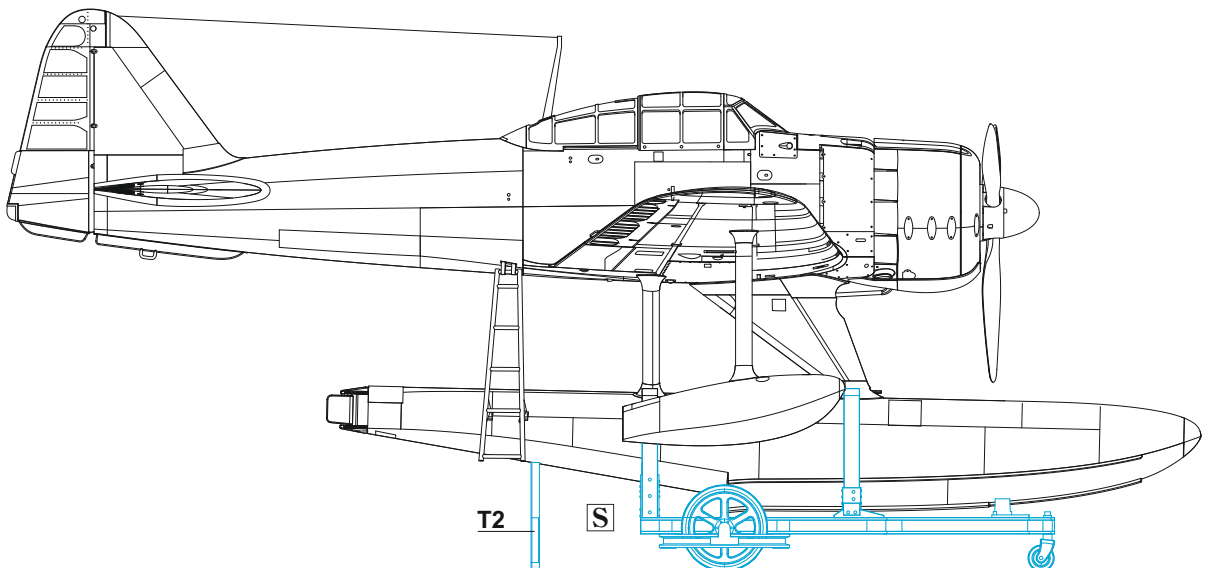


S



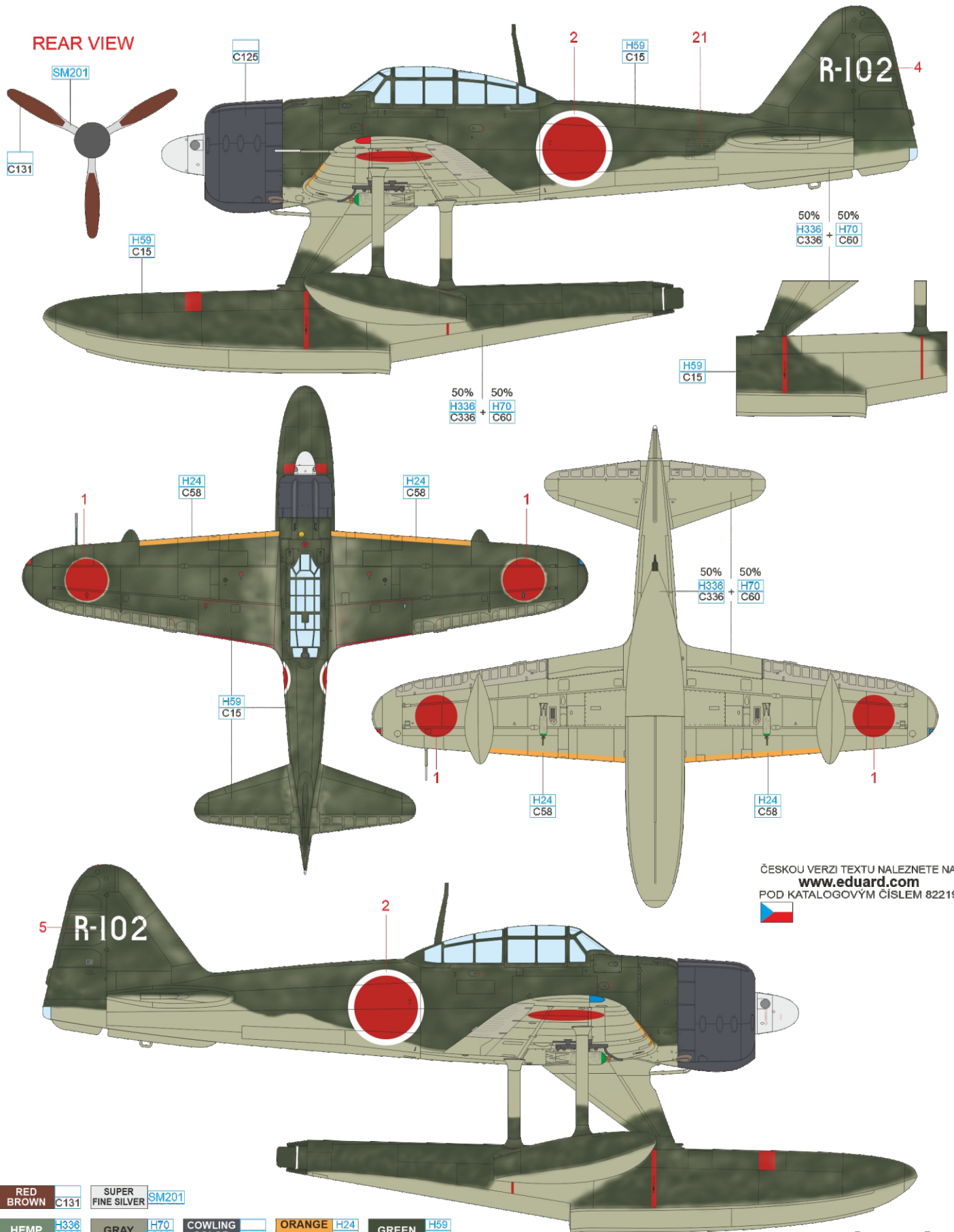


H53
C13
GRAY



A Kōkūtai 452, Kiska island, Aleutians, early 1943

This Rufe got dark green paint at the unit level. The camouflage later showed signs of wear, especially on the wing and on the rear fuselage around the horizontal tail surfaces. The aircraft of this fighter unit successively bore at least four different markings on the tail surfaces, depending on how the unit was designated and subordinated to different commands. Its most successful fighter was the CPO Gi-ichi Sasaki. The native from Miyagi Prefecture joined the Navy in 1937. He became a pilot of two-seat float planes and participated in combat in China. He took part in the conquest of the Philippines and the Dutch East Indies on board of the Mizuho seaplane tender. After its sinking, he was assigned to the Tōkō Kōkūtai in the Aleutians, which was eventually renamed the 5th Kōkūtai and then Kōkūtai 452. He achieved a total of four individual victories – five shared and one aircraft credited shared as probably destroyed. He was killed on February 19, 1943, over Amchitka Island in a dogfight with a Curtiss P-40 pilot.



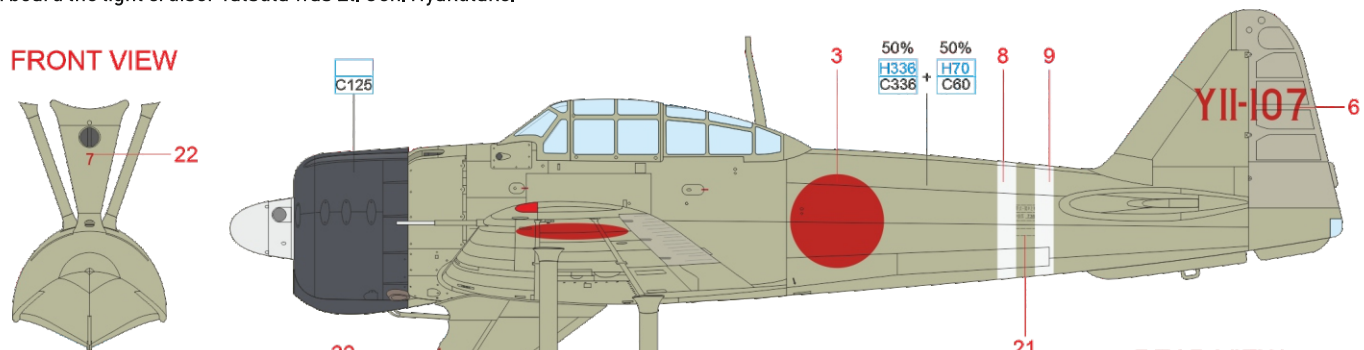
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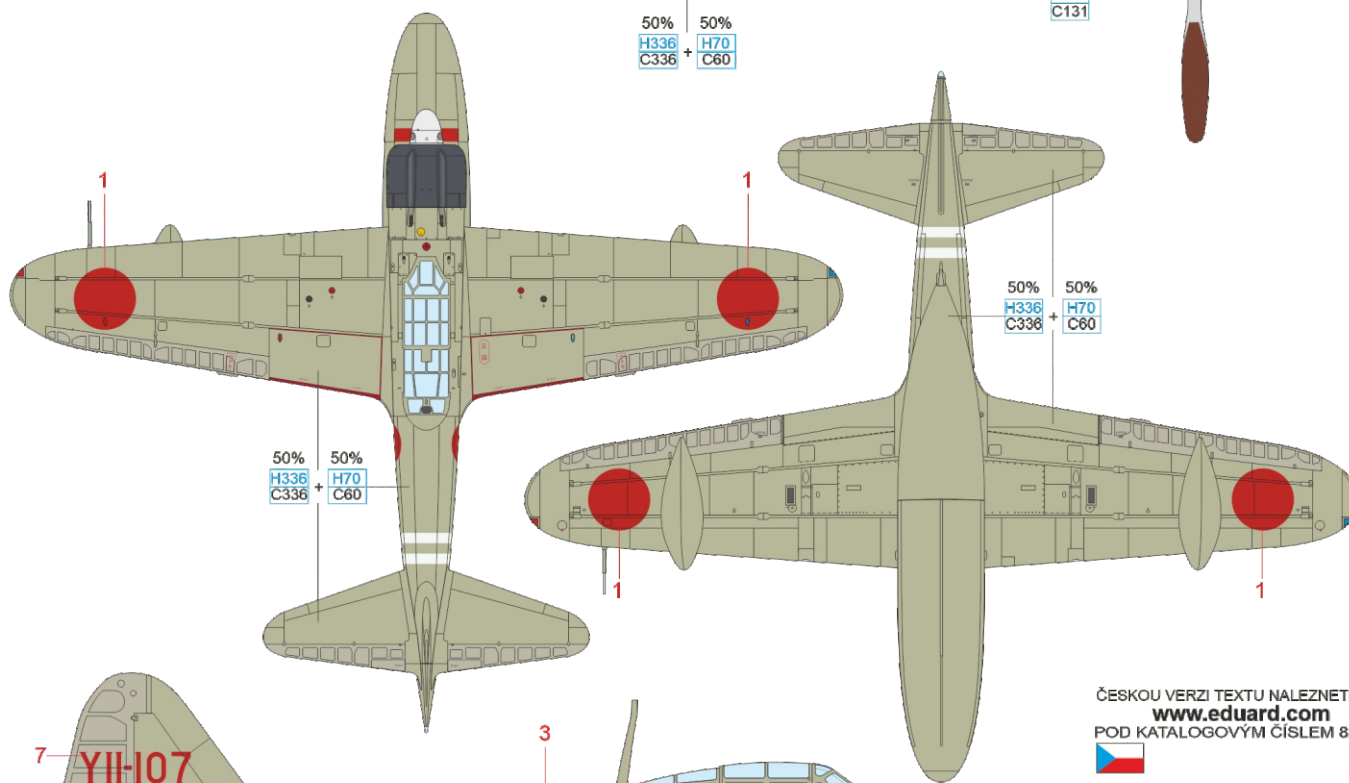
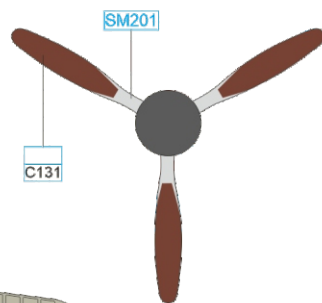
B Seaman 1st class, Takio Maruyama, aviation unit of seaplane tender Kamikawa Maru, Shortland, September 1942

This plane was early production Rufe with folding wingtips. The Kamikawa Maru was completed in 1936 as an ocean liner but was converted to a seaplane tender a year later and was combat deployed in the aggression against China until the spring of 1941. At the start of the fighting in the Pacific, her air unit was equipped with E13A1 Jake and F1M2 Pete seaplanes, but by September 1942 she was deployed in the Solomon Islands area with eleven A6M2-Ns and two F1M2s. The main tasks of her airmen were base protection, convoy escorts and also attacks on ground troops on Guadalcanal. In addition to engagements with B-17s and Cactus Air Force pilots, the Kamikawa Maru airmen also got into combat with aircraft from the USS Hornet (CV-8). One of them was Takio Maruyama. He was credited with one victory over a B-17 bomber. The Kamikawa Maru and Maruyama's performance with the No. 107 aircraft was cited in a letter of commendation by the Commander of the Combined Fleet in September 1942. Maruyama with machine Y11-107 was killed on October 10, 1942, in a dogfight with VMF-223 Wildcats while escorting Japanese vessels from the so-called Tokyo Express bound for Guadalcanal. On board the light cruiser Tatsuta was Lt. Gen. Hyakutake.

FRONT VIEW



REAR VIEW



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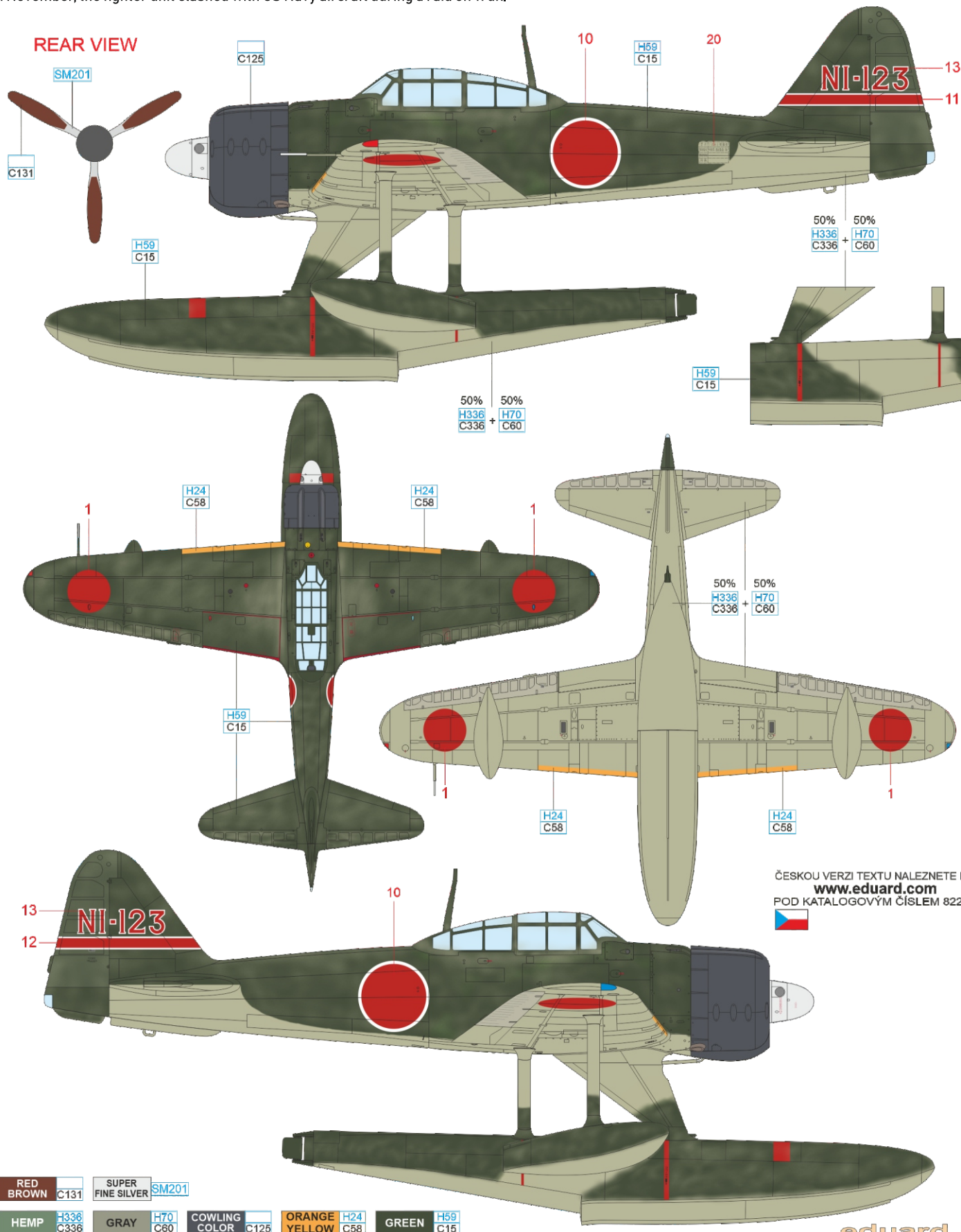
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RED BROWN	C131	SUPER FINE SILVER	SM201
HEMP	H336 C336	GRAY	H70 C60
		COWLING COLOR	C125

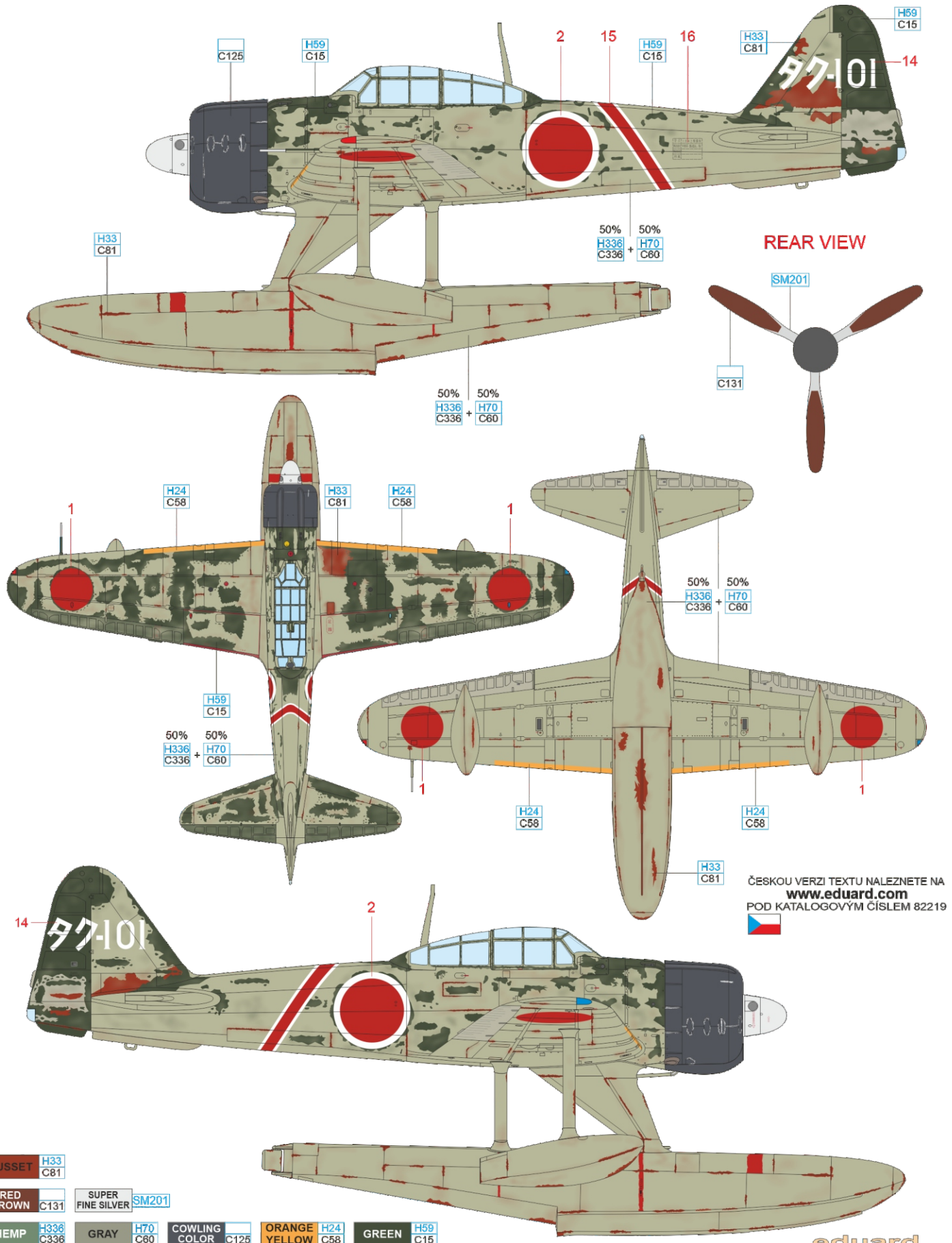
C Kōkūtai 802, Faisi-Poporang base, Shortland Islands, February 1943

This aircraft was among the new ones that Kōkūtai 802 took over in Japan during early 1943. At the unit level, the aircraft received a dark green paint and it probably had a late production stencil on the fuselage. The tail sported a horizontal red stripe on the vertical tail surfaces, which was probably the unit's identifying marking. It is likely that the aircraft took part in the aerial combat on February 13 and 14 during the defense of the Shortland Islands and Buin, in which the American units suffered fairly significant losses. After relocation to the Marshall Islands area in March 1943, Kōkūtai 802, under the command of Lt.(jg) Yamazaki, was primarily engaged in anti-submarine patrols and the pursuit of four-engine bombers. Long-range reconnaissance was carried out by another part of this unit, which was armed with H8K Emily flying boats. In September 1943, the designation of its aircraft was changed to Y4 in connection with the transition to the subordination of the 22nd Kōkū Sentai (Air Flotilla). The identification markings on the tail surfaces of Rufe seaplanes changed from red to white during service in the Marshall Islands. In October, fighter unit of Kōkūtai 802 was integrated into Kōkūtai 902, and in November, the fighter unit clashed with US Navy aircraft during a raid on Truk.



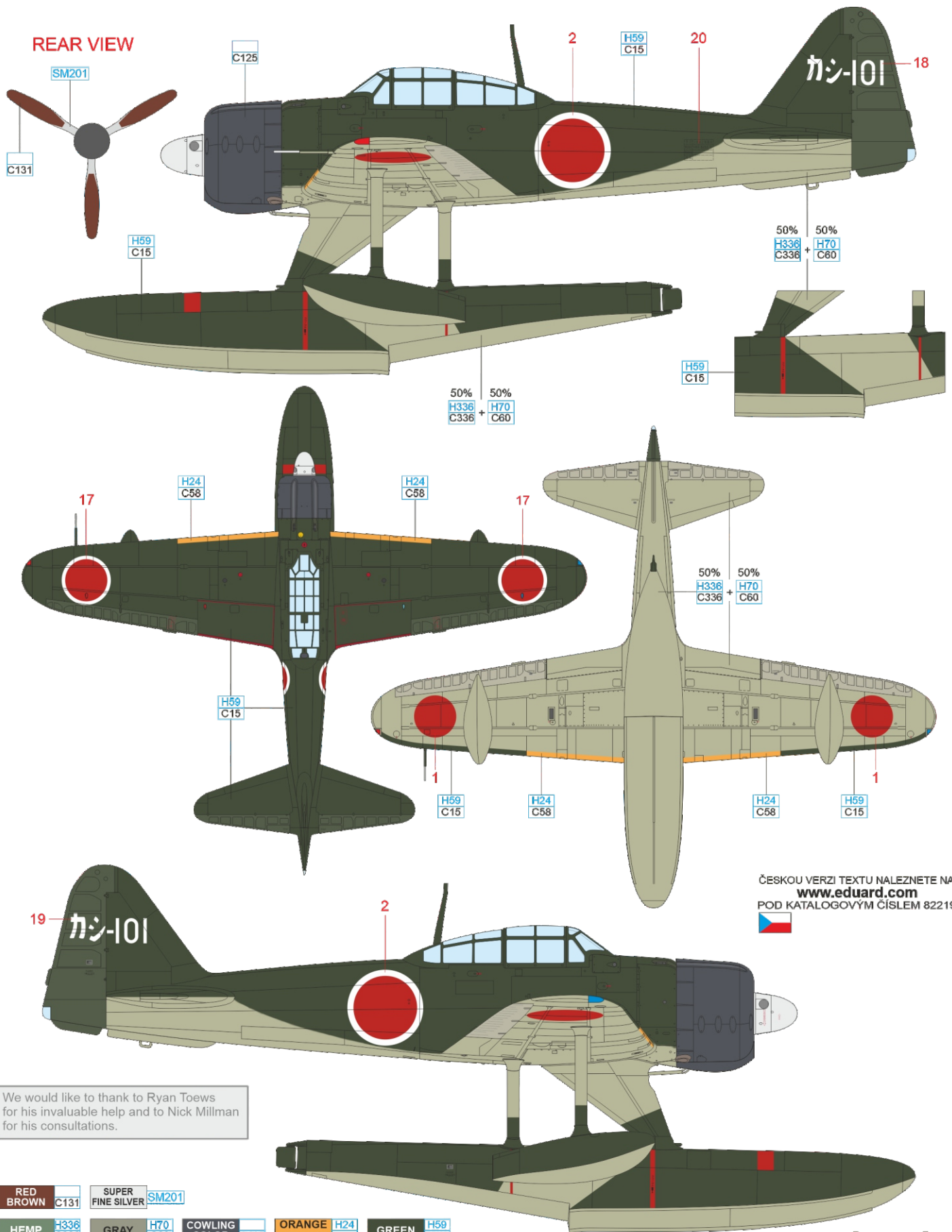
D Takuma Kōkūtai, Takuma base, Japan, 1944

This aircraft was originally finished with grey paint on all surfaces. Later, at the unit, it was given a dark green paint job on the upper surfaces. By the time it was in service with Takuma Kōkūtai, the green paint was badly worn, with reddish-brown primer and metal surfaces visible in some areas. The stripe on the fuselage was probably the designation of the aircraft flown by leader of fighter unit. Takuma Kōkūtai was established in mid-1943 to train seaplane crews and it included a fighter unit with Rufe aircraft which was also tasked with training, including dogfight practicing. However, the command envisaged the eventual deployment of Rufe aircraft by this unit for the air defense of Japan. A photograph of a Rufe seaplane from the Takuma Kōkūtai exists, showing the mount of Ensign Kyoshi Suga armed with 30 kg bombs for use against B-29 bombers, but there is no evidence that such a combat deployment occurred. In 1945, part of the Takuma Kōkūtai was deployed on Kamikaze missions. Takuma Kōkūtai was disbanded at the end of the war.



E Kashima Kōkūtai, Kashima base, Japan, 1944

This late production aircraft was finished in a factory applied dark green paint. Kashima Kōkūtai was established in 1938 as a training unit for seaplane crews. Her fighter unit, armed with Rufe floatplanes, was deployed several times to fight alongside Katori Kōkūtai airmen in the Home Defence and achieved several fighter and bomber kills. It was probably with this unit that the Hellcats of VBF-12 from USS Saratoga (CV-3) came into conflict around Kashima on February 16, 1945 and the Hellcats of VF-29 from USS Cabot (CVL-28) on March 18. In the first mentioned combat, the American fighters reported five Rufe kills and in the latter encounter claimed four victories. In May 1945, the Kashima Kōkūtai training section was cancelled, and a number of aircraft and crews were deployed on Kamikaze missions. Kashima Kōkūtai was disbanded at the end of the war.



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We would like to thank to Ryan Toews for his invaluable help and to Nick Millman for his consultations.

- RED BROWN C131
- SUPER FINE SILVER SM201
- HEMP H336 C336
- GRAY H70 C60
- COWLING COLOR C125
- ORANGE YELLOW H24 C58
- GREEN H59 C15

