



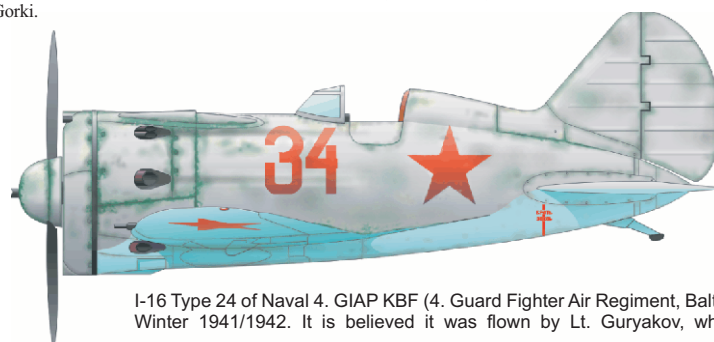
eduard

A FEW WORDS FIRST

One of the most popular and best known Russian aircraft ever built was born in 1933. On the last day of that year, on December 31, the famous Soviet aviator Valerij Chcalov conducted the maiden flight of the new CKB-12 prototype. The CKB-12 was a very modern and revolutionary design at the time. The installed powerplant was a Shvetsov M-22 engine (a license built Bristol Jupiter) rated at 480 hp, instead of the anticipated Shvetsov M-25 engine giving 750 hp. That was a Soviet license built Wright 1820 Cyclone. Although the new aircraft was a bit underpowered, Chcalov was amazed with its flight capabilities and especially its sensitivity of control. The second prototype was outfitted with an imported original Wright Cyclone engine, and the aircraft performance greatly improved. After necessary development and improvements, serial production was ordered at Zavod 39 in Moscow and at Zavod 21 in Gorki under the VVS (Soviet Air Force) designation I-16. These aircraft were equipped with the M-22 engine, because the new M-25 powerplant was not yet available, and no weapons were installed. Maximum speed of these first I-16s was 362 km/h at sea level and 346 km/h at 3000 m. Fifty aircraft were manufactured at Zavod 39, known as I-16 without any additional suffix designation. Zavod 21 produced the first batch of I-16, though with some difficulties, because three other aircraft types were on their production lines. For this reason, Zavod 21's I-16 were suffixed as „Type 4“. In late summer, 1934, the first aircraft reached VVS units. Reception of the new aircraft was cool, to put it gently. The flight characteristics were very different from the operational biplanes then in service; control was overly sensitive, and the landing speed too high with a lack of frontal view due to the wide nose. The lack of landing flaps, compensated for by the downward deflection of the ailerons acting as flaps on landing, didn't make the landing any easier. Accident rates soared to unacceptable levels, and reached the point where units couldn't achieve operational status. At this time, five NII VVS (Air force research institute) pilots, Kokkinaki, Suprun, Preman, Evseev and Shevchenko, made a tour of air force bases. With their red painted I-16, they demonstrated the aircraft's performance and potential. At about the same time, in late Spring, 1935, M-25 engine was finally available in sufficient quantities, and the development of the I-16 with its originally planned engine, was finally completed. The new engine received a new Watter type cowling, giving the I-16 its characteristic shape. The flight characteristics were unchanged, but the performance significantly improved. The maximum speed was now 390 km/h at sea level, and 445 km/h at 3000m. The aircraft was now armed with two 7,62 mm ShKAS machine guns mounted in the wings. By January 1936, the Type 5 replaced the Type 4 on the production lines at Zavod 21, and in late spring entered service with VVS units. Still a fresh newcomer on the fighter scene, the I-16 Type 5 soon got the chance to show their stuff in a real fight. Two flights of I-16s were dispatched to Spain to help the Republican forces. During the Spanish Civil War, the I-16 built its great warrior reputation, named Mosca by Republican pilots, but it was their opponent's nickname that became better known, giving the I-16 the best known identifier - the „Rata“. Until 1938, the Type 5 remained as the main version, marginally updated to the Type 6, but it is not certain if this was an official designation. Besides Spain, the Type 5 saw combat over China, where these aircraft were sent along with Soviet crews. By 1937, initial troubles were forgotten, but new critics were found. Problems with poor quality of the perplex canopy nagged on, and two machine guns became insufficient, especially in combat with modern bombers. Therefore, the new and improved Type 10 was introduced, instigating some significant changes. First, the new M-25V 750 hp engine was installed. The wing was re-designed to include landing flaps. Two 7,62 mm ShKAS machine guns were added on top of the engine, with two corresponding fairings on the engine cowling. The cockpit was improved, and the canopy was completely redesigned, with an all-glass single piece windscreen ahead of a now open cockpit. The Aldus OP-1 telescopic gun sight was replaced with new reflector type, the PAK-1. The wing was later modified to provide for retractable landing skis. Maximum speed was 390 km/h at sea level and 438 km/h at 3200 m. The Type 10's production started at Gorki in March, 1938. The Type 10 reached Spain as well as China, and fought against the Japanese over Chalkin-Gol and Chasan Lake. They saw action in the Winter War against the Finns, and also fought in Poland in the Autumn of 1939. In June, 1941, when the USSR was attacked by Germany and the Great Patriotic began, the I-16 Type 10 remained, along with other I-16 versions, the main weapon of VVS fighter units. The Type 10 formed the basis for the up-gunned Type 17. The wing machine guns were replaced by two 20 mm ShVAK cannon in late 1938, and production was set for October of the same year. Further I-16 development came in the form of new engine installation, when the M-62, rated at 800 hp was mated to the airframe. A new AV-1 propeller was also introduced, which required a new, remarkably wide, spinner. The maximum speed was increased to 411 km/h at sea level and 460 km/h at 3200 m. The next version was the Type 24. A modified M-63 engine of 930 hp was used, the radio was added as standard equipment, and the wing and undercarriage were strengthened as well. Thanks to a higher weight, maximum speed was now at 408 km/h (some sources indicate 440 km/h) and 460 km/h at 4700 m (489 km/h by some sources). The I-16 Type 24 entered service in November, 1939, and became the main production version in 1940. It is believed that most I-16s on the front lines in June, 1941, were Type 24s. The final version was the Type 29, in 1940. To reduce weight, the weapon load was reduced to three machine guns, when the two wing weapons were removed, and a third, in this case the 12,7 mm UBS, was mounted under the engine in the belly of the aircraft. The wing was completely redesigned, increasing the metal plated area to the full bottom surface of the wing. The bomb/external fuel tank racks were installed under the wing, and also rocket rails became standard. It seems that the future I-16 role was expected to be that of fighter-bomber, because new, modern fighters were ordered into service in early 1941. Nevertheless, during the early years of the Great Patriotic War, I-16s of all versions played their part extremely well. In 1942, they remained an important force. The early teething troubles were definitively over, and the I-16 took on the role of the 1934-era biplane fighters. The I-16 became well liked by pilots and crews alike, and were viewed as reliable types. Most I-16s were produced during the pre-war years, and the quality was much higher than of the new fighters, which were hampered by production under wartime conditions. Nevertheless, the time of the I-16 was over by late 1942, the technical and performance superiority of their opponents became too high, and the I-16 withdrawal from frontline service was just a question of time. But, they remained in service even as late as 1943. Although the nomenclature of the I-16 lineage looks as though the types were produced in a chronological order, it was quite different in reality. Production was mixed, and different types were on production lines together. Production of the Type 5 continued even when the Type 24 was being manufactured. In 1941, the types were also mixed within the front line units. Perhaps this is one of the reasons, why there is so much confusion surrounding the subtyping of the I-16. In total some 9450 I-16s of all versions were produced, most of them, to the tune of 8495, by Zavod 21 at Gorki.

TECHNICAL SPECIFICATIONS:

Wing span: 9.00 m, Length: 6.07 m
 Empty weight: 1440 kg
 Take-off weight: 1882 kg
 Speed: 408 km/h at sea level,
 460 km/h at 4700 m
 Time to 5000 m: 6 min
 Initial rate of climb: 991 m/min
 Engine: one M-63 rated at 930 hp
 Weapon: 4xShKAS 7.62 mm machine guns
 (Data: Erik Pilawskii, SOVIET AIR FORCE
 FIGHTER COLOURS 1941-1945)



I-16 Type 24 of Naval 4. GIAP KBF (4. Guard Fighter Air Regiment, Baltic Fleet, Soviet Navy). Winter 1941/1942. It is believed it was flown by Lt. Guryakov, who was photographed

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 započetím 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.



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



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



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

INSTRUKTION SIGNS * INSTR. SYMBOL * INSTRUKTION SINNBILDEN * SYMBOLES * 記号の説明



OPTIONAL
VOLBA
FACULTATIF
NACH BELIEBEN
選択する



BEND
OHNOU
PLIER SIL VOUS PLAIT
BITTE BIEGEN
折る



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



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



NOTCH
ZÁŘEZ
L'INCISION
DER EINSCHNITT
切る



REMOVE
ODŘÍZNOUT
RETIRER
ENTFERNEN
移す



APPLY EXPRESS MASK
POUŽIT EXPRESS MASK
AND PAINT BEFORE
GLUING

PARTS



DÍLY



TEILE



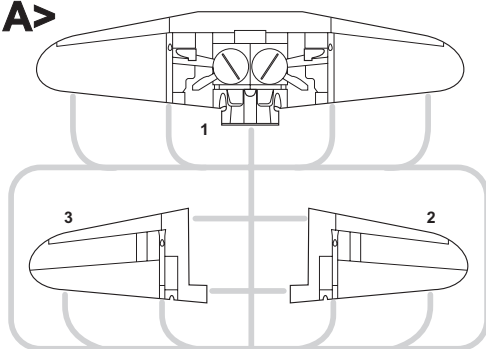
PIÈCES



部品

PLASTIC PARTS

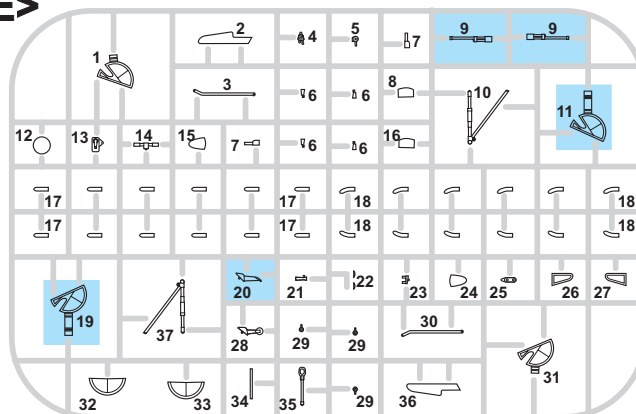
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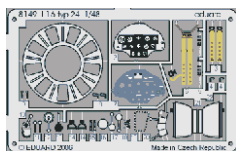
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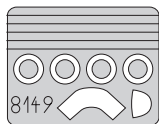
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PE - PHOTO ETCHED
DETAIL PARTS



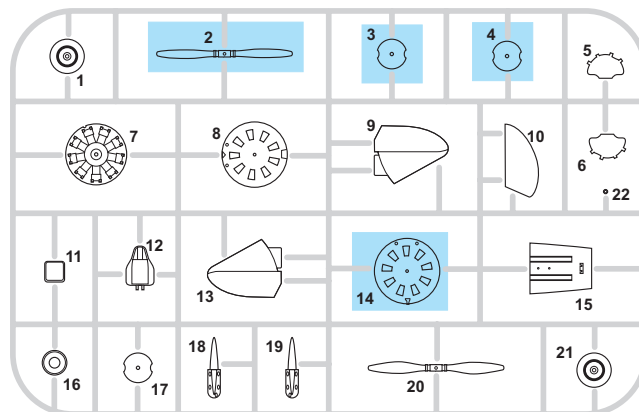
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MASK



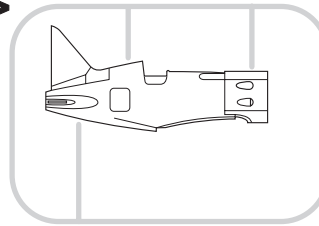
FILM



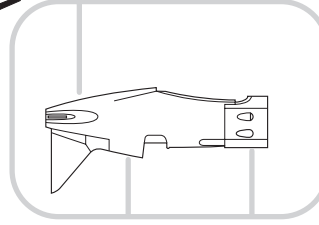
F >



I >



J >



-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



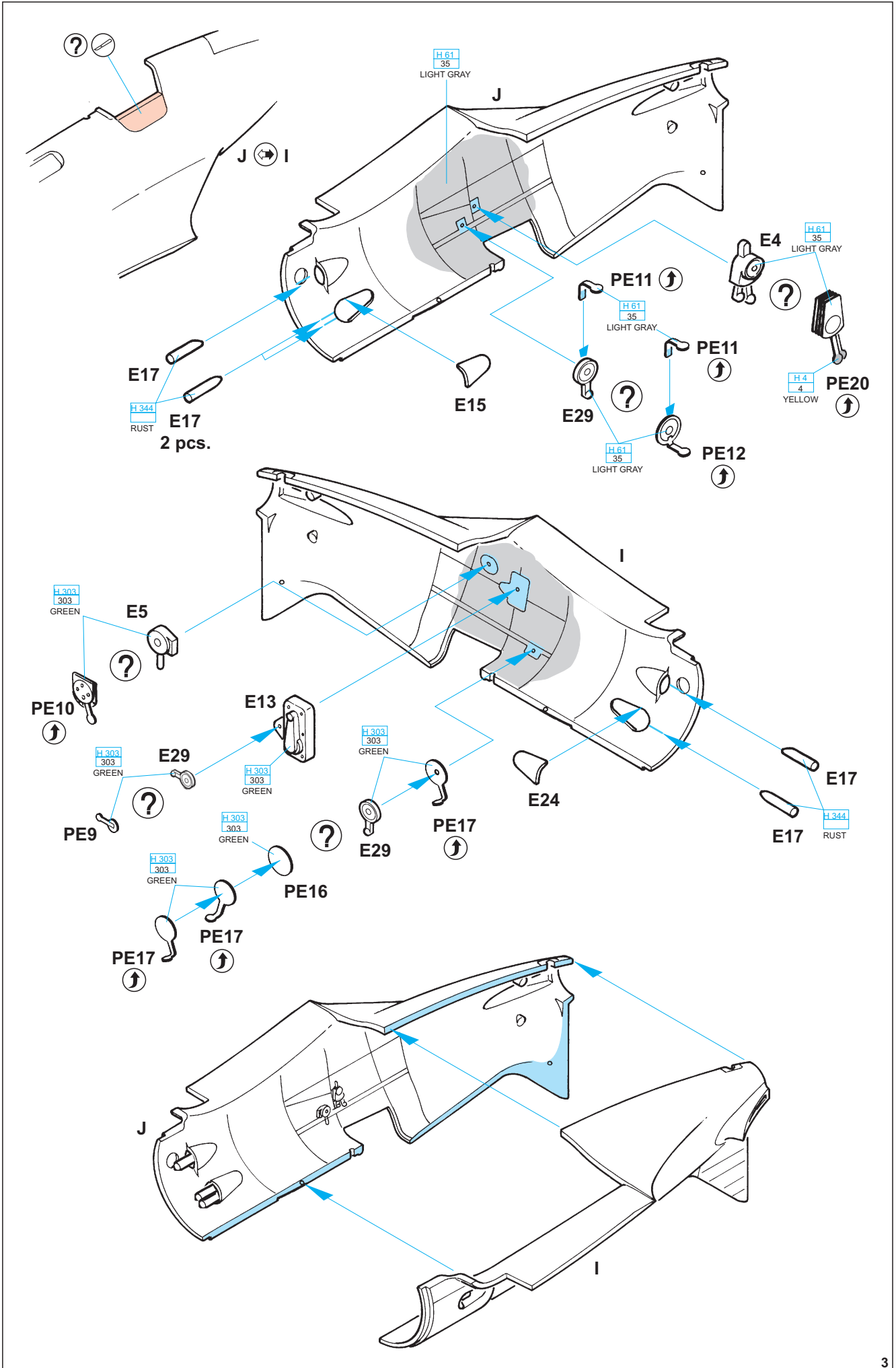
PEINTURE

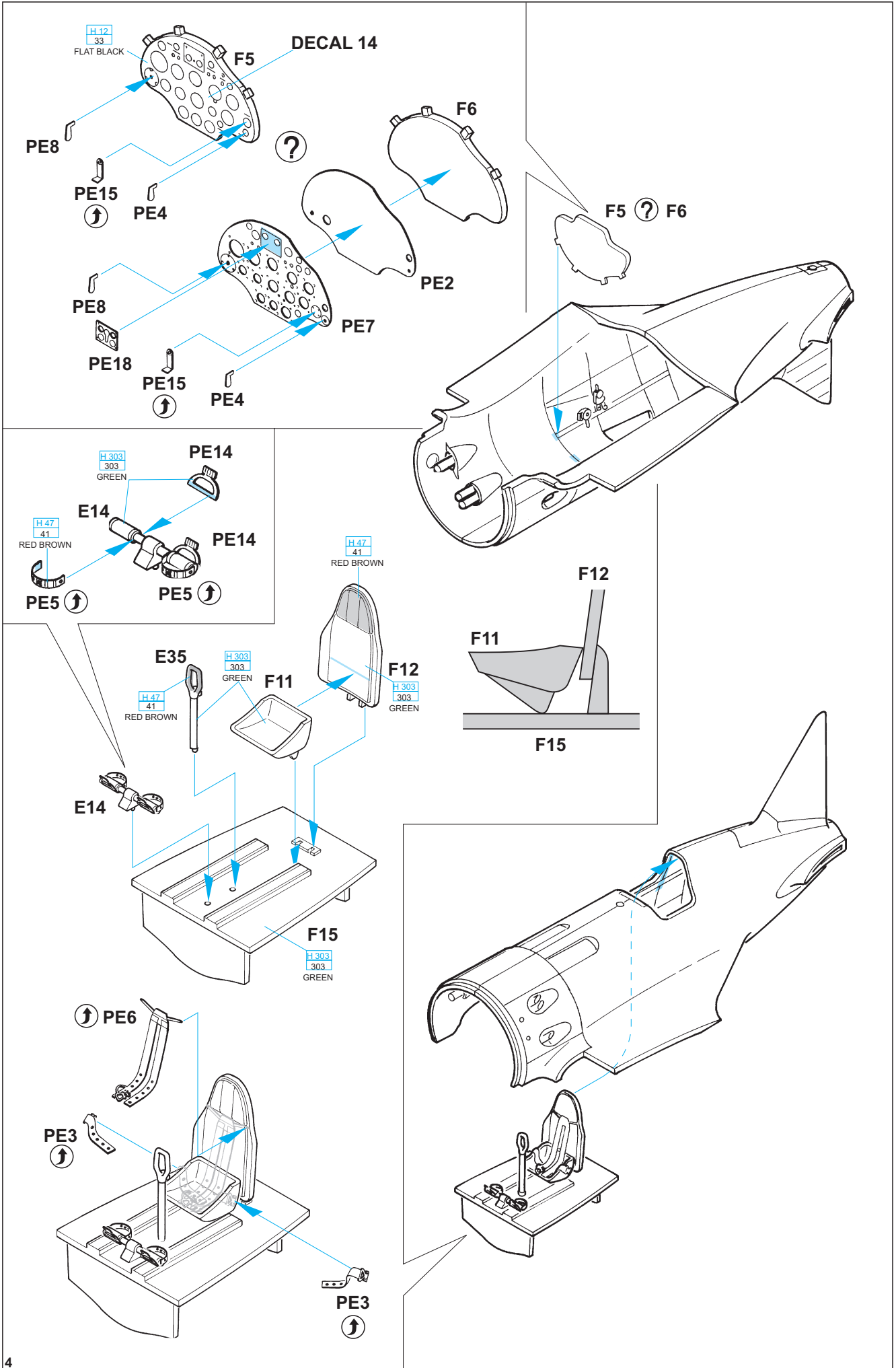


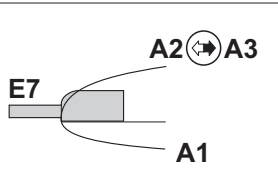
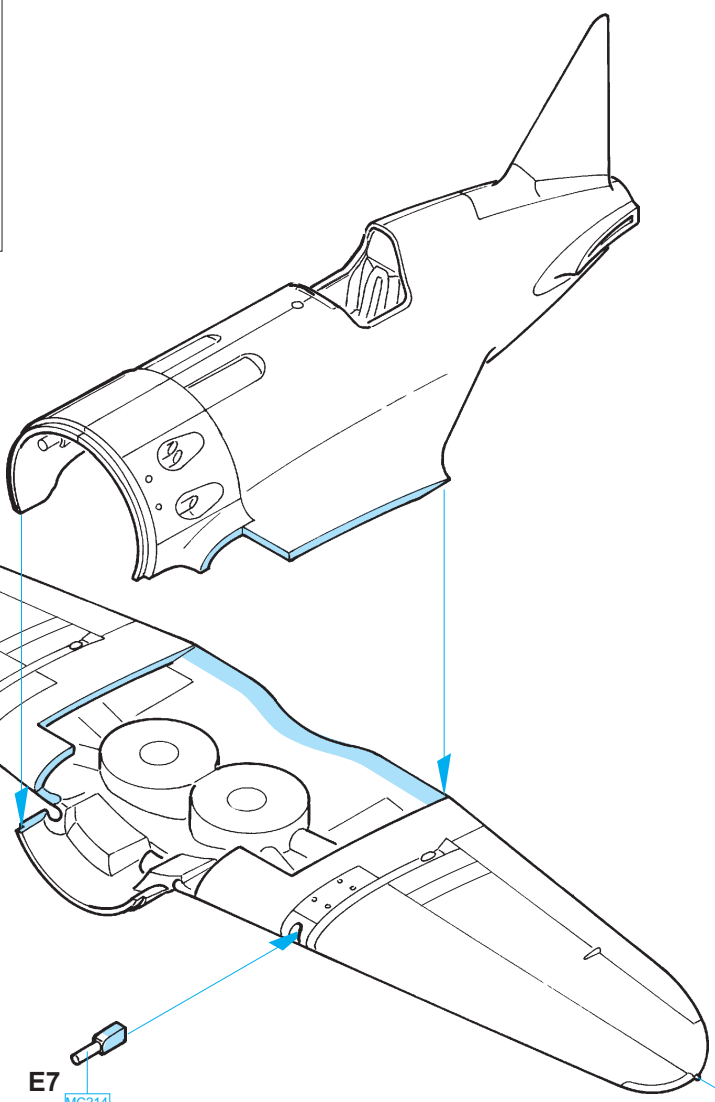
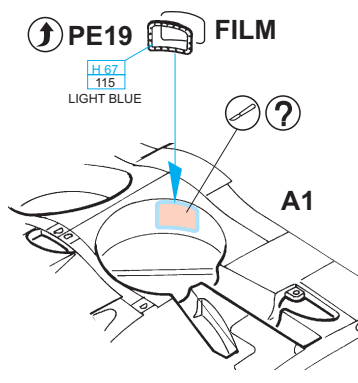
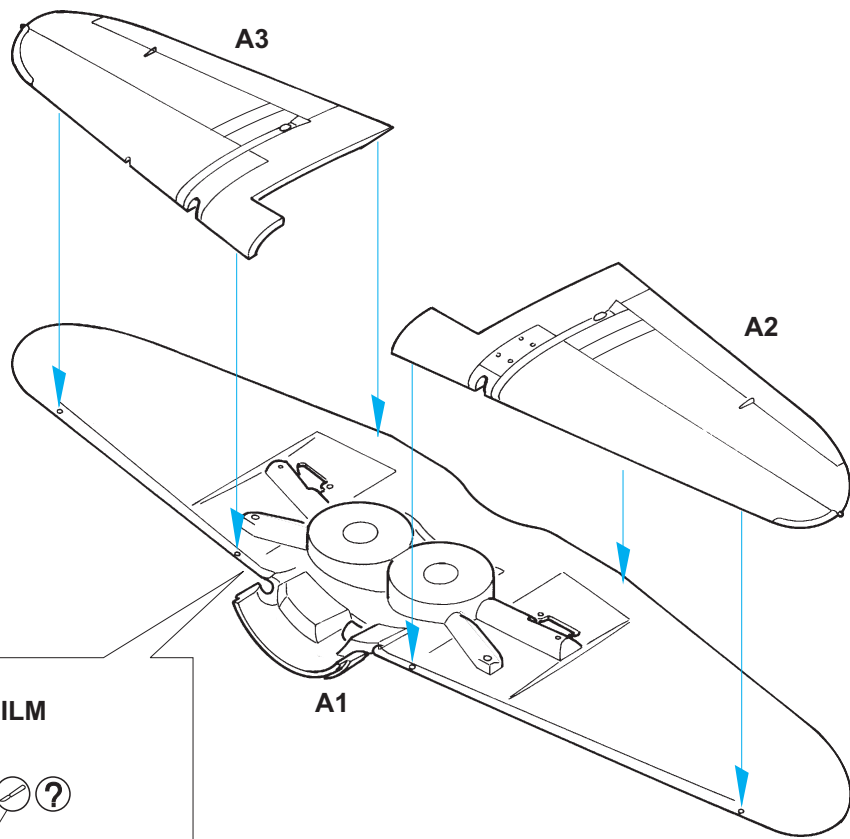
色

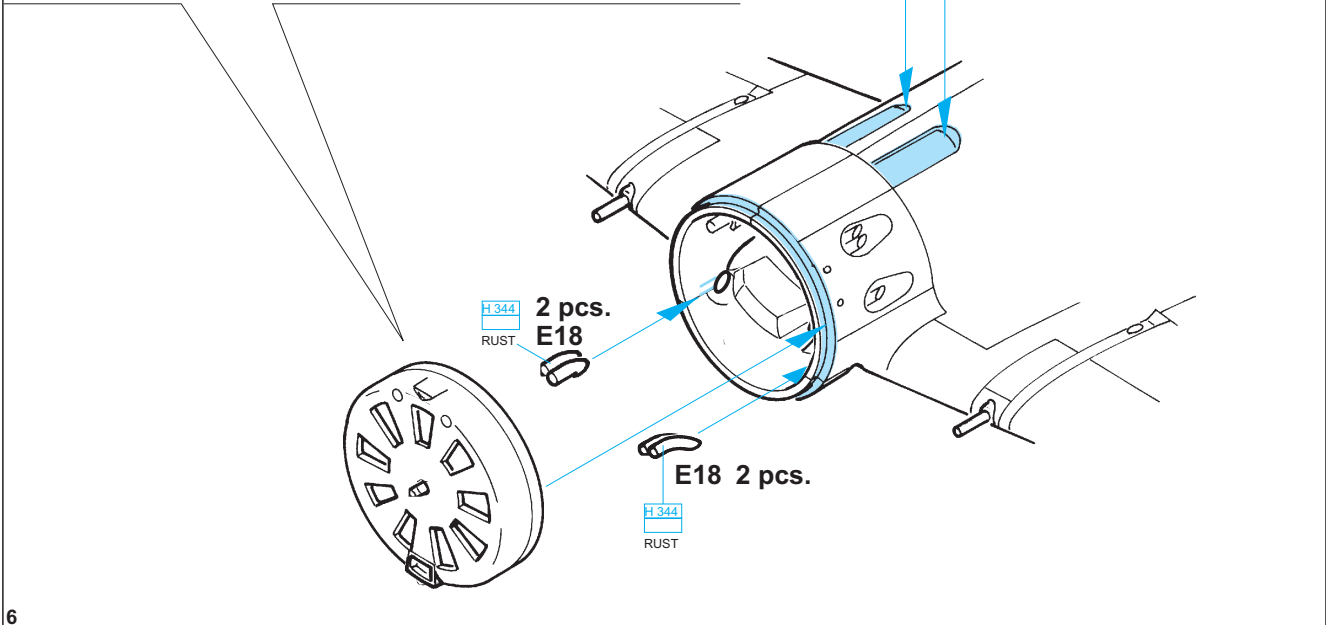
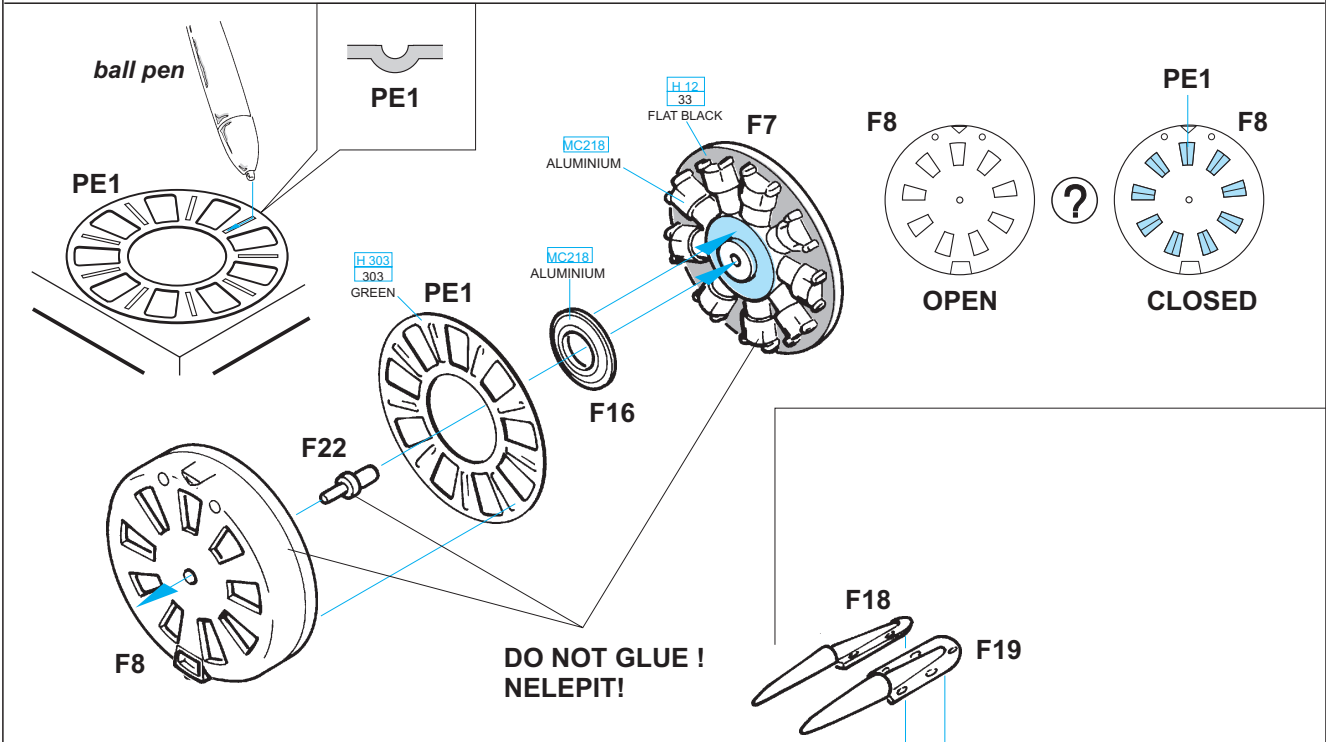
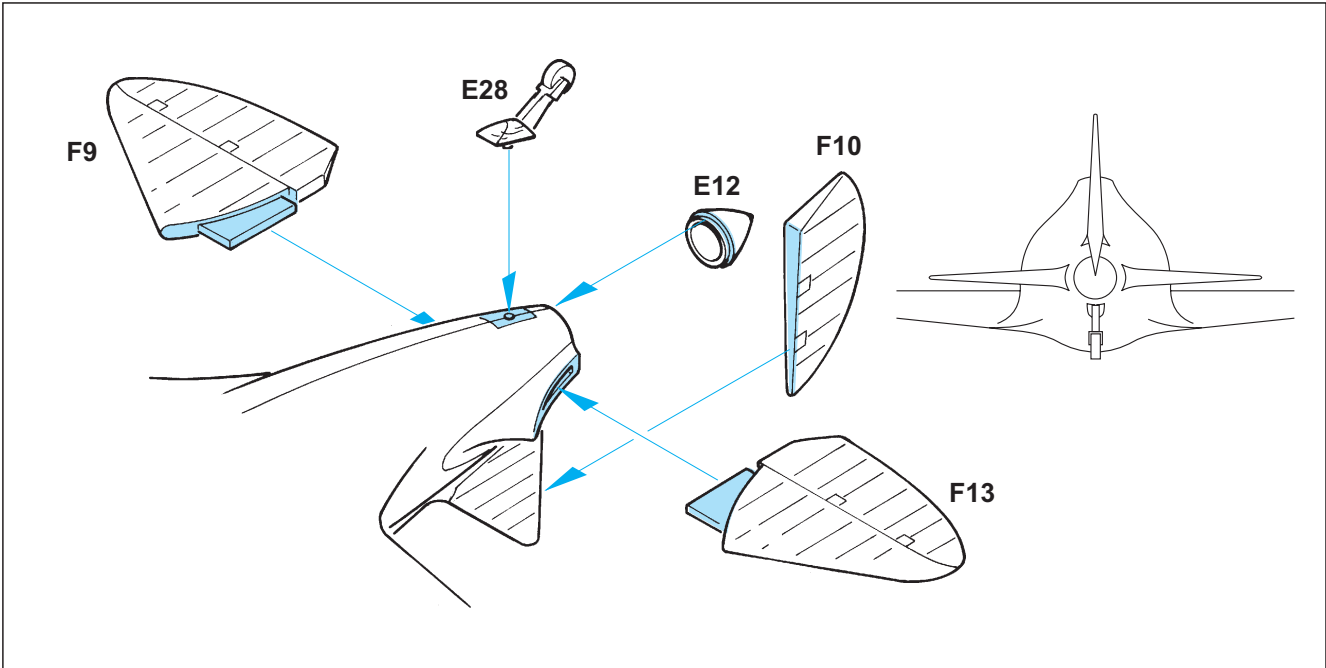
GSi Creos (GUNZE)		
AQUEOUS	Mr.COLOR	
[H 3]	3	RED
[H 4]	4	YELLOW
[H 12]	33	FLAT BLACK
[H 47]	41	RED BROWN
[H 57]	73	GRAY
[H 61]	35	LIGHT GRAY
[H 67]	115	LIGHT BLUE
[H 77]		TIRE BLACK

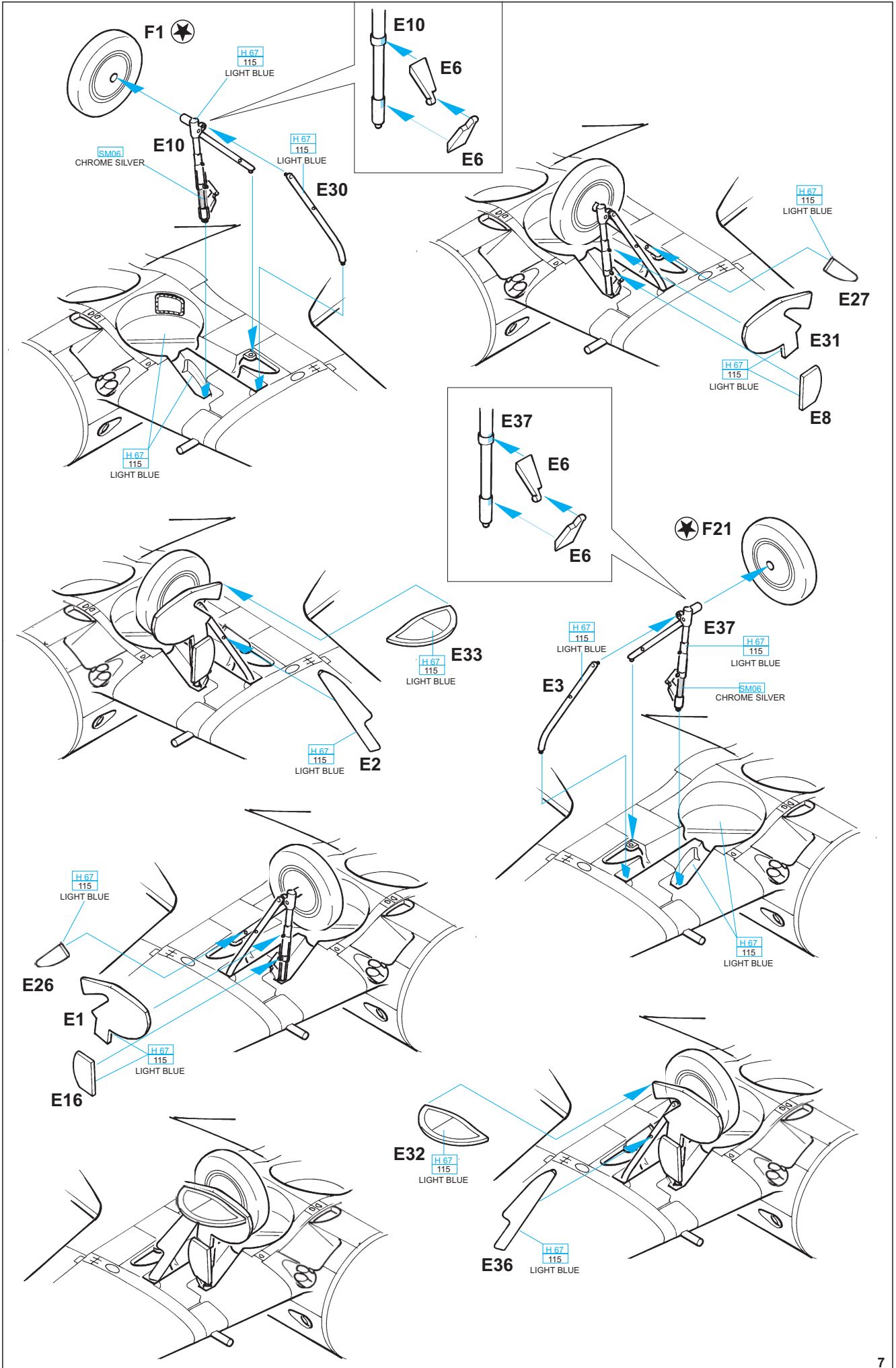
AQUEOUS	Mr.COLOR	
[H 303]	303	GREEN
[H 320]		GREEN
[H 344]		RUST
	74	LIGH BLUE
Mr.METAL COLOR		
[MC214]		DARK IRON
[MC218]		ALUMINIUM
[SM06]		CHROME SILVER

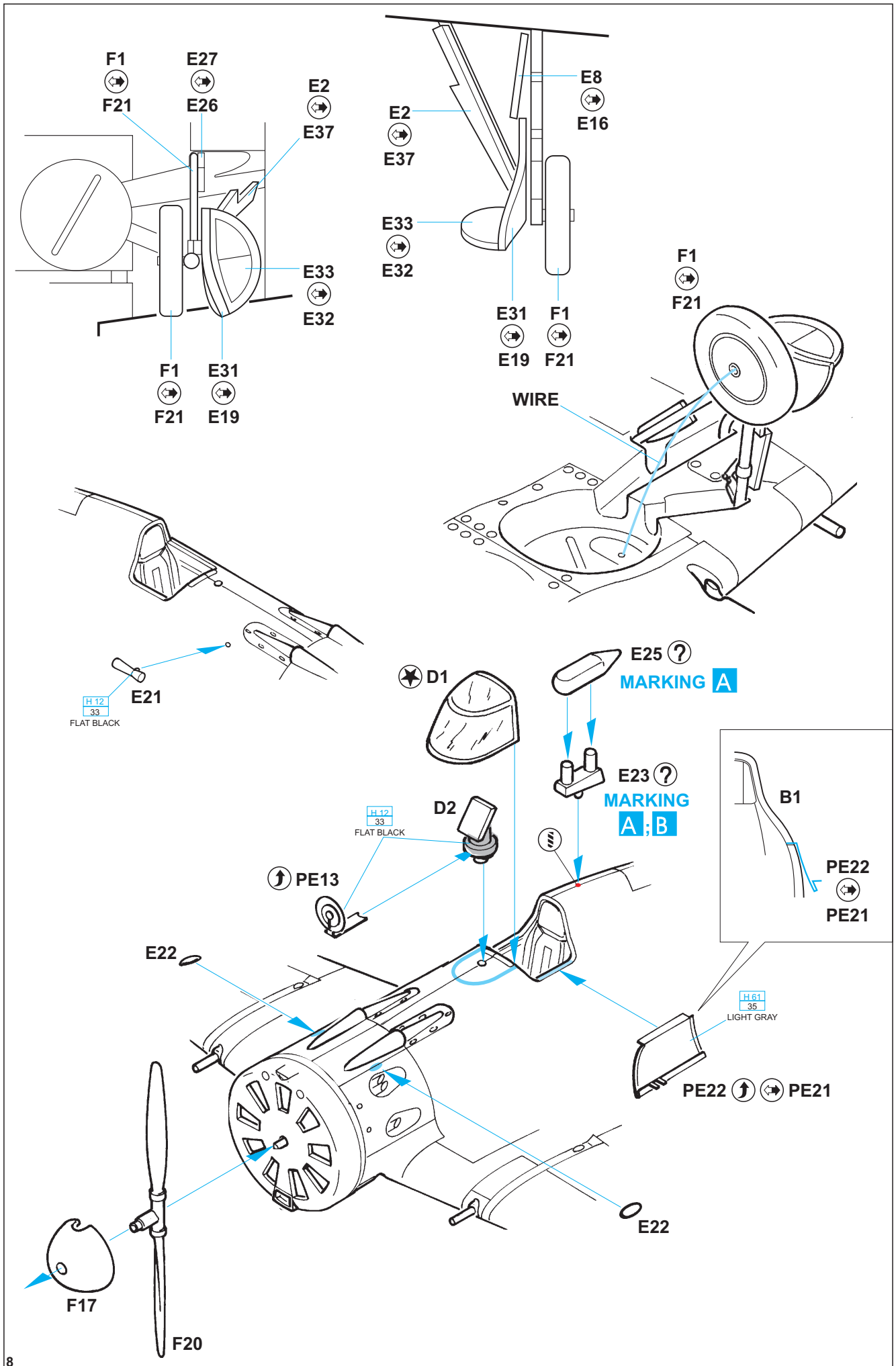








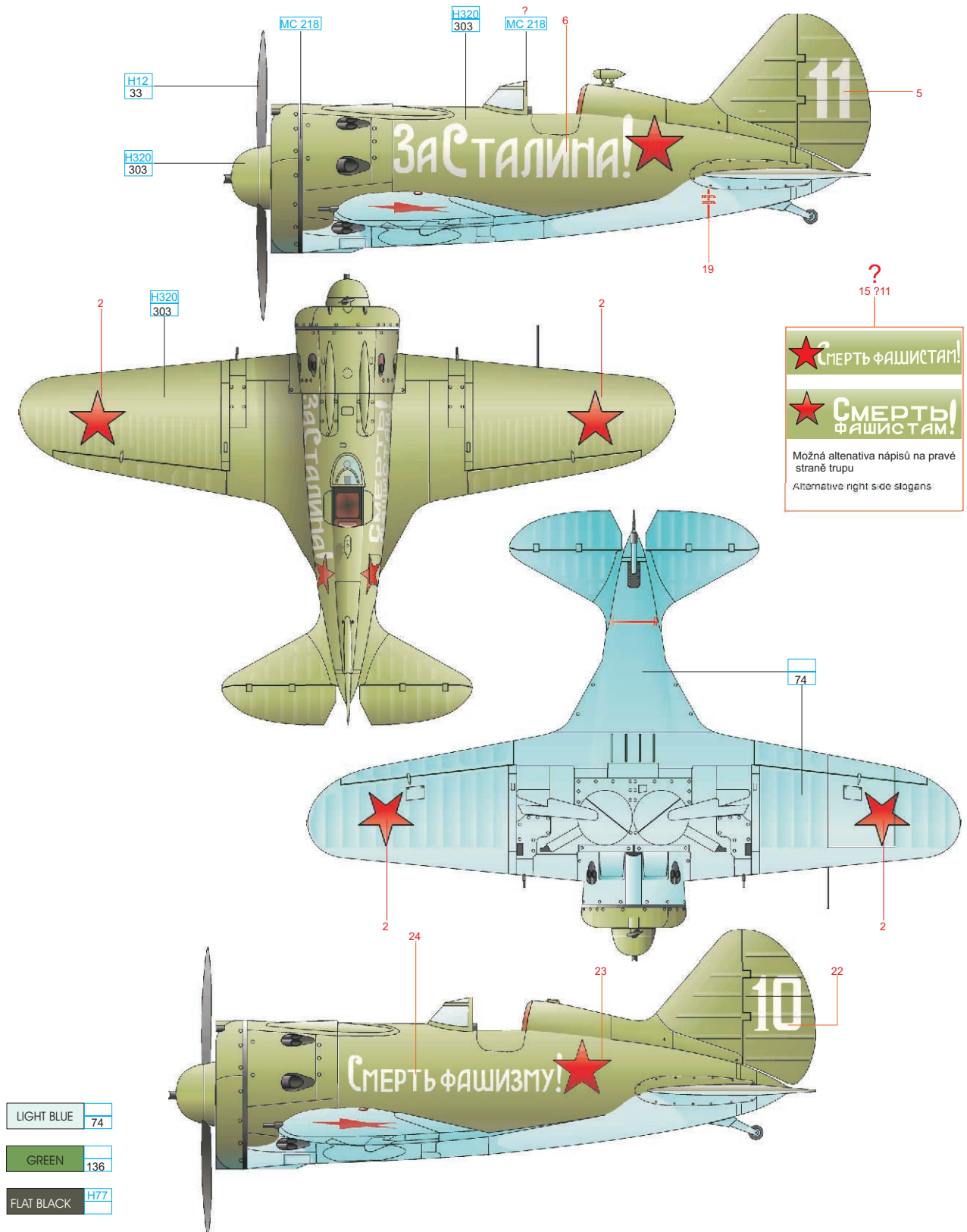




A BORIS F. SAFONOV, 72. SAP, NORTHERN FLEET, Summer 1941

Boris F. Safonov was the first pilot serving with the Soviet Navy awarded the Gold Star of the Hero of the Soviet Union during the Great Patriotic War (Sept. 16, 1941). Although this aircraft was on many occasions depicted in various books, it remains a mystery. The left side is quite clear, but the right side has been described to varying degrees. We offer you two versions of the right side slogan. However, the corresponding left side slogan, in this case, is perhaps a simple and erroneous eyewitness flashback. In our mind, there was nothing on the right side except the red star on the fuselage and the number 11 on the rudder. The mysterious slogan "SMERT FASIZMU" was actually painted on the left side of another aircraft, No. 10, which is also noted to have been flown by Safonov. There was also a third aircraft with a patriotic slogan, No. 13 "ZASSR!" So with that, some of the interpretation will have to be up to you.

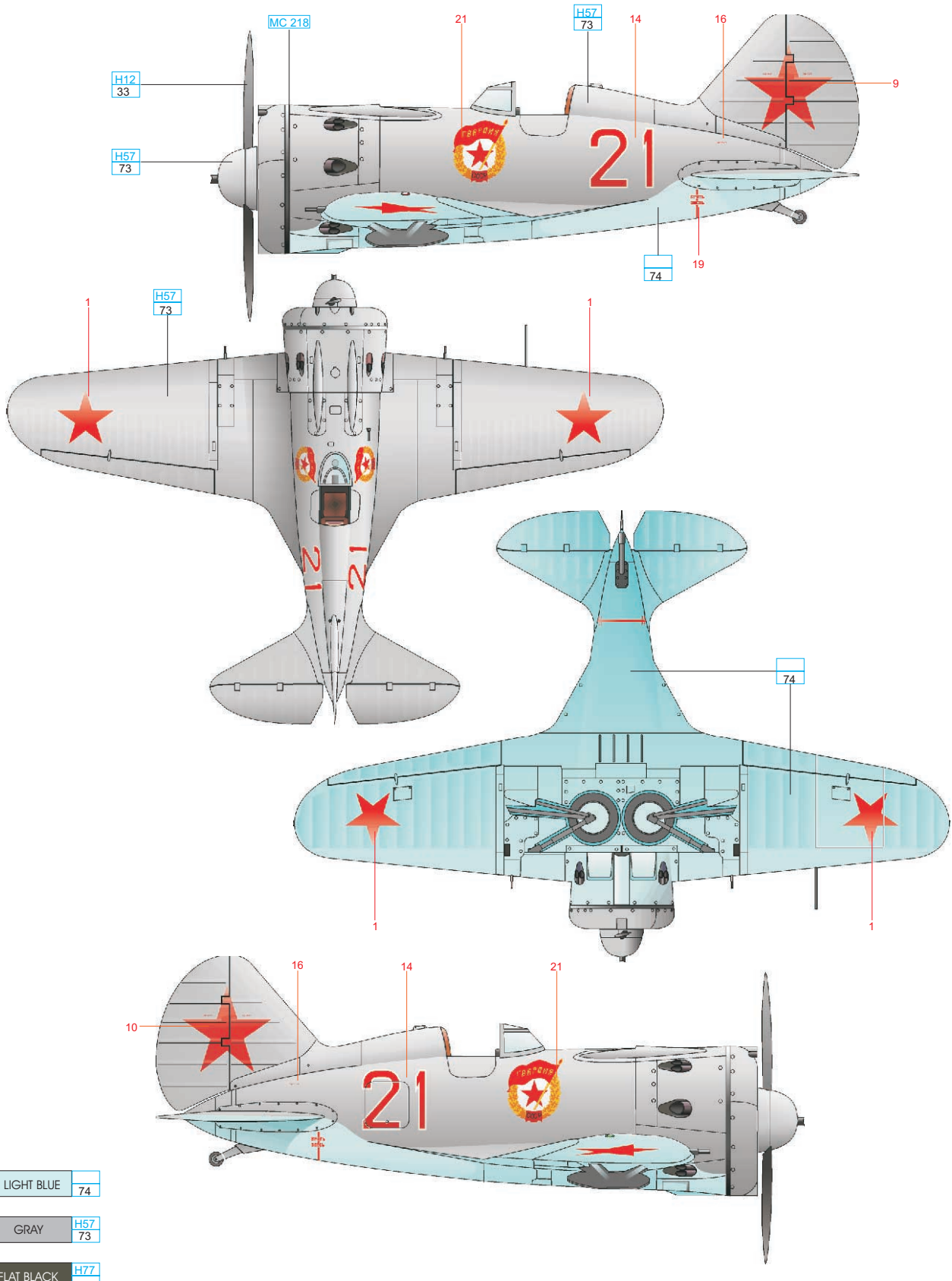
Boris F. Safonov byl prvním pilotem Sovětského námořnictva, vyznamenaným v době Velké Vlastenecké Války Zlatou Hvězdou Hrdiny Sovětského svazu (16. září 1941). Přestože je tento stroj často zobrazován v různých publikacích, je kolem jeho podoby mnoho nejasností. Ty se týkají výhradně pravé strany trupu, kde se traduje další heslo, Smert' fašizmu! nebo Smert' fašistam! Nabízíme vám dvě varianty tohoto záhadného nápisu. Ale možná jde v tomto případě prostě o chybnou interpretaci vzpomínek pamětníků. Podle našeho názoru na pravé straně trupu nebylo nic, kromě rudé hvězdy a čísla 11 na směrovce. Nápis „SMERT' FAŠIZMU“ byl namalován na jiném stroji, číslo 10, který měl být také pilotován B. Safonovem. Celkem jsou u této jednotky známy tři stroje s vlasteneckými hesly na boku, č. 10 SMERT' FAŠIZMU!, č. 11 ZA STALINA!, a č. 13 ZA SSSR!. Je jen na vás, pro kterou z variant se rozhodnete.



B GENADIJ TSOKOLAJEV, 4.GIAP, BALTIC FLEET, LAKE LADOGA, APRIL 1942

Captain Genadij Tsokolajev is another Navy ace with 17 individual and 11 shared victories. He was awarded the Gold Star of the Hero of the Soviet Union on June 14, 1942. It is not certain, if the Guards badge was in reality painted on both sides of the fuselage. Also, the blue bottom surfaces are not definitely ascertained; it is possible the aircraft was light gray overall. Note missing undercarriage doors.

Kapitán Genadij Čokolajev je dalším námořním esem s celkem 17 samostatnými sestřely a 11 sestřely, dosaženými ve skupině. 14. června 1942 byl vyznamenán Zlatou hvězdou Hrdiny Sovětského svazu. Není úplně jisté, zda byl gardový znak namalován i na levé straně trupu. Rovněž není jisté, zda byly spodní plochy skutečně modré, je možné, že stroj byl natřen světlou šedou na všech plochách. Všimněte si chybějících krytů podvozku.



LIGHT BLUE 74

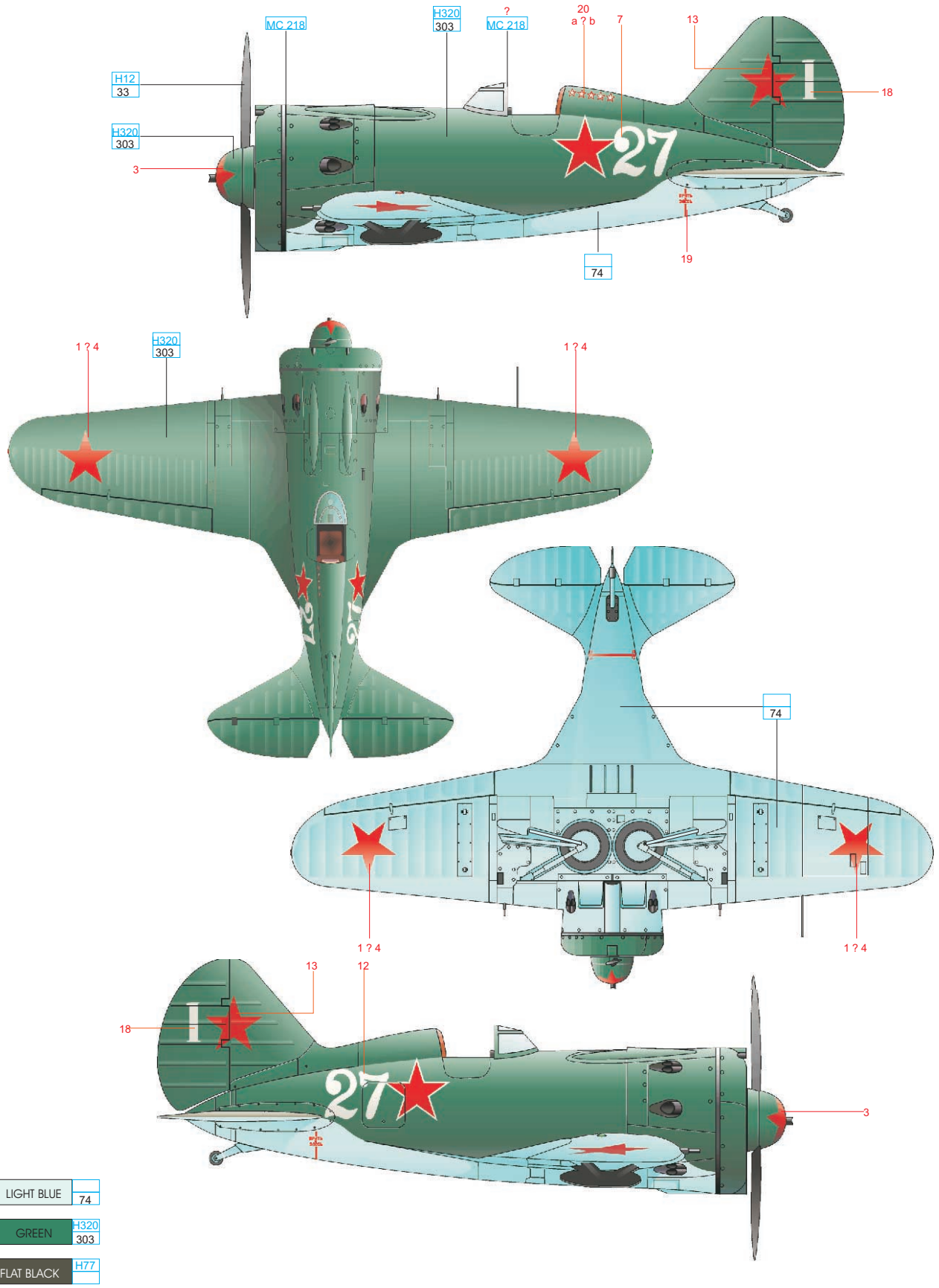
GRAY H57 73

FLAT BLACK H77

C Lt. KRICHEVSKIY, 254. IAP, LENINGRAD FRONT, 1942

254. IAP (Fighter Aviation Regiment) was an unit of the 8. SAD (Mixed Air Division), based at Budogosh airfield in the fortified Leningrad area in 1942. The aircraft was painted in a two-tone, pre-war VVS scheme, common in the early Great Patriotic War months, with All Green upper surfaces and All Blue lower surfaces. The propeller blades were heavily weathered. Note missing undercarriage doors.

254. IAP (Stíhací Letecký Pluk) byl v roce 1942 součástí 8. SAD (Smíšená Letecká Divize), a operoval z letiště Budogoš v oblasti obklíčeného Leningradu. Stroj nesl standardní předválečné dvoubarevné kamuflážní schéma, běžné v prvních měsících Velké Vlastenecké Války. Horní plochy jsou zbarveny zeleně, spodní modře. Vrtulové listy byly silně olétané. Všimněte si chybějících krytů podvozku.



D LEV L. SHESTAKOV, 69. IAP, ODESSA, SUMMER 1941

69. IAP (Fighter Aviation Regiment), later renamed 9. GIAP (Guard Fighter Aviation Regiment), was commanded by a Spanish Civil War veteran, Lev Shestakov, in the summer of 1941. The regiment took part in the protection of the important south Ukrainian port of Odessa against advancing German and Rumanian troops. Lev Shestakov was an ace with 7 individual and 8 shared victories, with another three (2+1), achieved in Spain. The 9. GIAP gained notoriety later in the war, after re-equipping with P-39 Airacobras, during the Battle of Kuban, under the command of the legendary, three-time Hero of the Soviet Union, A. I. Pokrishkin.

69. IAP (Stíhací Letecký Pluk), později přejmenovaný na 9. GIAP, byl v létě 1941 pod velením veterána Španělské občanské války, Lva Lvoviče Šestakova. Pluk se podílel na obraně důležitého ukrajinského přístavu Oděsa proti postupujícím německým a rumunským jednotkám. Lev Šestakov byl esem se 7 samostatnými sestřely a 8 sestřely, dosaženými ve skupině, s dalšími třemi sestřely (2+1), dosaženými dříve ve Španělsku. 9. GIAP se v pozdějším období války, po přezbrojení na P-39 Airacobra, proslavil v bojích nad Kubání pod velením legendárního trojnásobného Hrdiny SSSR, A. I. Pokriškina.

