

## P-40E Warhawk 'Tigers and Sharks'

### INSTRUCTIONS

**EN**

In the 1930's, when the effects of the great depression had faded away, a contest flared up in the USA between aviation companies to provide the military with a new and standard type of a fighter plane. Eventually, Curtiss company became the winner with their radial engine-equipped P-36 Hawk monoplane. Curtiss supplied not only the USAAC (to be known as the USAAF from 1941), but also their European customers who were involved in the conflict that had broken out in 1939. In 1937, after eight years of development, a new type of in-line aircraft engine was finally approved for production and service called Allison V-1710 C-series. It was decided to build a test series of Curtiss YP-37 planes and also the new XP-40 fighter type just to give this new powerplant a try. Both these types originated in the already mentioned P-36 plane. The prototype XP-40 took off for the first time on 14 October 1938 and following some improvements and adaptations, it took part in a fighter competition in January 1939 which it passed with flying colours. Production of Allison V-1710 C series engine equipped Curtiss fighter planes started, giving the P-40, P-40B and eventually the P-40C versions. The British military bought the type as well, acquiring in total much more than the US forces and named the type the Tomahawk Mk.IA and Mk.IB respectively.

In 1939, Allison developed a new version of their V-1710 engine, the so-called F-series. It was intended to use this engine in the new Curtiss XP-46 fighter, which however in the end did not offer much better performance than the P-40B/C type. But as large numbers of fighter planes were needed at that time, a new version of the P-40 with this new engine was ordered, to be known as the P-40D Warhawk and in the RAF as the Kittyhawk Mk.I. The first batch of 43 had armament of only two machine guns per wing, later machines would be fitted with three guns in each wing. The following E version, bearing six guns by standard, differed only very little from the earlier D model, in just few details. It became clear very soon that in real combat the P-40D/E's engine lacked sufficient power at higher altitudes, mainly because of its single-stage supercharger.

The war time necessity for still more and more fighter aircraft without interrupting the production lead the aircraft manufacturers to the development of further versions with even more powerful engines or also equipped with British R&R Merlin engines. The latter were used with the P-40F and L versions (in the UK known as the Kittyhawk Mk.II). Due to the lack of directional stability, the fuselages of F-5 production block machines were lengthened by 48cm. But as the Merlin engines were most needed for the Mustang fighters, the production of the P-40Fs and Ls did not last very long.

The P-40K was fitted with a V-1710-73 engine and was produced in two main varieties, the block K-1 to K-5 machines had larger tail fin area while the K-10 and later machines had their fuselage elongated in a similar manner to the P-40F. Following the K machines, a new and light-weight version was developed and produced, designated the P-40M and equipped with a V-1710-87 power unit. Both these versions were known as the Kittyhawk Mk.III in Britain. The final production version was the N or Kittyhawk Mk.IV. Its first production block did not look much too different from the M, later blocks differed by having the clear canopy redesigned and providing much better rearward view for the pilot.

The Warhawk / Kittyhawk fighters did not prove to be much suitable for the war over Western Europe, but fought and enjoyed quite a lot of success in Africa, over Italy, in the Pacific, China, India or Alaska and also in the skies of the Soviet Union, where they had been delivered during the Lend and Lease programme. Along the USAAC / USAAF, the type was also operated by such air forces as were the RAF, SAAF, RAAF, RNZAF or RCAF and many other forces almost all around the world. Some machines were also captured by the enemy, namely Finland and Japan and even these found their way to real combat use.

The P-40D to N fighters had never been the very top fighting machines of that time, however due to their rather robust and reliable structure they became much liked by their pilots who during the course of the war flew them rather more and more in the fighter-bomber role and even enjoyed many success in air to air engagements, achieving plenty of victories over the enemy and also reaching their acedoms quite often. It would be just fair to acknowledge the shark-mouthed P-40 fighters as one of the symbols of the Allied victory in the Second World War.

Wingspan: 11.38 m, length: 10.16 m, max speed: 608 km/h (N-1), range: 1207 km, ceiling: 9144 m

**CZ**

Na konci třicátých let, po odeznění hospodářské krize, se v USA rozhořela soutěž o to, která z leteckých firem dodá armádnímu letectvu standardní stíhačku. Firma Curtiss v této soutěži uspěla se svým P-36 Hawk s hvězdicovým motorem. Dodávala jej nejen USAAC (od roku 1941 USAAF), ale hlavně zákazníkům v Evropě, kde v roce 1939 vypukla druhá světová válka. V roce 1937 byl v USA homologován od roku 1929 vyvíjený řadový motor Allison V-1710 řady C. Snaha o jeho vyzkoušení vedla k stavbě pokusné série letounů Curtiss YP-37 a také ke stavbě nového letounu XP-40. Oba typy vycházely konstrukčně z P-36. XP-40 poprvé vzletl 14. října 1938. Po úpravách se zúčastnil v lednu 1939 porovnávací soutěže nových stíhacích typů a tu vyhrál. S motorem Allison V-1710 řady C byly postupně vyráběny verze P-40, P-40B a P-40C. Britové, kteří zakoupili více letounů než letectvo USA, označovali tyto stroje jménem Tomahawk Mk.IA a Mk.IB.

Firma Allison vyvinula v roce 1939 novou verzi motoru V-1710, řady F. Motor byl použit v nové Curtissově stíhačce XP-46. Ta ale nenabídla vyšší výkony než P-40B/C. Vzhledem k potřebě stíhacích letounů byl ale objednána nová verze P-40 s novou verzí motoru. Dostala označení P-40D Warhawk (u Britů Kittyhawk Mk.I). Prvních 43 strojů neslo v křídle 4 kulomety, další vyráběné jich nesly šest. Jen v drobnostech se lišila verze P-40E vyzbrojená standardně šesti kulomety (britské označení Kittyhawk Mk.IA). V bojích se brzy ukázalo, že P-40D/E s motory V-1710 s jednostupňovým kompresorem mají špatné výškové vlastnosti. Válečná potřeba dalších stíhaček bez nutnosti přerušit výrobu vedla k vývoji dalších verzí se silnějšími verzemi motoru V-1710 a verzí s britským motorem R&R Merlin. Merlin byl použit u verzí P-40F a L (britské označení Kittyhawk Mk.II). Potíže se směrovou stabilitou vedly u výrobního bloku F-5 k prodloužení trupu o 48 cm. Rostoucí potřeba Merlinů pro výkonnější Mustangy ale výrobu těchto verzí zastavila.

P-40K s motorem V-1710-73 byl vyráběn ve dvou provedeních, série K-1 až K-5 měly zvětšenou kýlovou plochu. K-10 a vyšší výrobní bloky měly prodloužený trup, podobně jako vyšší výrobní bloky P-40F. Na verzi K navázala odlehčená verze M s motorem V-1710-87. Britové obě verze označovali Kittyhawk Mk.III. Poslední sériovou verzí se stala P-40N / Kittyhawk Mk.IV. První výrobní blok měl ještě starý typ kabiny, další výrobní bloky dostaly novou kabinu s lepším výhledem vzad.

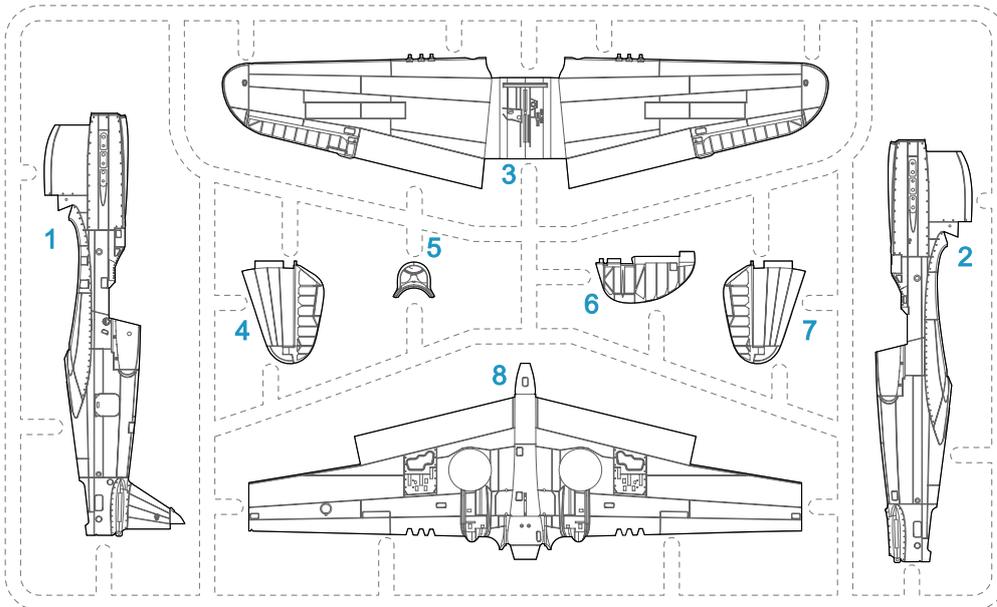
Stíhačky Warhawk/Kittyhawk se nehodily pro západoevropské bojiště. Byla nasazeny v Africe, Itálii, v Pacifiku, Číně, Indii, na Aljašce, v rámci pomoci byly dodány do Sovětského Svazu. Kromě USAAC/USAAF tyto stroje používalo RAF, SAAF, RAAF, RNZAF, RCAF a letectva dalších států po celém světě. Kořistní stroje P-40 byly bojově použity Japonskem a Finskem.

P-40D až N nebyly špičkové stíhačky, ale byly robustní a odolné a bylo jich vyrobeno velké množství. V průběhu války byly stále více používány jako stíhací bombardéry. I přesto se mnoho pilotů stalo v cockpitu P-40 esem a P-40 s namalovanou zubatou tlamou na přídi se stal jedním ze symbolů vítězství spojenců ve druhé světové válce.

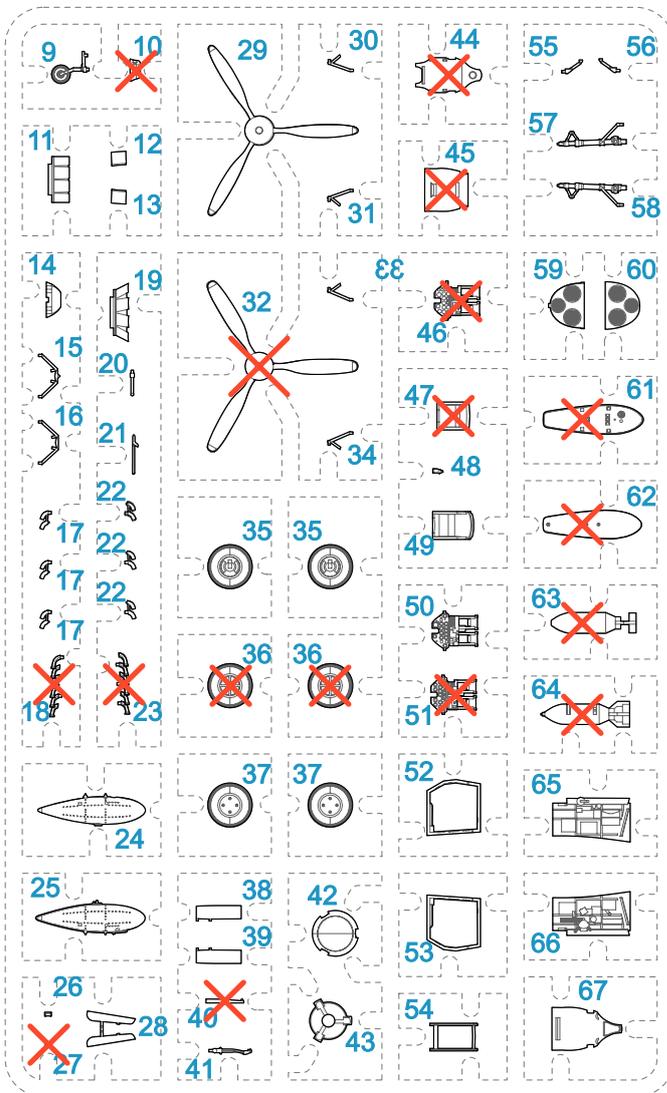
Rozpětí: 11,38 m, délka: 10,16 m, max. rychlost: 608 km/h (N-1), dolet: 1207 km, dostup: 9144 m

## Parts List

**A**



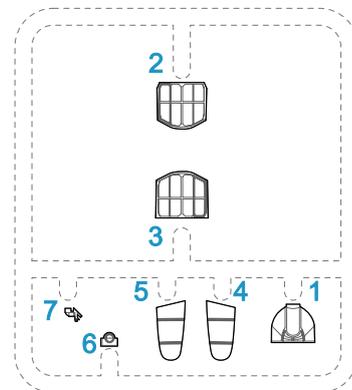
**B**



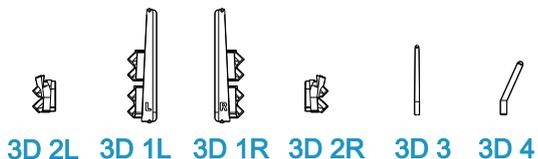
**X** = Tento díl nepoužít  
Do not use this part

## Clear Parts

**G**



## 3D-printed Parts



## Barvy GUNZE/ GUNZE Colour No.

<b>A</b>	Curtiss Interior Green	H58/C27+a drop of 37/43
<b>B</b>	Hliník / ALUMINIUM	H8/C8
<b>C</b>	Černá / BLACK	H12/C33
<b>D</b>	Červená / RED	H3/C3
<b>E</b>	Nevýrazná olivová / OLIVE DRAB	H52/C12
<b>F</b>	Opálený kov / BURNT IRON	H76/C61
<b>G</b>	Barva pneu / TIRE BLACK	H77/C137
<b>H</b>	Žlutá / YELLOW	H329/C329
<b>I</b>	Hnědočervená / LEATHER	H47/C41
<b>J</b>	Červená čirá / CLEAR RED	H90/C47
<b>K</b>	Zelená čirá / CLEAR GREEN	H94/C138
<b>M</b>	Lesklá Bílá / WHITE	H1/C1
<b>N</b>	Dělovina / GUNMETAL	H28/C78
<b>O</b>	Neutr. šedá / NEUTRAL GRAY	H53/C13

## SYMBOLS



MOŽNOST VOLBY  
OPTIONAL  
NACH BELIEBEN  
OPTION



POUŽÍT KYANOAKRYLÁTOVÉ LEPIDLO  
INSTANT CYANOACRYLATE GLUE  
ZYANOAKRYLÁTKLEBER  
ADHÉSIF CYANOACRYLAT



OHNOUT  
BEND  
BIEGEN  
COURBER



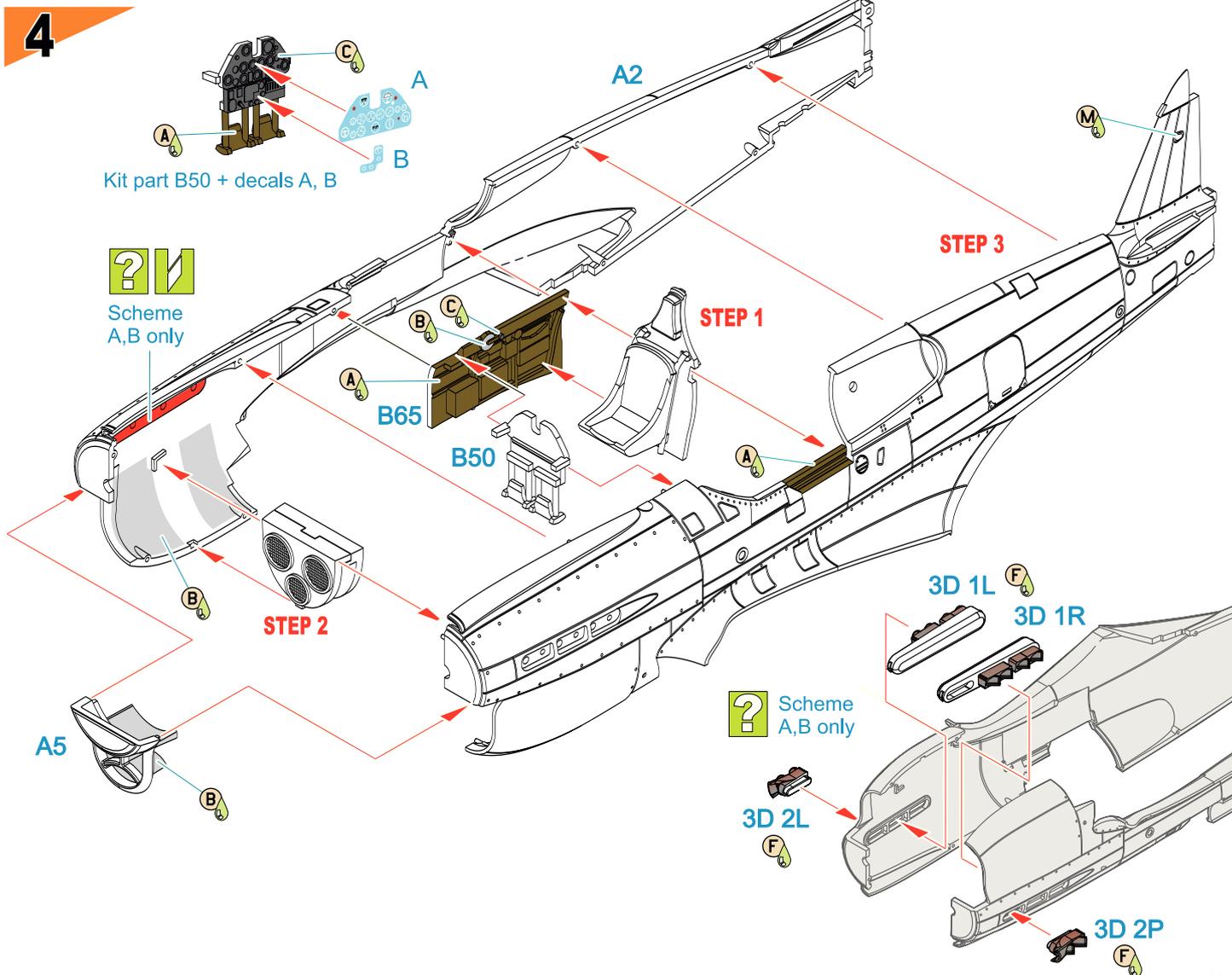
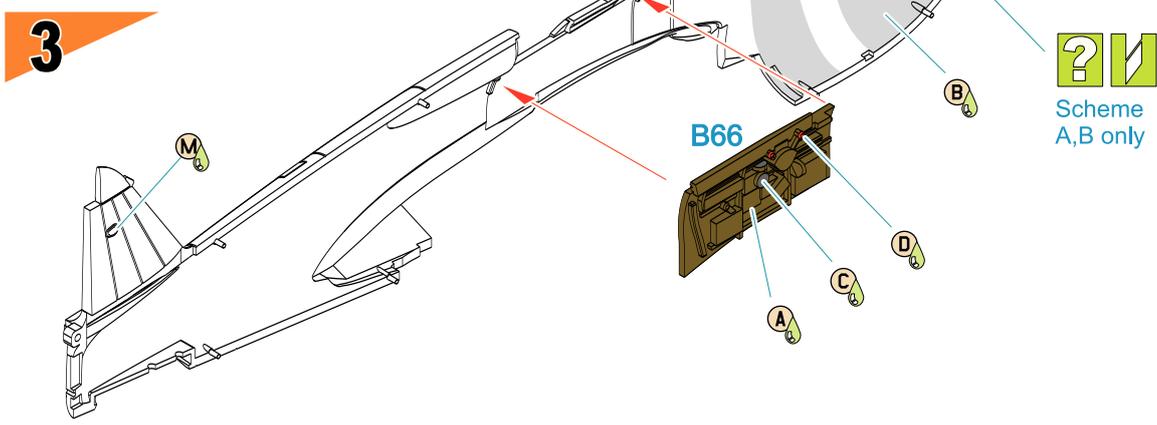
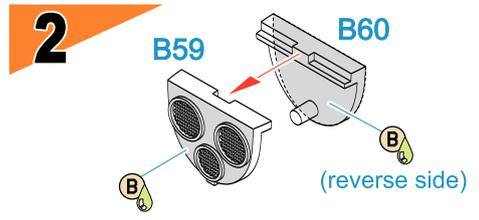
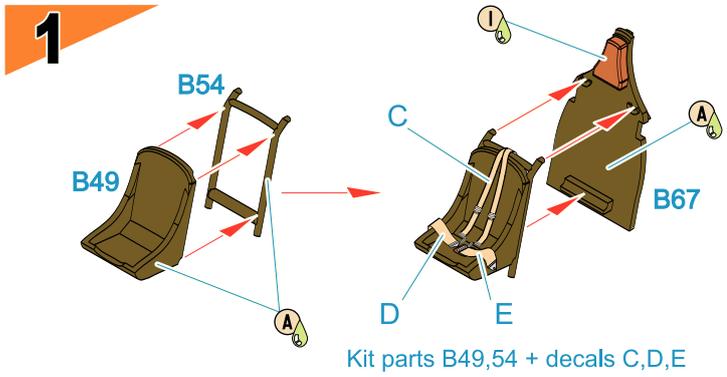
ZHOTOVIT NOVĚ  
SCRATCH BUILD  
FERTIGSTELLEN  
ACHEVER



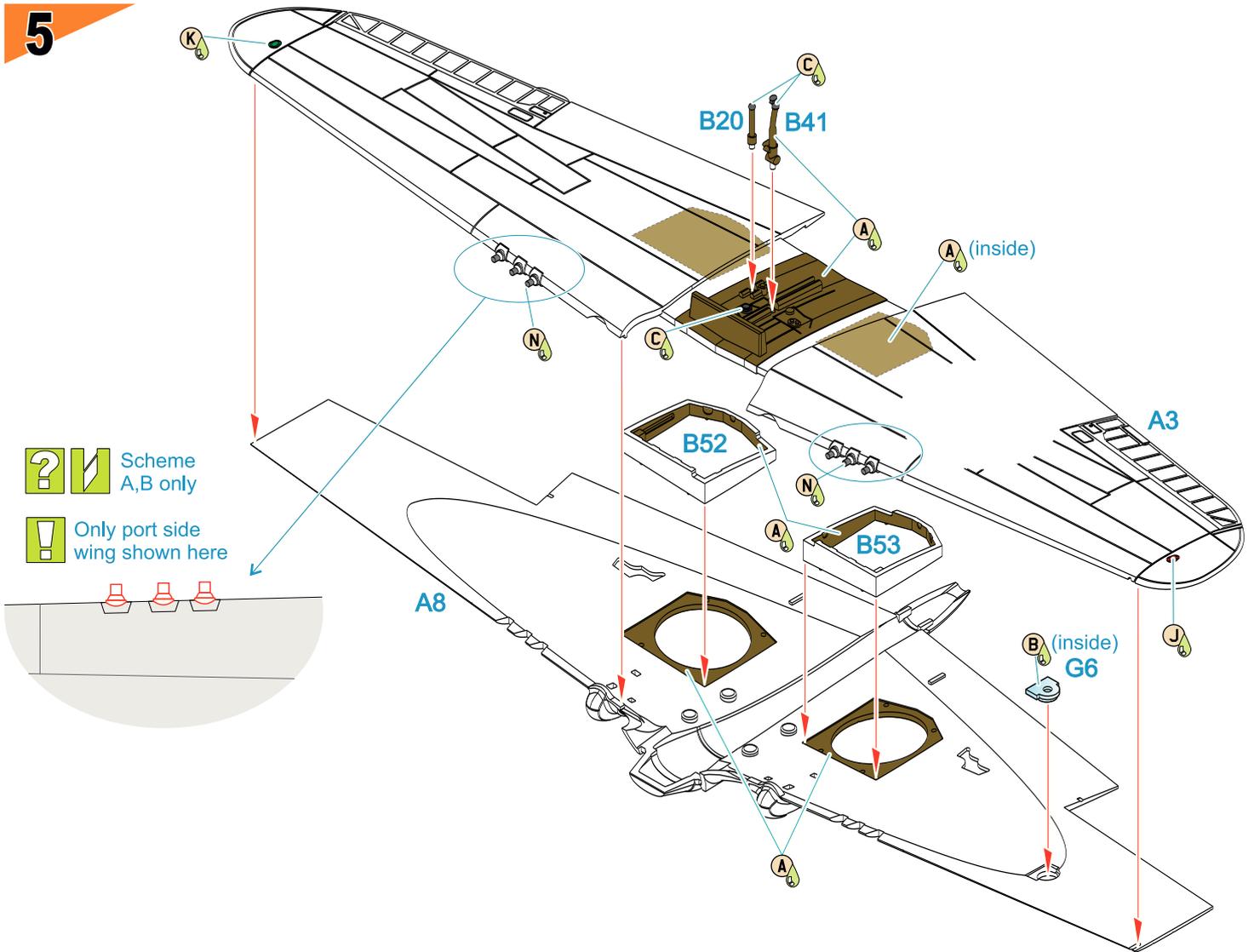
ŘEZAT/VRTAT  
CUT OFF/DRILL  
ENTFERNEN  
DETACHER



NATRÍT  
COLOUR  
FARBEN  
PEINDRE



5



? Scheme A,B only

! Only port side wing shown here

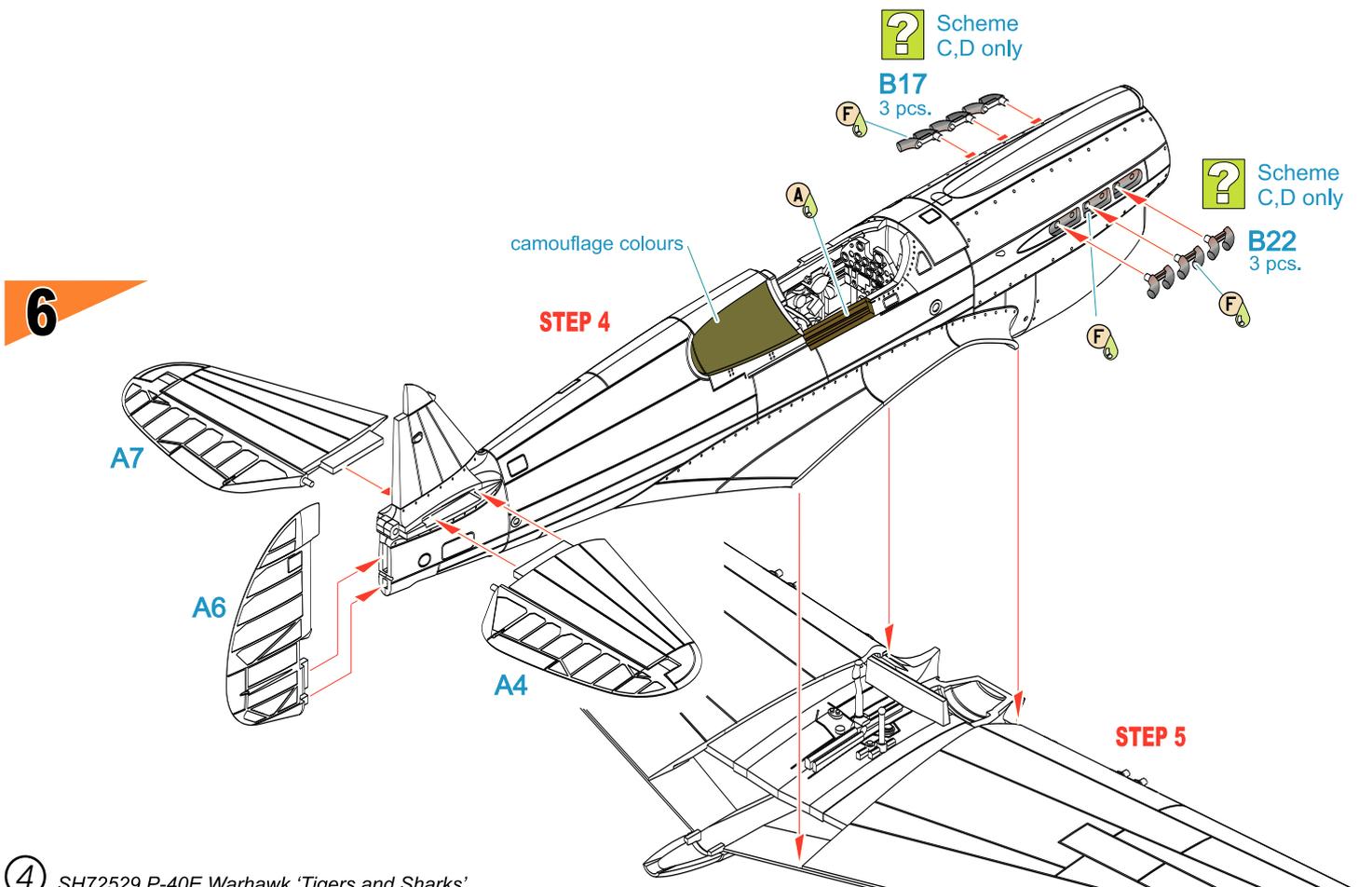
? Scheme C,D only

B17  
3 pcs.

? Scheme C,D only

B22  
3 pcs.

6

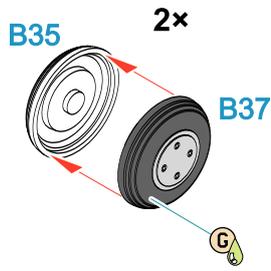


camouflage colours

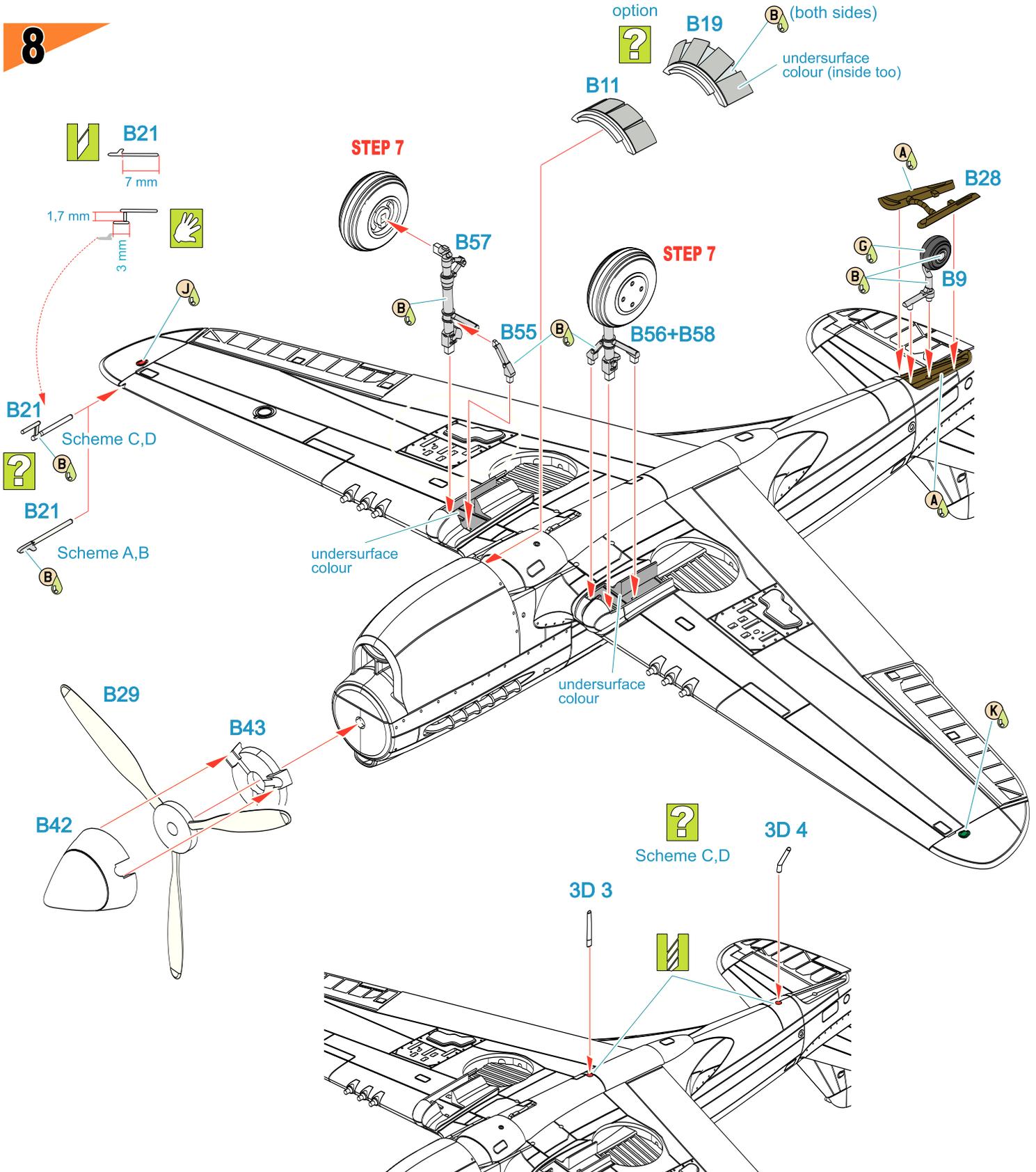
STEP 4

STEP 5

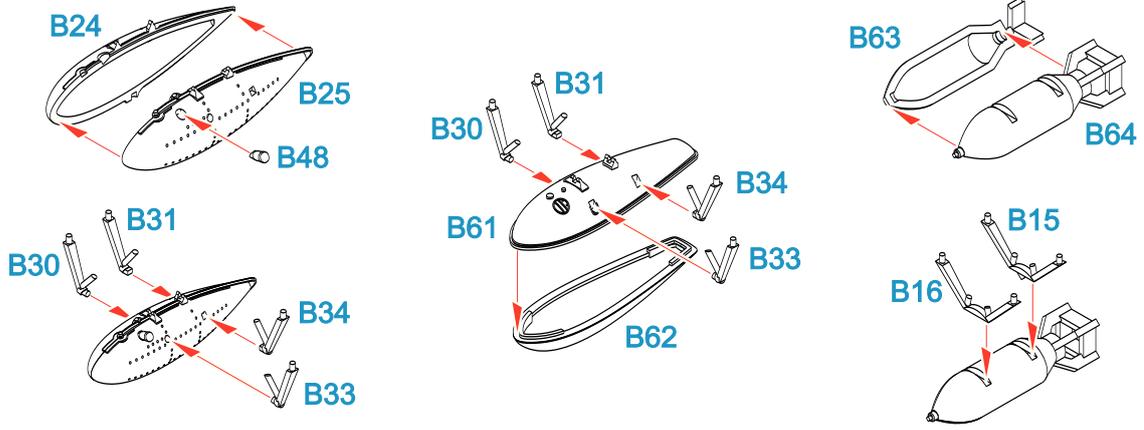
# 7



# 8



9



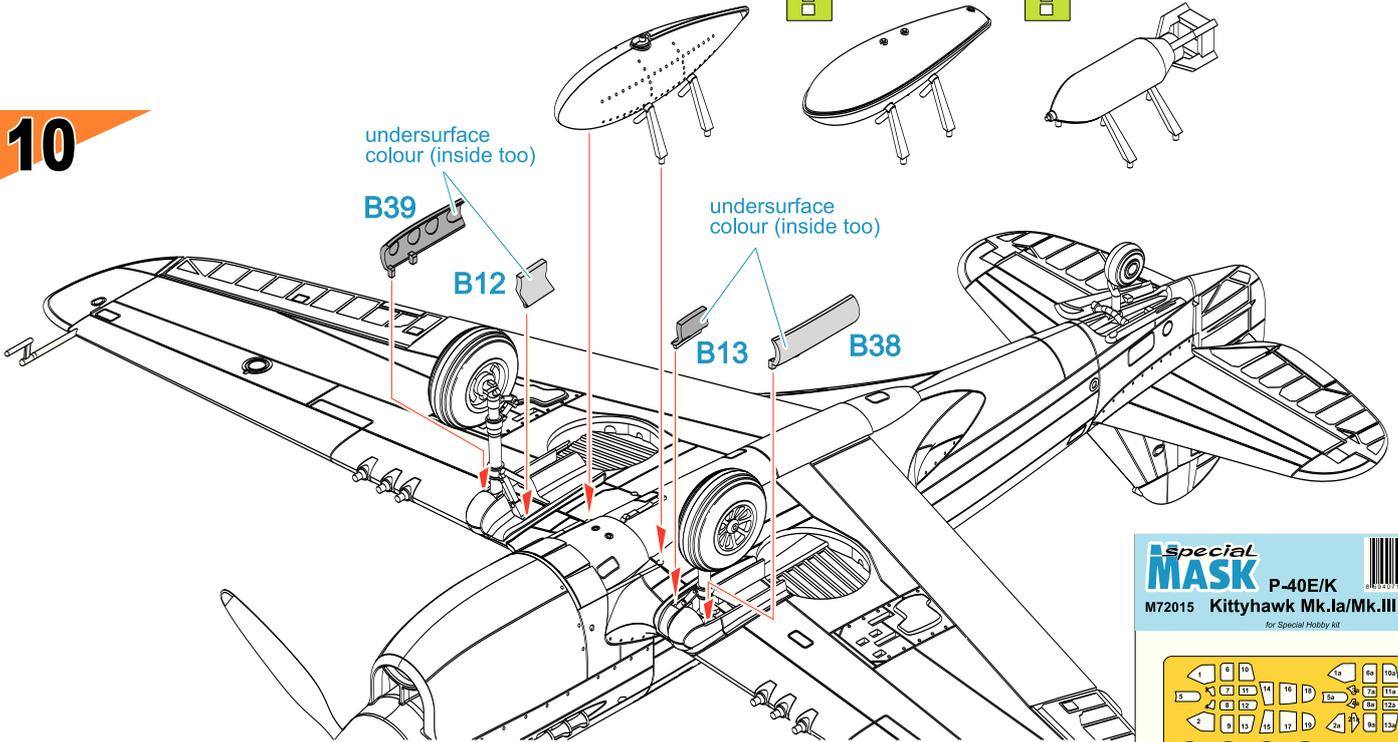
option



option

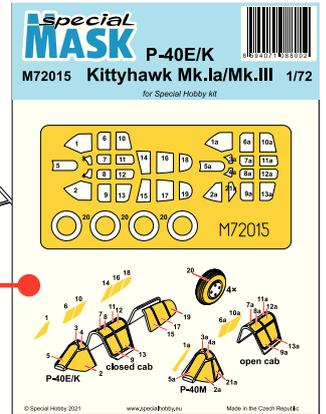


10



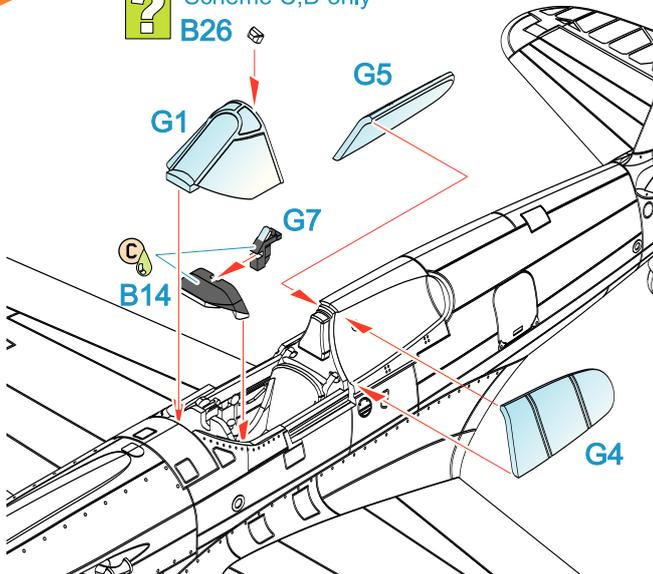
For easier assembly of the P-40D / Kittyhawk Mk.I kit we recommend our pre-cut mask M72015 P-40E/K/Kittyhawk Mk.Ia/Mk.III Mask, sold separately.

Pro snazší stavbu modelu P-40D / Kittyhawk Mk.I doporučujeme použít samostatně prodávané předřezané stříkací masky M72015 P-40E/K/Kittyhawk Mk.Ia/Mk.III Mask

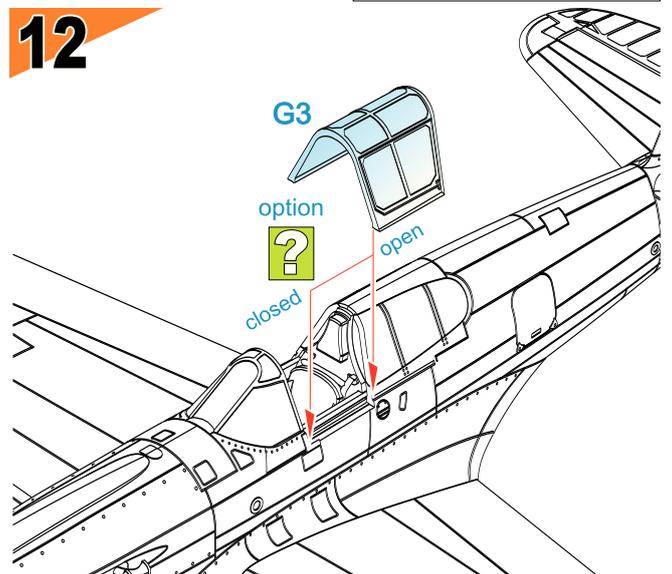


11

Scheme C,D only  
 B26

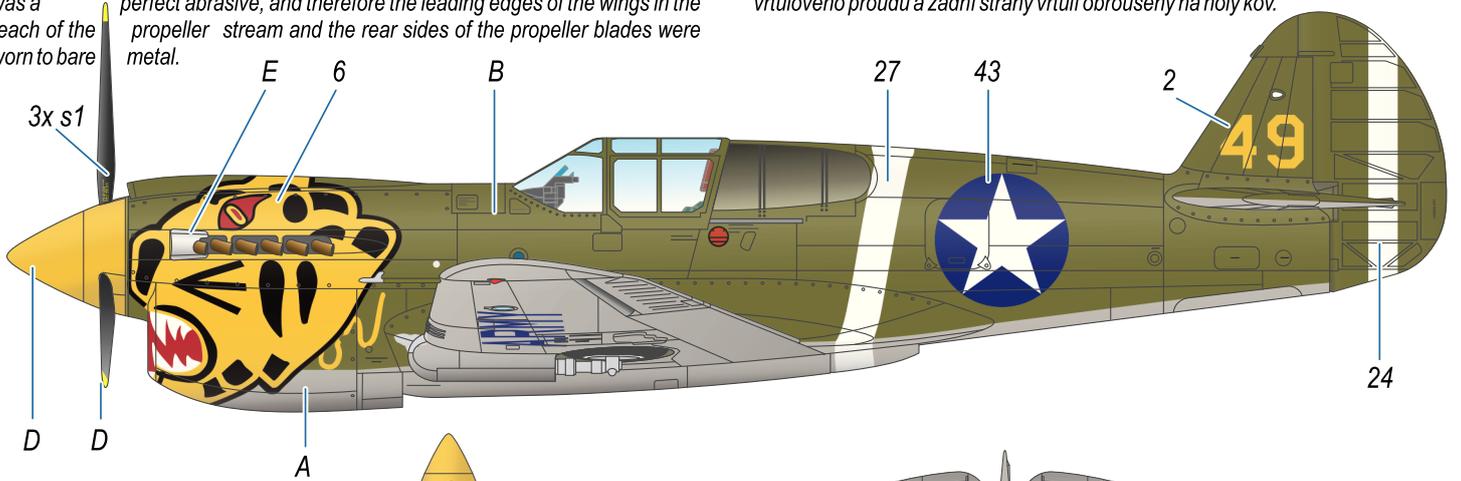


12

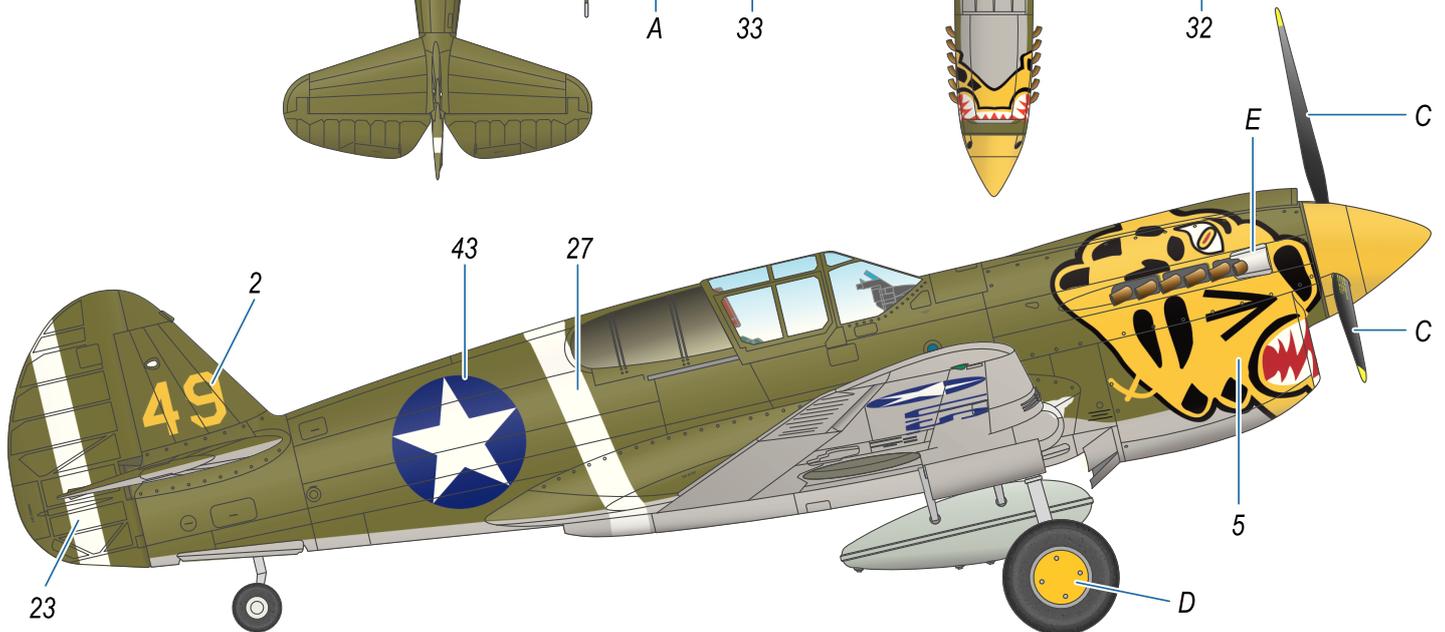
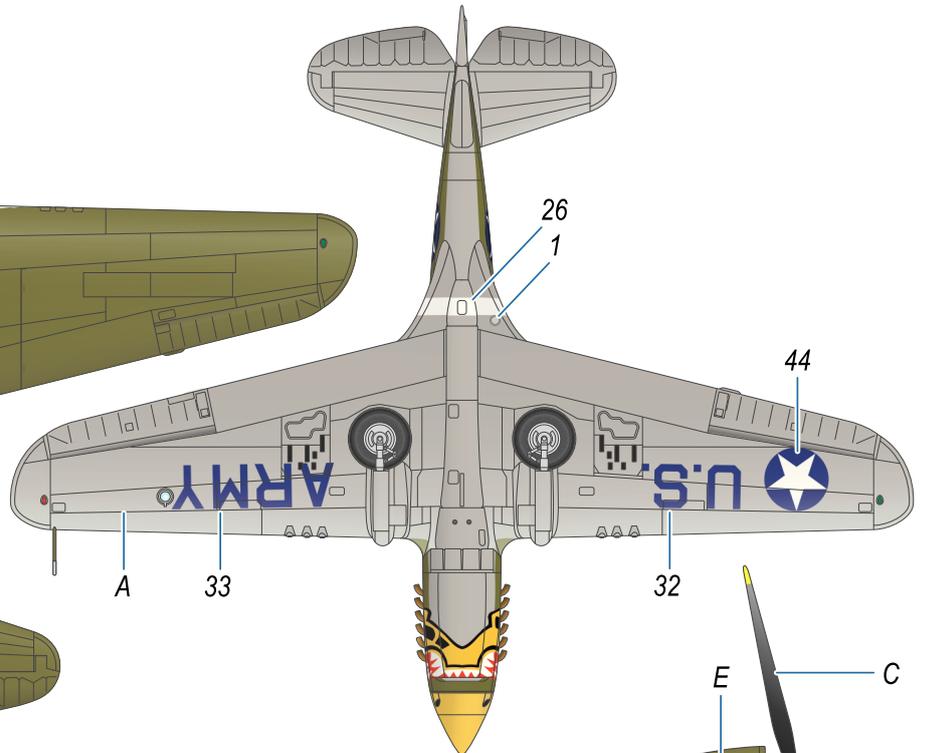
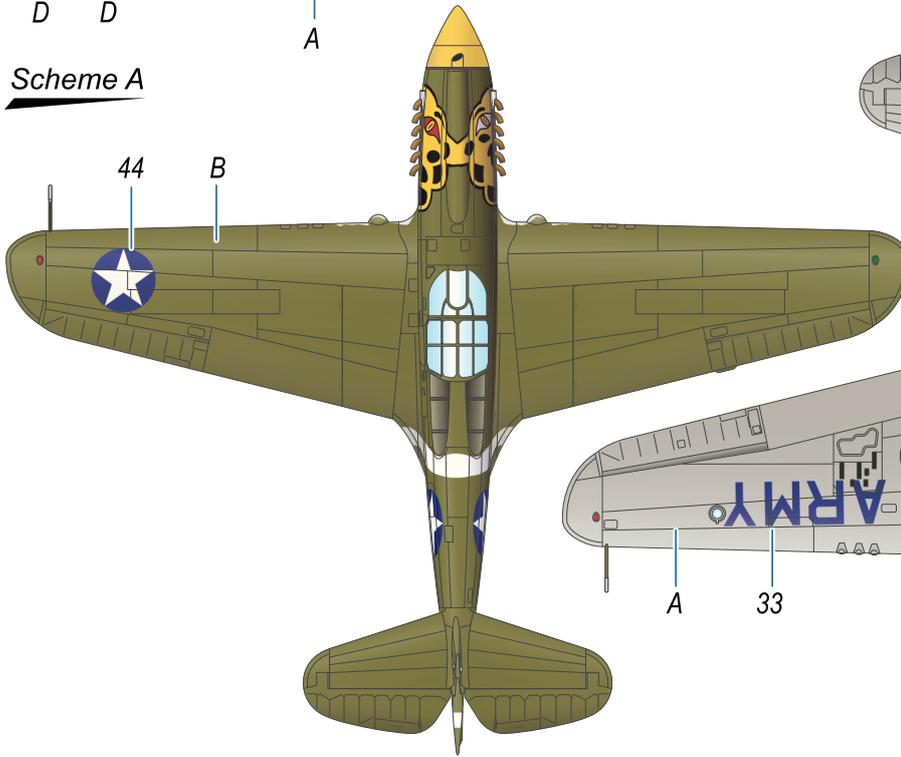


P-40 E Warhawk, Yellow 94, 11th FS, 343rd FG, 11th Air Force, USAAF, Fort Glenn, Aleutian Islands, Alaska, summer 1942. Yellow 94 was one of the machines used by John Stephen 'Jack' Chennault, a son of the famous father C.L. Chennault, the commander of the AVG (Flying Tigers). JS Chennault became a pilot like his father. As the first commander of the 343rd FG, he successfully led his unit to battles against the Japanese in the difficult conditions of the Aleutians. In the battles he shot down a Zero and damaged a Japanese submarine (probably while flying a P-38). Due to the difficult natural conditions, the P-40Es of this unit were modified, the exhausts were covered over and the machine gun blast tubes were shortened so that they could be taped over on the wing leading edge. Aleutian volcanic dust was a perfect abrasive, and therefore the leading edges of the wings in the propeller stream and the rear sides of the propeller blades were worn to bare metal.

P-40 E Warhawk, Yellow 94, 11th. FS, 343rd FG, 11th Air Force, USAAF, základna Fort Glenn, Aleutské ostrovy, léto 1942. Yellow 94 byla jedním ze strojů, které používal John Stephen „Jack“ Chennault. Syn slavného otce C. L. Chennaulta, velitele AVG (Létajících Tigrů), se stal jako otec pilotem. Jako první velitel 343rd FG úspěšně vedl tuto jednotku v bojích proti Japoncům v náročném prostředí Aleut. V bojích sestřelil Zero a poškodil japonskou ponorku (pravděpodobně v kabině P-38). Vzhledem k náročným přírodním podmínkám byly P-40E této jednotky upravovány, výfuky byly zakrytovány a nátrubky kulometů byly zkráceny, aby je bylo možné přelepit na náběžné hraně křídla. Aleutský sopečný prach byl dokonalé abrazivum a proto byly náběžné hrany křídel v dosahu vrtulového proudu a zadní strany vrtulí obroušeny na holý kov.



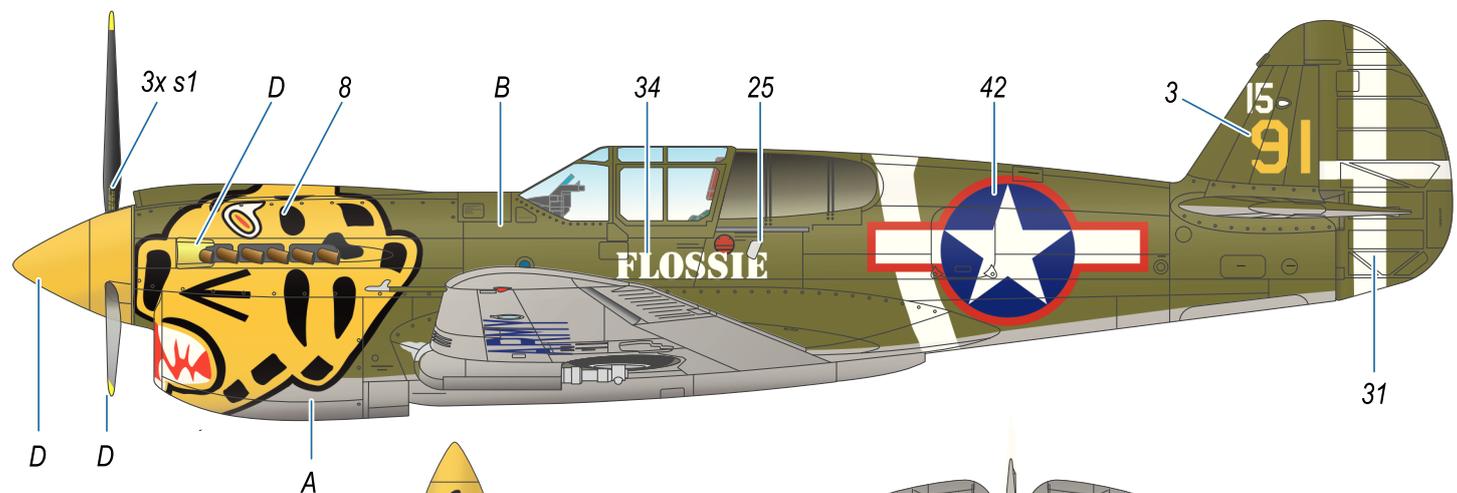
**Scheme A**



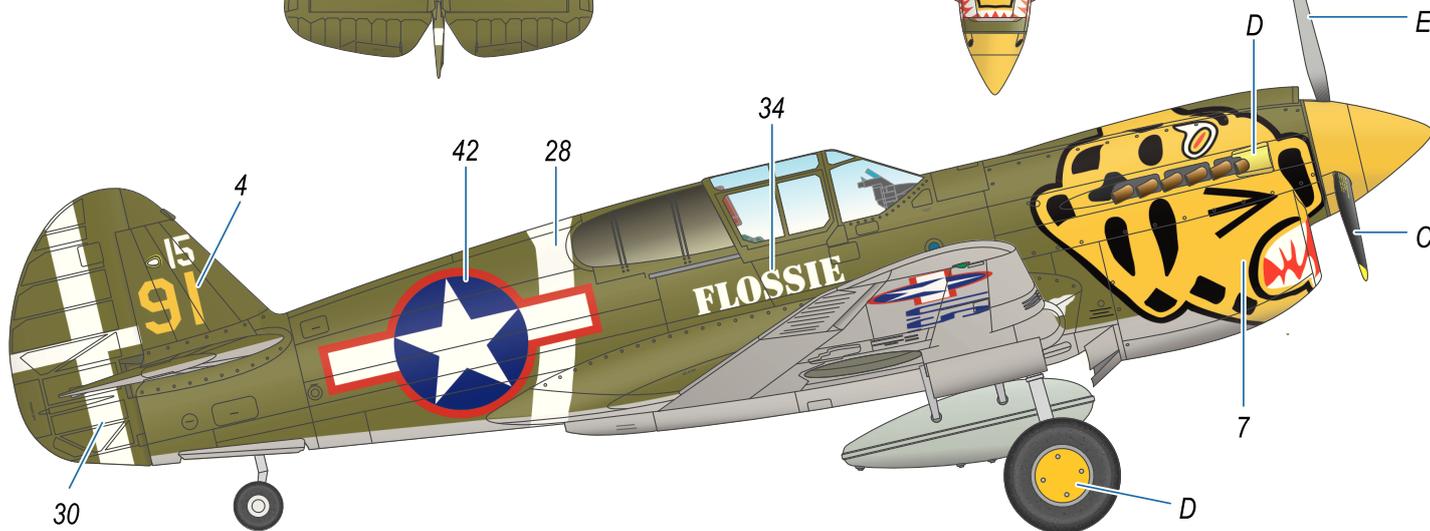
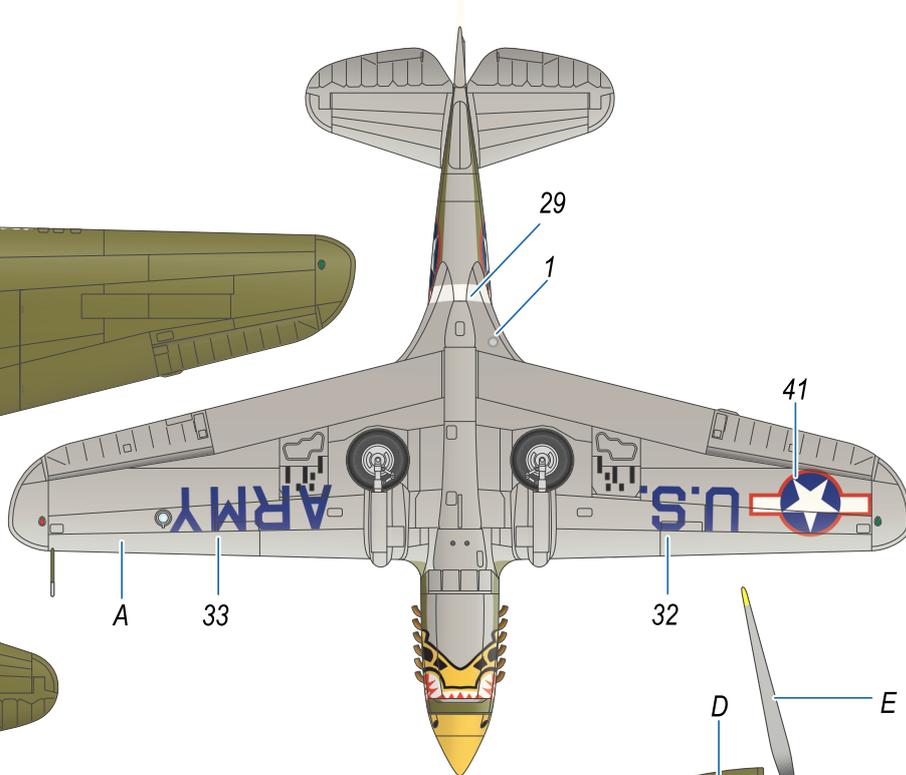
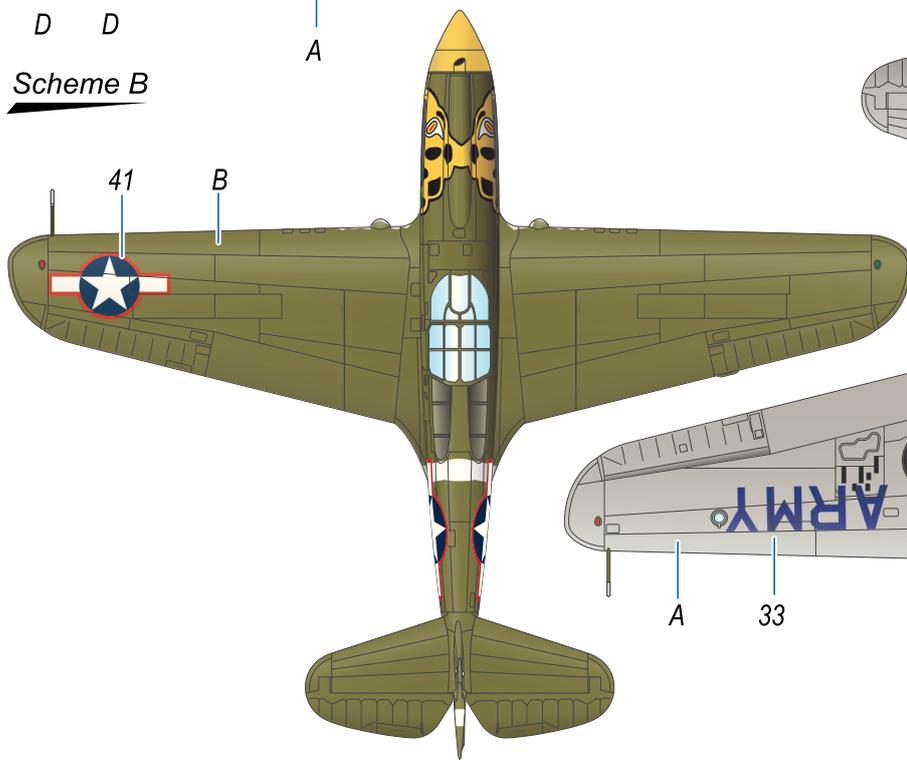
- |  |   |                                    |                                    |   |
|--|---|------------------------------------|------------------------------------|---|
| <b>A</b> Neutral Gray<br>Neutrální šedá<br>H53/C13 | <b>B</b> Olive Drab<br>Nevýrazná olivová<br>H52/C12 | <b>C</b> Black<br>Černá<br>H12/C33 | <b>D</b> Yellow<br>Žlutá<br>H/C329 | <b>E</b> Natural Metal Finish<br>Barva kovu<br>H/C8 |
|--|---|------------------------------------|------------------------------------|---|

P-40 E Warhawk, 15-91, 11th FS, 343rd FG, 11th Air Force, USAAF, Kiska, Aleutian Islands, Alaska, spring 1943. The aircraft, named Flossie, is an example of how the official and unofficial markings of the 11th FS were modified during the war. In the spring of 1943, a horizontal bar was added to the rudder, the star insignia received two white bars and outlined in red. The tiger head on the nose of this aircraft is also photographically documented in two different forms.

P-40 E Warhawk, 15-91, 11th. FS, 343rd FG, 11th Air Force, USAAF, Kiska, Aleuty, jaro 1943. Stroj, pojmenovaný Flossie, je příkladem, jak se v průběhu bojů upravovalo oficiální i neoficiální označení 11th FS. Na jaře 1943 byl na kormidlo SOP doplněn vodorovný pruh, výsostné znaky byly rozšířeny o křídélka a červený lem. Také tygří hlava tohoto letounu je fotograficky doložena ve dvou různých podobách.



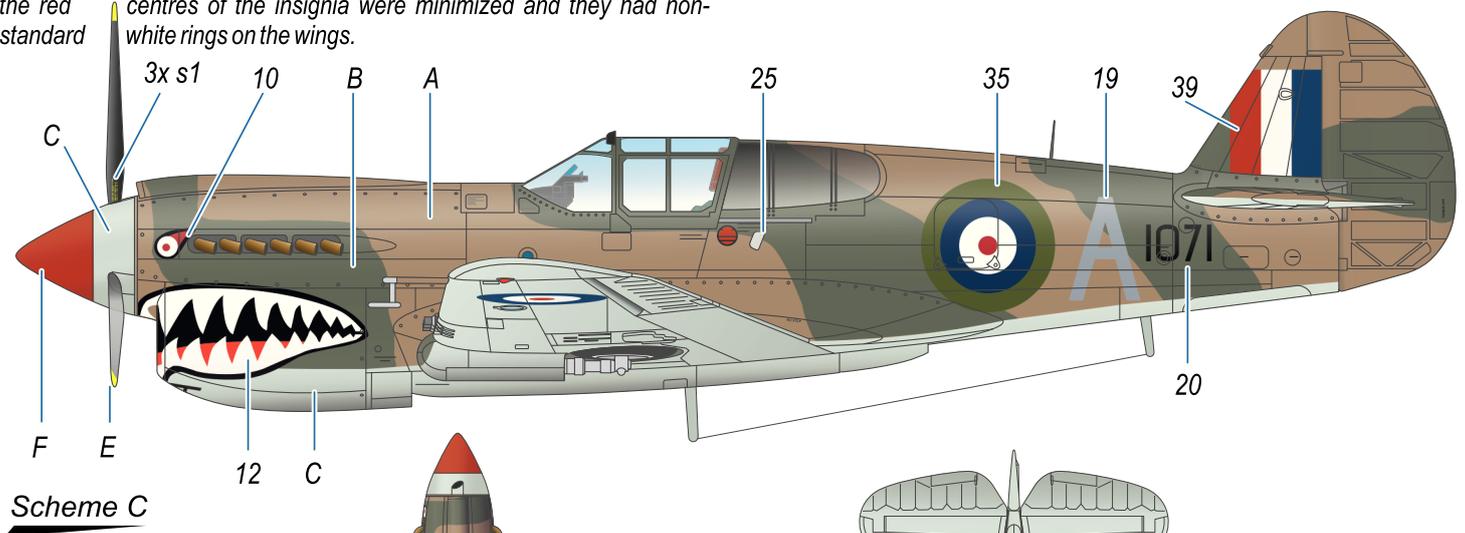
**Scheme B**



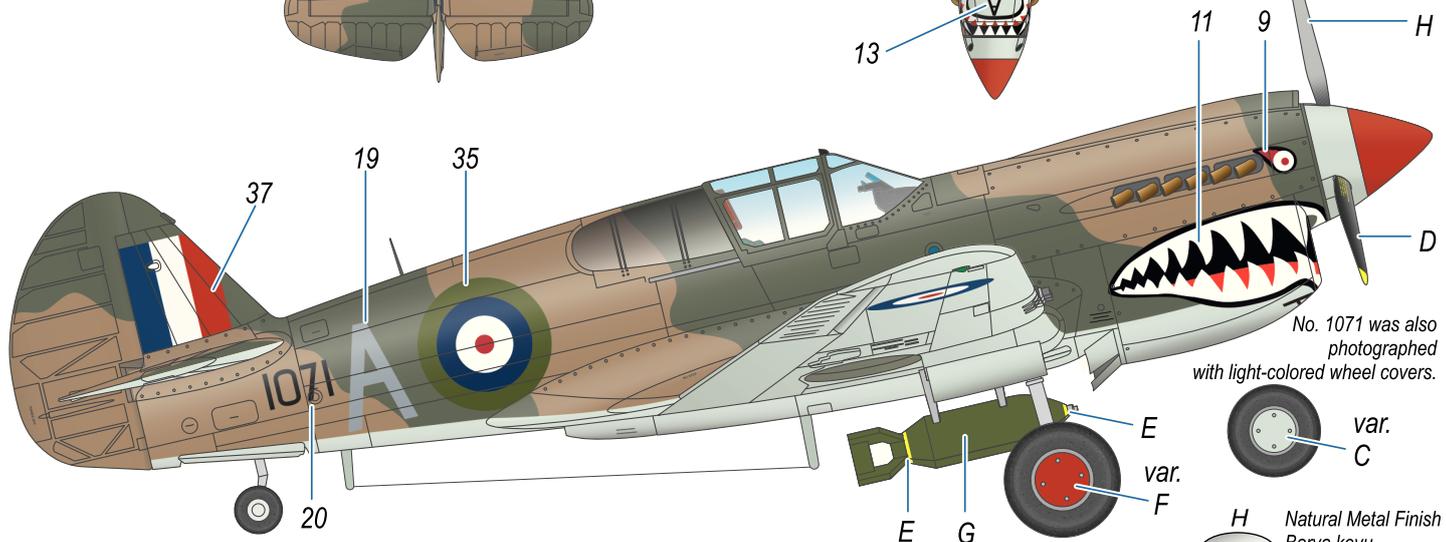
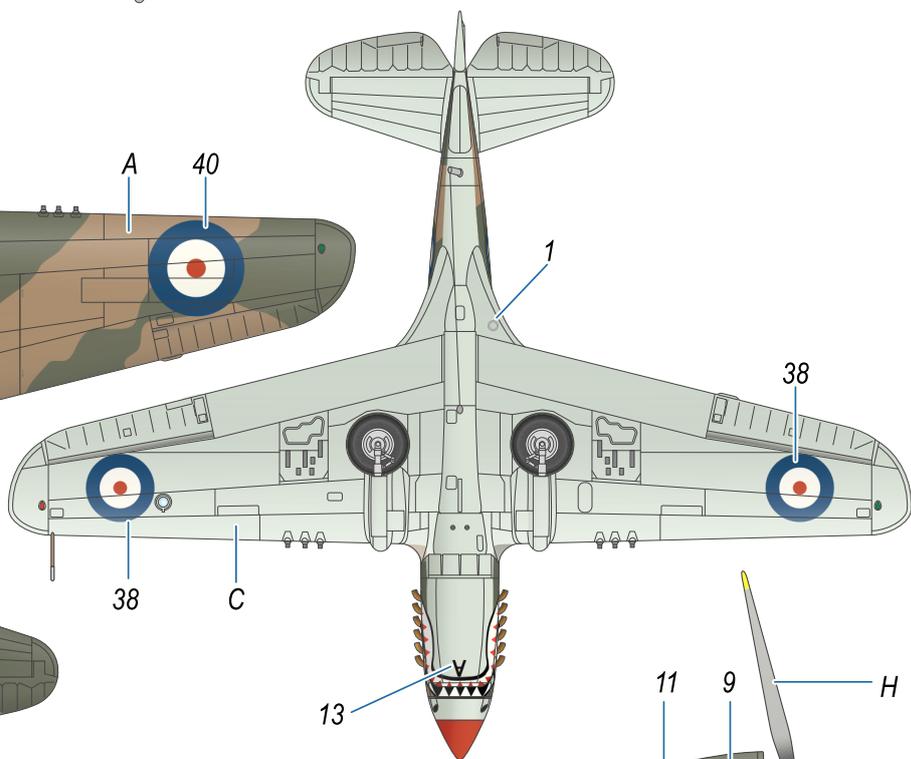
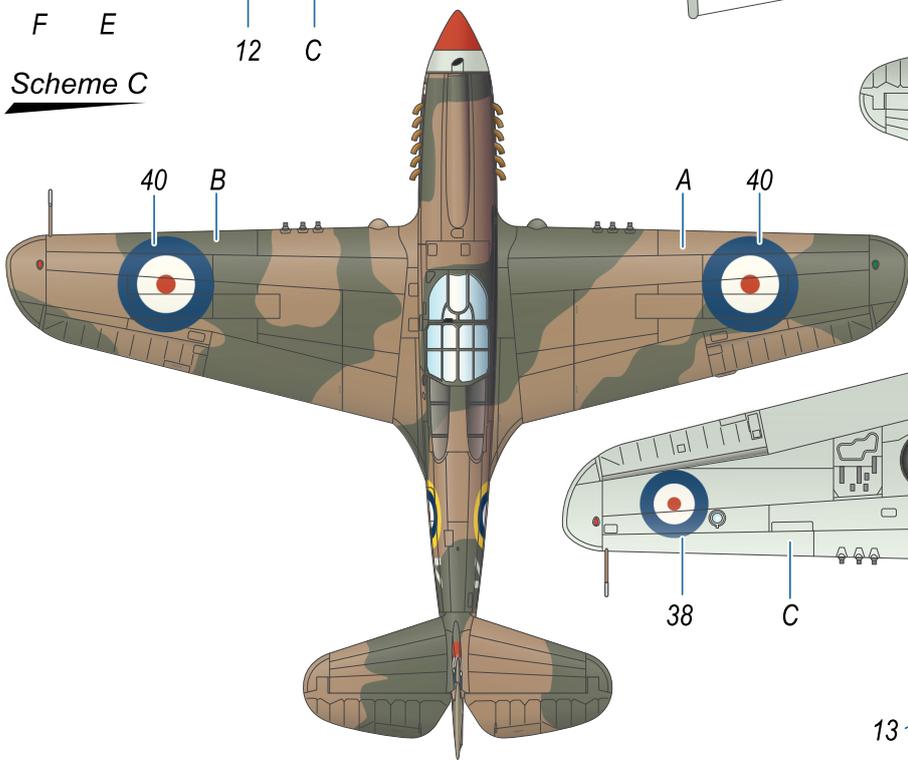
- |  |   |                                    |                                    |   |
|--|---|------------------------------------|------------------------------------|---|
| <b>A</b> Neutral Gray<br>Neutrální šedá<br>H53/C13 | <b>B</b> Olive Drab<br>Nevýrazná olivová<br>H52/C12 | <b>C</b> Black<br>Černá<br>H12/C33 | <b>D</b> Yellow<br>Žlutá<br>H/C329 | <b>E</b> Natural Metal Finish<br>Barva kovu<br>H/C8 |
|--|---|------------------------------------|------------------------------------|---|

Kittyhawk Mk.IA, serial No. 1071/A, pilot P/O A. W. Roseland, No.14 Kittyhawk Mk.IA, s/n 1071/A, flown by P/O A.W. Roseland, No.14 Sqn. RCAF, Umnak, Aleutian Islands, Alaska, 1943. Canadian Kittyhawks entered combat over the Aleutians as fighter-bombers and are photographically documented with bomb armament. Due to the demanding natural conditions of the Aleutians, they were equipped with powerful radio set which also resulted in the installation of two antenna masts connected by an antenna cable under the fuselage. Due to the imminent threat of confusion of the RCAF insignia with the insignia of the Japanese Empire, the red centres of the insignia were minimized and they had non-standard white rings on the wings.

Kittyhawk Mk.IA, serial No. 1071/A, pilot P/O A. W. Roseland, No.14 Sqn. RCAF, Umnak, Aljaška, 1943. Kanadské Kittyhawky se do bojů nad Aleutami zapojily jako stíhací bombardéry a jsou fotograficky doloženy s pumovou výzbrojí. Vzhledem k náročným přírodním podmínkám Aleut byly vybaveny výkonnými radiostanicemi. To se projevilo montáží dvou anténních sloupků spojených anténním lankem pod trupem. Vzhledem k hroziící záměně výsostných znaků RCAF s výsostnými znaky Japonského císařství, byly červené středy znaků minimalizovány a na křídle měly nestandardní bílé mezikruží.



Scheme C



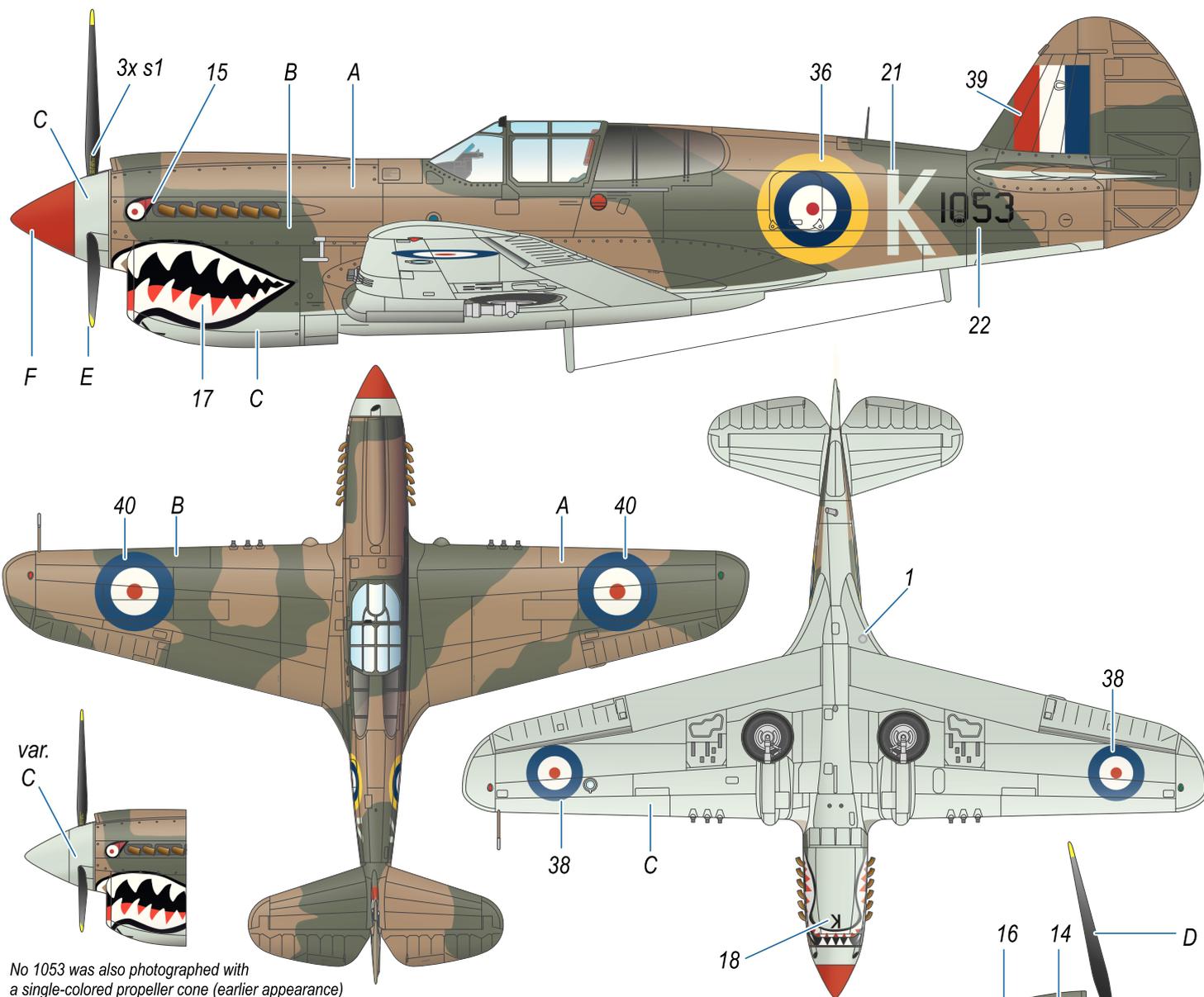
No. 1071 was also photographed with light-colored wheel covers.

- |  |  |  |                                    |                                    |                                      |   |   |
|--|--|--|------------------------------------|------------------------------------|--------------------------------------|---|---|
| <b>A</b> Dark Earth<br>Tmavě zemitá<br>(DuPont 71009)<br>H72/C22 | <b>B</b> Dark Green<br>Tmavě zelená<br>(DuPont 71013)<br>H73/C23 | <b>C</b> Sky Grey<br>Sivětle šedá<br>(DuPont 71021)<br>H325/C325 | <b>D</b> Black<br>Černá<br>H12/C33 | <b>E</b> Yellow<br>Žlutá<br>H/C329 | <b>F</b> Red<br>červená<br>H327/C327 | <b>G</b> Olive Drab<br>Nevýrazná olivová<br>H52/C12 | <b>H</b> Natural Metal Finish<br>Barva kovu<br>H/C8 |
|--|--|--|------------------------------------|------------------------------------|--------------------------------------|---|---|

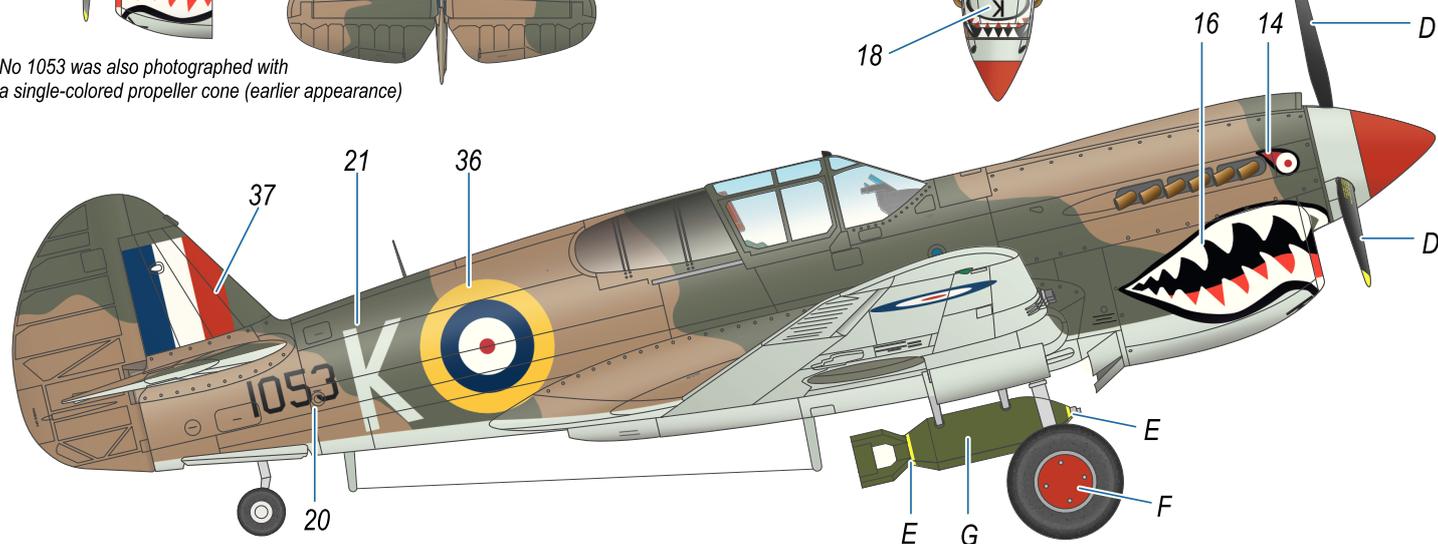
Kittyhawk Mk.IA, serial No. 1053/K, No.14 Sqn. RCAF, Umnak, Aleutian Islands, Alaska, 1943. No 1053 shows a different shark mouth shape. At first, the spinner was just in one colour while later, it was painted in two shades. Both forms were caught on period photographs.

Kittyhawk Mk.IA, serial No. 1053/K, No.14 Sqn. RCAF, Umnak, Aljaška, 1943. No 1053 ukazuje jiný tvar žraločí tlamy. Je fotograficky doložen nejprve s jednobarevným kuželem, pozdější fotografie ukazuje dvoubarevnou variantu.

### Scheme D

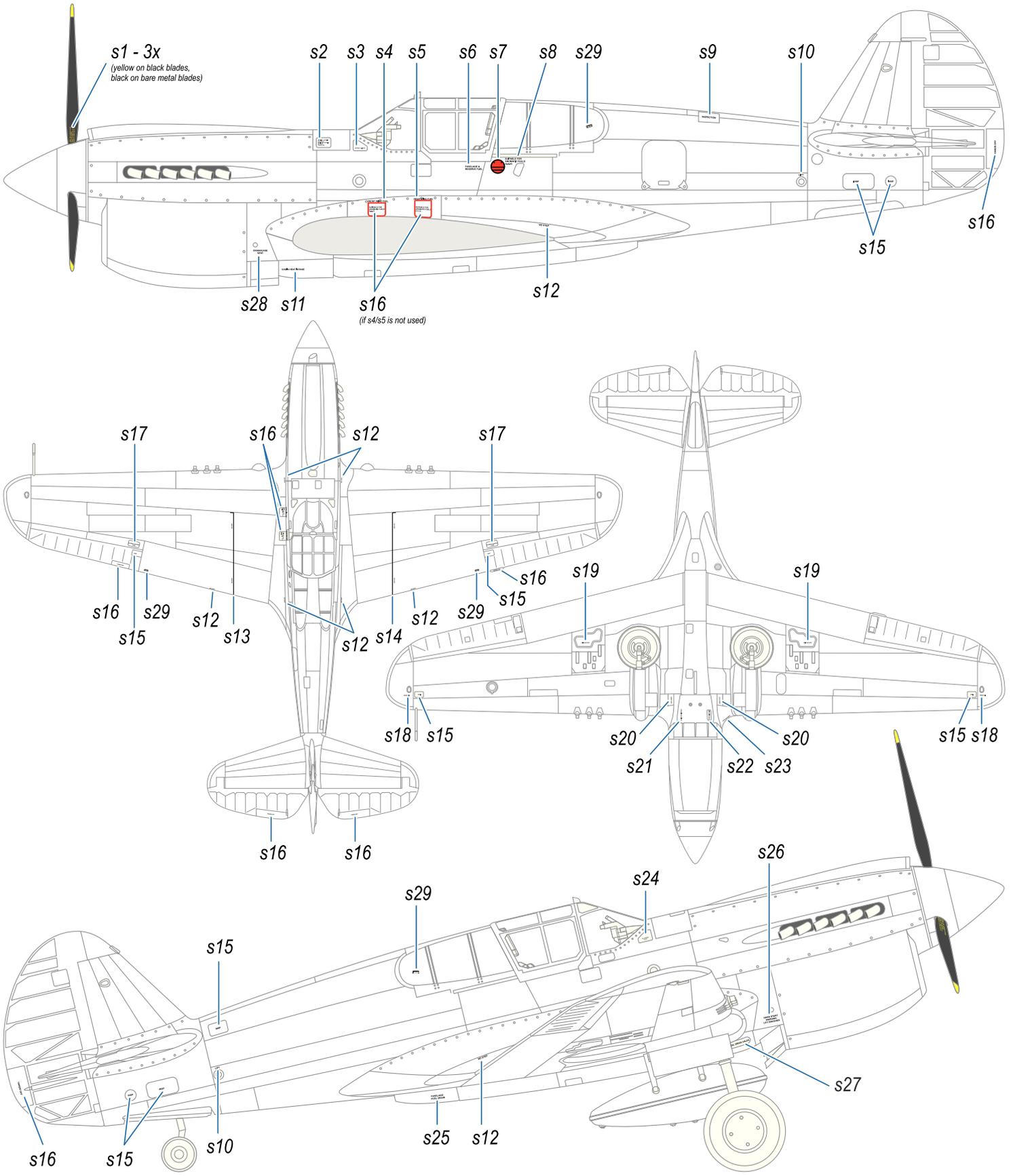


No 1053 was also photographed with a single-colored propeller cone (earlier appearance)



<b>A</b> Dark Earth Tmavě zemitá (DuPont 71009) H72/C22	<b>B</b> Dark Green Tmavě zelená (DuPont 71013) H73/C23	<b>C</b> Sky Grey Sivětle šedá (DuPont 71021) H325/C325	<b>D</b> Black Černá H12/C33	<b>E</b> Yellow Žlutá H/C329	<b>F</b> Red červená H327/C327	<b>G</b> Olive Drab Nevýrazná olivová H52/C12
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Universal Stencil Placement Scheme





# 1/72 P-40 SETS for Special Hobby Kits



**Q72293**  
P-40E/F/K/L/M  
and N-1 Seat



**Q72294**  
P-40N-5 through  
N-40 Seat



**Q72299**  
P-40E, F, K, L, M  
and N-1 Seat with Belts



**Q72301**  
P-40 Cockpit Sidewalls  
and Control Column



**Q72295**  
P-40 Wheels Diamond Tread



**Q72296**  
P-40 Wheels Block Tread



**Q72300**  
P-40N-5 through  
N-40 Seat with  
Belts



**Q72302**  
Kittyhawk I, Ia, II,  
IIa and III Seat with  
Sutton Harness



**Q72303**  
Kittyhawk IV Seat  
with Sutton  
Harness



**Q72309**  
P-40E-N  
Control Column (3 pcs)



**Q72297**  
P-40 Wheels Cross Tread



**Q72298**  
P-40 Wheels Diamond  
and Hole Tread

**7386**  
P-40 Control  
Surfaces



**7389**  
P-40E/K/M/N Armament Set



**7387**  
P-40 Undercarriage Set



**7388**  
P-40 Engine Set



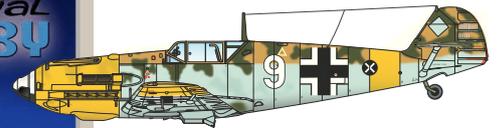
**7390**  
P-40N Engine Set



**F72344**  
RAF Pilot Sitting in Cockpit with Monkey +  
2 Mechanics, Western Desert



72 Special HOBBY



Messerschmitt Bf 109E-7 Trop 'Braving Sand and Snow'

RECOMMENDED FOR OUR MESSERSCHMITT BF 109E KITS



**7455**  
Bf 109E  
Engine



**7457**  
Bf 109E-3/4/7  
Wing Guns



**7458**  
Bf 109E  
FuG VII Radio  
Equipment



**7460**  
Bf 109E-1/5  
Wing  
Machine Guns



**7461**  
ESK 2000 B  
German WWII  
Gun Camera



**Q72390**  
Bf 109E  
Exhausts



**Q72384**  
Bf 109E  
Wheels



**Q72391**  
Bf 109E  
Tailwheel with  
Strengthened Leg



**Q72389**  
Bf 109E  
Propeller  
Spinner



**F72369**  
Bf 109E Ace  
A. Galland and  
Mechanic

Messerschmitt Bf 109E-4/7 Mask  
**M72009**

Messerschmitt Bf 109E-1/3 Mask  
**M72010**



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