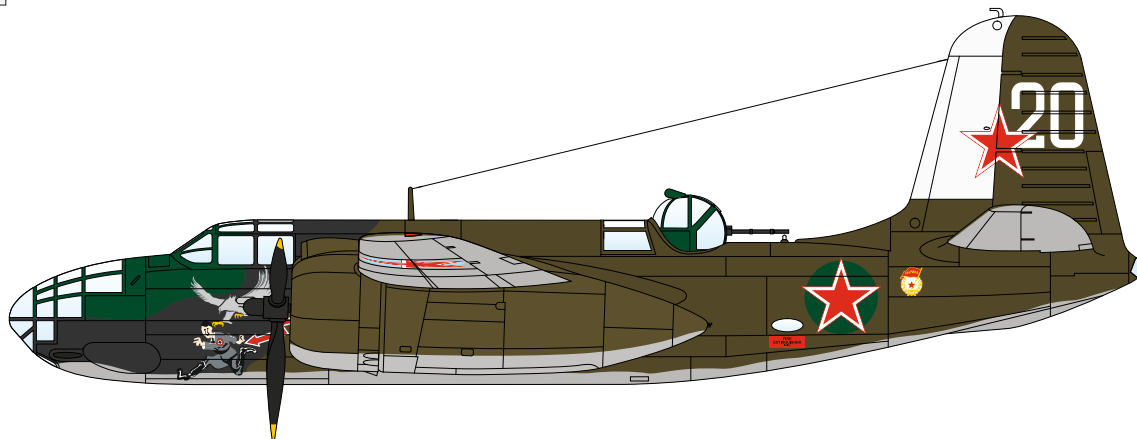




NÁVOD / INSTRUCTION

A-20B/C Boston with UTK-1 Turret

1/72

Historie

Americké letectvo usoudilo v roce 1937, že jednomotorové letouny kategorie Attack přestávají výkonově stačit. Vypsalo proto soutěž na nový dvoumotorový stroj této kategorie. Firma Douglas se stala vítězem této soutěže se svým návrhem model 7B. Původní návrh by postupně upravován, částečně také podle francouzských požadavků. Francie a další evropské země objednaly stroje označované DB-7A. Všechny tyto stroje byly poháněny motory R-1830. Po kapitulaci Francie převzalo další objednávky RAF. RAF tyto stroje pojmenovalo Havoc Mk.I. USAF a RAF požadovaly větší výkony a tak firma Douglas navrhla model DB-7B se silnějšími motory R-2600. Americké letectvo dostalo nejprve malou sérii A-20A Havoc s motory vybavenými turbokompresory a pak velké série verzí A-20B a A-20C. Ty se lišily zejména tvarem prosklení příďe. A-20B měla prosklení stupňené, A-20C šikmé. Tyto stroje odebíralo i RAF, které přidělilo verzi A-20B jméno Havoc Mk.III a verzi A-20C Havoc Mk.IIIA. Dále se tyto stroje dostaly do výzbroje SAAF, RAAF (ex holandské stroje pro Holandskou východní Indii) a Brazílie. V rámci Lend-Lease je dostal i Sovětský svaz. V Sovětském Svazu byly A-20B a C často upravovány montáží domácích věží UTK-1 a jiné výzbroje a výstroje podle podmínek a potřeb východní fronty. Na základě těchto strojů byly postaveny i noční stíhací verze, americká P-70 a britská Havoc NF Mk.II. Část britských strojů byla přestavěna na variantu Havoc Turbinlite se světlometem v přídi a neúspěšně použita k nočnímu stíhání.

A-20B/C se jako lehké bombardéry a bitevníky velmi osvědčily. USAF je nasadilo hlavně v Africe a Itálii, Britské RAF s Havocy zahájilo tzv. Non-stop ofenzívu, používalo je jako denní bombardéry i k nočním útokům na nepřátelská letiště a jiné cíle (Intrudery). Část strojů nasadilo také v Africe a Itálii. Australské RAAF upravilo své Havocy montáží pevných zbraní do přídi a nasadilo je s velkými úspěchy k bitevním útokům z malých výšek. Dalším vývojem vznikly verze A-20G/H/J/K vyzbrojené střeleckou věží místo hřbetního střeliště. Ty sloužily až do konce druhé světové války.

Rozpětí: 18,69 m, délka: 14,27 m, max. Rychlost: 560 km/h, dolet: 1740 km, dostup: 8800 m., nosnost pum: 940 kg, obranná výzbroj se lišila dle provedení pro USAF nebo RAF.

History

In 1937 US Air Force HQ found out that performance single engined Attack aircraft of were not sufficient. Therefore a competition was issued calling for new twin engined aircraft of this category. Douglas Co. won the competition with its Model 7B design. The original design was subsequently modified, partly according to French requirements, too. France and other European countries ordered these machines under designation DB7A. All these machines were powered by R-1830 engines. When France capitulated the rest orders were taken over by the RAF that designated these machines as the Havoc Mk.I. Both RAF and USAAF demanded better performance so Douglas Co. designed Model DB-7B powered by R-2600 engines with increased output. At first the USAAF received small batch of A-20A Havocs powered by engines with superchargers and then bigger series of A-20Bs and A-20Cs. These versions differed from each other mainly by the nose glazing shape. The A-20B had step like glazing but the A-20C featured diagonal edge of the glazing. Both versions were also ordered by the RAF that designated them the Havoc Mk.III and Mk.IIIA respectively. Moreover, these machines were also used by the SAAF, RAAF (ex-Dutch machines for the Dutch East Indies) and Brazil. As a part of the Lend-Lease treaty, also the Soviet Union received these machines. In the USSR, the A-20B/C were often adapted by fitting locally produced UTK-1 gun turrets or another type of armament and equipment to be able to comply with the needs of the Eastern front.

Based on these versions the night fighter version, US P-70 and British Havoc NF Mk.II were built. Several British machines were modified into Havoc Turbinlite equipped with a searchlight in the nose for night fighter missions but did not enjoy much success. The A-20B/C proved efficient as light bombers and attack planes. The USAAF deployed them mainly to Africa and Italy, while the RAF started with Havocs the so-called Non-Stop offensive; they were used as day bombers and for night intruder missions against enemy airbases and other targets. Several machines were also deployed to Africa and Italy.

The RAAF modified their Havocs by addition of fixed machine guns into the nose and successfully used them as ground attack planes. Further development brought A-20G/H/J/K versions equipped with dorsal turret in place of the original dorsal gunner's position. These versions served until the end of World War 2.

Wingspan: 18.69 m, length: 14.27 m, Max. Speed: 560 kmh, Range: 1,740 km, Service Ceiling: 8,800 m., Bomb load: 940 Kg; Both USAF and RAF versions differed by defensive armament.

KIT PARTS

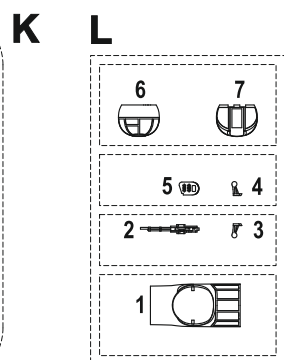
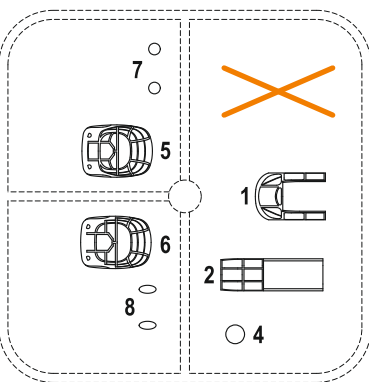
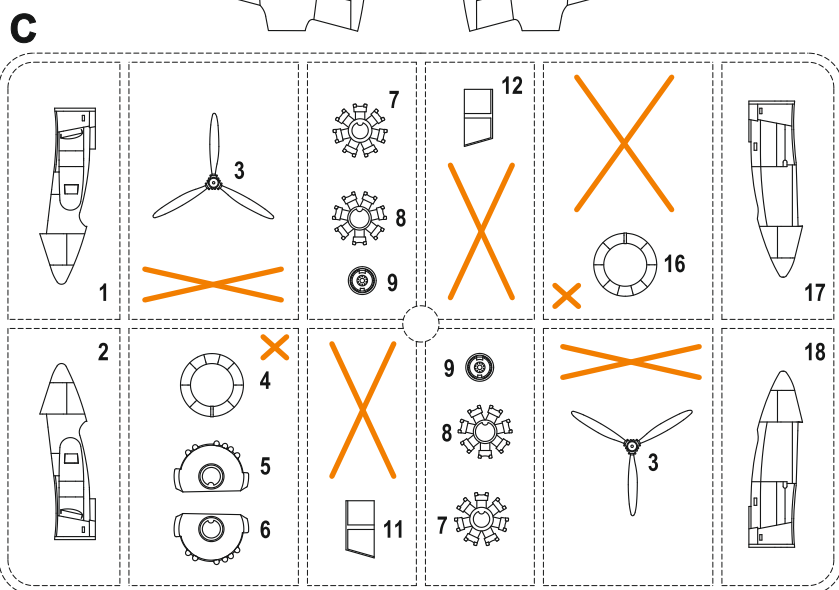
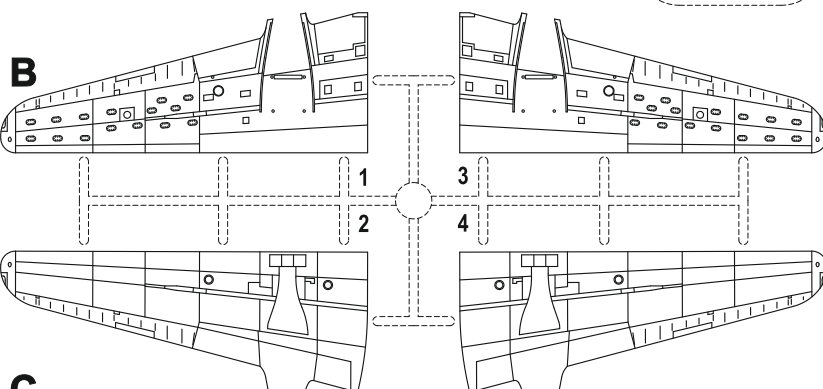
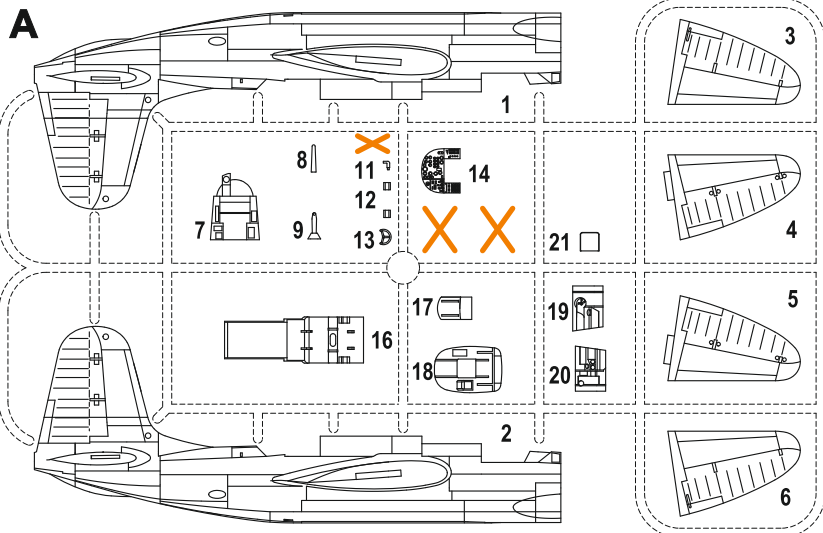
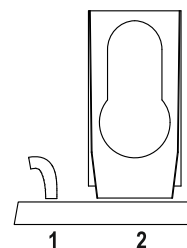
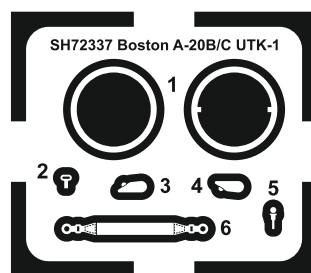


PHOTO-ETCHED PARTS PP

RESIN PARTS PUR



Tento díl nepoužít Do not use this part

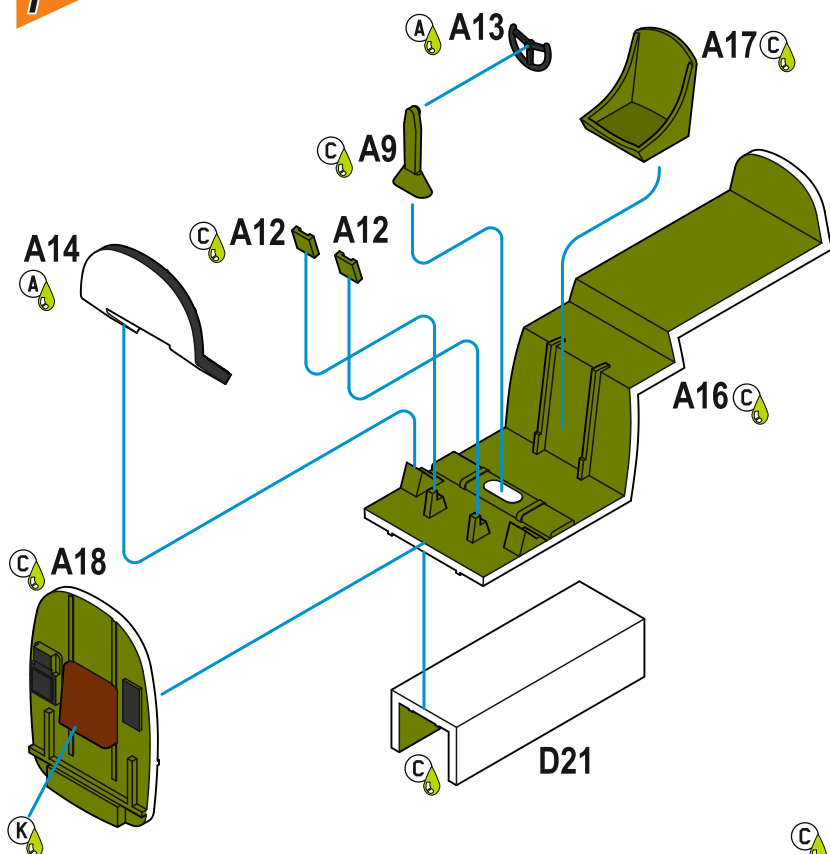
SYMBOLS

	MOŽNOST VOLBY OPTIONAL NACH BELIEBEN OPTION		POUŽIT KYANOAKRYLÁTOVÉ LEPIDLO INSTANT CYANOACRYLATE GLUE ZYANOAKRYLATKLEBER COLLE CYANOACRYLAT		OHNOUT BEND BIEGEN COURBER		ZHOTOVIT NOVÉ SCRATCH BUILD FERTIGSTELLEN ACHEVER		ŘEZAT/VRTAT CUT OFF/DRILL ENTFERNEN DETACHER		GSI colours code		NATŘÍT COLOUR FARBEN PEINDRE
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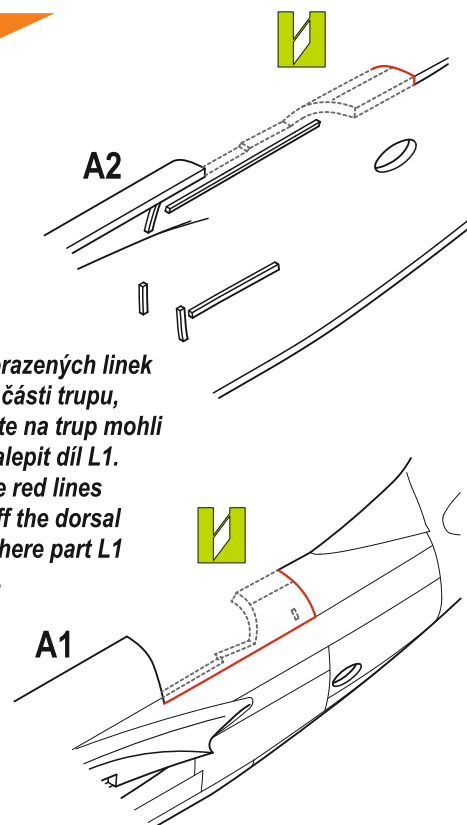
A Matná černá/ Matt Black	H12/ C33	H Černý kov/ Metal Black	H28/ C78
B Barva pneu/ Tire Black	H77/ C137	I Hliník/ Aluminium	H8/ C8
C Interier. zelená/ Interior Green	H58/ C27	J Opálený kov/ Burnt Iron	H76/ C61
D Letecká šedá/ Aircraft Gray	H57/ C73	K Barva kůže/ Red Brown	H47/ C41
E Žlutá/ Yellow	H4/ C4	L Kovová šedá A-14/ Steel Gray A-14	H22/ C13
F Ruská zelená AMT-4/ Russian Green AMT-4H303/ C303		M Mosaz/ Brass	MC219
G Tan /Barva Plátu	H27/ C44		

ASSEMBLY

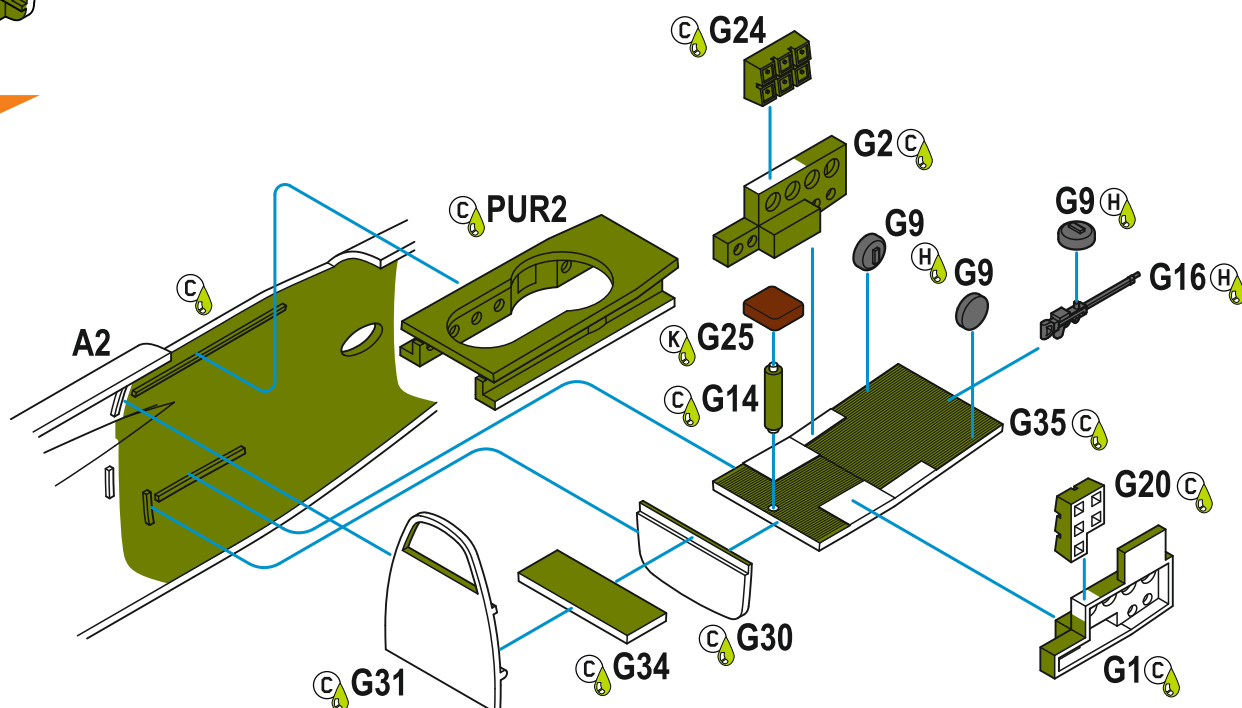
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2



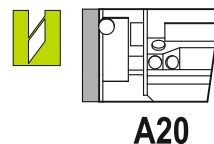
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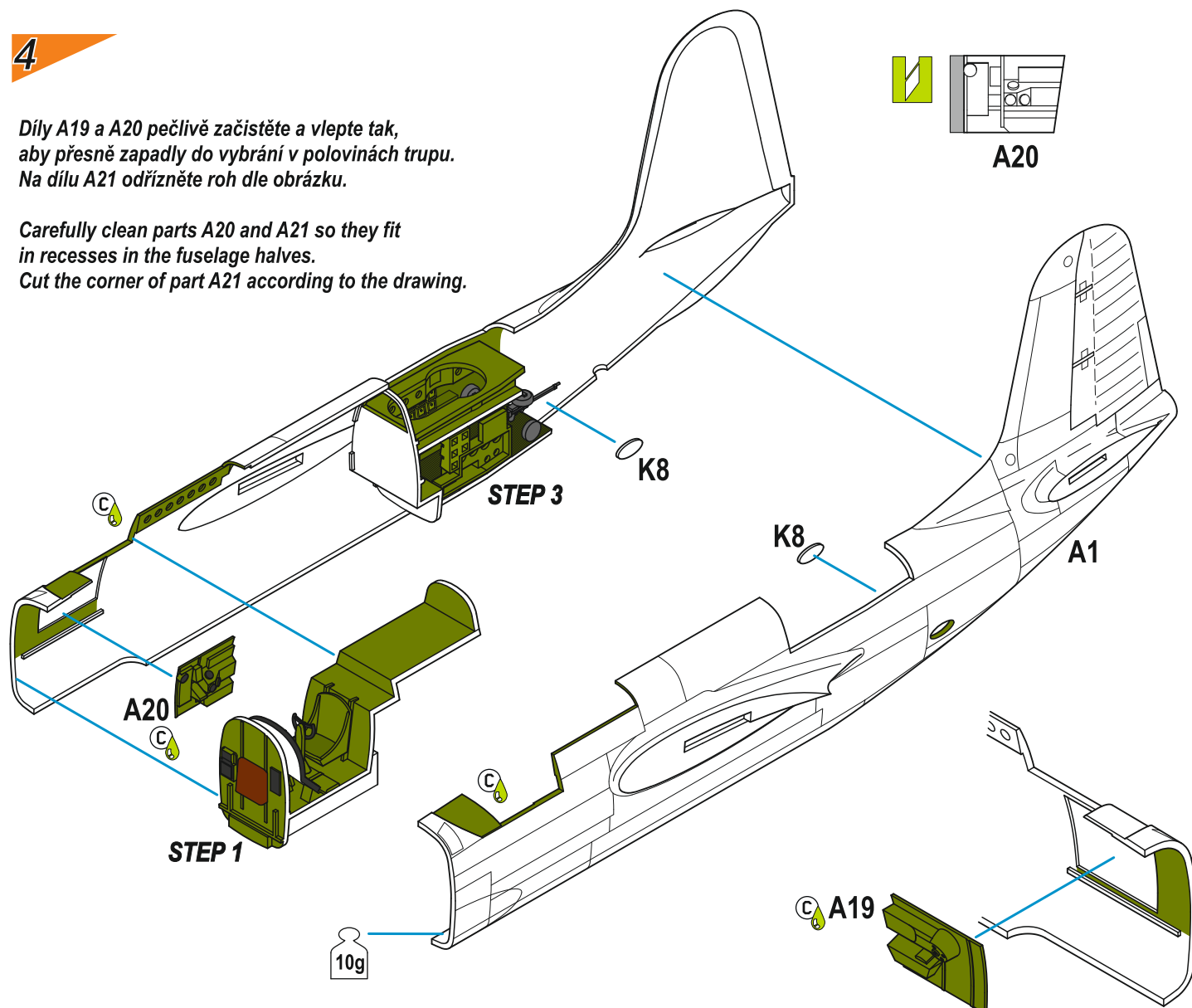
4

Díly A19 a A20 pečlivě začistěte a vlepíte tak, aby přesně zapadly do vybrání v polovinách trupu. Na dílu A21 odřízněte roh dle obrázku.

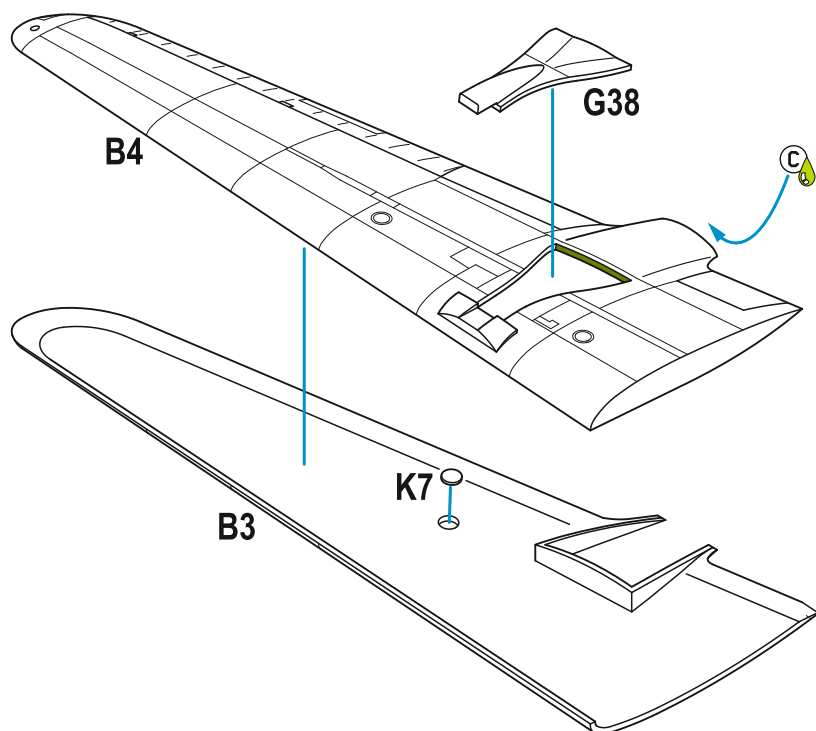
Carefully clean parts A20 and A21 so they fit in recesses in the fuselage halves. Cut the corner of part A21 according to the drawing.



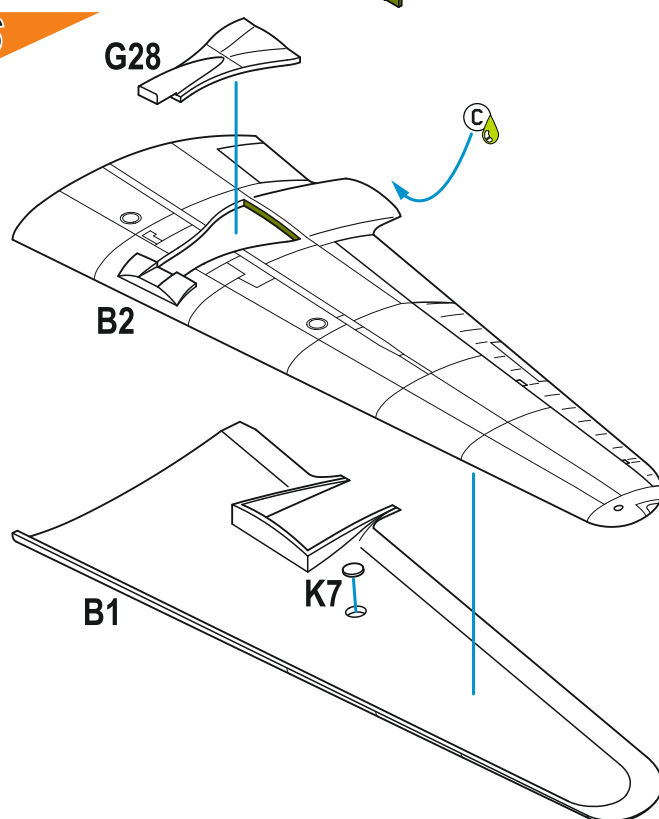
A20



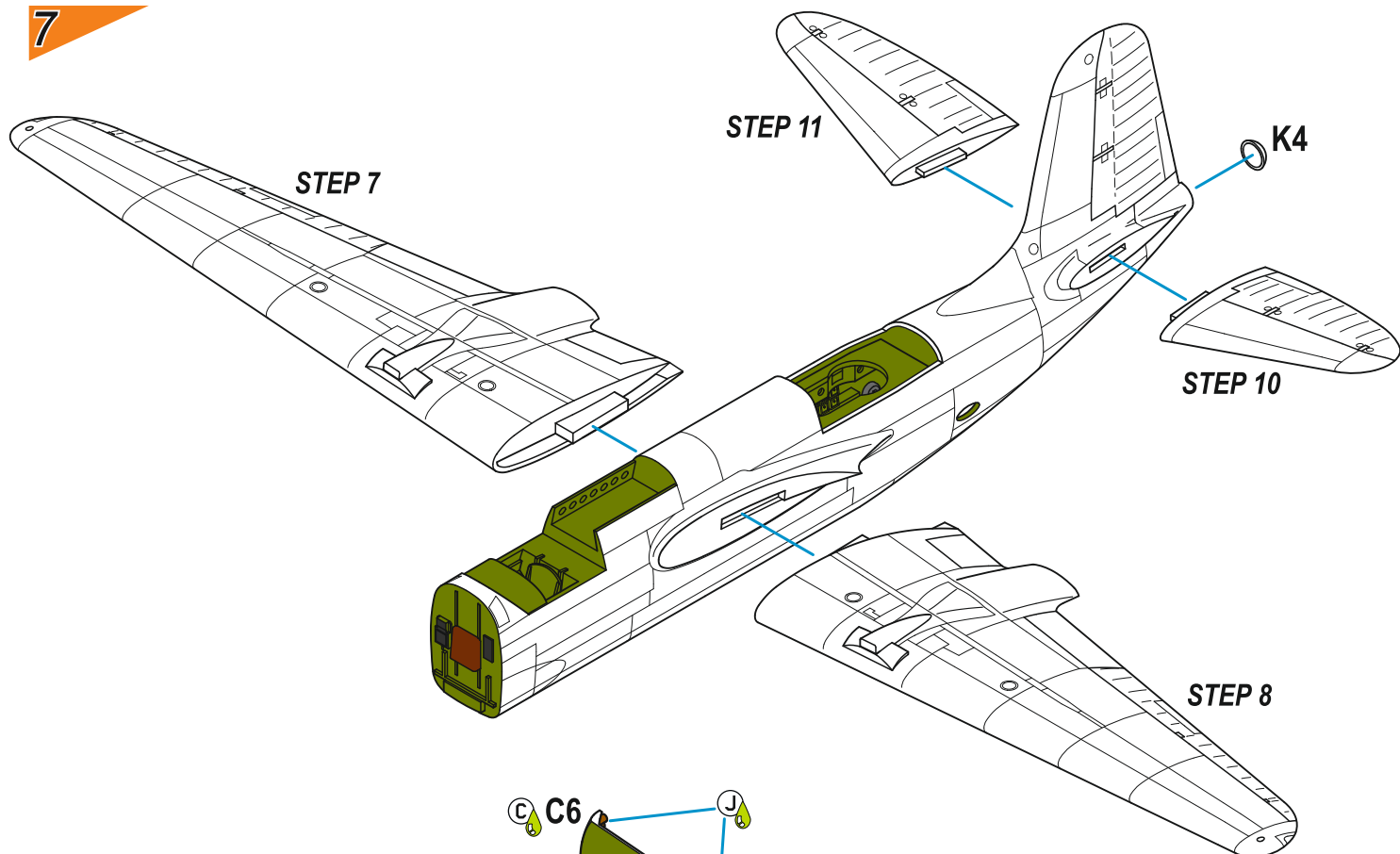
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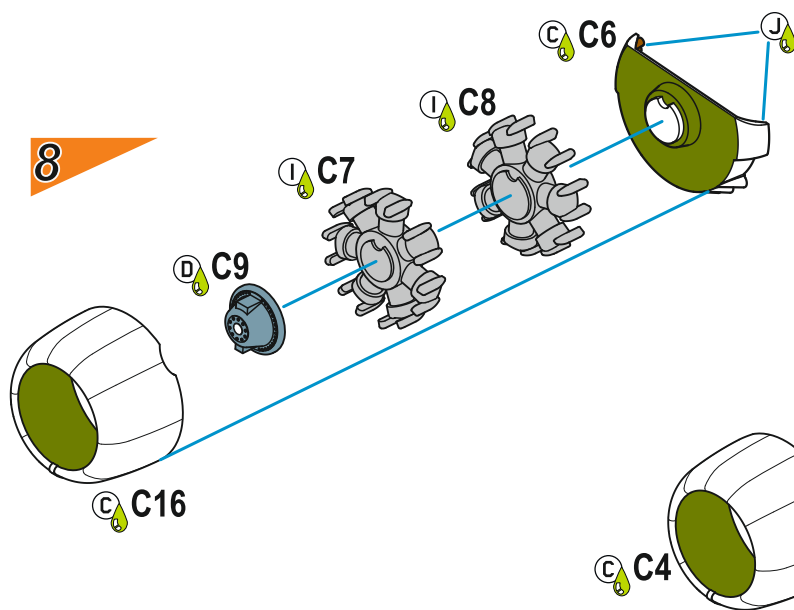
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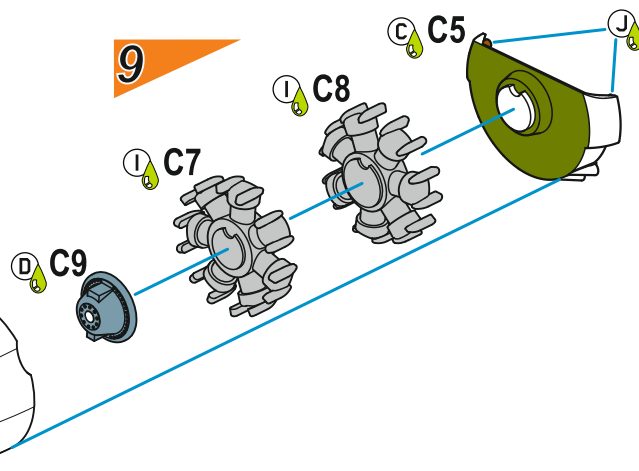
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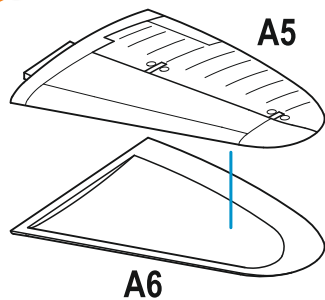
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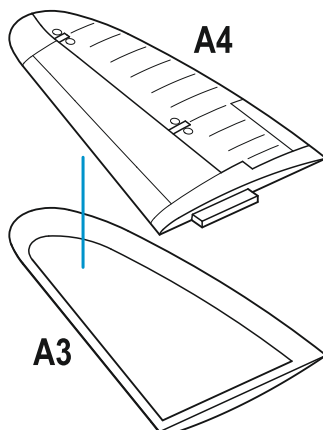
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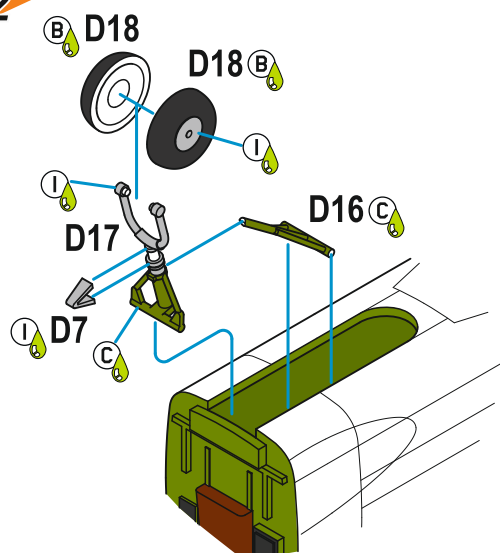
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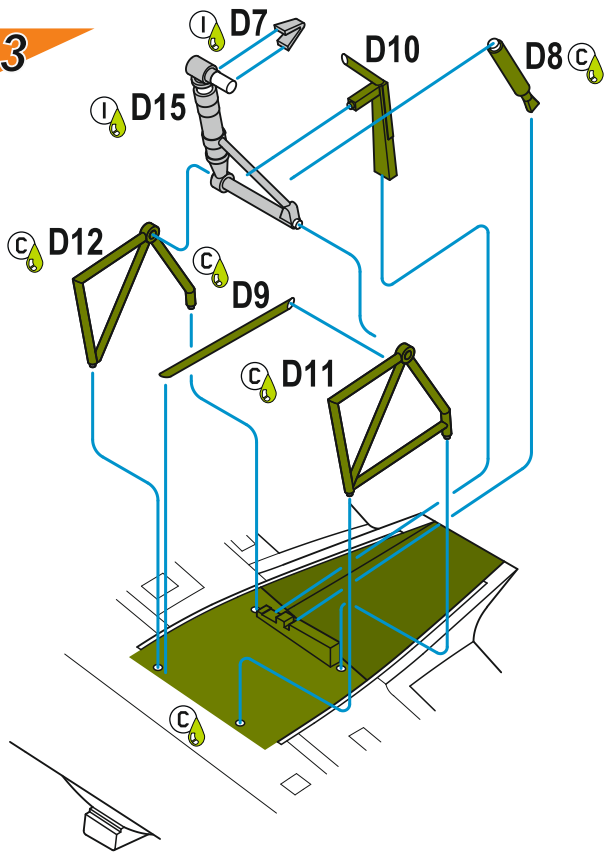
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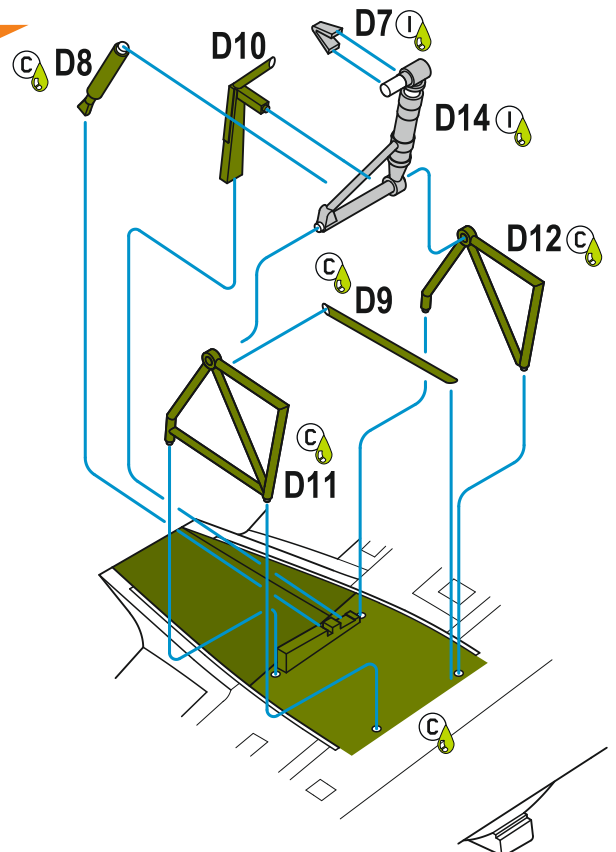
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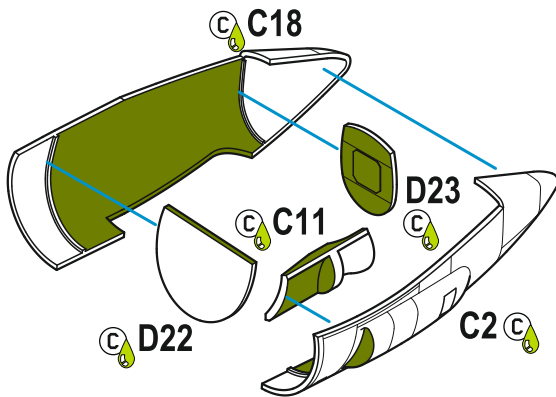
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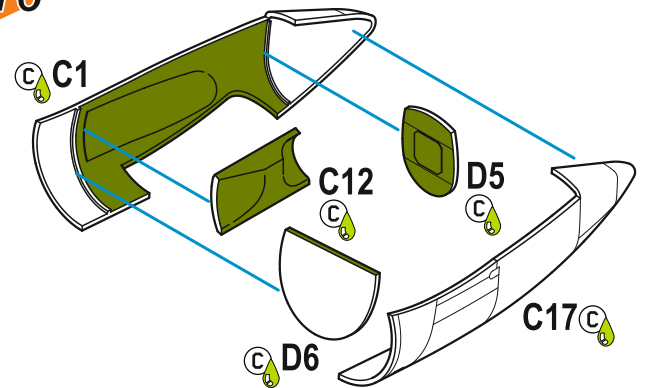
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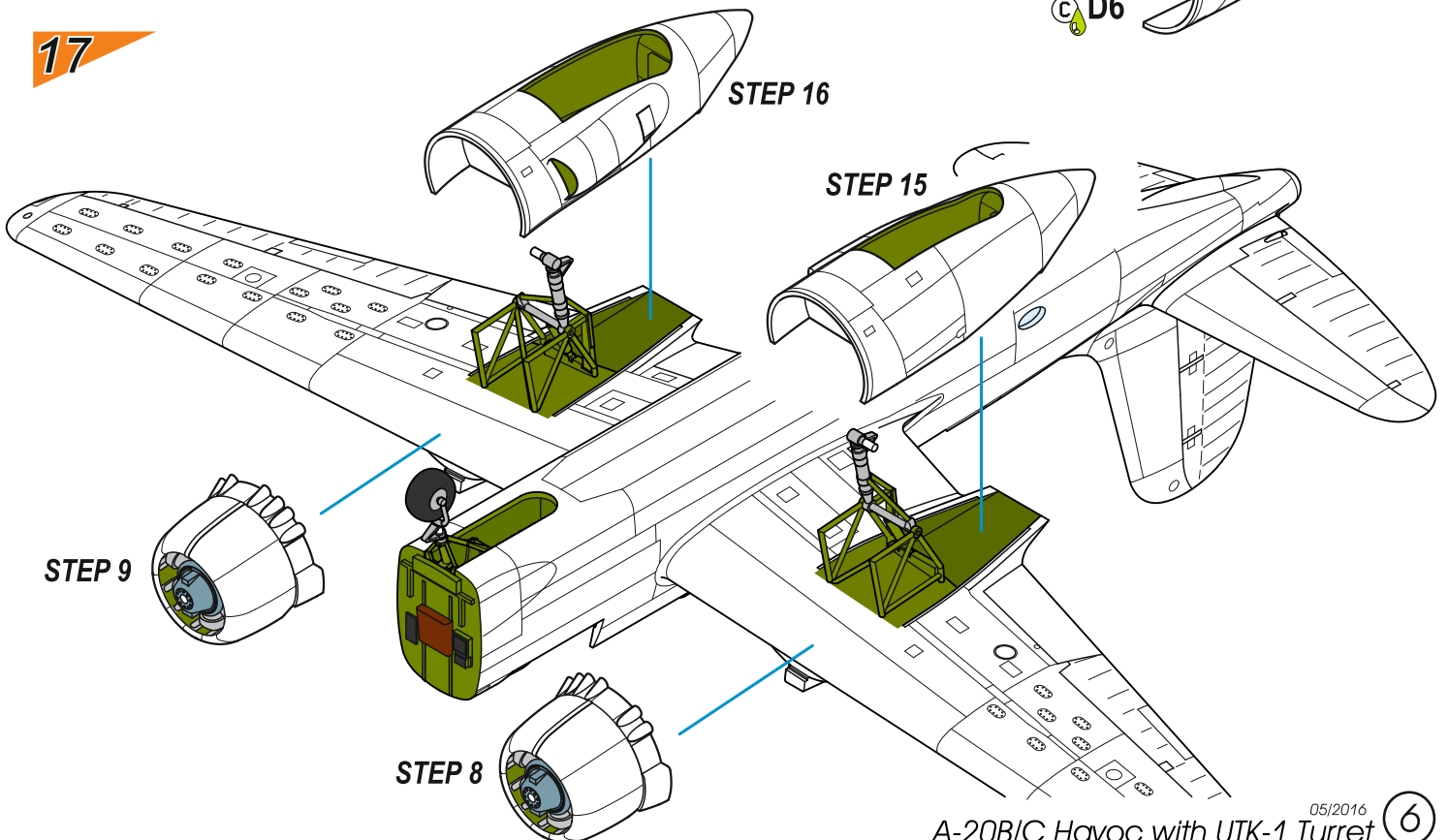
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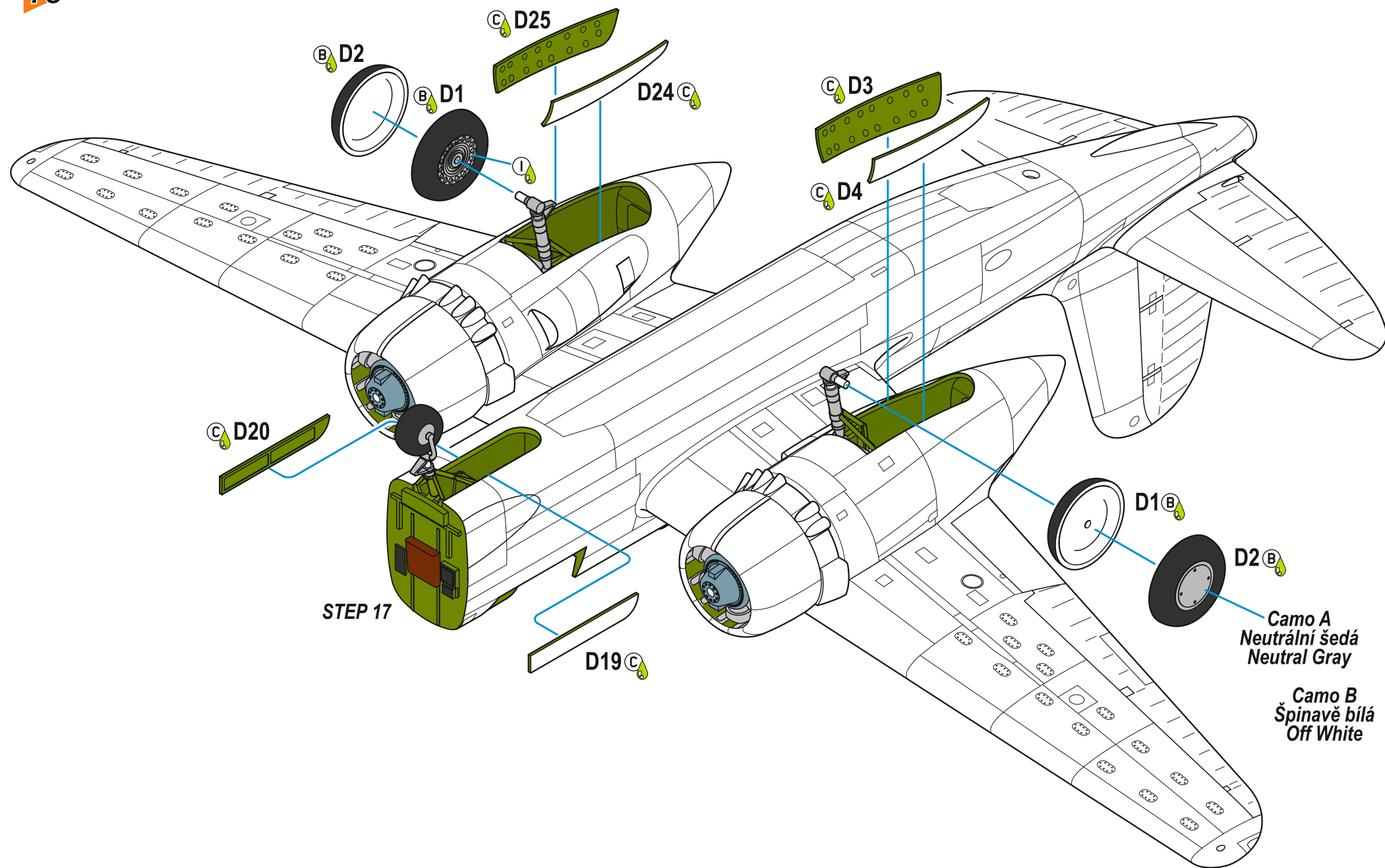


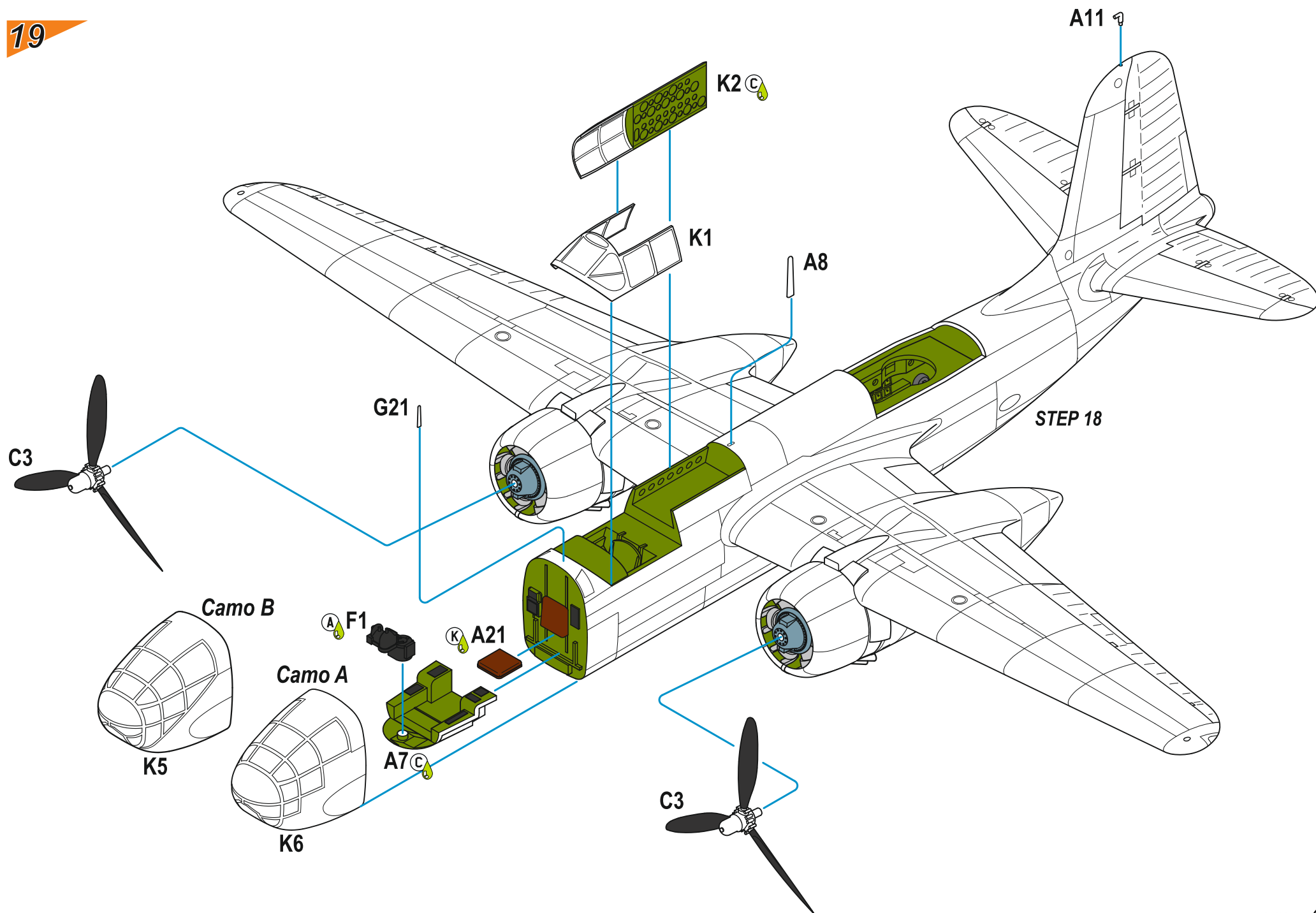
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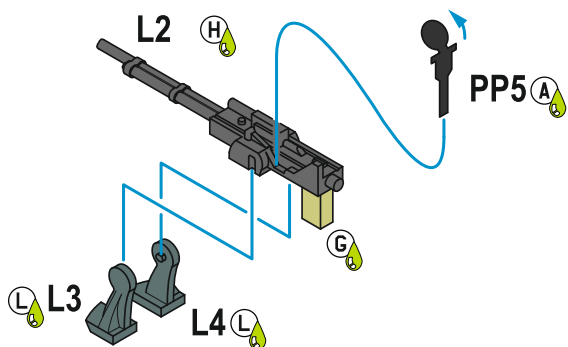
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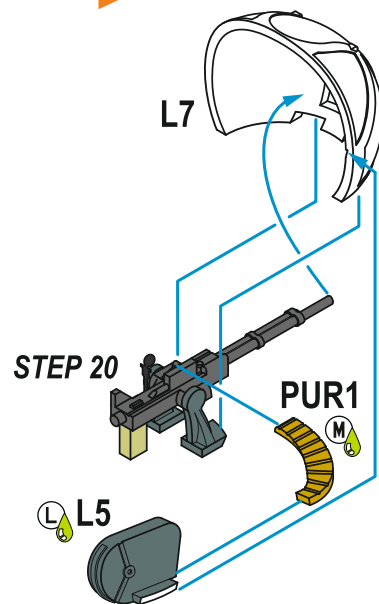




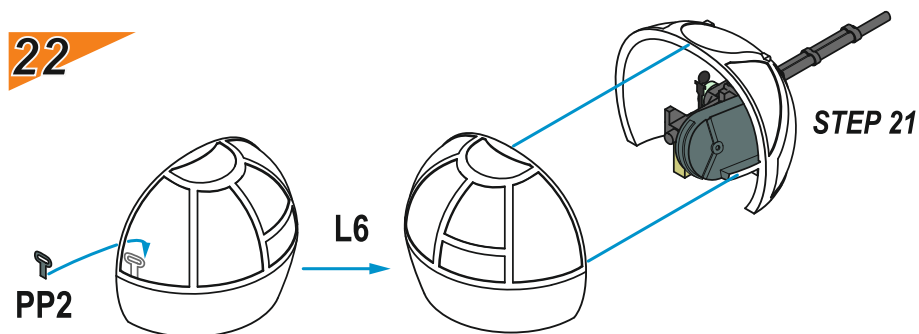
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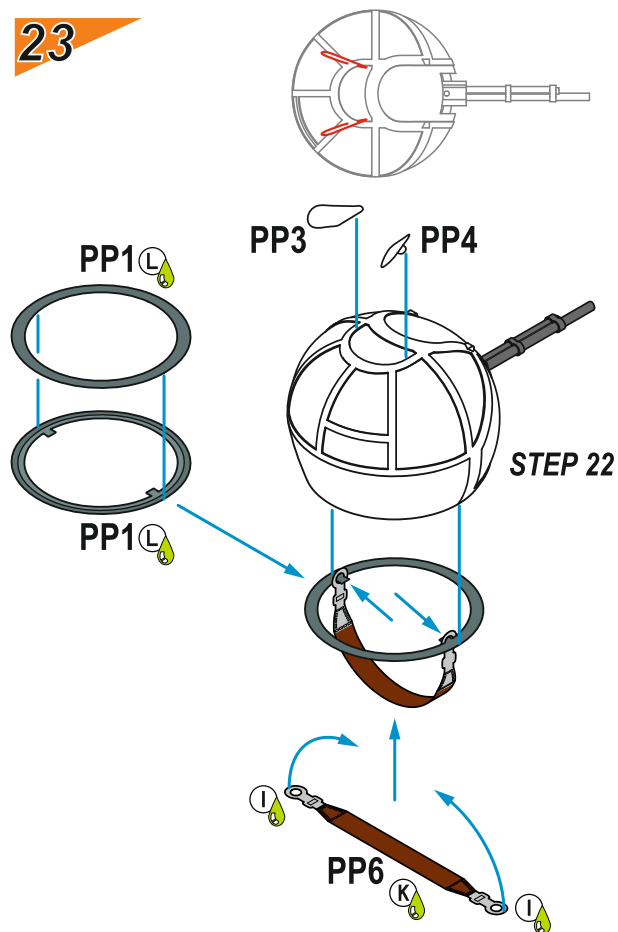
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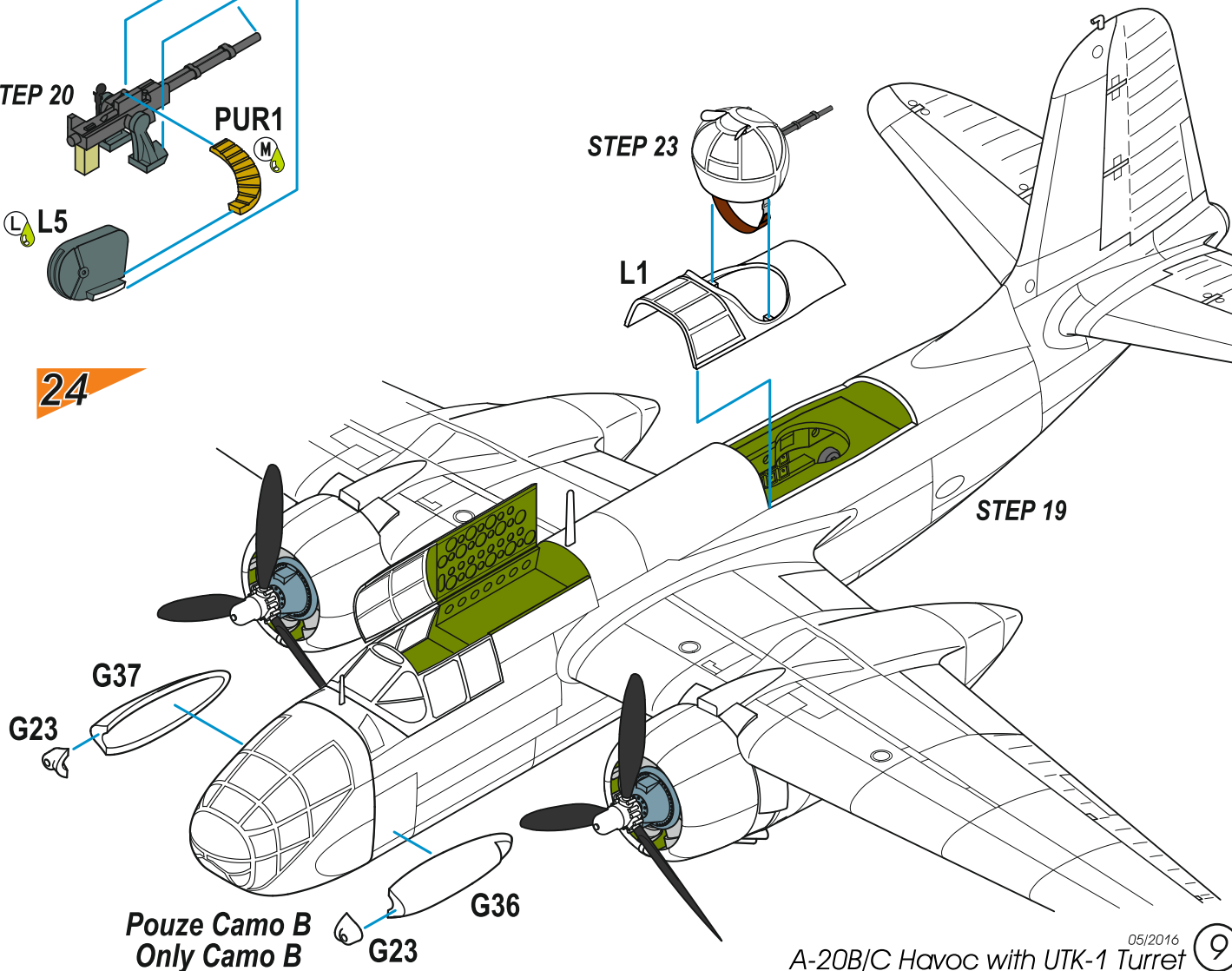
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23

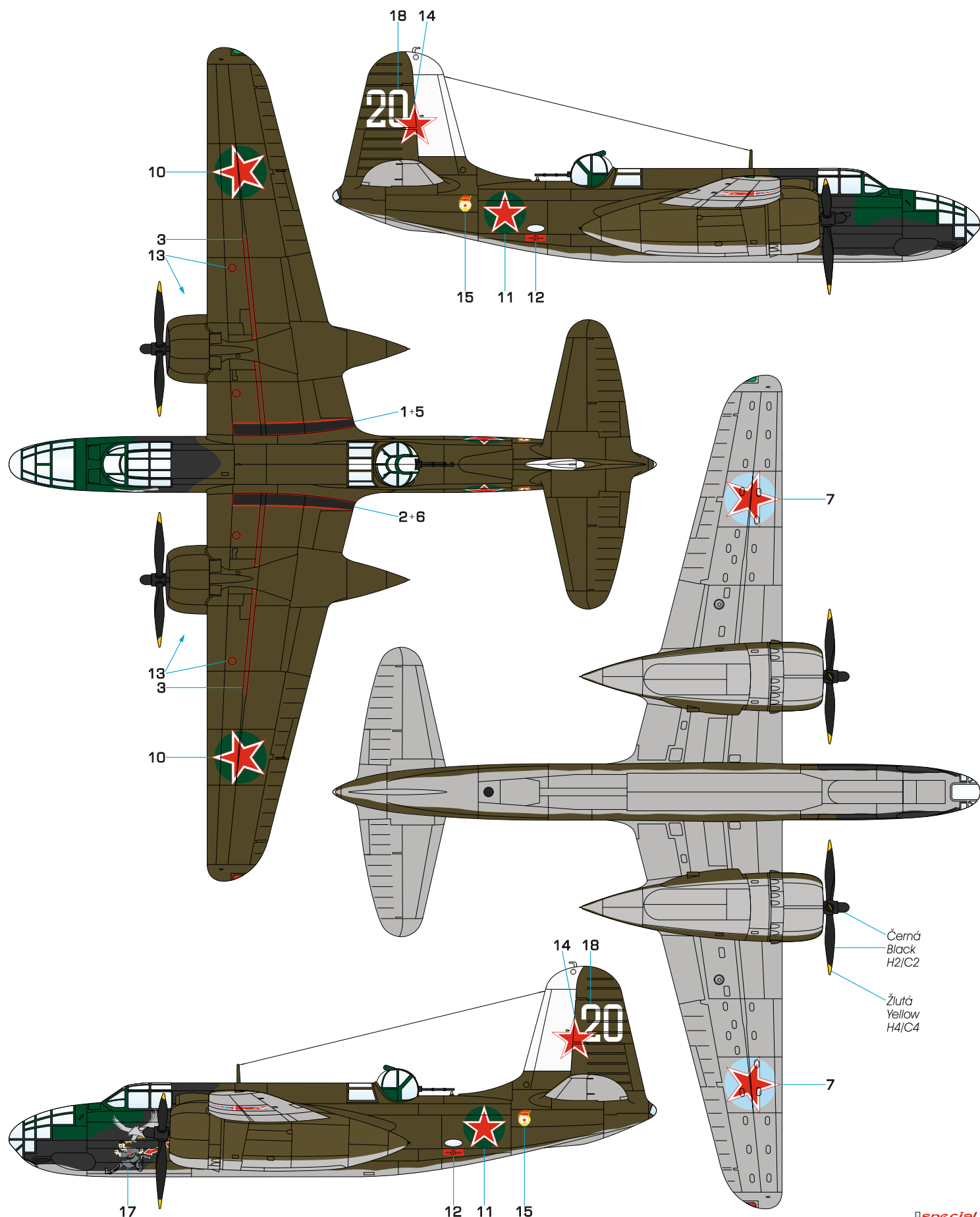


24



A-20B Havoc, bílá 20, létal s karikaturou Hitlera u 8.GBAP (Gardový bombardovací letecký pluk), 221. BAD (Bombardovací letecká divize), 1944-45.

A-20B Havoc, white 20, embellished with a caricature of Adolf Hitler, operated by 8th GBAP (Guards Bomber Aviation Regiment), 221st BAD (Bomber Aviation Division), 1944-45.



Olivová
Olive Drab
H52/ C12

Neutrální šedá
Neutral Gray
H53/ C13

Zelená AMT-4
Green AMT-4
H303/ C303

Černá AMT-6
Black AMT-6
H401

Špinavě bílá
Off White
H21/ C69

Special
HOBBY
GUNZE
SANGYO

05/2016

SH72337 Boston A-20B/C with UTK-1 Turret



P-40E Warhawk

1/72

'Claws and Teeth'



SH72338

special
HOBBY

CMK SETS

P-40
WARHAWK
KITTYHAWK

SPECIAL HOBBY



Q72293 1/72
P-40E/F/K/L/M
and N-1 Seat



Q72294 1/72
P-40N-5 through
N-40 Seat



Q72 299
P-40E, F, K
and N-1 Se



Q72300 1/72
P-40 5 through
N-1 Seat with
Sutton Harness



Q72 302 1/72
Kittyhawk I, II,
III and IV Seat with
Sutton Harness



Q72303 1/72
Kittyhawk IV Seat
with Sutton
Harness



Q72295 1/72
P-40 Wheels
Diamond Tread



Q72296 1/72
P-40 Wheels Block
Tread



Q72301 1/72
P-40 Cockpit Sidewall
and Control Column



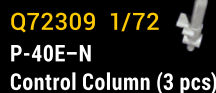
Q72297 1/72
P-40 Wheels
Cross Tread



Q72298 1/72
P-40 Wheels Diamond
and Hole Tread



7386 1/72
P-40 Control Surfaces



Q72309 1/72
P-40E-N
Control Column (3 pcs)



7389 1/72
P-40E/K/M/N Armament Set



7387 1/72
P-40
Undercarriage Set



7388 1/72
P-40 Engine Set



7390 1/72
P-40N Engine Set



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