

## Historie

Firma Short byla jednou z největších firem, které se věnovaly vývoji a výrobě létajících člunů. Ve třicátých letech minulého století, kdy celokovové jednoplošníky začaly vytlačovat dvouplošníky, Short vyvinul několik variant civilních čtyřmotorových celokovových létajících člunů S.23, 30 a 33, souhrnně označovaných C-Class nebo Empire Class. Část z nich dostala vojenské vybavení a používaly se i bojově. Zkušenosti s výrobou a provozem těchto člunů se projeví v konstrukci stroje Short S.25. Ten byl navržen podle specifikací R.2/33, požadujících létající člun dalekého doletu určený k protiponorkovému hlídkování a k průzkumu. Čtyřmotorový celokovový stroj, jehož první prototyp vzletl poprvé 16. října 1937 dostal pojmenování Sunderland Mk.I. Sunderlany Mk.I byly vybaveny motory Pegasus Mk.XXII, střeleckými věžemi v přídi a zádi a otevíratelnými střelišti na hřbetě trupu. Bylo jich vyrobeno 90 ks, část z nich u firmy Blackburn. Verze Sunderland Mk.II dostala hřbetní střeleckou věž a silnější motory Pegasus Mk.XVIII. Společná výroba u Shortu a Blackburnu dal vzniknout 43 kusům této verze. Na některých kusech této verze byly použity první verze radarů se stromečkovitými anténami ASV Mk.II. Zkušenosti z bojišť vedly k úpravám Sunderlandu. Výroba přešla na verzi Mk.III/IIIA. Trup této verze dostal nové, aerodynamicky výhodnější stupňování kýlu, ASV radar Mk.III v kapkovitém výstupku pod křídlem. Pozdější vyrobené kusy dostaly do příde výzbroj čtyř pevných kulometů určených k boji s obsluhami protiletadlových zbraní na vynořených ponorkách. Celkem bylo vyrobeno 456 kusů trojek. Vzhledem k tomu, že zvětšená verze Sunderland Mk.IV, později přeznačená na Seaford Mk.I se nevyráběla sériově, poslední verzi Sunderlandu v sériové výrobě se stala verze Sunderland Mk.V. Dostala americké motory P&W R-1830-90B a radar ASV Mk.VIC. Výroba byla ukončena až v červnu 1946 po vyrobení 150 kusů. Sériové Sunderlany Mk.I dostala jako první No.230 sqn. RAF v roce 1938. Na konci války se Sunderlany létalo dvacet squadron pod velením RAF a další squadrony pod velením spojeneckým. Bojovaly od prvního dne války až do jejího konce. Během válečných let se nesporně osvědčily. Nasazeny byly v nad oceány od Atlantiku, přes Indický oceán až po Pacifik. Spolehlivě sloužily na chladném severu v polárních oblastech, stejně jako v tropech. Vysloužily si, pro svou obrannou výzbroj, pojmenování létající dikobraz. Konec války neznamenal konec jejich služby. Sunderlany RAF se mohou pochlubit mimo jiné účastí v Korejském konfliktu, Berlínském mostu nebo bojů s komunistickými bojovkami v Malajska. Kromě britského RAF létaly v řadách australského, novozélandského, norského, jihoafrického a kanadského letectva, francouzského a portugalského námořnictva. U většiny zahraničních uživatelů již během války. Poslední novozélandské Sunderlany byly přitom vyřazeny až v roce 1967!

## CZ

### TTD verze Mk.V

Rozpětí: 34,39 m, délka: 26 m, max. rychlost: 343 km/h v 1900 m, operační dostup: 5457 m, dolet 3027 km, vytrvalost: 10/21 hodin při rychlosti 260/220 km/h, výzbroj: 2250 kg bomb či hlubinych bomb, 12x kulomet 7,7 mm, 2x kulomet 12,7 mm

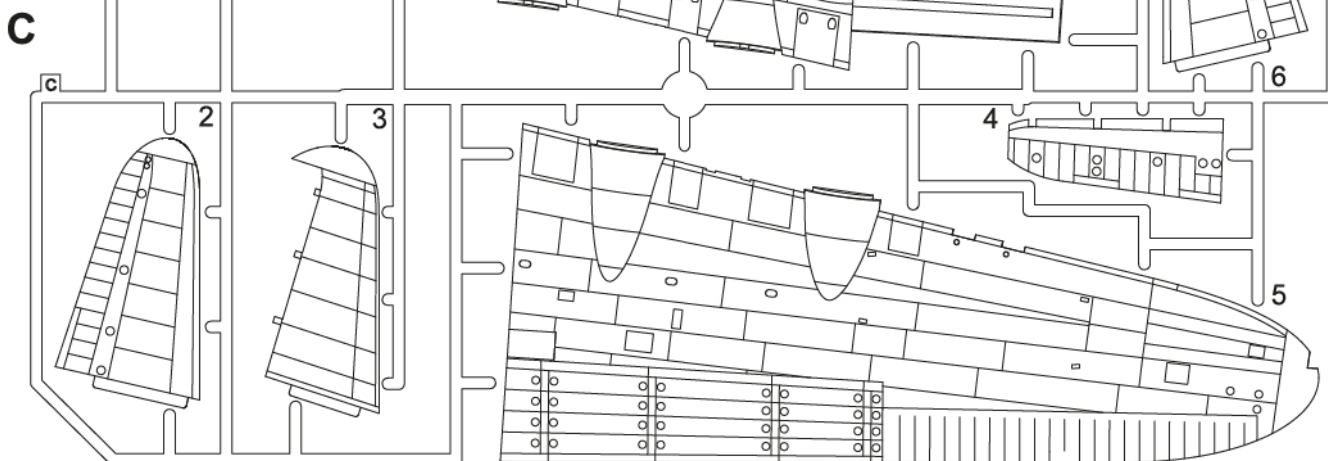
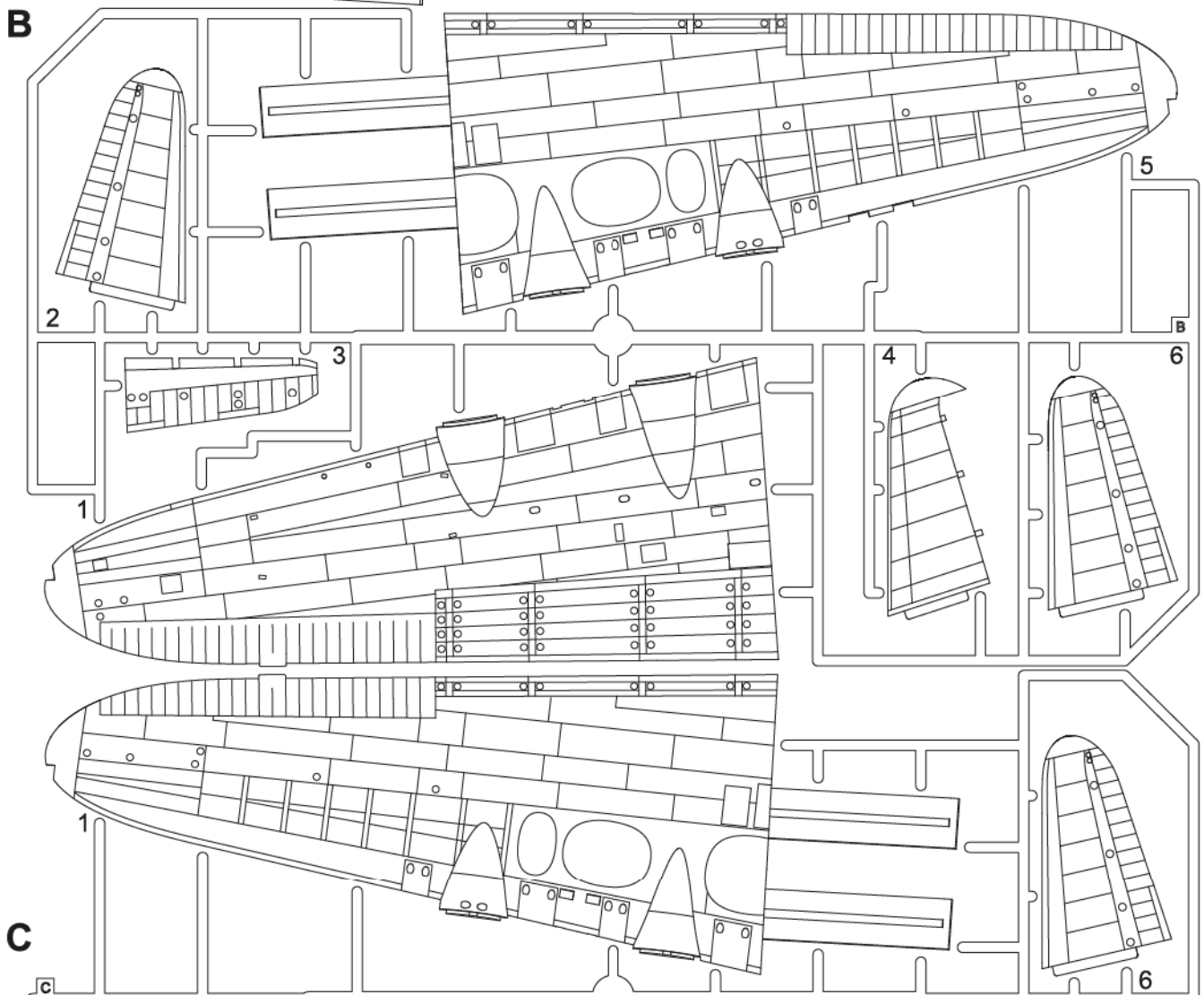
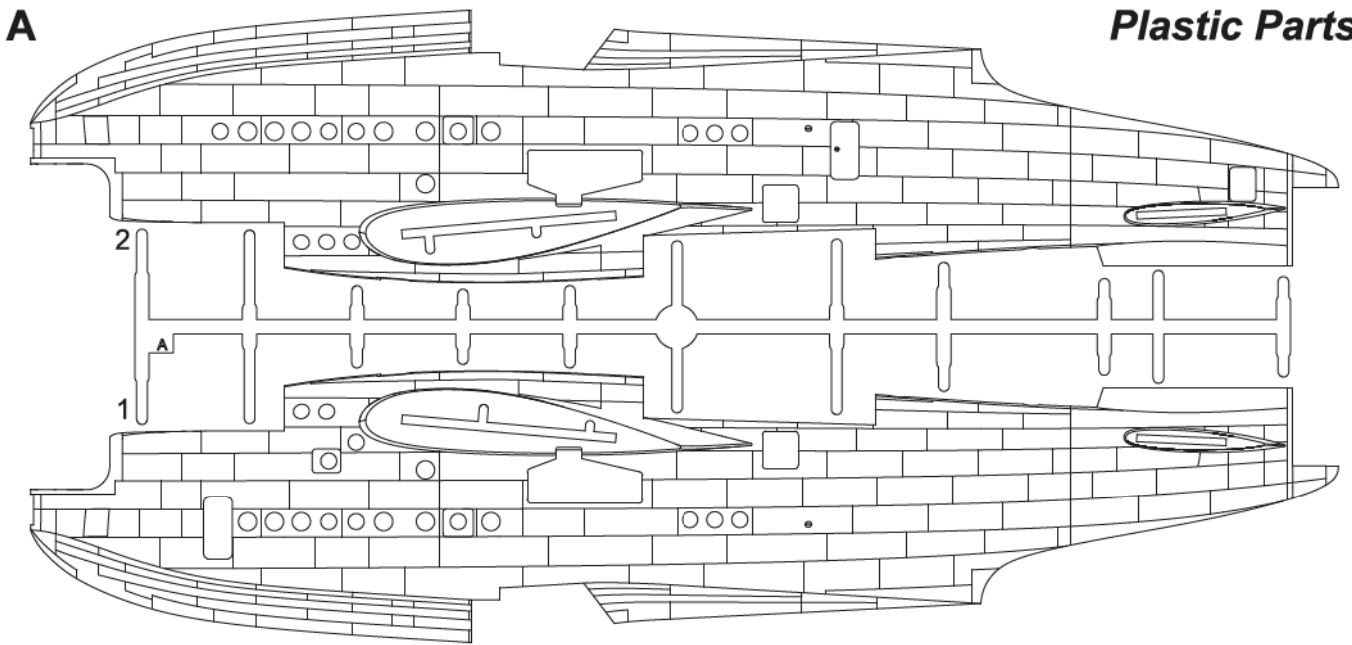
## History

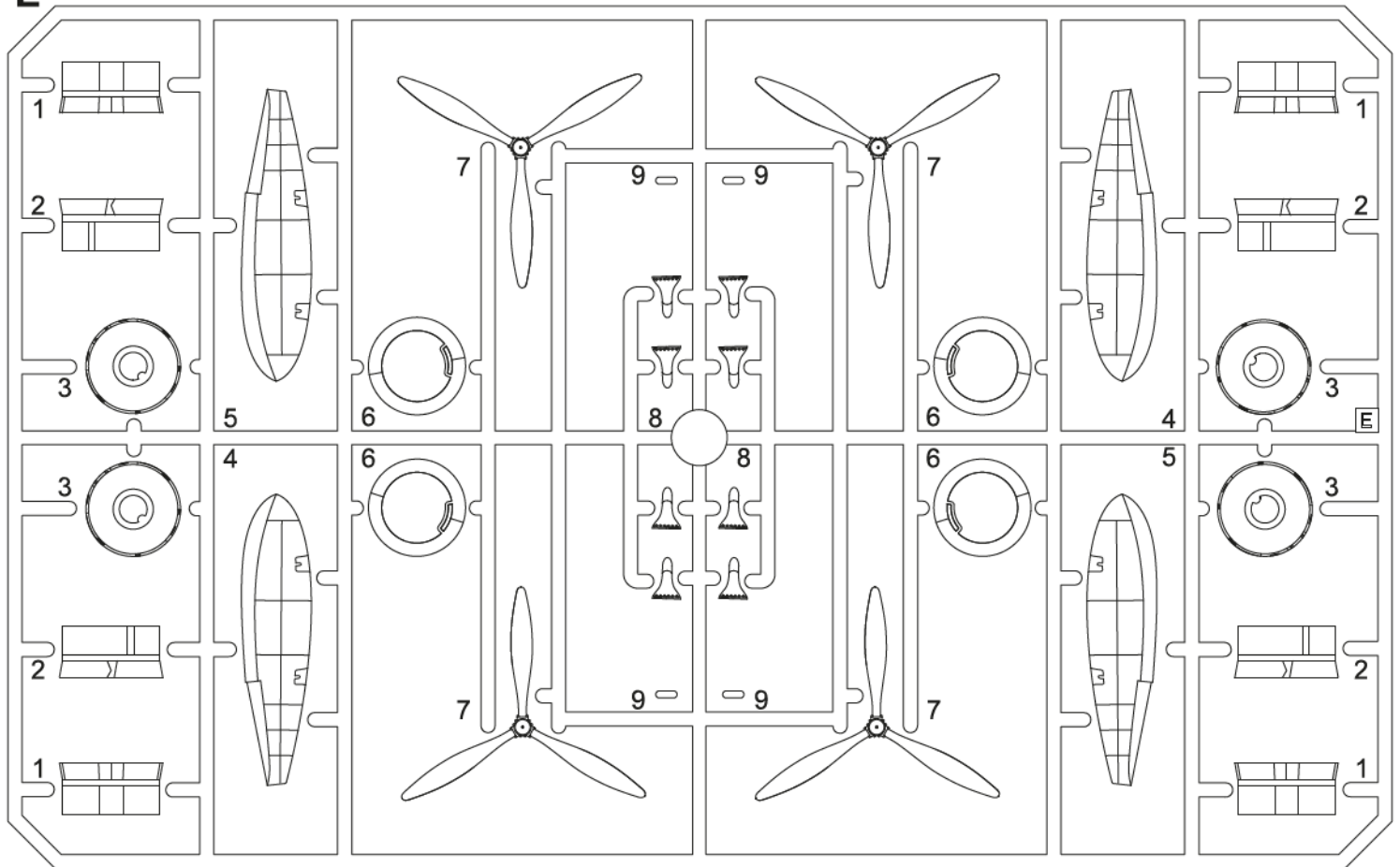
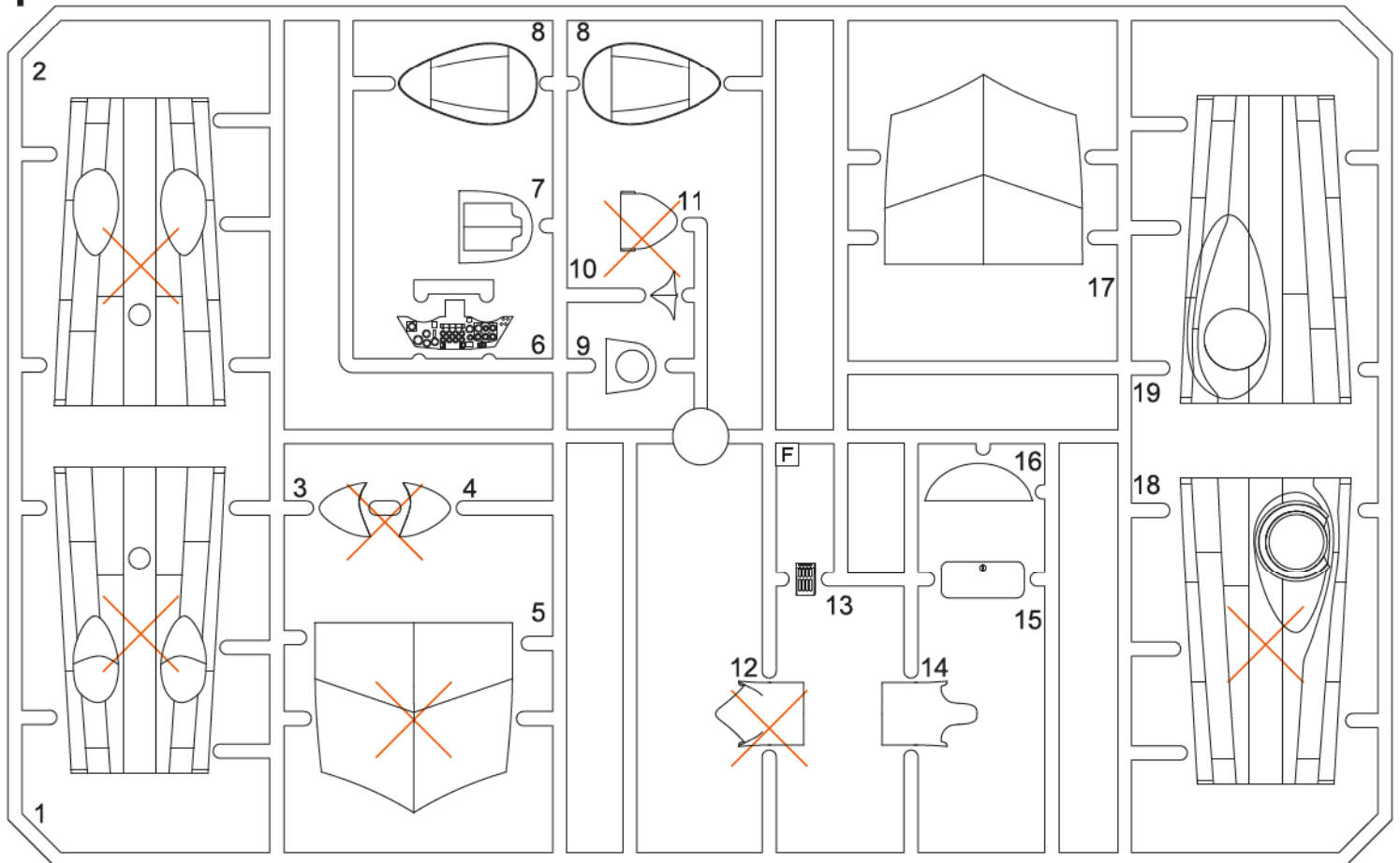
Short Brothers were one of the largest aircraft producers to undertake the development and manufacturing of multi engine flying boats. In the 1930s, when monoplanes of all metal construction were beginning to have the upper hand over biplane aircraft designs, Short Brothers developed a couple of all metal, four engine flying boats for the civilian market - these aircraft were known as the S.23, S.30 and S.33, or generally as the C-Class or Empire Class. Some of the machines were fitted with military equipment and saw service in the force. The experience gained during the production and operational service of these boats proved to be essential for the development of their successor, the Short S.25, which was designed to Specification R.2/33 that called for a long range flying boat suitable for anti submarine patrol and reconnaissance missions. The prototype of this aeroplane first took to the air on 16 October 1937 and got the name Sunderland Mk.I. The production machines were powered by Pegasus Mk.XXII engines and had gun turrets in the bow and stern and a pair of manually operated machine guns on either side of the upper fuselage. As many as ninety of them were produced, some of them at the Blackburn plant. The following variety, the Mk.II was fitted with a dorsal gun turret and more powerful engines in the shape of the Pegasus Mk.XVIII. The Short and Blackburn plants produced in total 43 airframes of this mark, some of which were experimentally equipped with the first generation of ASV Mk.II radars with an array of tree-like antennae. Combat experience gained in the field even led to a couple more improvements which enabled the production of the Mk.III/IIIA version. The hull was reshaped at the keel step and got a much smoother profile and the machines also had a new type of ASV radar fitted under their wings, where the radar dishes were placed in large teardrop-shaped housings. Later machines were even equipped with four fixed machine guns in their nose sections, which were meant to be used against anti-aircraft defence of emerged German submarines. In total, 456 of the Sunderland Mk.III were produced. A production of an enlarged variety, known as the Sunderland Mk.IV (later renamed to Seaford Mk.I) was also planned, though it never materialised. The final version of this flying boat was the Mk.V, which was powered by American P&W R-1830-90B units, used ASV Mk.VIC radar equipment and was in production until June 1946, giving in total 150 machines. The first production Mk.I machines saw operational service with No.230 Sqn of the RAF, and by the end of the War, twenty RAF units operated the Sunderland along with a few more of the Allied forces'. The Sunderland proved useful for the Allied war effort right from the outset of the hostilities and remained so until the end of the conflict. These flying boats were operated over the vast expanses of the Atlantic Ocean as well as the Indian Ocean and the Pacific and proved to provide reliable service in such different environments as the cold polar areas and over the tropical seas. For their heavy armament, they got the nickname the 'Flying Porcupine'. The end of the horrible world conflict did not manage to bring the faithful service of the Sunderland to an end. These magnificent flying boats went on serving with the RAF in the Korean war, during the Berlin Airlift Operation and even fighting communist insurgents in Malaya. Besides the RAF, they flew with the Australian, New Zealandian, South African, Norwegian and Canadian air forces as well as with the French and Portuguese navies, in most cases already during the war. The last Sunderlands to fly were those operated by the RNZAF and they were struck off charge as late as 1967.

## EN

### Mk.V Specification / Performance

Wingspan: 34.39 m, (112ft. 9.5in) Length: 26 m, (85 ft. 3.5 in) Height 10.01m (32 ft. 10.5in) Max. speed: 343kph(213 mph) Service ceiling 5457m (17900 ft.) Range at cruising speed 3027 km (1880 m) Defensive armament: 12x 7.7 mm (.303 in.) 2x 12.7 mm (.5in) machine guns. Offensive ordnance 2250 kg (4960lbs)



**E****F****SYMBOLS**

 **MOŽNOST VOLBY**  
OPTIONAL  
NACH BELIEBEN  
OPTION

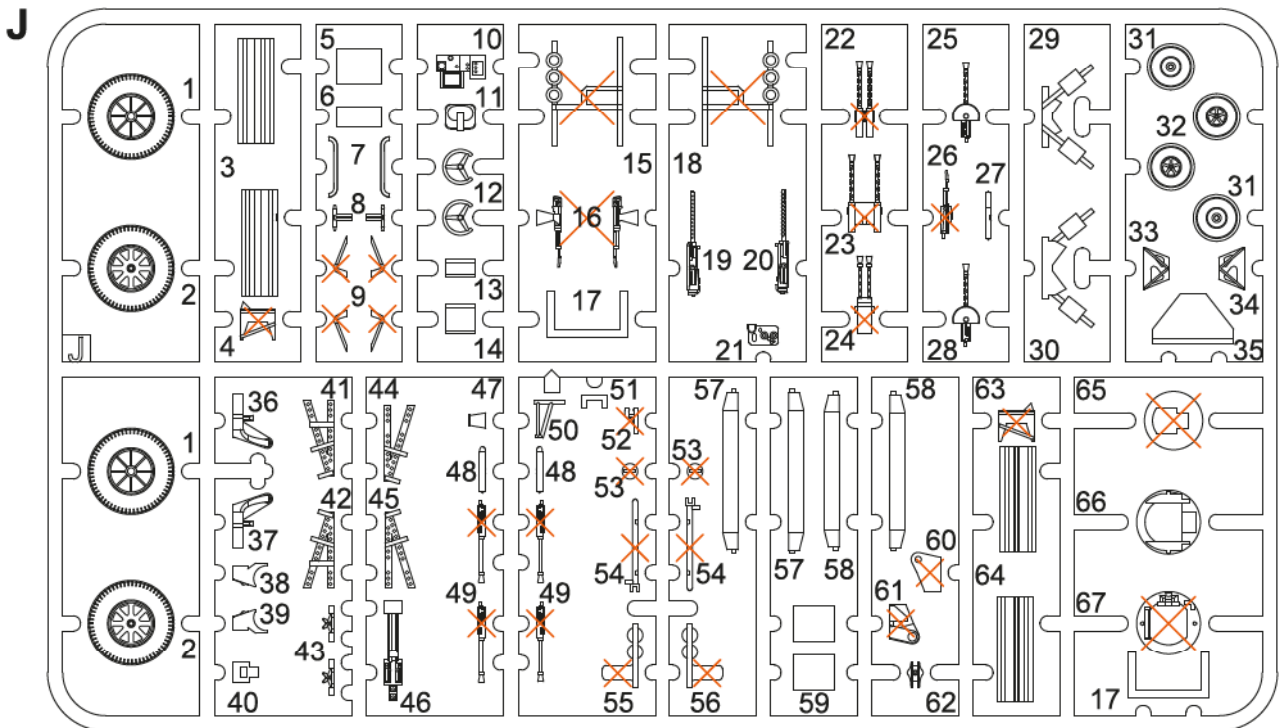
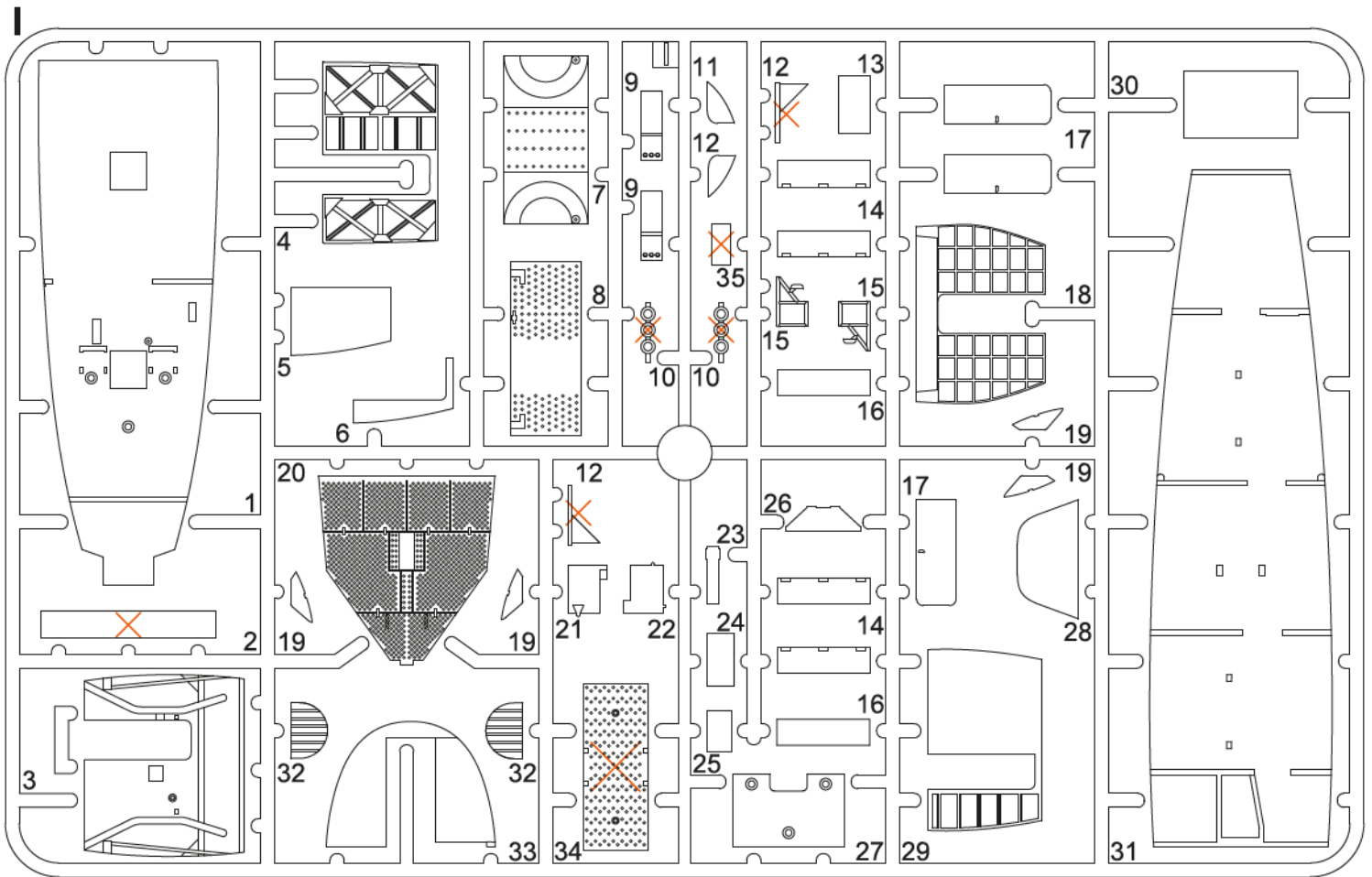
 **POUŽÍŤ KYANOAKRYLÁTOVÉ LEPIDLO**  
INSTANT CYANOACRYLATE GLUE  
ZYANOAKRYLATKLEBER  
COLLE CYANOACRYLAT

 **OHNOUT**  
BEND  
BIEGEN  
COURBER

 **ZHOTOVIT NOVÉ**  
SCRATCH BUILD  
FERTIGSTELLEN  
ACHEVER

 **ŘEZAT/VRTAT**  
CUT OFF/DRILL  
ENTFERNEN  
DETACHER

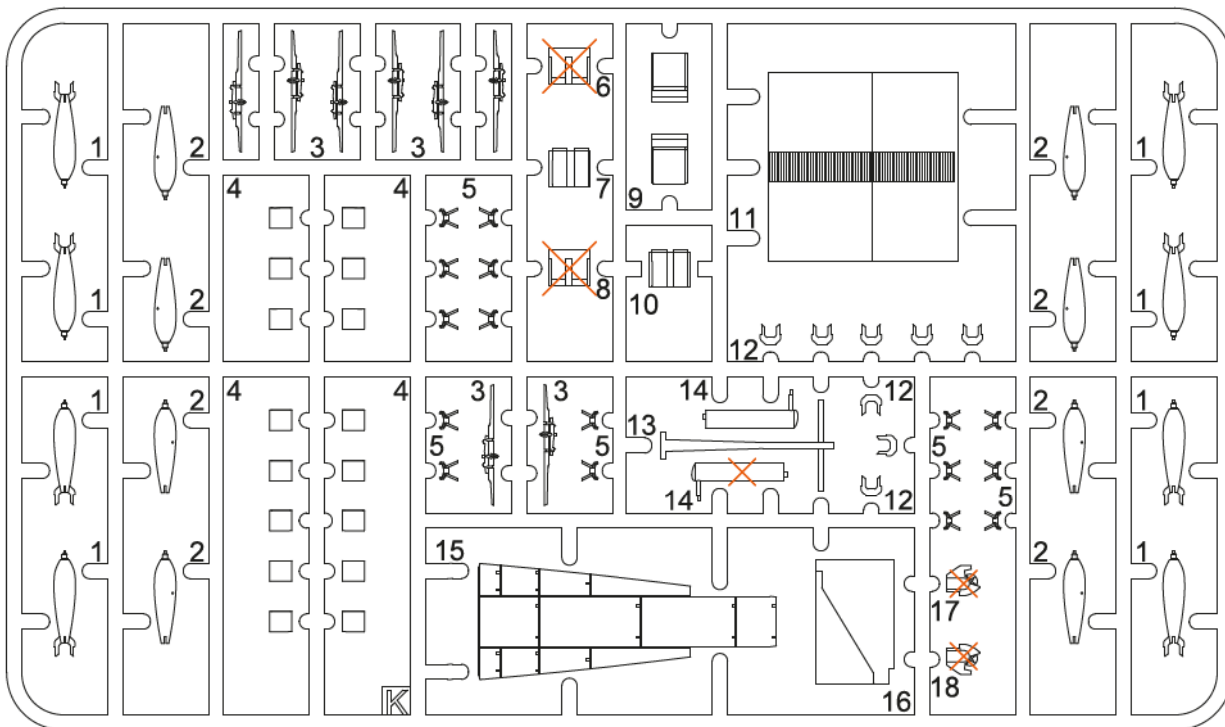
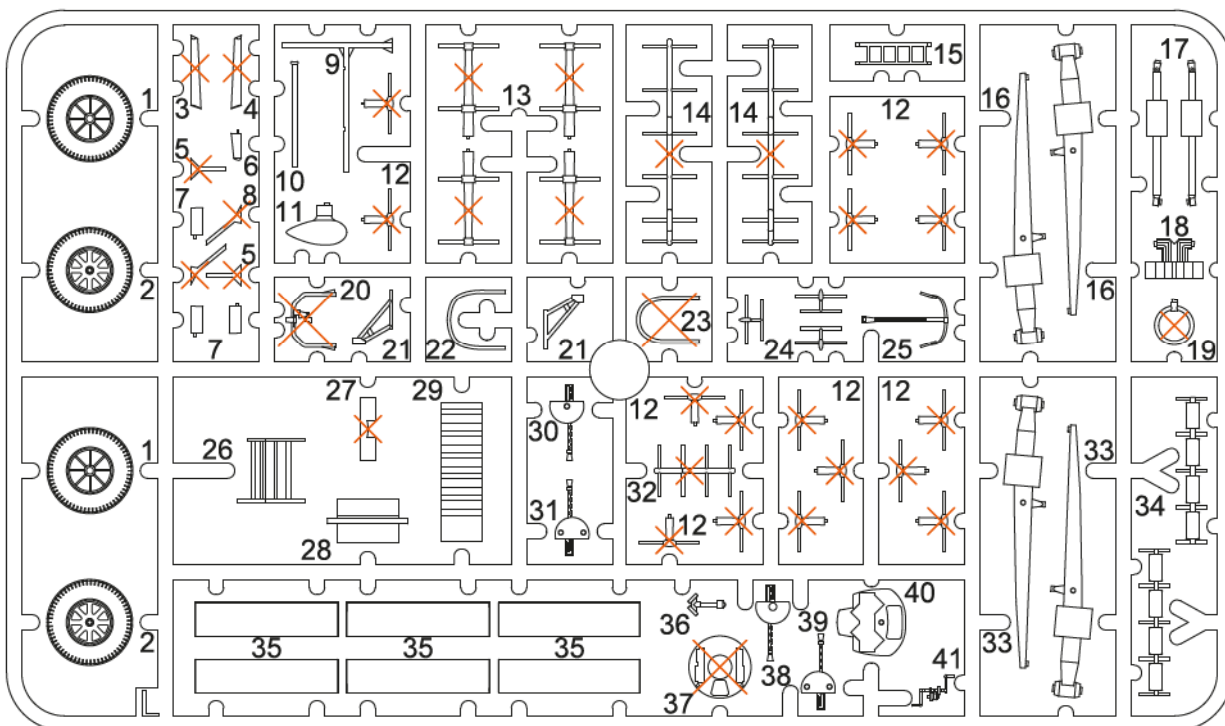
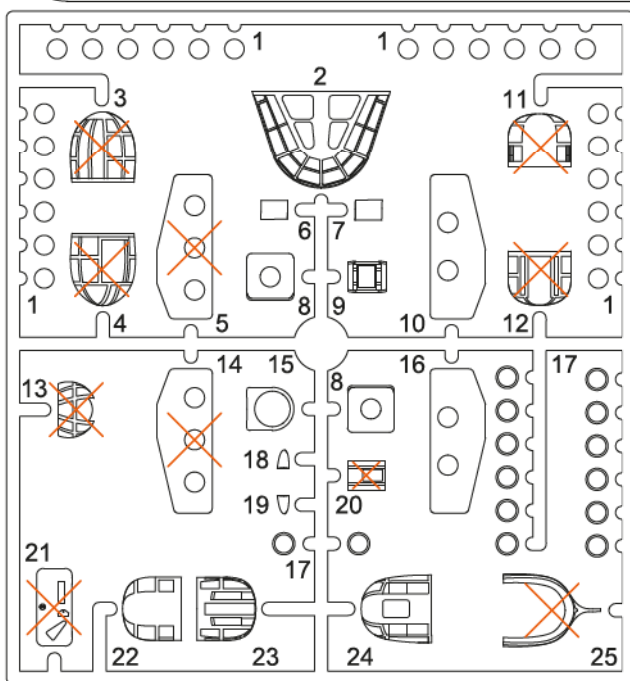
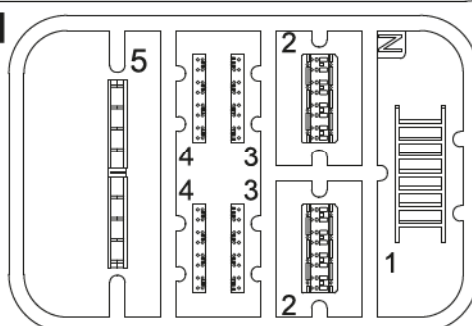
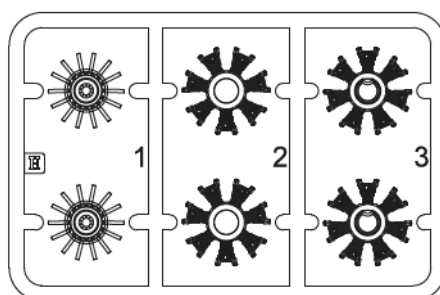
 **GSI**  
colour code  
 **NATRÍT**  
COLOUR  
FARBEN  
PEINDRE



Tento díl nepoužít  Do not use this part

**Barvy GUNZE/ GUNZE Colour No.**

<b>A</b> Černá/ Black	H12/ C33	<b>H</b> Žlutá/ Yellow	H4/ C4
<b>B</b> Barva pneu/ Tire Black	H77/ C137	<b>I</b> Barva plátna/ Tan	H27/ C44
<b>C</b> Tmavý kov/ Dark Iron	H28/ C78	<b>J</b> Bílá/ White	H28/ C78
<b>D</b> Hliník/ Aluminium	H8/ C8	<b>K</b> Dřevo/ Wood	H37/ C43
<b>E</b> Inter. šedozelená/ Inter. Grey Green	C364	<b>L</b> Opálený kov/ Burnt Iron	H76/ C61
<b>F</b> Motorová šedá/ Engine Grey	H339/ C339	<b>M</b> Barva kůže/ Red Brown	H17/ C29
<b>G</b> Červená/ Red	H43/ C100		

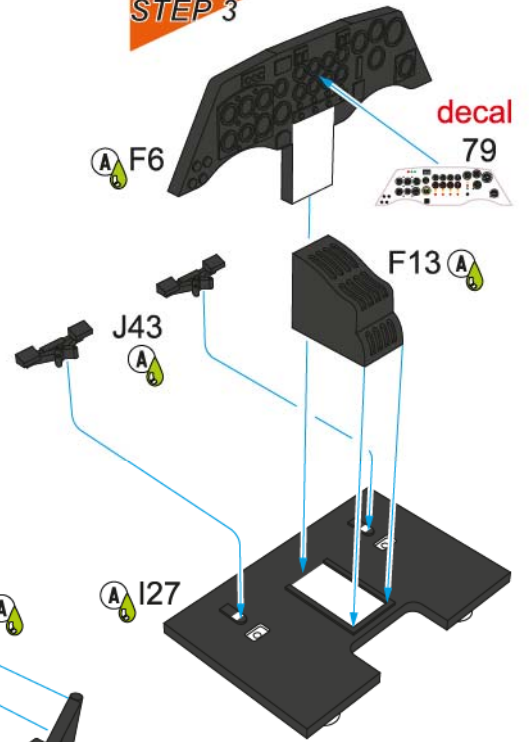
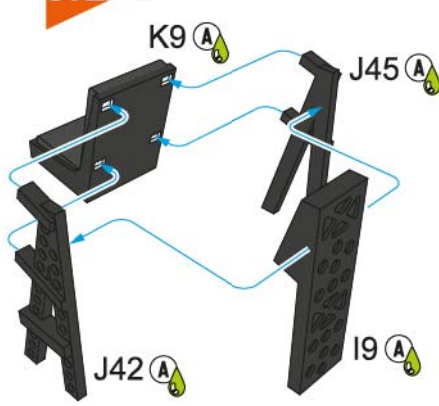
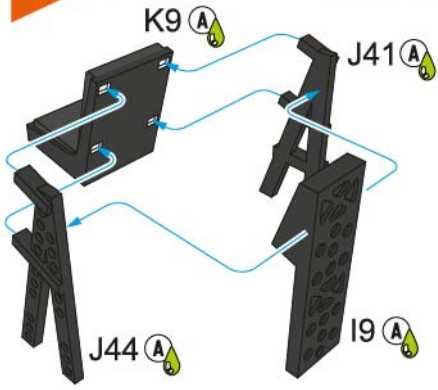
**K****L****CP  
(Clear  
Parts)****N****2xH****PUR****PE  
(Photo-  
Etched  
Parts)**

# Assembly

STEP 1

STEP 2

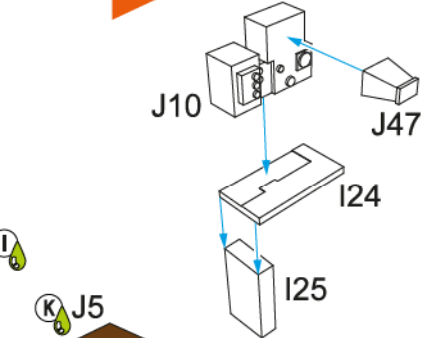
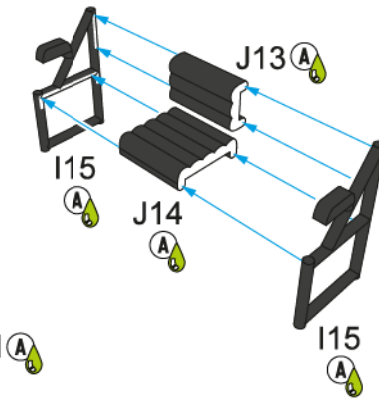
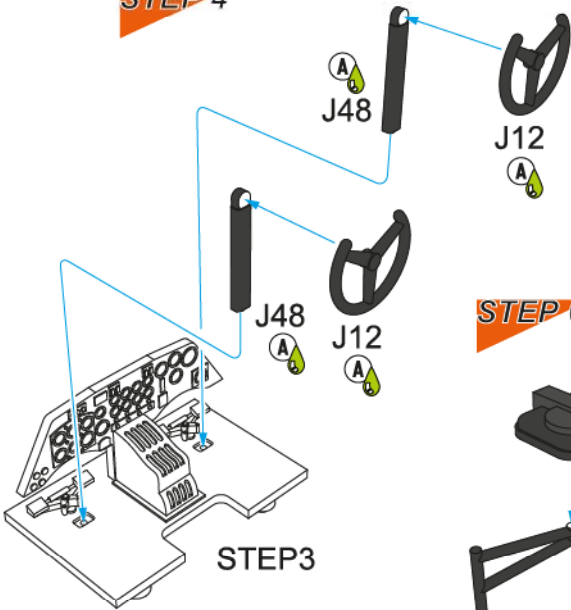
STEP 3



STEP 4

STEP 5

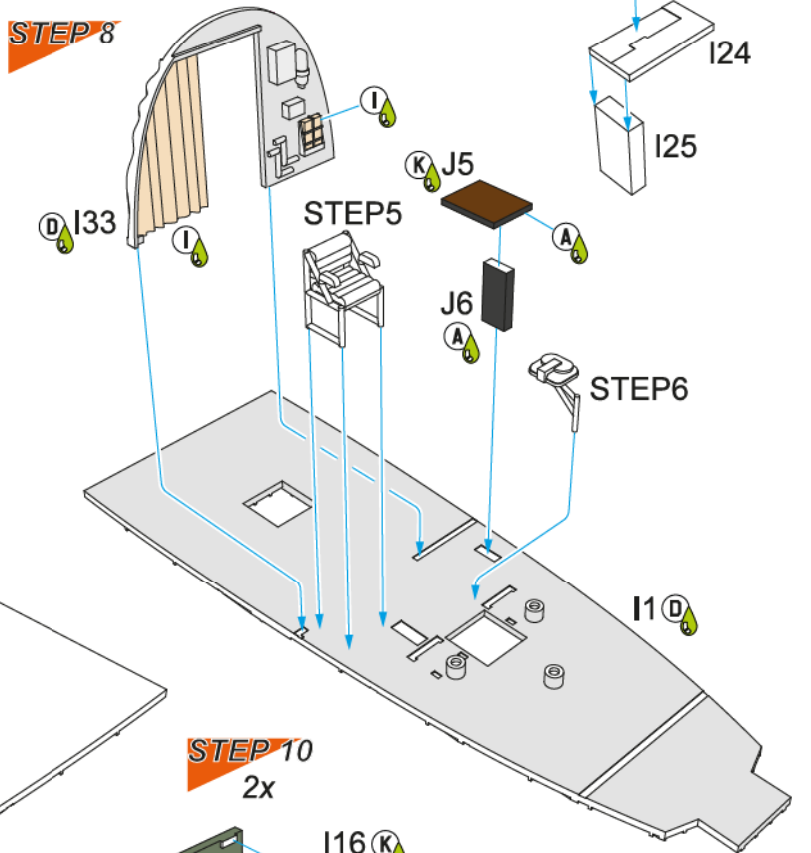
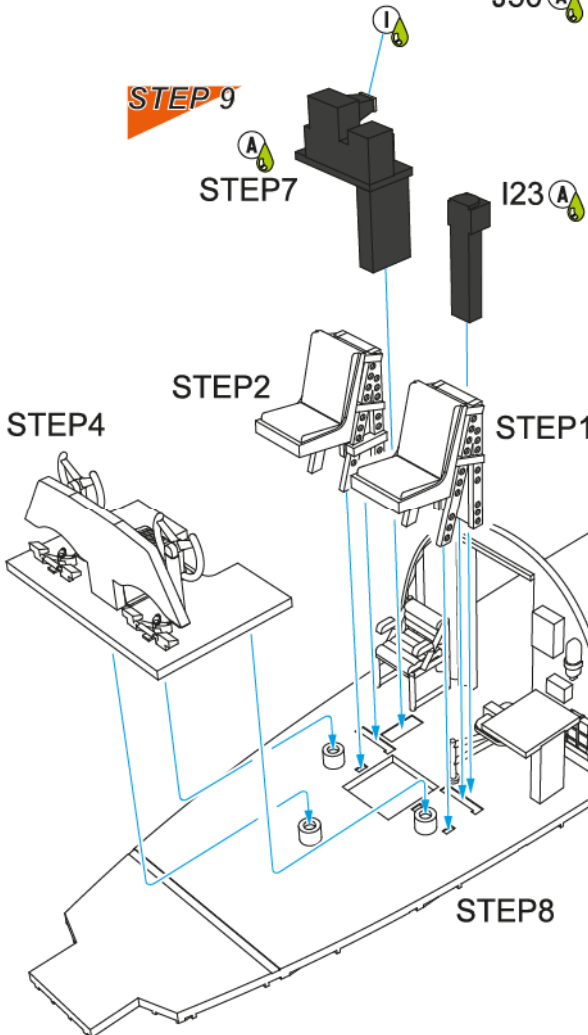
STEP 7



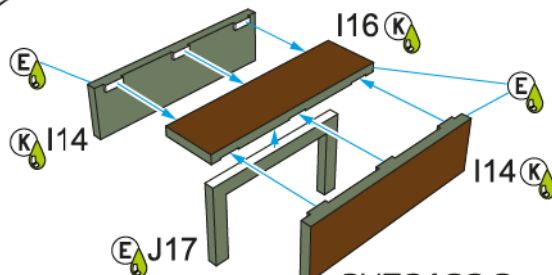
STEP 6

STEP 8

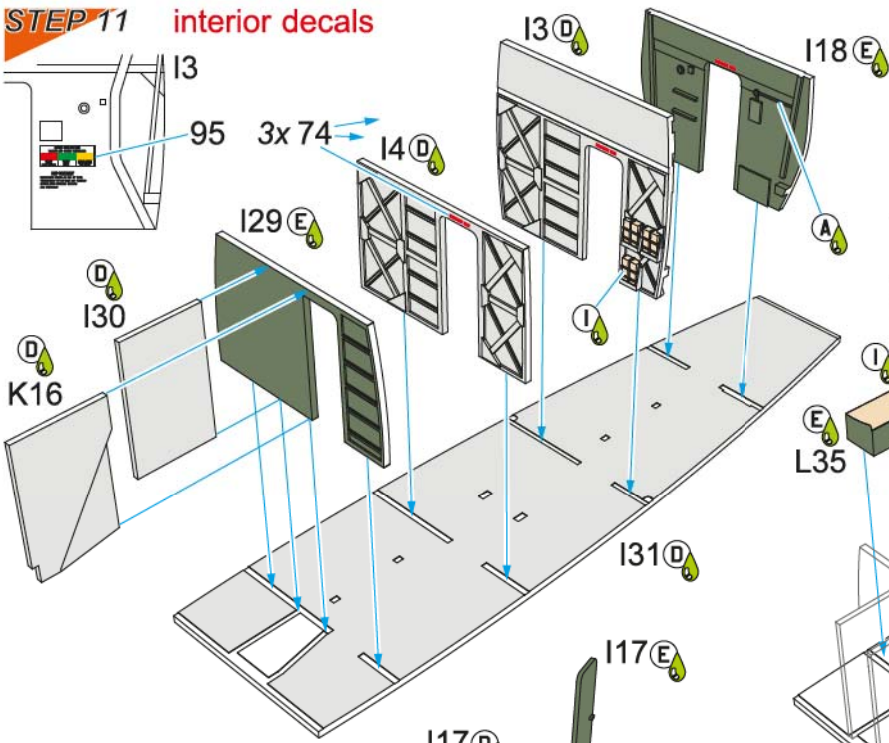
STEP 9



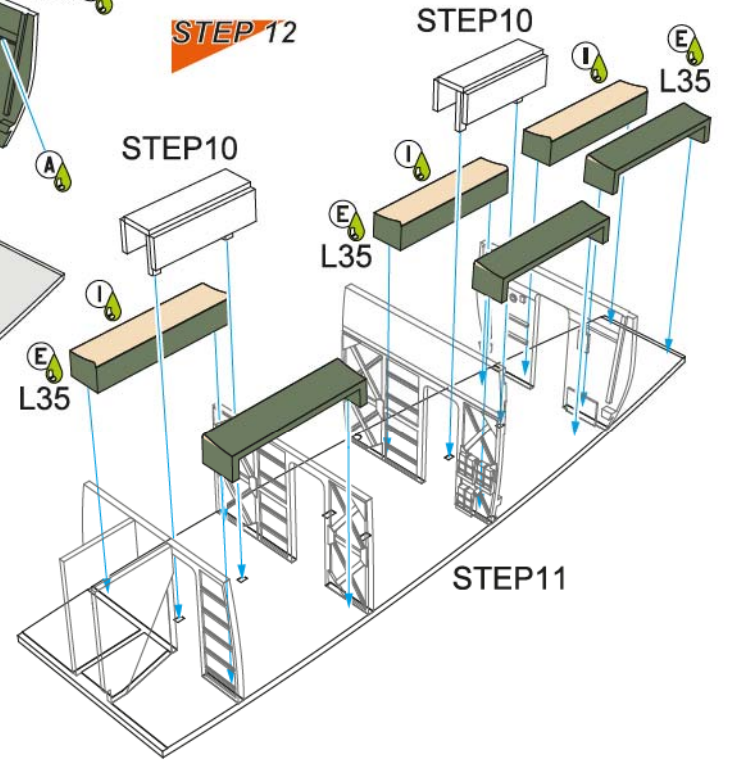
STEP 10  
2x



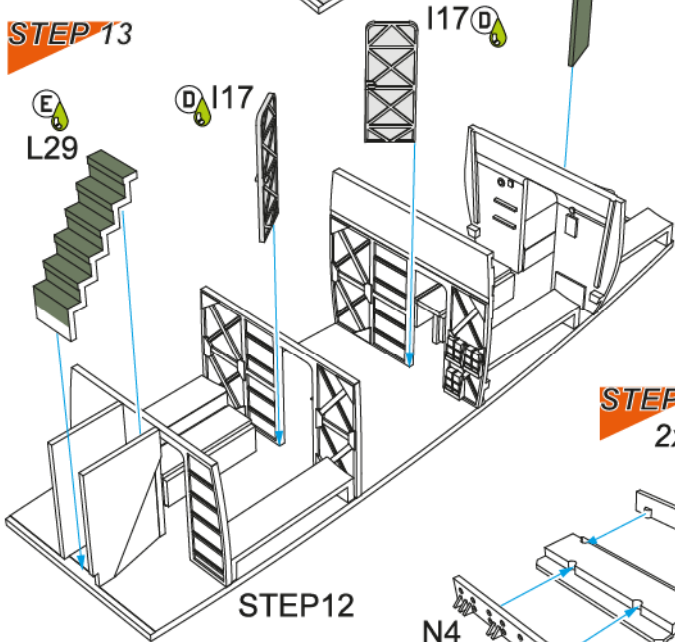
**STEP 11** interior decals



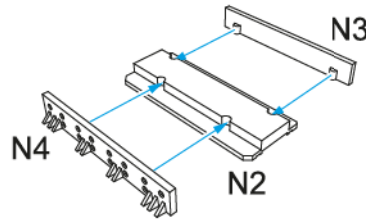
**STEP 12**



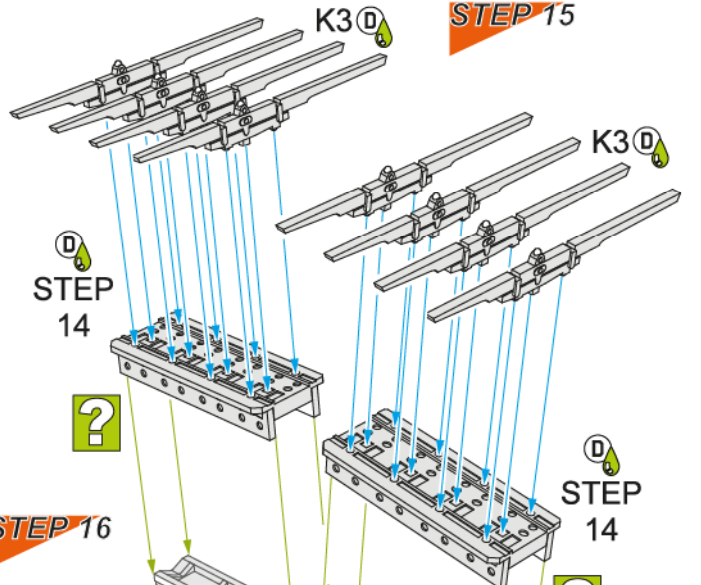
**STEP 13**



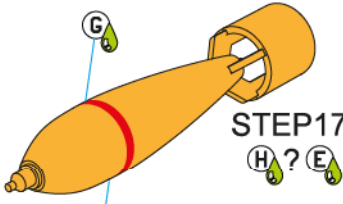
**STEP 14**  
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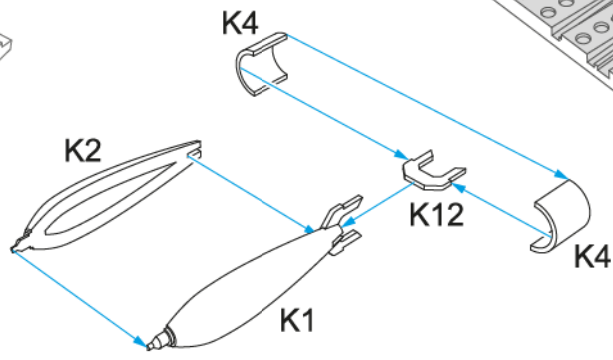
**STEP 15**



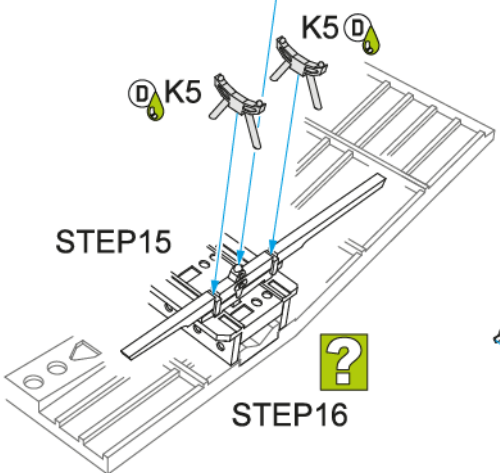
**STEP 18**  
8x



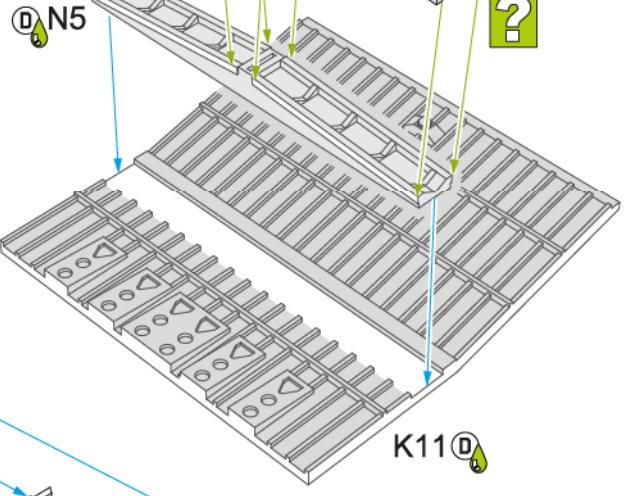
**STEP 17**  
8x



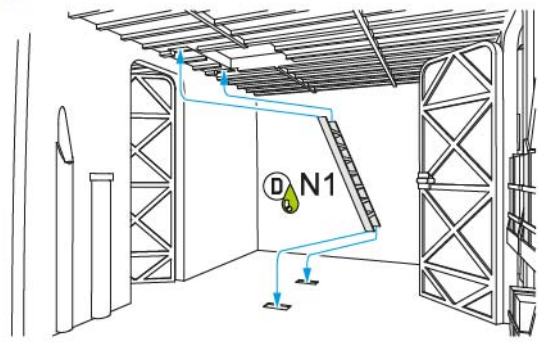
**STEP 15**



**STEP 16**

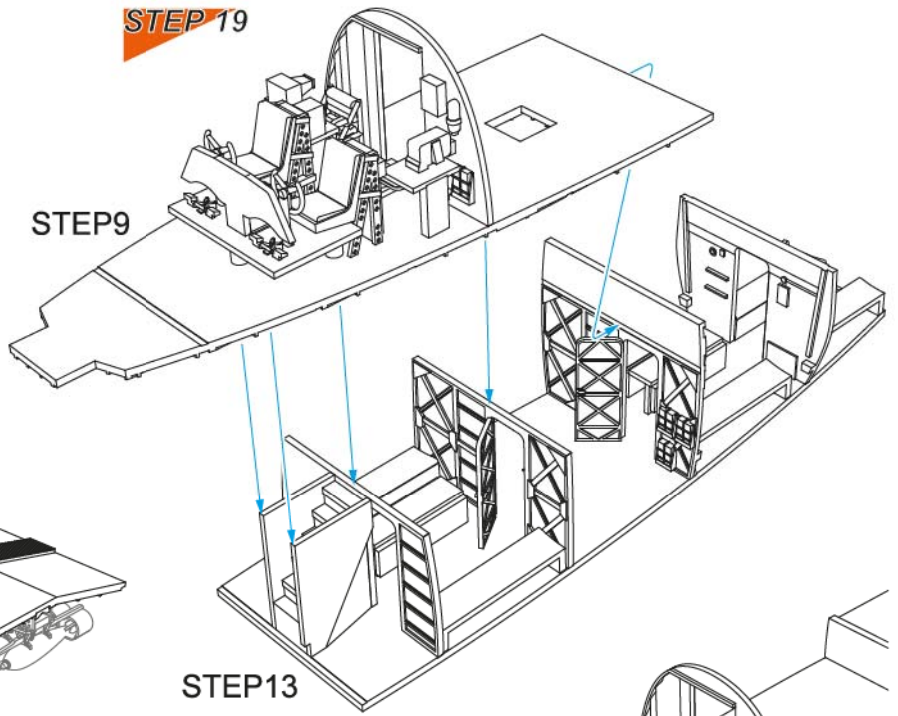


**STEP 20**



STEP19

**STEP 19**

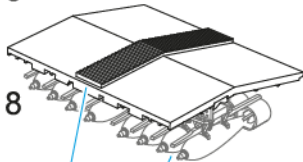


STEP 9

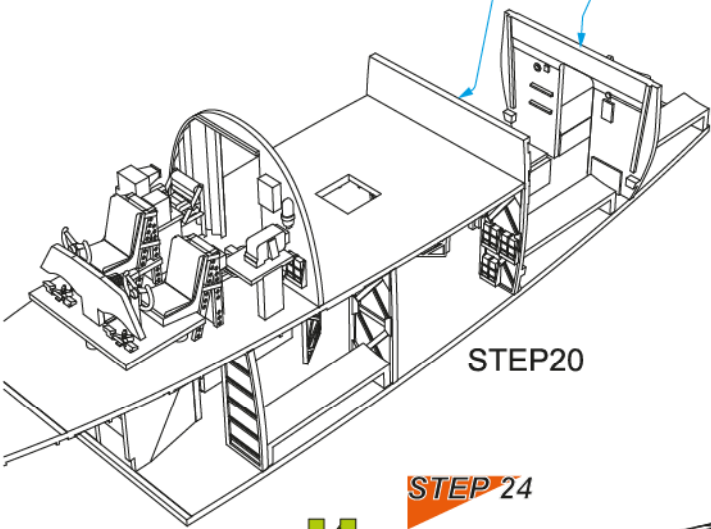
STEP16



STEP18



**STEP 21**



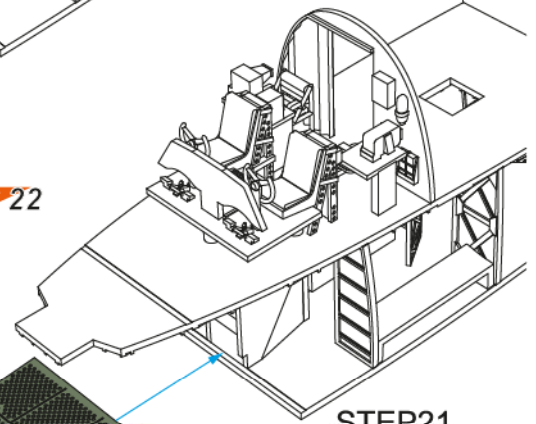
STEP20

STEP13

**STEP 22**



E I20

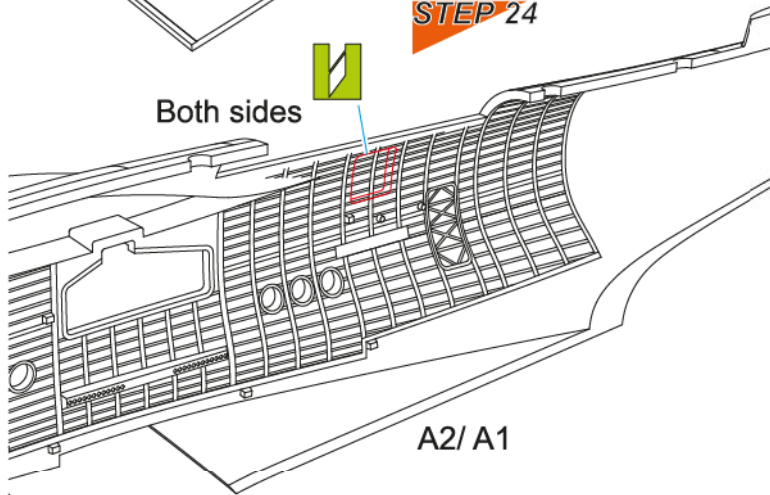


STEP21

**STEP 24**



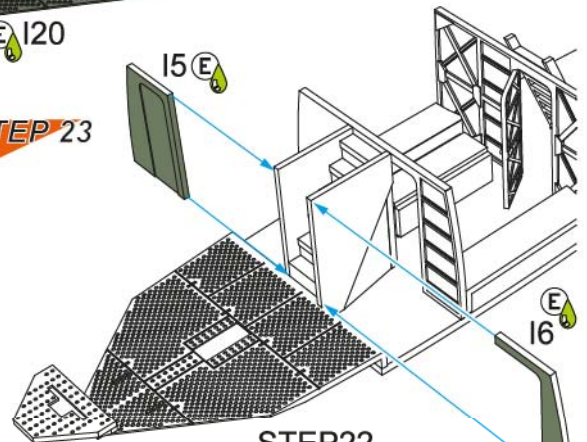
Both sides



A2/ A1

**STEP 23**

I5 E



STEP22

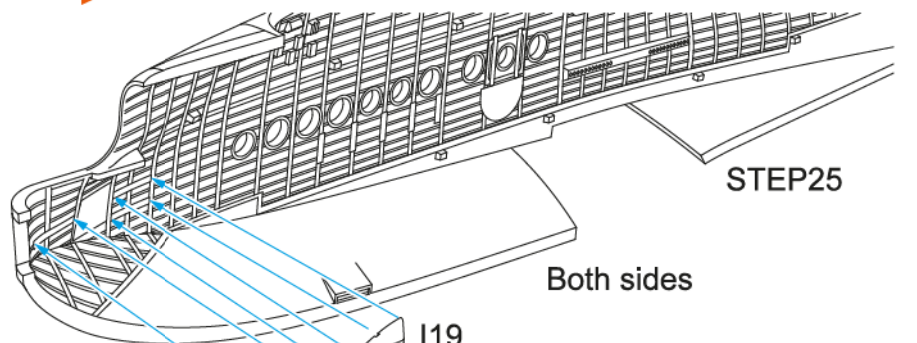
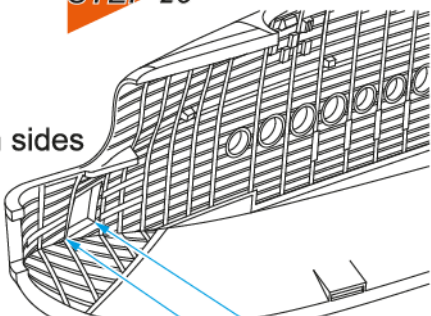
E I6

**STEP 26**

**STEP 25**

STEP24

Both sides



STEP25

Both sides

I19

camo A, C, D J59



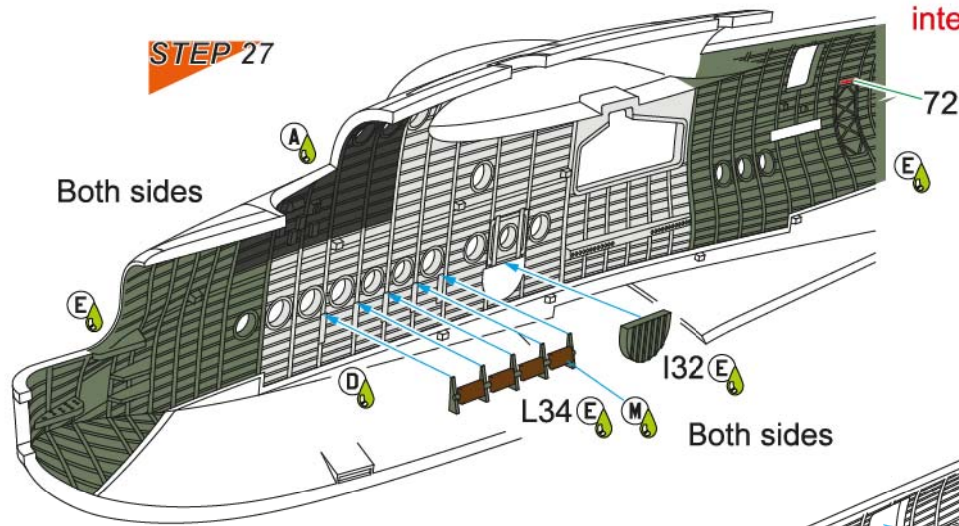
camo B K7/ K10

I12/ I11

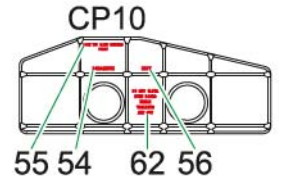
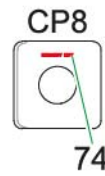
SH72162 Sunderland Mk. V



**STEP 27**

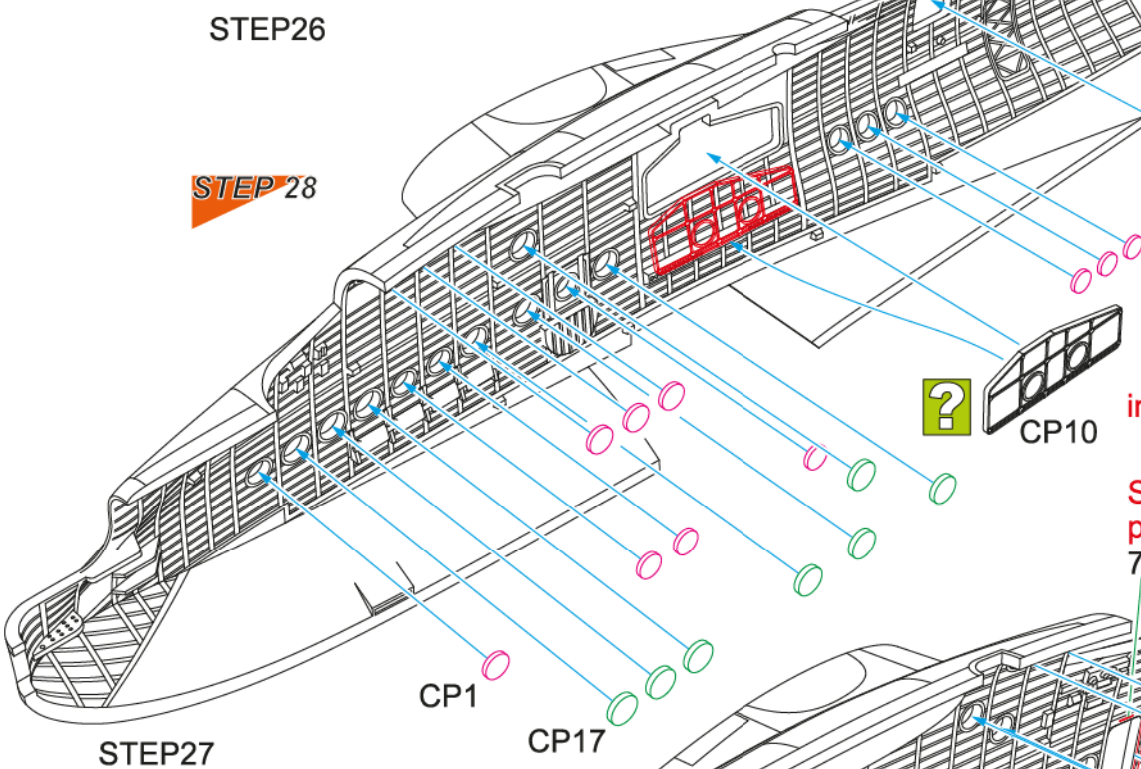


interior decals

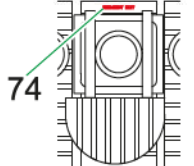


**STEP 26**

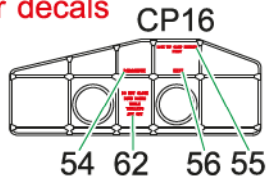
**STEP 28**



**STEP 28**



interior decals

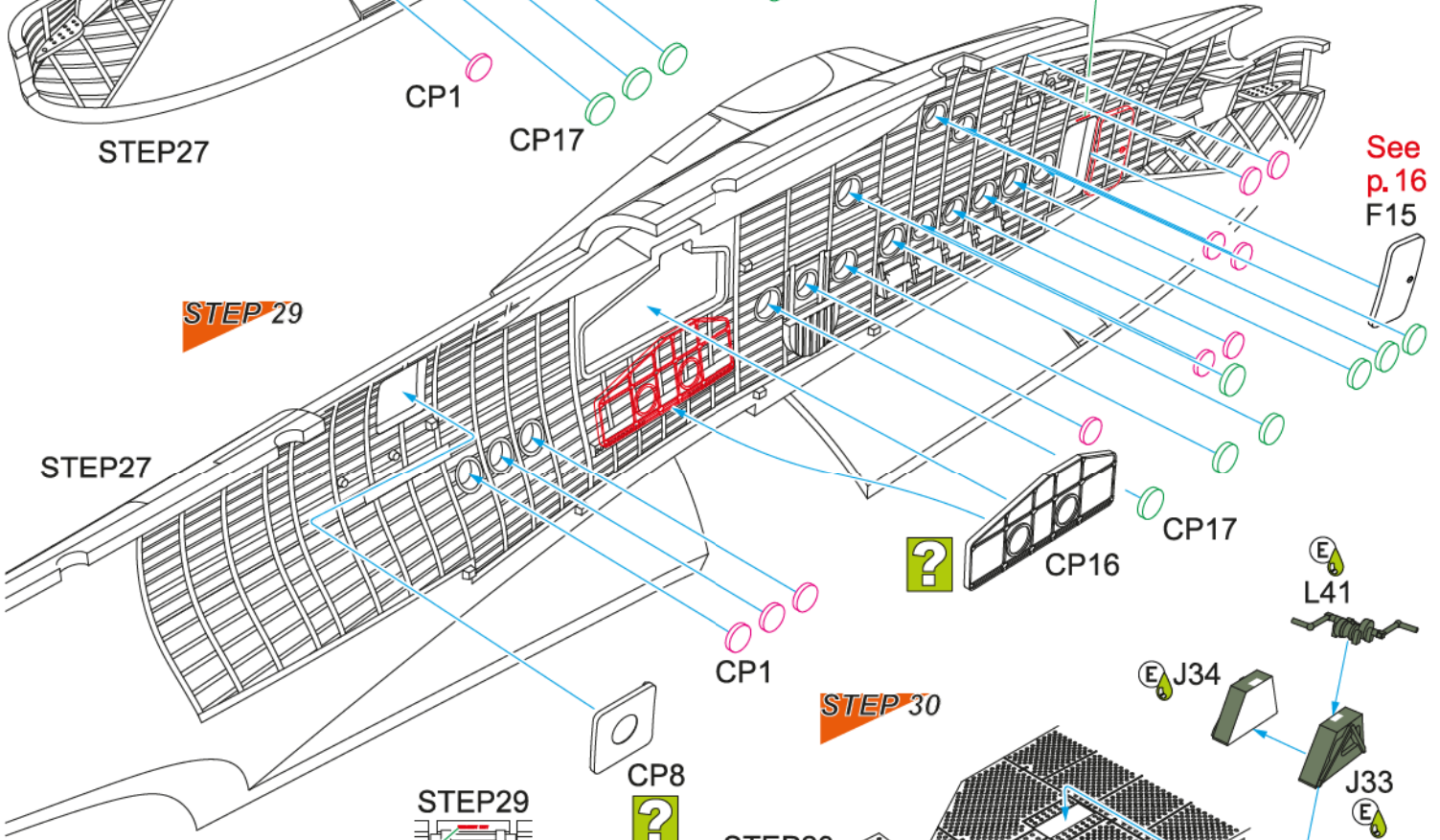


See p. 16 74

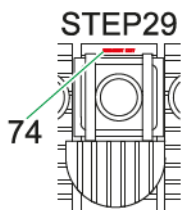
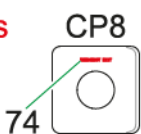
See p. 16 F15

**STEP 29**

**STEP 27**

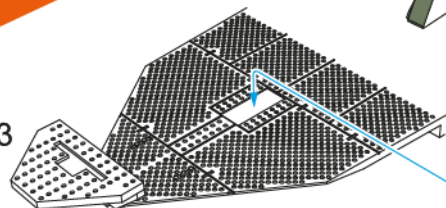


interior decals

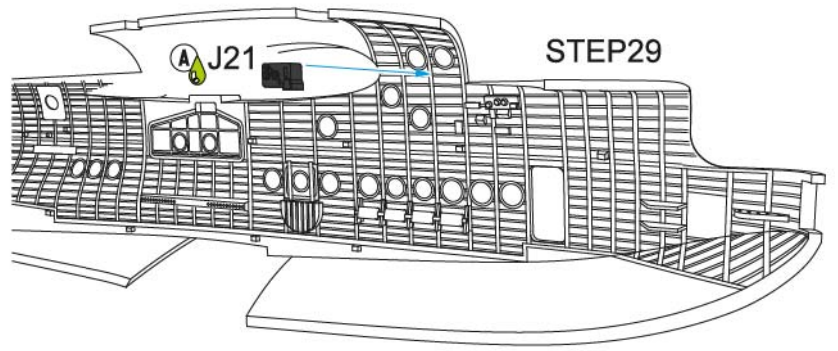


**STEP 30**

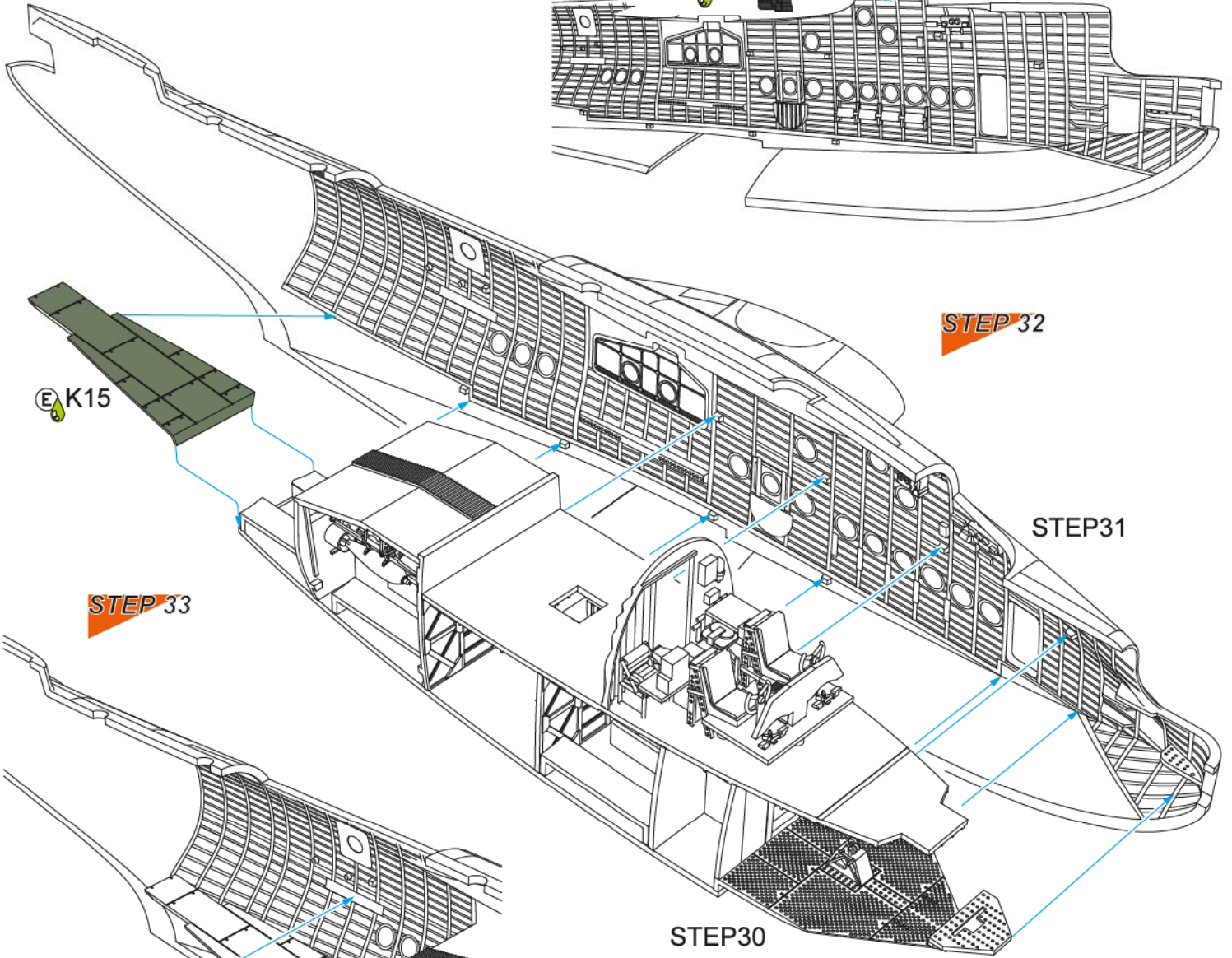
**STEP 23**



STEP 31



STEP 29

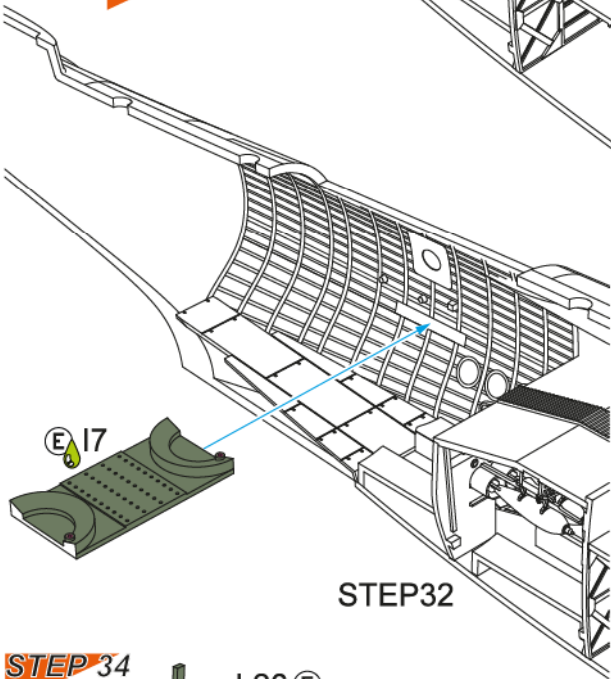


STEP 32

STEP 31

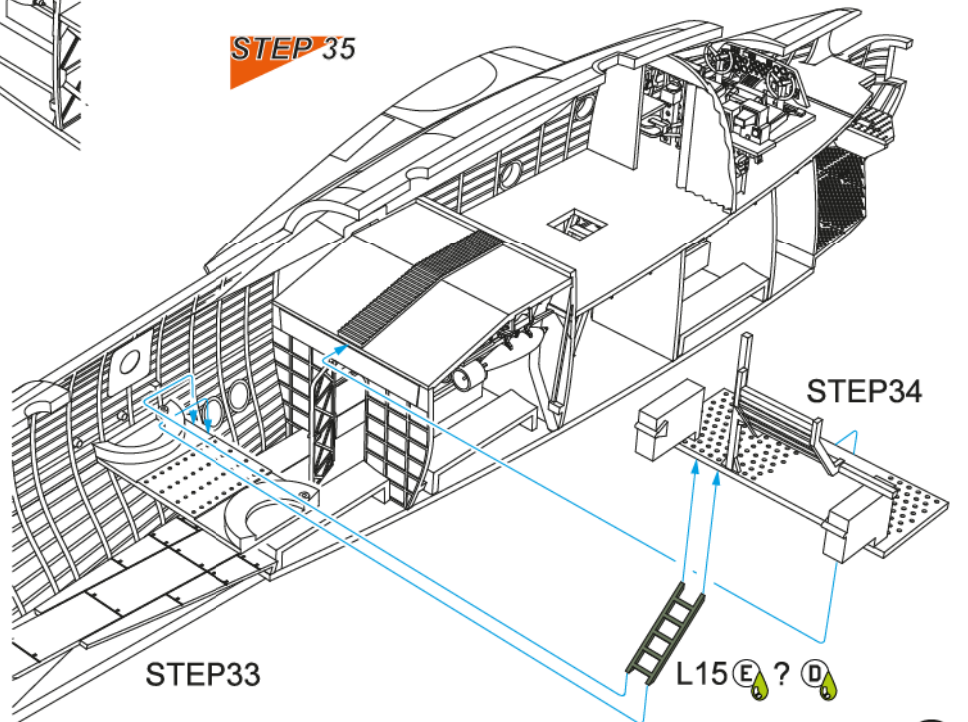
STEP 30

STEP 33



STEP 32

STEP 35



STEP 34

STEP 33

L15 E ? D

STEP 34

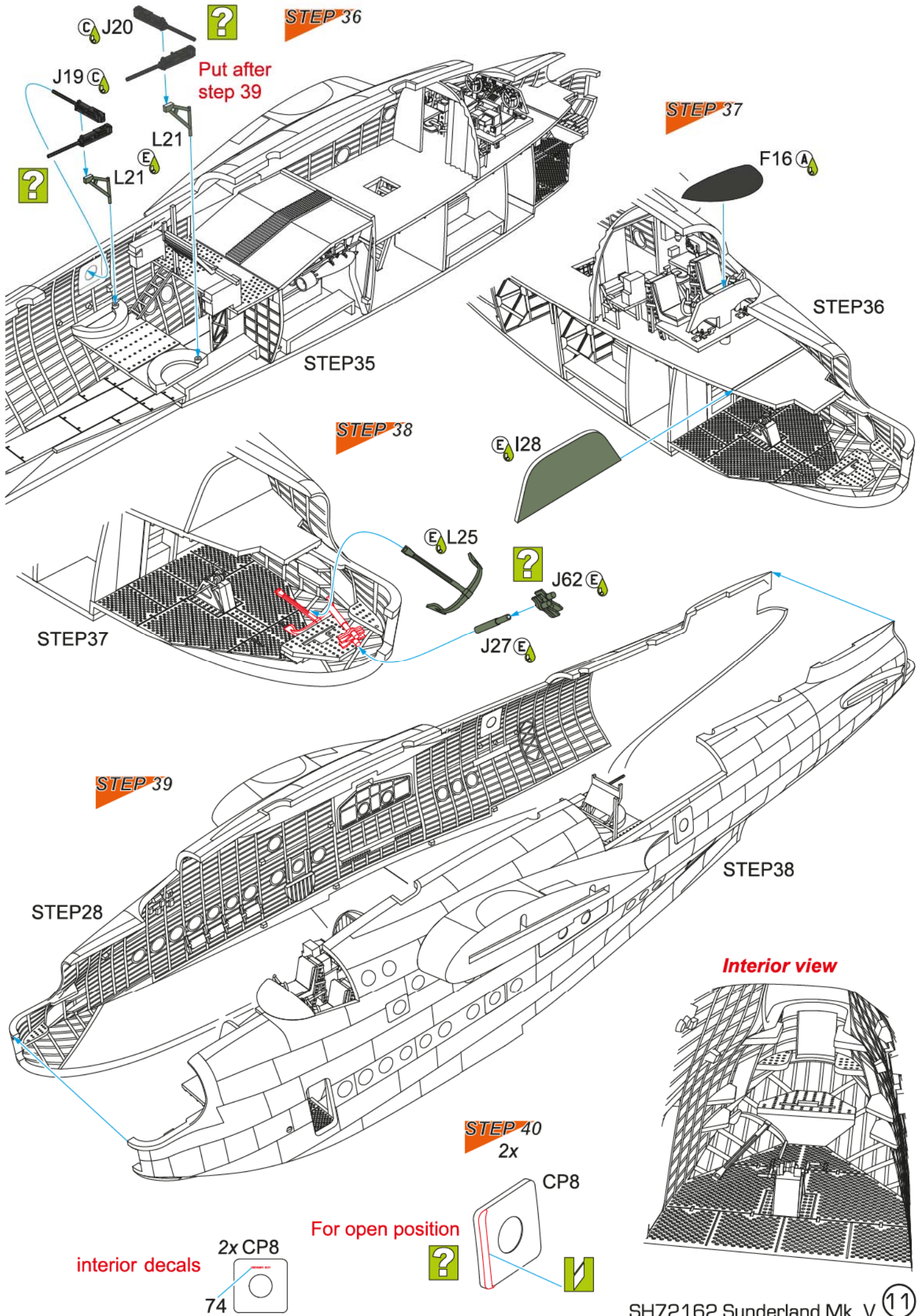
L26 E

L9 E

E I21

E I22

E I18



STEP 36

Put after step 39

STEP 37

STEP 35

STEP 36

STEP 38

STEP 37

STEP 39

STEP 38

STEP 28

Interior view

STEP 40  
2x

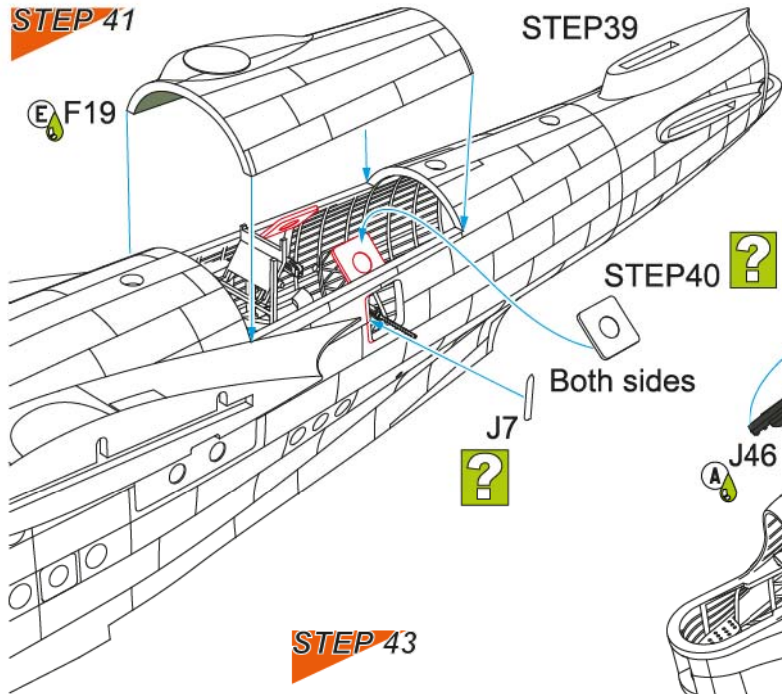
interior decals

2x CP8

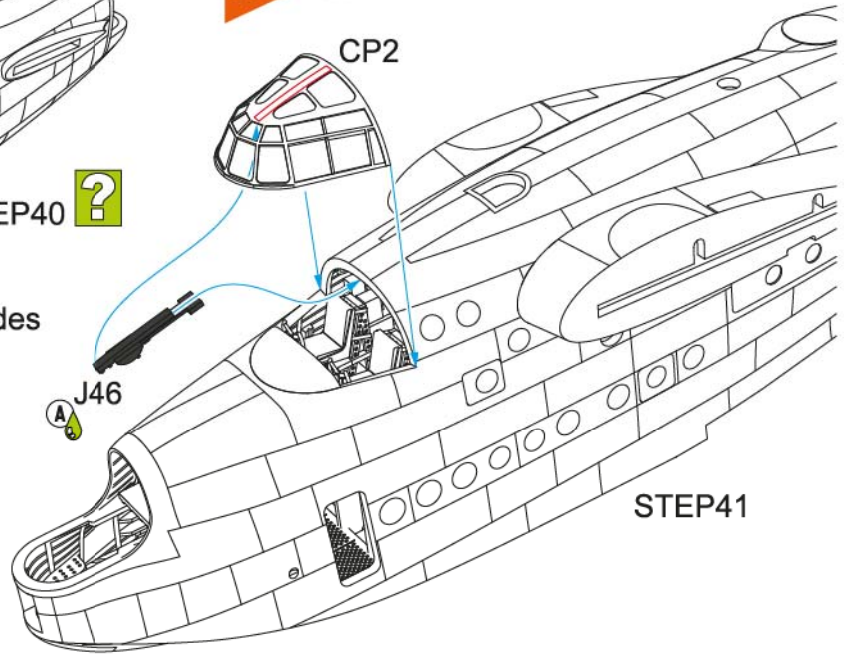
For open position

74

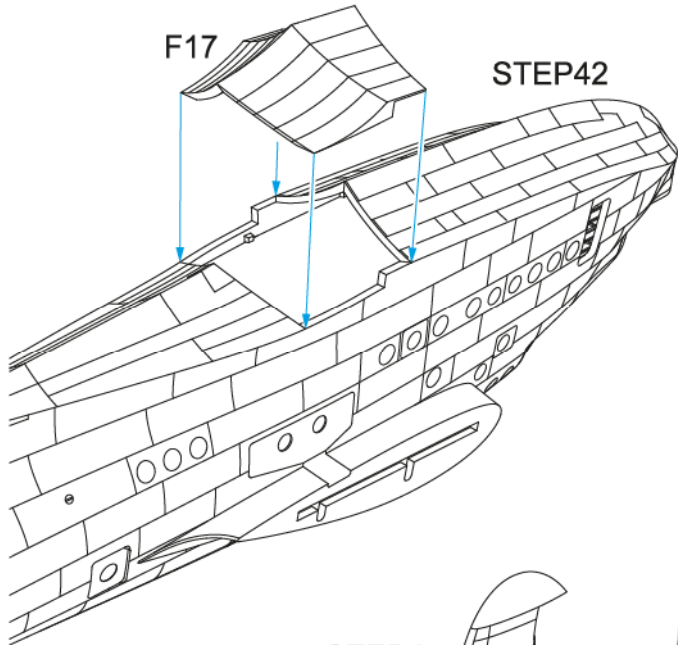
**STEP 41**



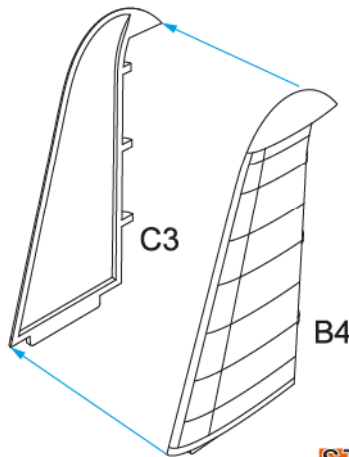
**STEP 42**



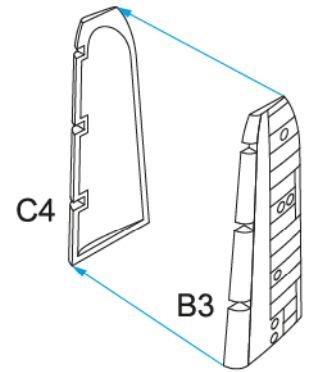
**STEP 43**



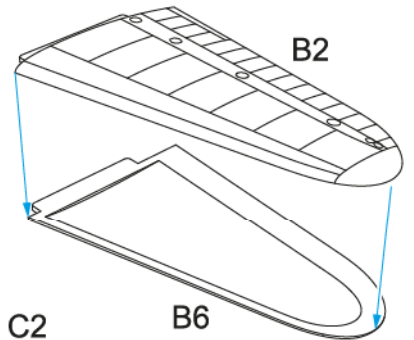
**STEP 45**



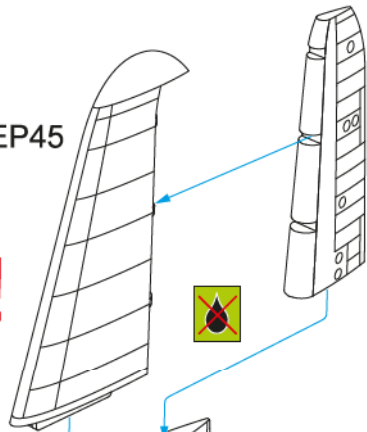
**STEP 44**



**STEP 46**

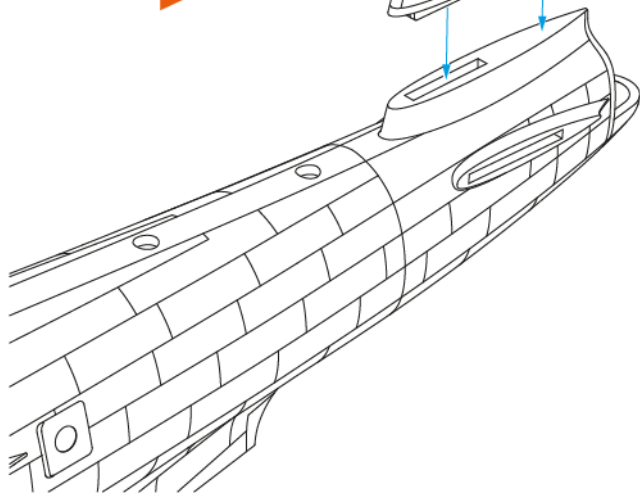


**STEP45**

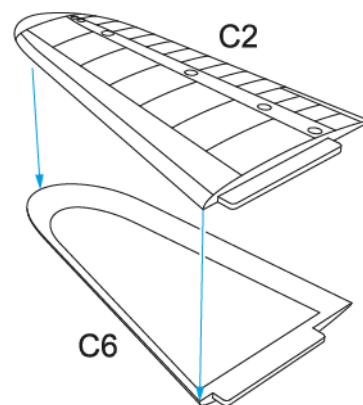


**Test fit first,  
glue in step 51!**

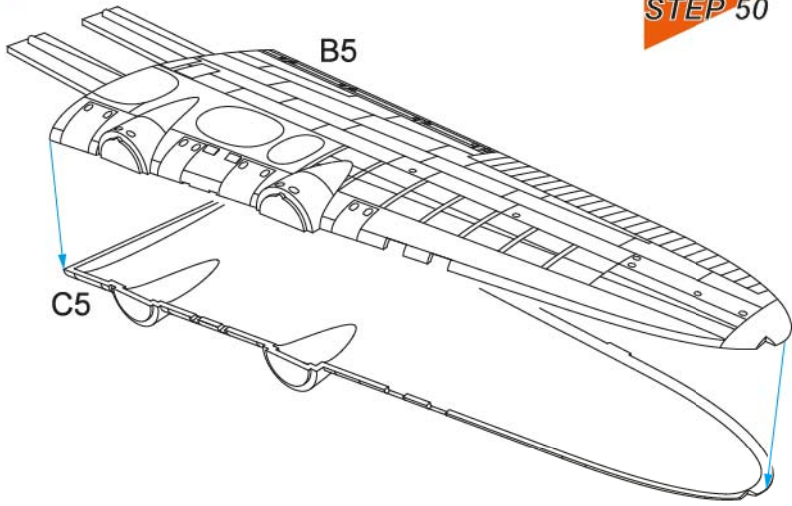
**STEP 48**



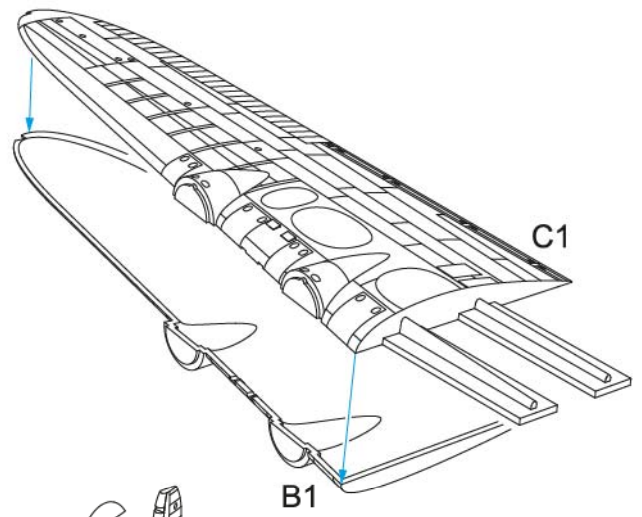
**STEP 47**



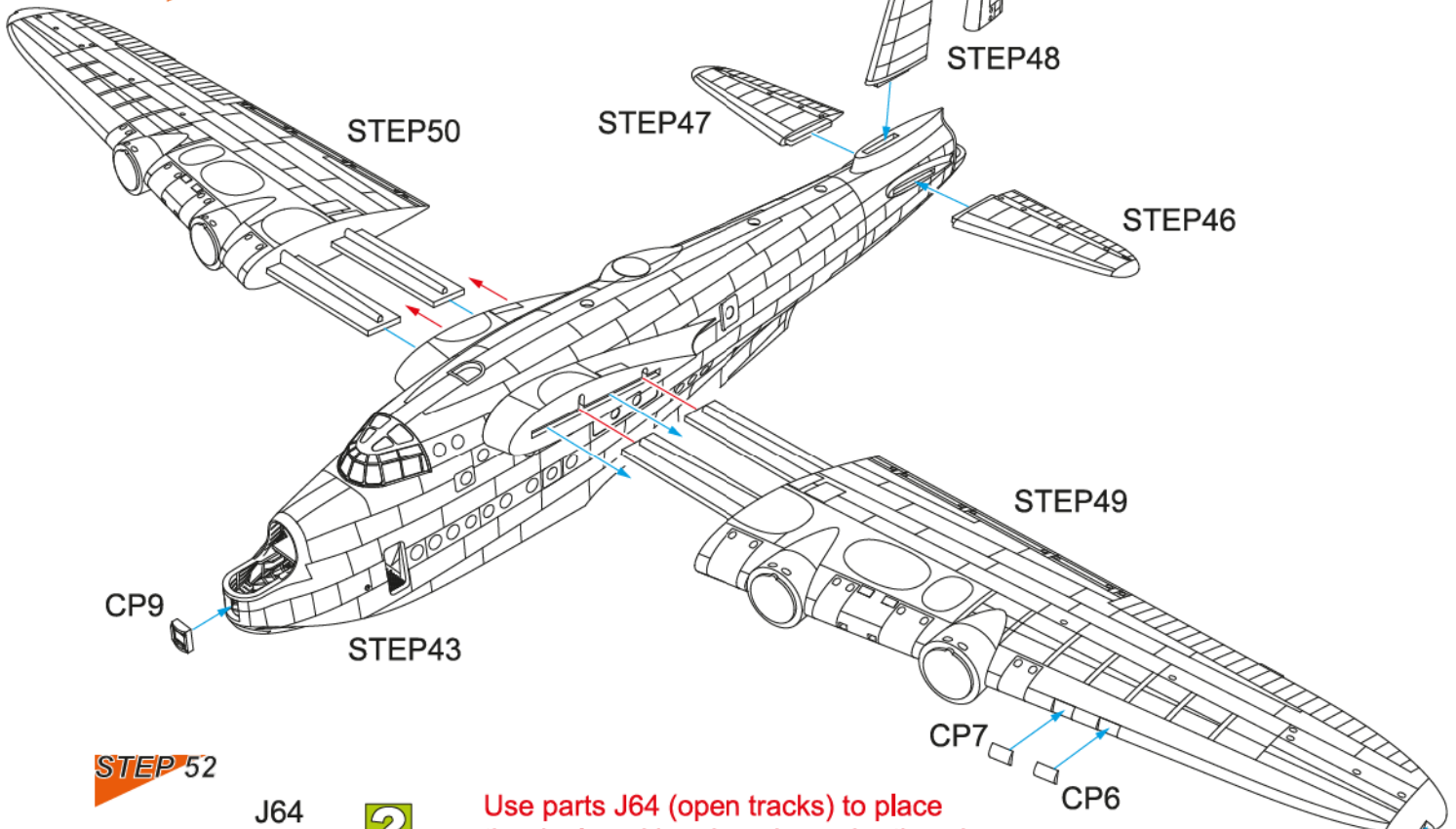
**STEP 49**



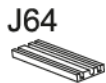
**STEP 50**



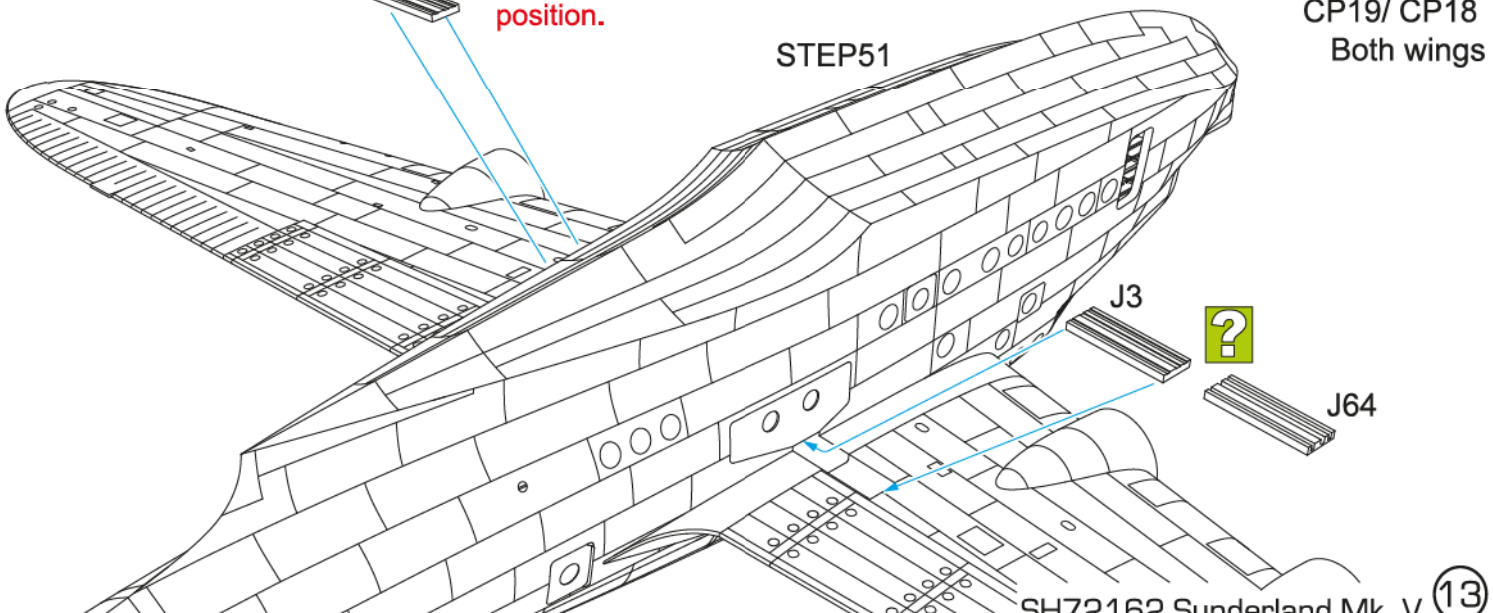
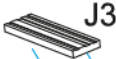
**STEP 51**



**STEP 52**

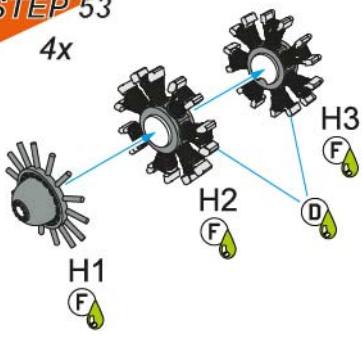


Use parts J64 (open tracks) to place the deployed bomb racks under the wings.  
Use parts J3 with the bomb racks in retracted position.



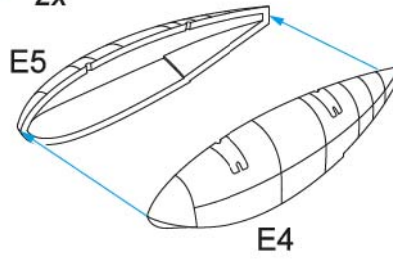
**STEP 53**

4x



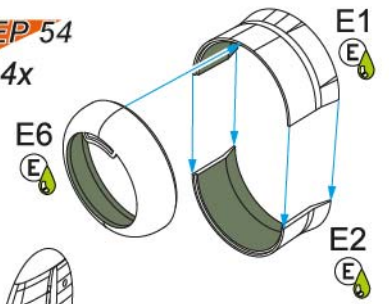
**STEP 55**

2x

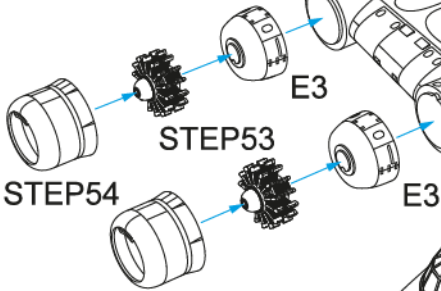


**STEP 54**

4x



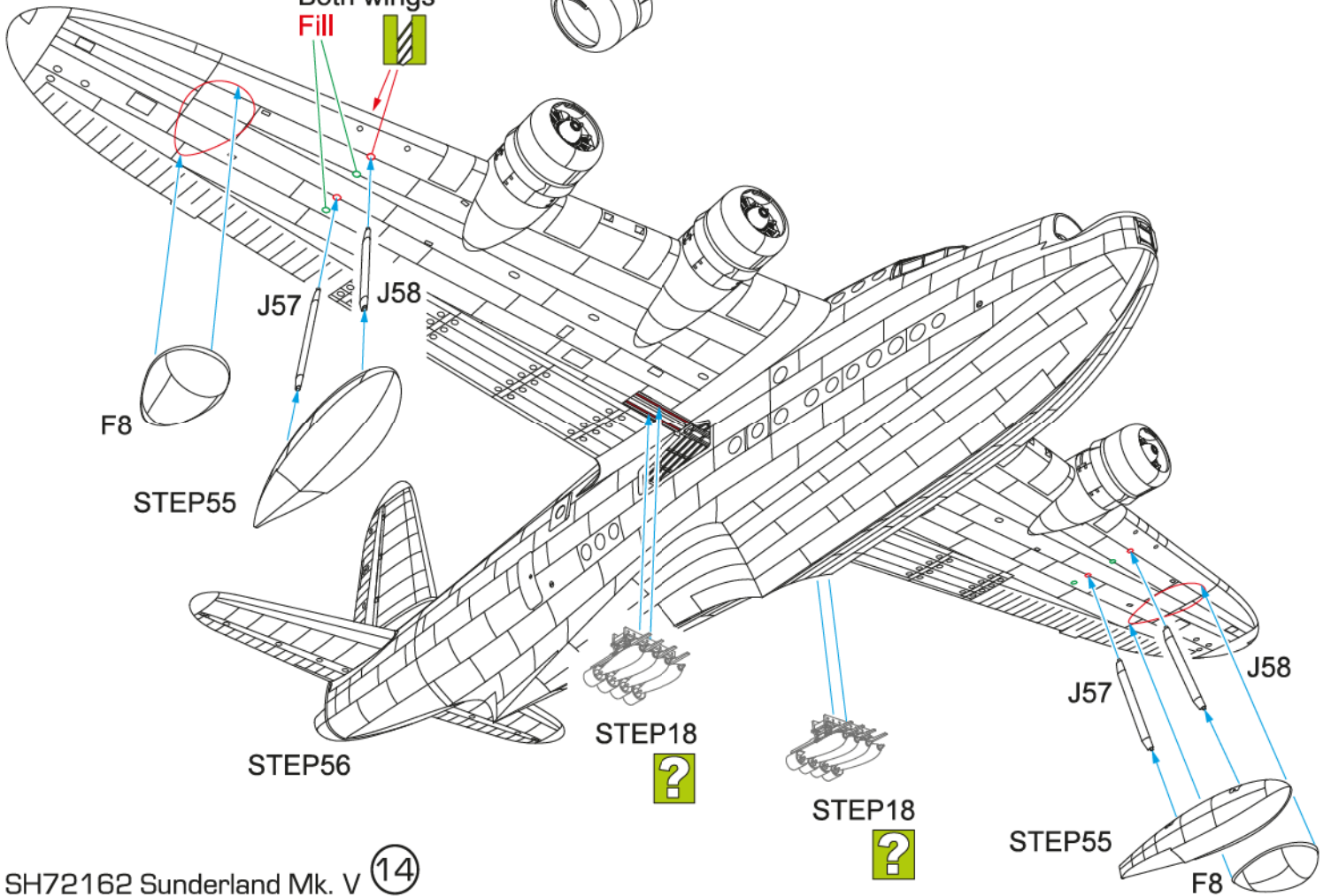
**STEP 56**

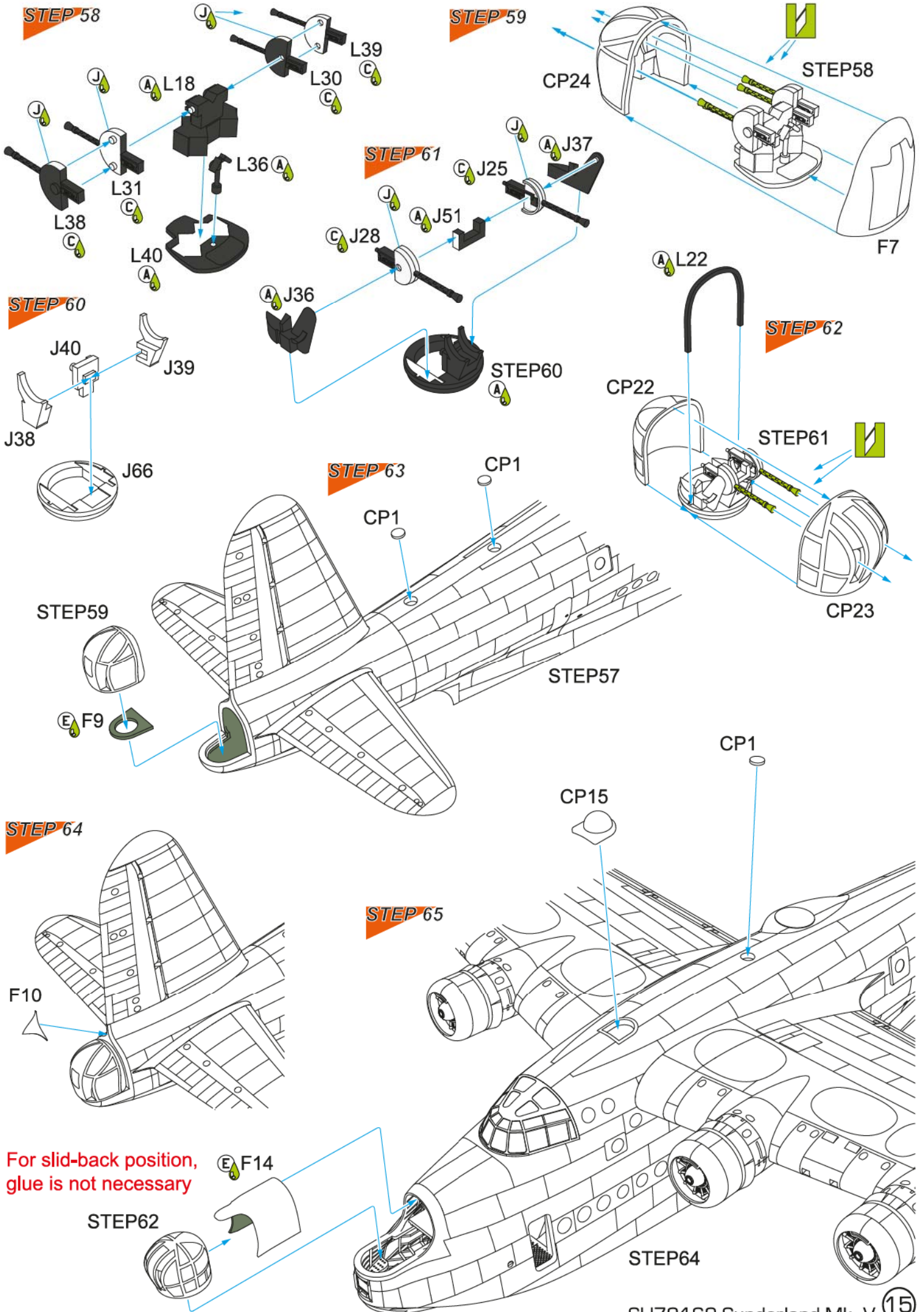


STEP52

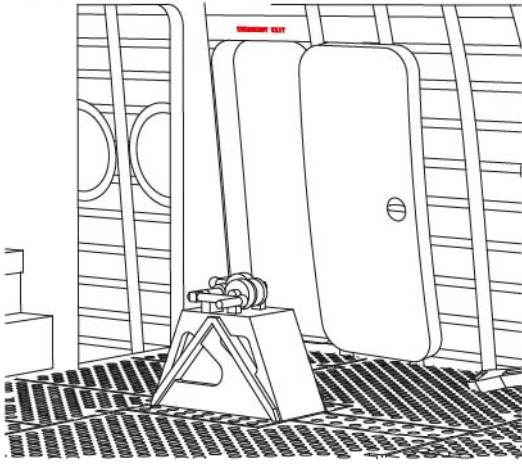
**STEP 57**

Both wings  
Fill

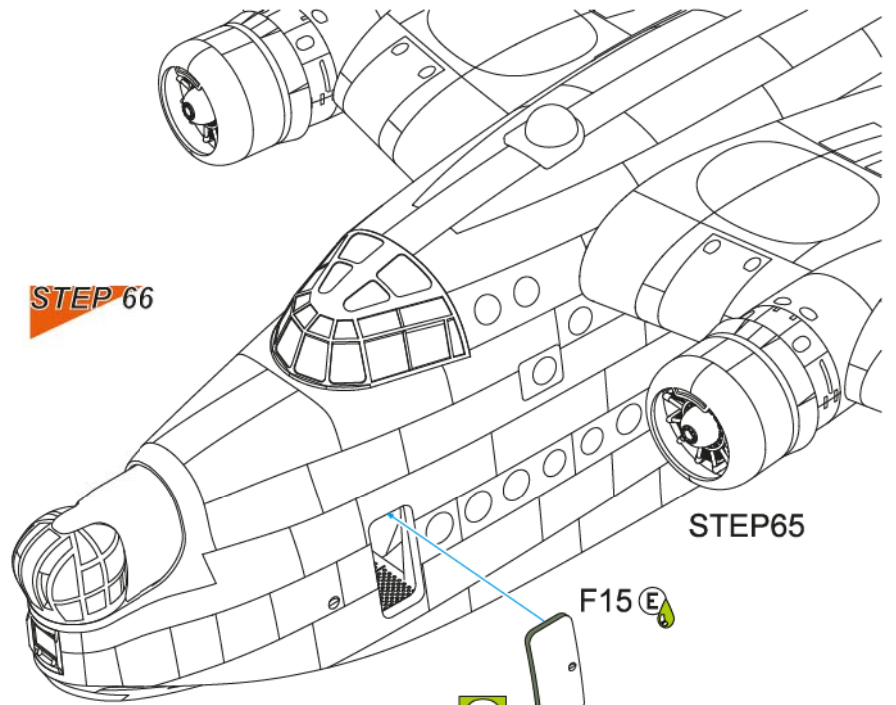




**Interior view with the front door open**



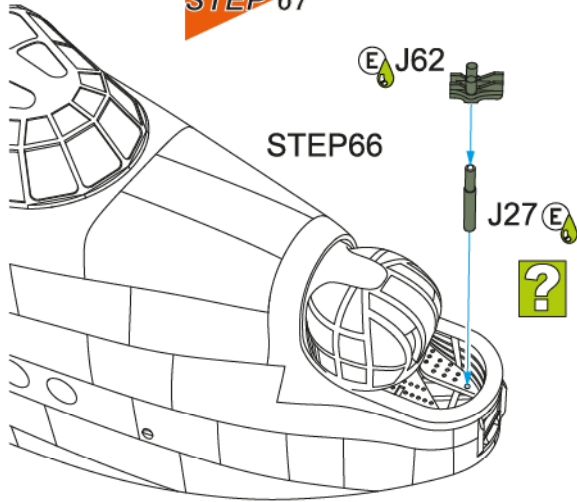
**STEP 66**



**STEP 65**

F15 E

**STEP 67**



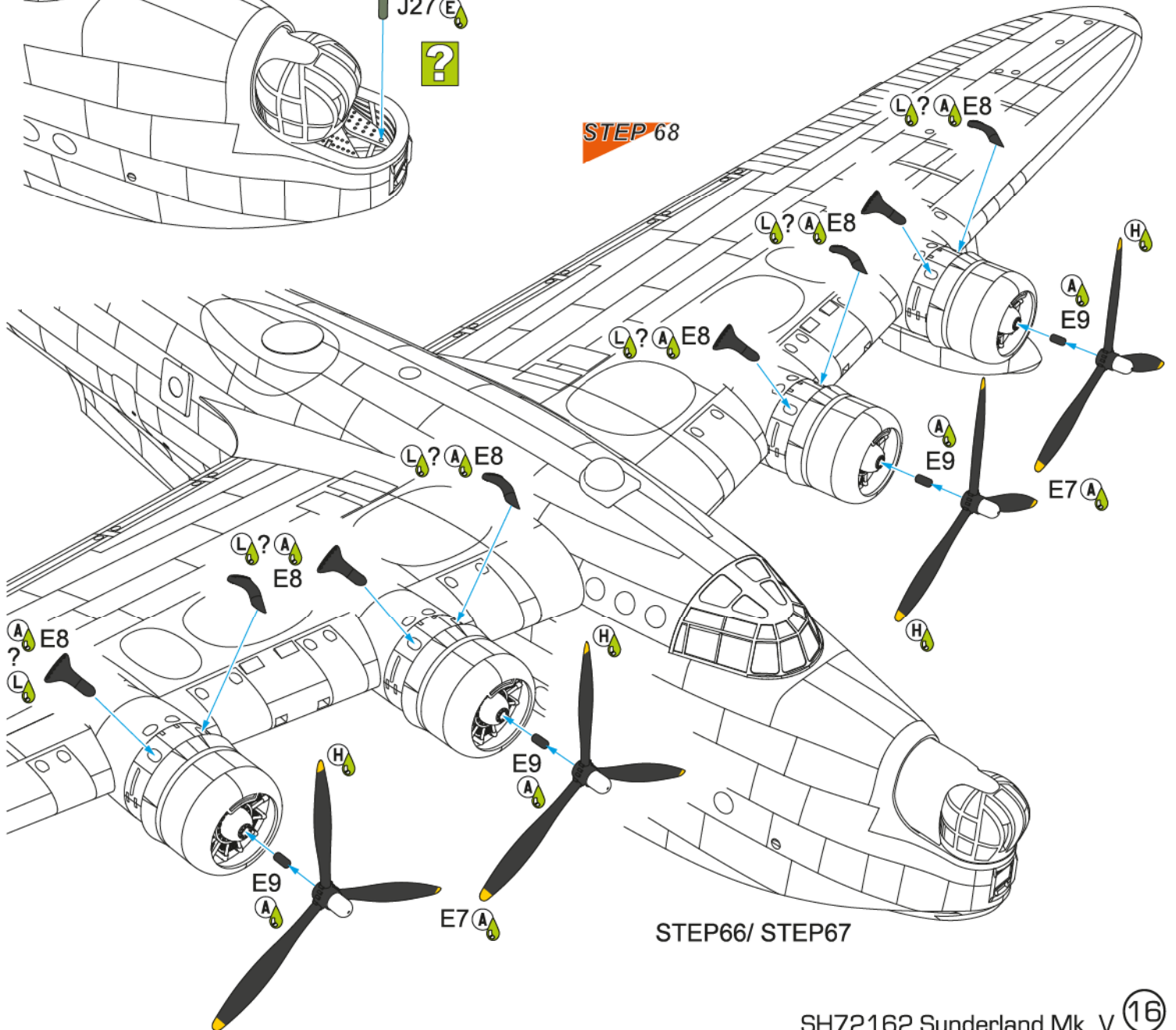
**STEP 66**

E J62

J27 E



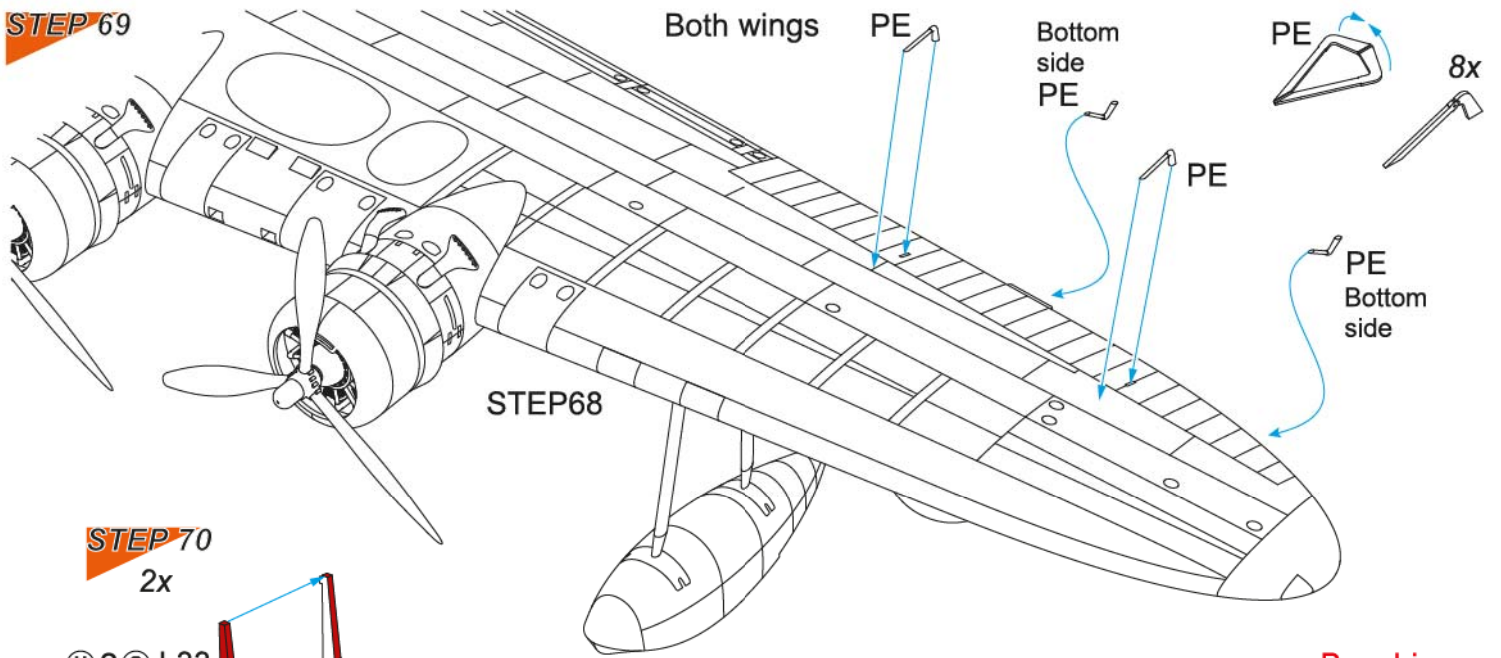
**STEP 68**



**STEP 66/ STEP 67**

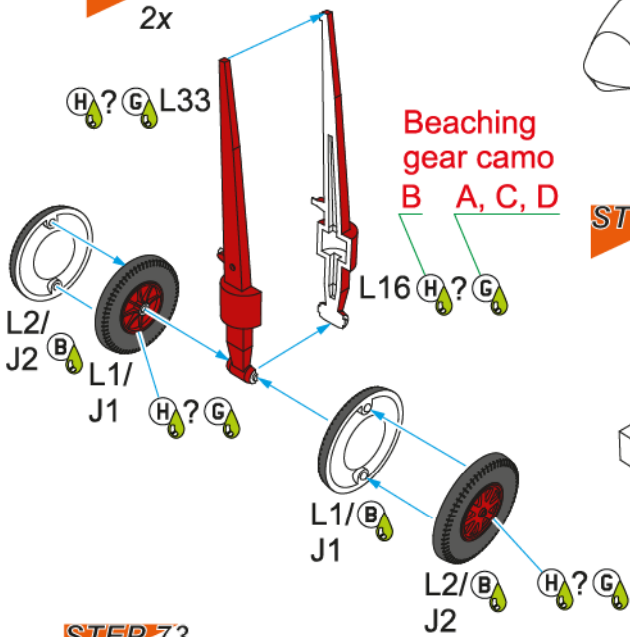


**STEP 69**

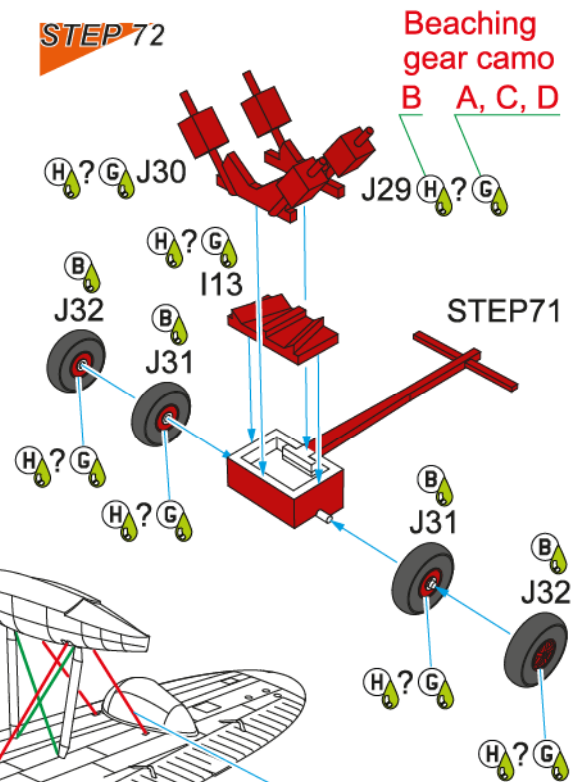


**STEP 70**

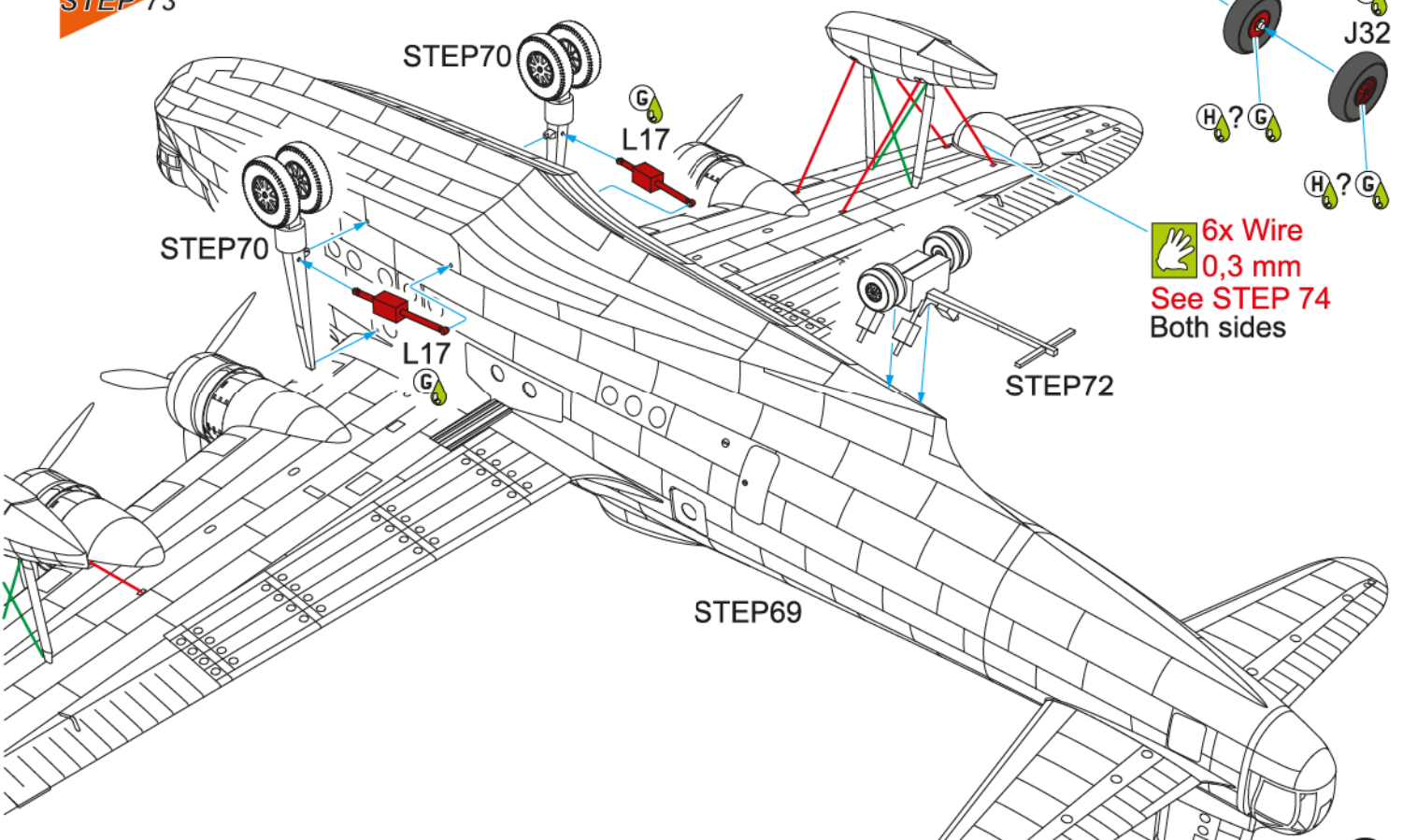
2x

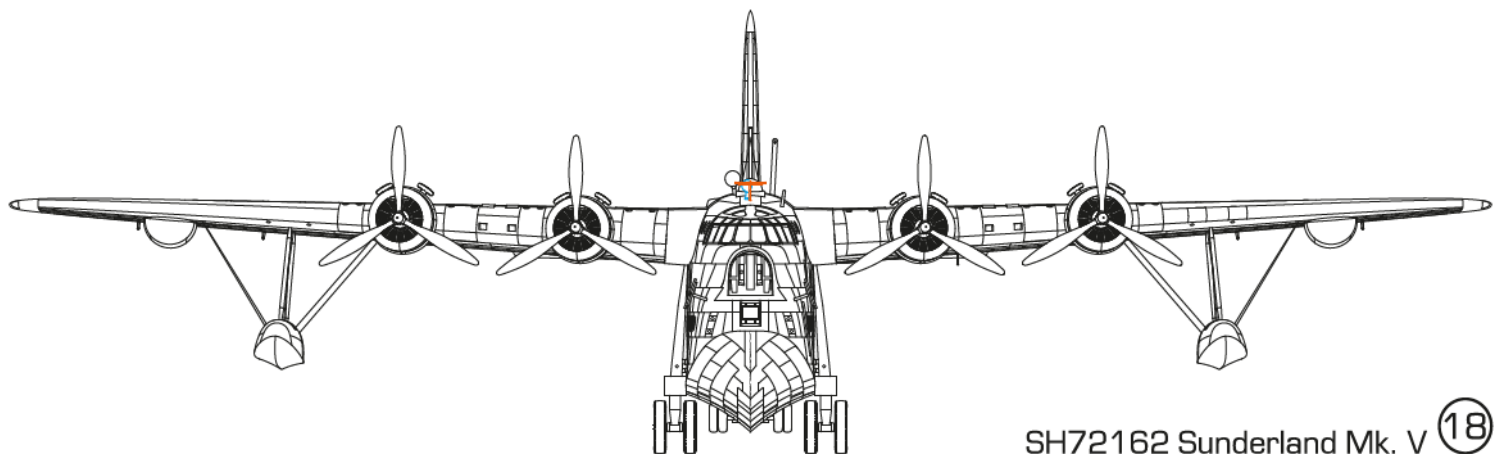
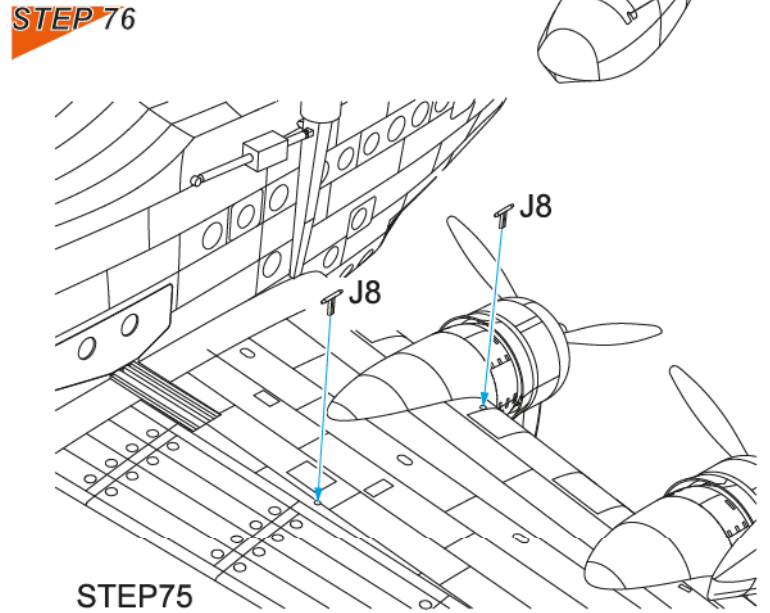
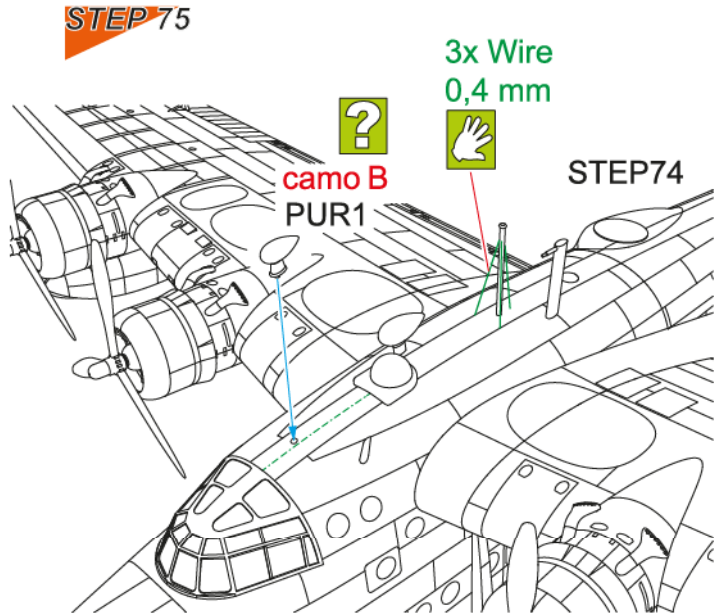
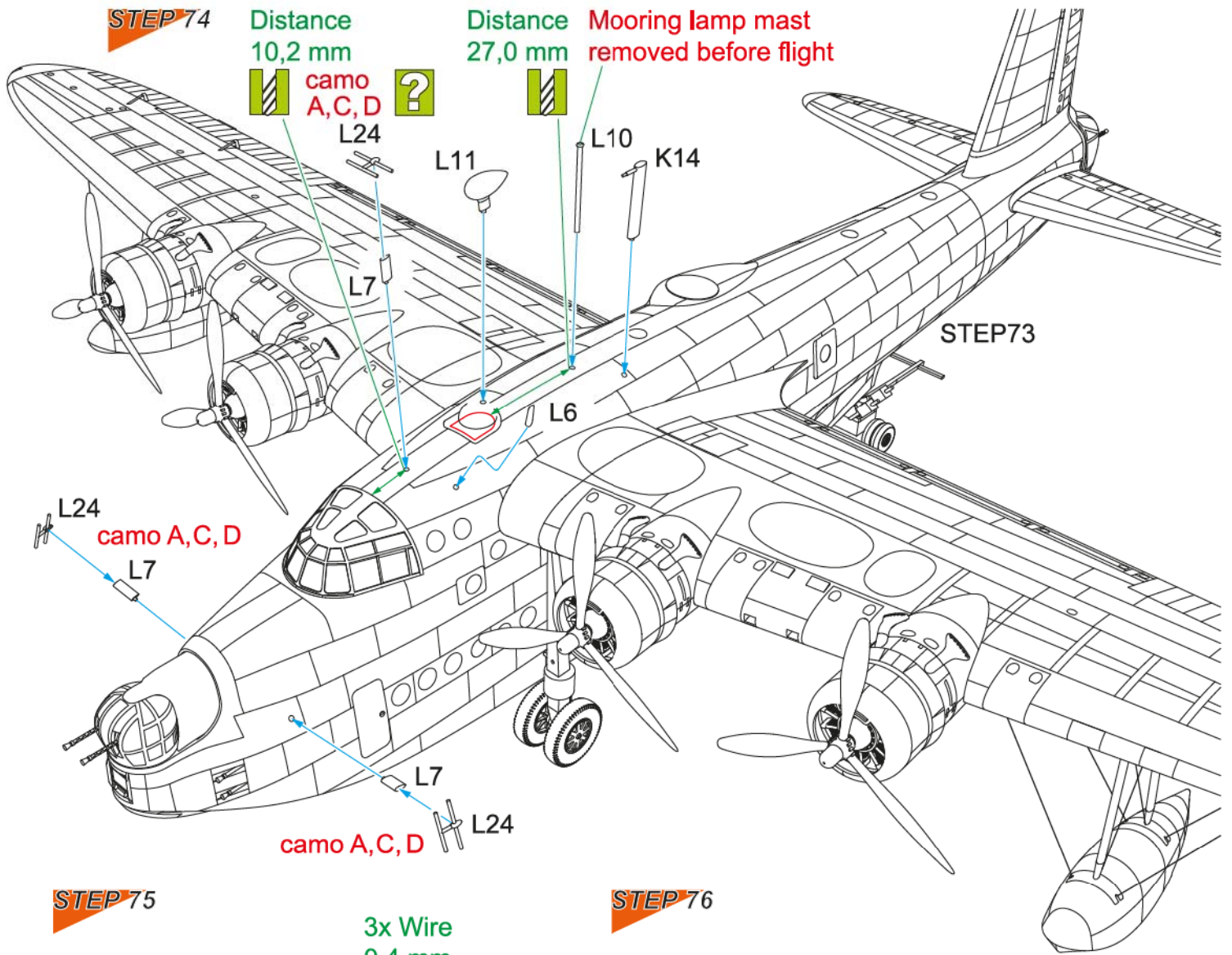


**STEP 72**



**STEP 73**

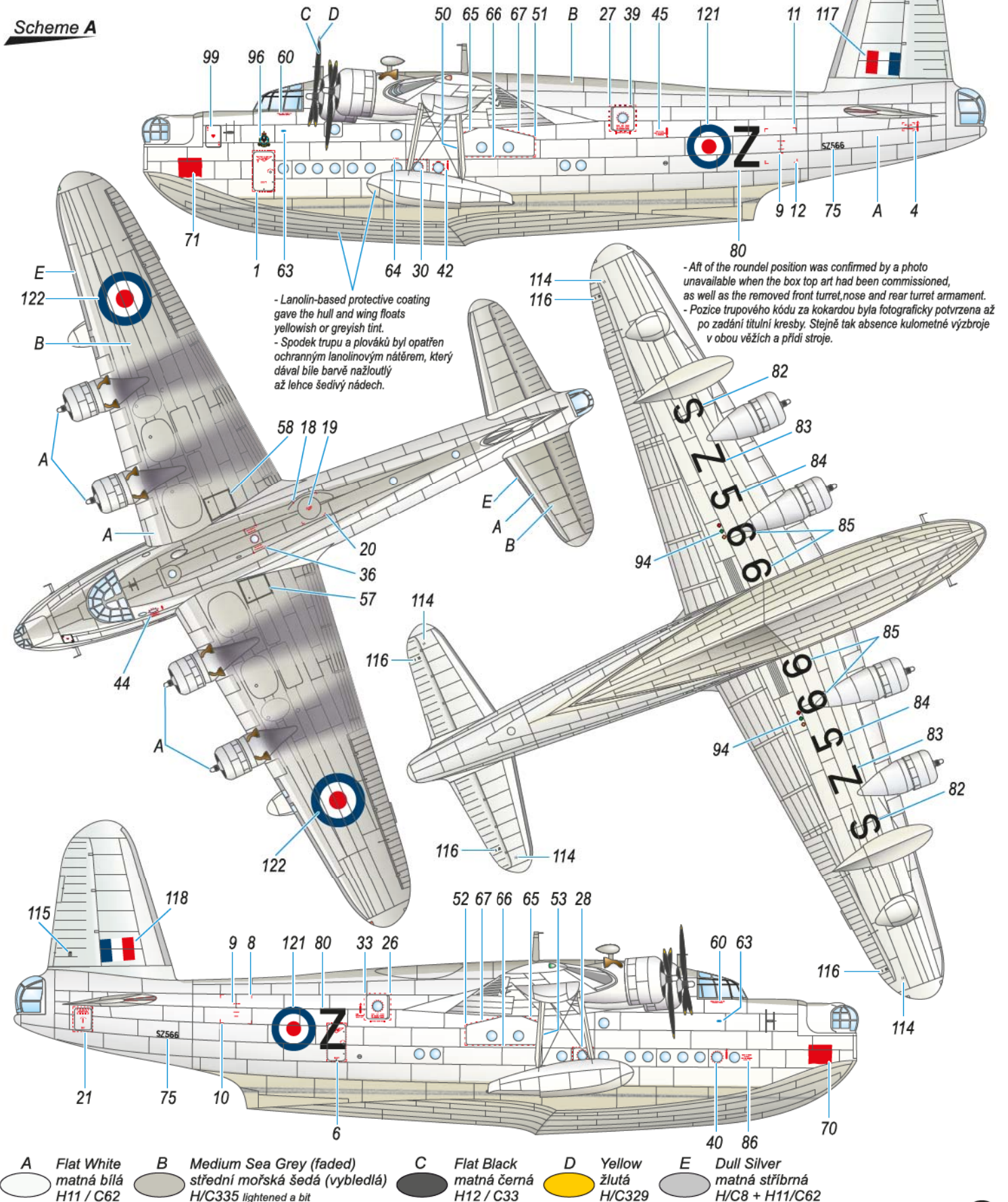




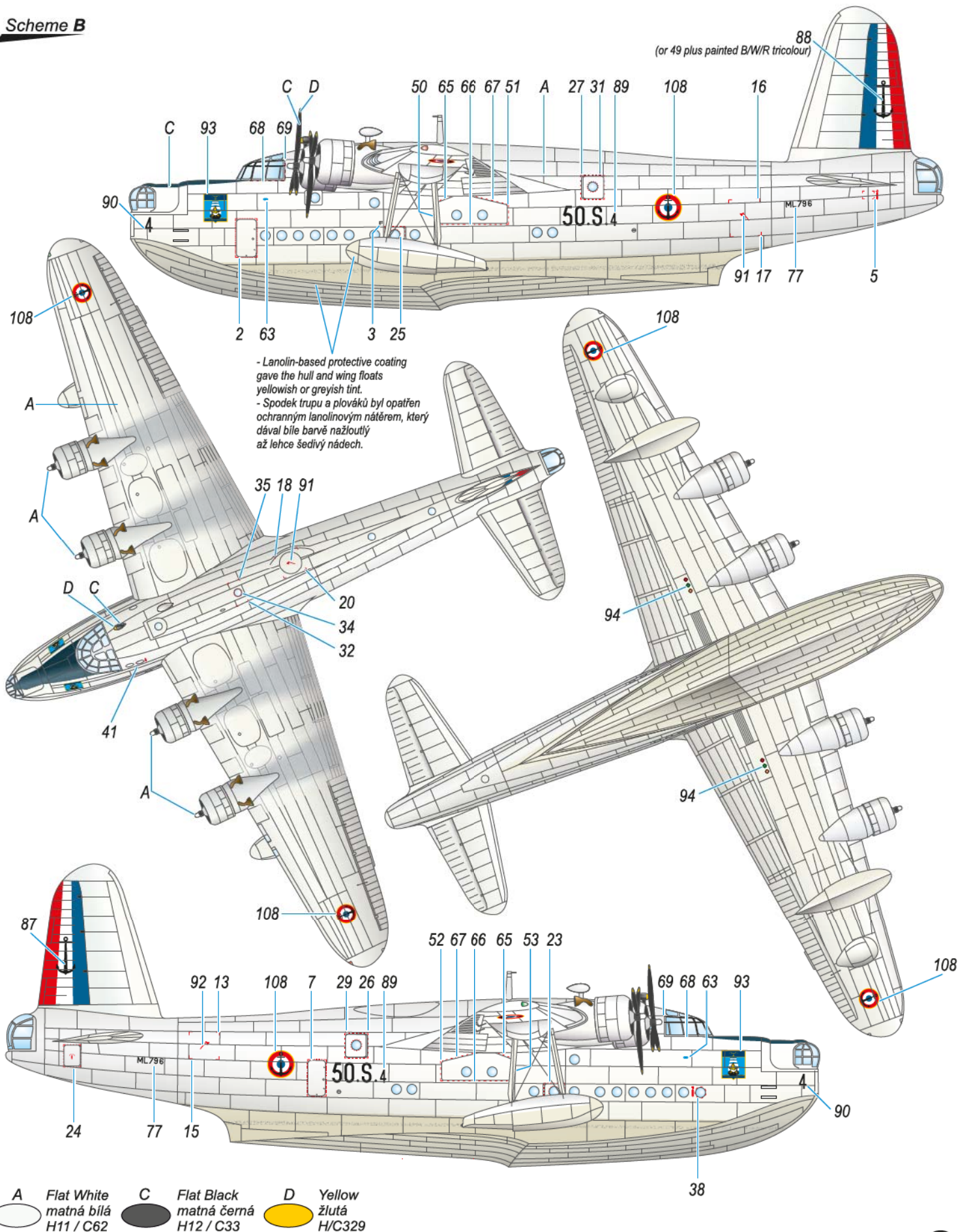
**Short Sunderland Mk.V, SZ566/Z, No.209 Sqn. RAF, Seletar, Singapore, 1951-53.** Usually flown by the crew of Vaclav Bergman, DFC and Bar. During the Korea War, No.209 Sqn's Sunderlands took part in anti-submarine patrols off the Korean shore as well as in bombing the communist insurgents in Malaya. Vaclav Bergman, DFC and Bar, fled Czechoslovakia, his homeland, twice. The first time because of the Nazi occupation, the second time to avoid Communist oppression. He fought with the RAF during WW2 as a fighter pilot, was one of the Czechoslovak pilots to take part in the Battle of Britain, and in 1944 commanded No.313 Sqn RAF. Having left his country for the second time, he flew Spitfire Mk.XVIs and later Sunderland flying boats in Malaya and Korea. When he got back to the UK again, he found himself flying Shackleton aircraft and eventually retired from the RAF in 1969 as a Squadron Leader. For his service in Korea and Malaya, he was awarded high military decorations which fact was almost impossible for the Czechoslovak communist regime to get over with at that time. Bergman was the sole Czechoslovak national, besides Karel Kuttelwascher, to receive Distinguished Flying Cross two times.

**Short Sunderland Mk.V, SZ566/Z, No.209 Sqn. RAF, Seletar, Singapur, 1951-53.** Tento stroj pilotoval Václav Bergman DFC&Bar. Stroje No.209 Sqn. byly nasazovány v době války v Koreji k protiponorkovým hlídkám u korejského pobřeží a k bombardování komunistických povstalců v Malajsi. Václav Bergman, DFC&Bar, dvakrát emigroval z Československa. Poprvé kvůli nacistům a podruhé kvůli komunistům. Bojoval v RAF za druhé světové války jako stíhač. Je jedním z československých účastníků Bitvy o Británii, v roce 1944 velel No.313. sqn. RAF. Po druhé emigraci létal Spitfirey Mk.XVI a později bojově v Malajsi a Koreji stroje Sunderland. Po návratu do Velké Británie svou leteckou kariéru uzavřel jako pilot Shackletonů, do výslužby odešel v roce 1969 v hodnosti Squadron Leader. Za službu v Koreji a Malajsku obdržel vysoká vyznamenání (což v té době nemohli rozdávat českoslovenští komunisté). Vedle K. Kuttelwaschera je jediným Čechoslovákem, který obdržel vyznamenání DFC dvakrát.

**Scheme A**



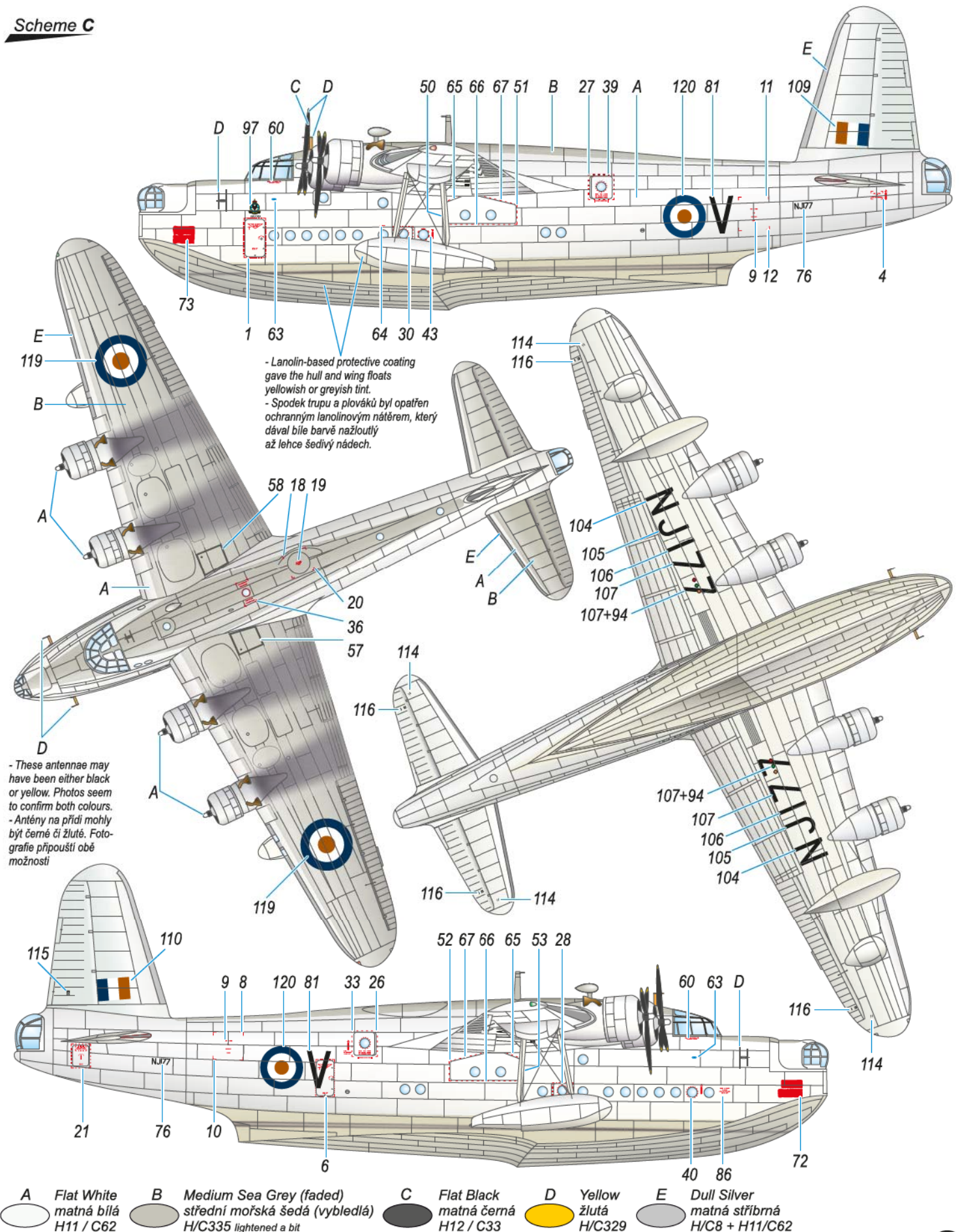
**Scheme B**



Short Sunderland Mk.V, NJ177/V, nicknamed Sulu Sea, No.209 Sqn. RAF, flown by the crew of Capt. Richard Lockyer, Seletar, Singapore, 1953. The crew's Wireless Operator/Gunner Sgt Brian Matthews is the author of a stunning series of photographs some of which we were allowed to use while making this kit.

Short Sunderland Mk.V, NJ177/V, pojmenovaný Sulu Sea, No.209 Sqn. RAF, osádka Capt. Richarda Lockyera, Seletar, Singapur, 1953. Jako radiový operátor/střelec v této osádce létal Sergeant Brian Matthews, autor úžasných fotografií. Některé byly použity při přípravě tohoto modelu.

**Scheme C**



Short Sunderland GR Mk.V, PP117/4X-W, No.230 Sqn. RAF, temporarily detached to Finkenwerde base, Hamburg, British Zone of Germany, July-December 1948. PP117, along with other 230Sqn's Sunderlands, took part in the so-called Berlin Airlift, ie. a shuttle service from Finkenwerde to Havel See in Berlin, ferrying supplies of coal, food and salt (the latter allowed due to the anti-corrosion coating of the airframe)

Short Sunderland GR Mk.V, PP117/4X-W, No.230 Sqn. RAF, detašmán umístěný na základně Finkenwerder, Hamburk, Západní zóna Německa. Stroj PP117 se zapojil společně s jinými stroji této squadrony do Berlínského vzdušného mostu. Sunderlandy dodávaly do Berlína zejména uhlí a vzhledem k antikorozní úpravě draků i sůl.

**Scheme D**

