

Romanian Barbarossa 1941 vol.2: IAR.80 early & IAR.80A (2 in 1)



Cat. No. 72565
Scale 1/72



3d design: Radu Brînzan
Research: IBG Crew

IBG Models would like to thank Horia Stoica, Radu Brînzan, Dénes Bernád and Michał Skawiński for the great help in recreating colour schemes for this model kit.

I.A.R.80 and 81 Series

The legendary I.A.R.80 and 81 was the only Romanian fighter of domestic design to take part in World War II, often facing superior opponents and still being capable to hold its own thanks to the skills and courage of its pilots. The turns of war made for a very interesting operational career, with the airplane having the opportunity to fight all the major air forces in the theatre: USAAF, Soviet VVS, German Luftwaffe and the aviation of Hungary.

The success of this design was possible thanks to the previous experience of I.A.R. designers with cantilever, low-wing monoplanes and the transfer of the all-metal airplane construction technology after the purchase of the P.11F license from Poland (see IBG Models set No. 72521). I.A.R.80 sleek lines bear resemblance to the Hughes H-1 racer, which might have been one of the distant inspirations, nevertheless the airframe was designed from scratch by Romanian engineers, who used only the heavily-modified rear fuselage and smaller parts from PZL P.24E fighter, licence-produced at I.A.R.

The entire production run included 450 numbered airframes (with the last two being lost during USAAF bombardment of I.A.R. factory at Braşov). In addition to the pure fighter airplane (I.A.R.80), the series included a fighter-bomber with dive bombing capability (I.A.R.81). It is worth to note that both during the production and in service, the airplanes underwent continuous improvement, resulting in a number of versions that visibly differed in fuselage length, wingspan, armament and other details. More on the differences between them can be found in the eBook downloadable from our website: <http://www.ibgmodels.com/resources-2/>

Early I.A.R.80

Early series-production airplanes (understood here as airframes No. 2 to 50), differed from later series in having four machine guns in the wings. Initially equipped with ring-and-bead gunsight, unarmoured seat and a flatter canopy, these elements were gradually updated during service. From the modeller's point of view the important aspect is also that it served in the period of the often-changing markings regulations, resulting in very interesting colourful schemes, as presented in the marking options for both this and the earlier IBG kit no.72564.

I.A.R.80A

This version brought the much-needed increase in the firepower, as the airframe now mounted six FN Browning machine guns instead of four. Apart from the initial specimens in the early weeks of their career, I.A.R.80A was equipped with gyro gunsight, armour behind pilot's seat and bulged canopy as a standard. Starting with No.76, airplanes were partially unified with the BoPi dive-bomber version, having bulged belly and flaps lowered by 60 degrees, with the mechanism of flaperons removed (differences between flaps versions were visible only when they had been extended and are included only as 3D-printed parts available separately).

I.A.R. Fighters During Barbarossa Campaign

In June 1940, under threat of armed invasion, Romania was forced to cede Eastern parts of its territory to USSR. When offered by Germany to join the attack on that country in order to regain its territories, Romania agreed and on 22nd June 1941 started what was termed as 'Liberation of Bessarabia', part of the wider Barbarossa campaign. The troops that were assigned to it included Gruparea Aeriana de Lupta (Combat Air Grouping). Its fighter components included I.A.R.80-equipped Grupul 8 Vânătoare (consisting of Escadrile 41, 59 and 60), He 112-equipped Grupul 5 Vânătoare and Grupul 7 Vânătoare on Bf 109E.

I.A.R.80s were active from the very first day of the war, initially flying mainly escort and air superiority missions, fighting Soviet I-16 and MiG-3 fighters. As the VVS forces dwindled, Grupul 8 Vânătoare gradually switched to ground support missions, although air combats took place throughout entire campaign. Liberation of Bessarabia was completed by 28th July, but this did not end the involvement of Aeronautica Regală Română (ARR, Royal Romanian Aviation) in Barbarossa campaign. New units arrived to the front, including Escadrila 42 Vânătoare, soon merged with the remnants of Escadrila 52 that earlier flew He 112 fighters to create Escadrila 42/52 Vânătoare. Phase two of the campaign commenced on 8th August and is known as 'Battle for Odessa' that involved fierce air battles and concluded only on 16th October 1941. Before that happened, I.A.R.81 dive bombers arrived at the front and took part in operational missions, yet this story will be a subject of a separate IBG kit. Fall of Odessa marked the end of ARR participation in 1941 campaign, during which I.A.R.80 and 80A fighters scored at least 124 confirmed victories.



Element assembled in previous step
Element złożony we wcześniejszym etapie



Paint colour
Kolor farby



Version to choose
Wersja do wyboru



Element after assembly in current step
Element po złożeniu w aktualnym etapie



Decal
Kalkomania



Sub-assembly in step
Kolejne kroki w etapie

Please read instructions before assembly. Follow the sequence of assembly presented in instructions. Glue and paint not included.
Przed montażem przeczytać instrukcję. Przestrzegać kolejności montażu podanego w instrukcji. Klej i farby nie wchodzą w skład zestawu.

IBG Models
ul. Benedykta Hertza 2
04-603 Warszawa
Poland

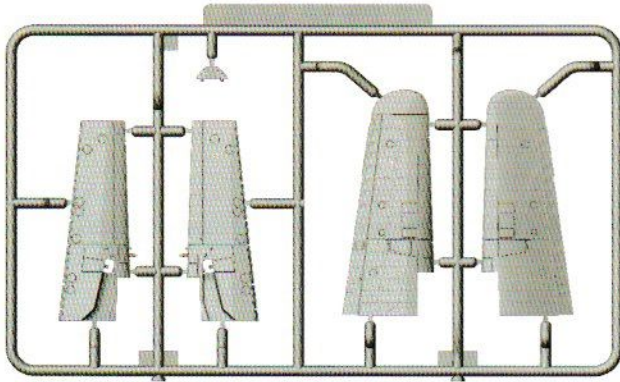
tel +48 22 8159150
fax +48 22 8159151
ibgsc@ibg.com.pl
www.ibg.com.pl
www.ibgmodels.com

Elements of the model kit
Elementy modelu

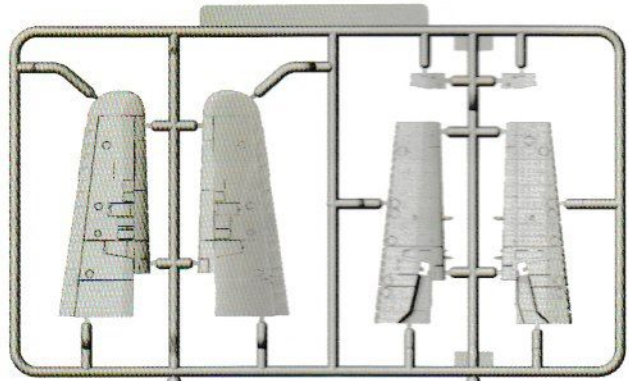
2x Photo-etched Parts
 Elementy Fototrawione



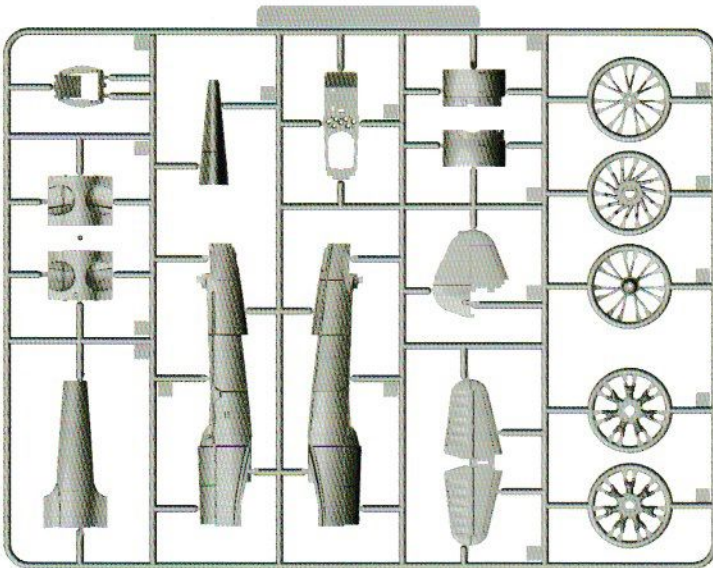
Frame F / Ramka F



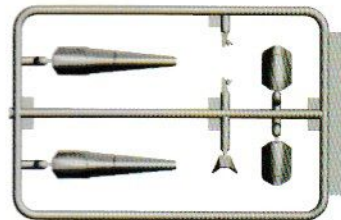
Frame G / Ramka G



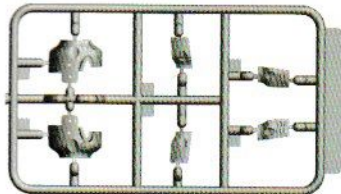
2x Frame B1 / Ramka B1



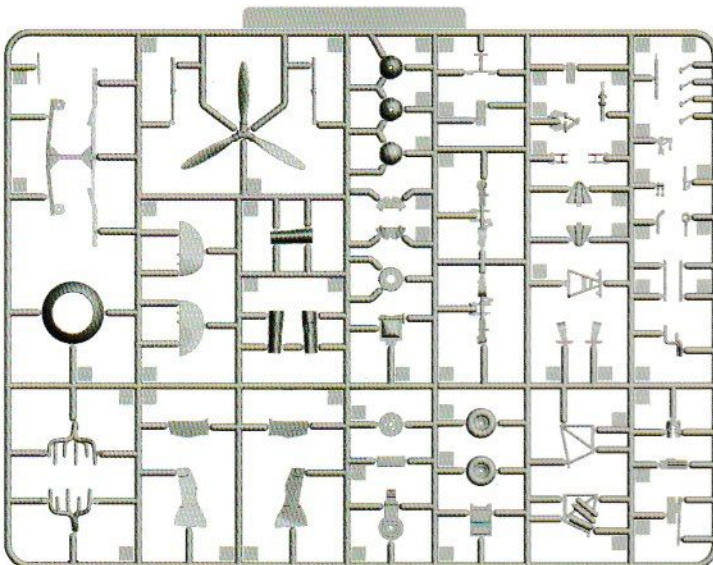
**2x Frame A transparent /
 Ramka A przezroczysta**



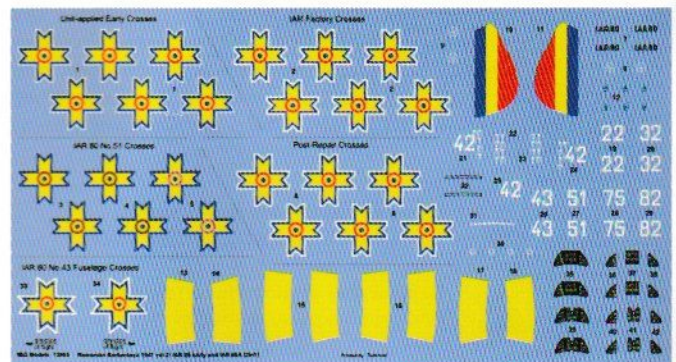
2x Frame E / Ramka E



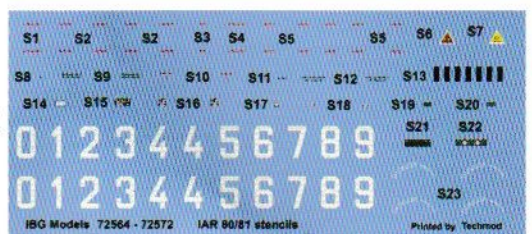
2x Frame B2 / Ramka B2



Decals / Kalkomanie



2x



IBG Models 72564 - 72572

IAR 80/81 stencil

Printed by Technod

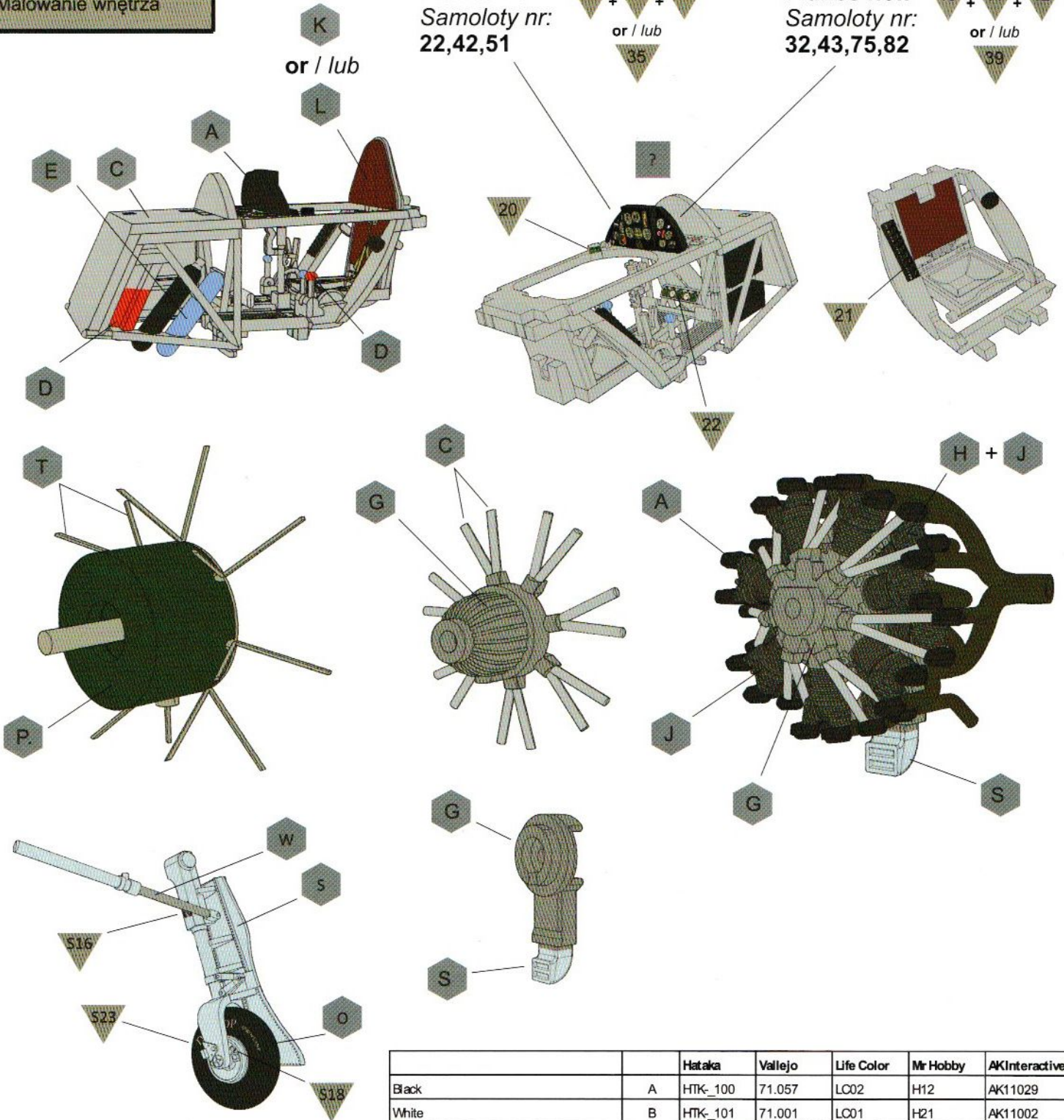
Interior painting
Malowanie wnętrza

Planes no.:
Samoloty nr:
22,42,51

36 + 37 + 38
or / lub
35

Planes no.:
Samoloty nr:
32,43,75,82

40 + 41 + 42
or / lub
39



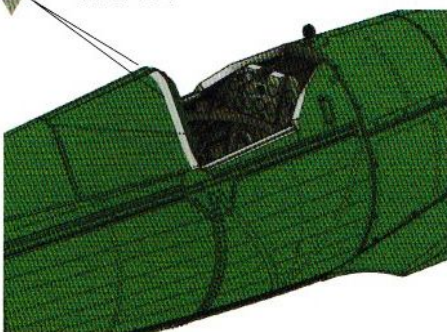
Planes no.:
Samoloty nr:

32

No. 32, 42, 51, 75, 82

31

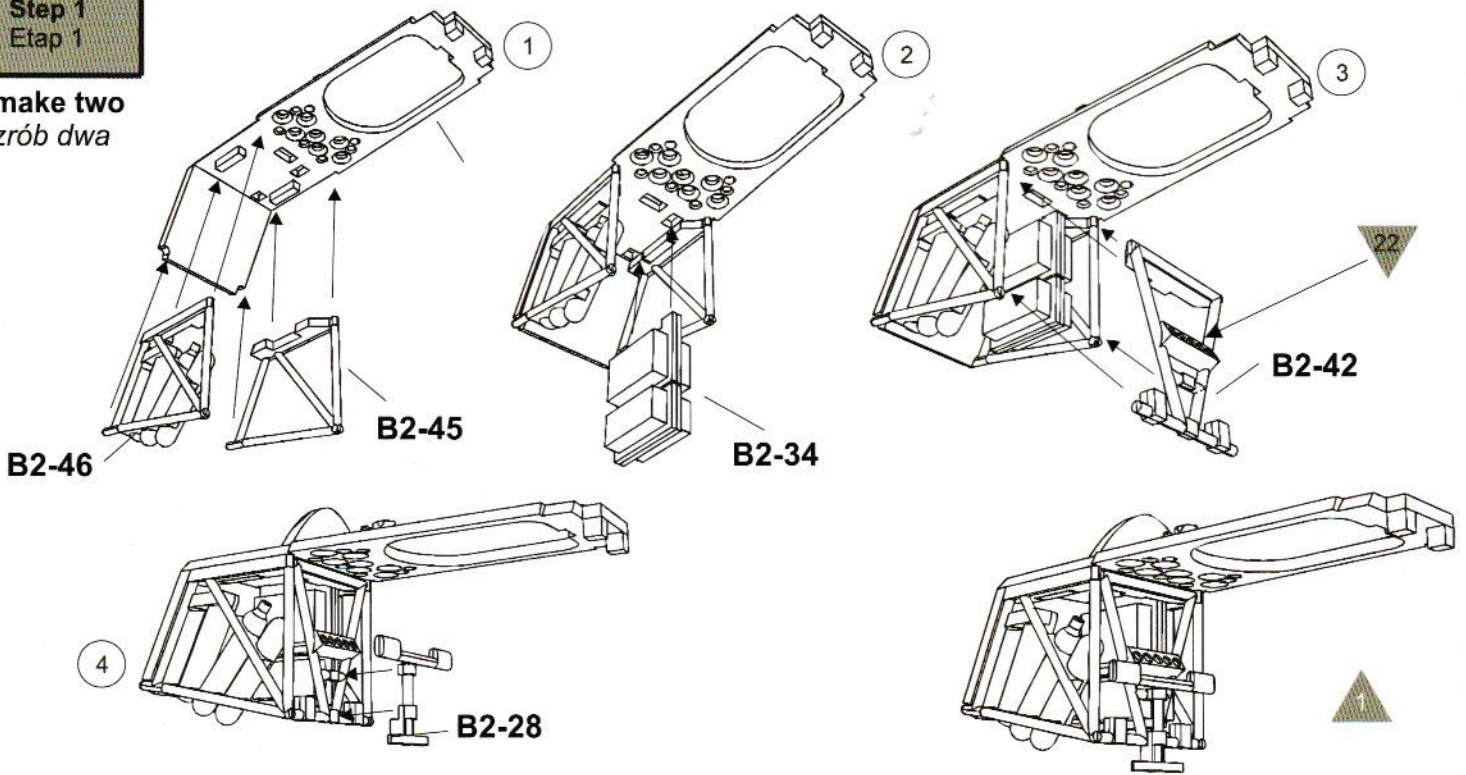
No. 22



		Hataka	Vallejo	Life Color	Mr Hobby	AKInteractive
Black	A	HTK_100	71.057	LC02	H12	AK11029
White	B	HTK_101	71.001	LC01	H21	AK11002
Silver	C	HTK_003	71.063	LC24	H8	AK11209
Red	D	HTK_103	71.003	UA808	H23	AK11213
Blue	E	HTK_102	70.736	LC09	H93	AK11178
Green	F	HTK_327	70.936	UA802	H94	AK11216
Engine Grey	G	HTK_033	71.051	UA046	H53	AK11862
Rust	H	HTK_132	71.130	LC32	H47	AK11103
Gunmetal	J	HTK_106	71.072	LC26	H18	AK11212
Brown Leather	K	HTK_186	72.740	UA764	H460	AK11110
Black Leather	L	HTK_100	71.057	UA763	H12	AK11026
Seatbelt Grey-Brown	M	HTK_074	71.075	UA202	H321	AK11009
Tyre black	O	HTK_125	71.315	UA733	C135	AK11027
Romanian Green	P	HTK_022	71.011	UA111	C309	AK11155
Romanian Khaki brown	R	HTK_299	71.297	UA210	C517	AK11373
Romanian Blue-Grey	S	HTK_203	71.407	UA036	C334	AK11848
Grey Primer	T	HTK_048	71.121	UA025	C325	AK11866
Recognition Yellow	U	HTK_066	71.078	UA140	C113	RC934
Aluminium	W	HTK_078	71.062	UA792	SM208	AK481
RLM70 Black Green	X	HTK_015	71.021	UA501	H065	AK11821

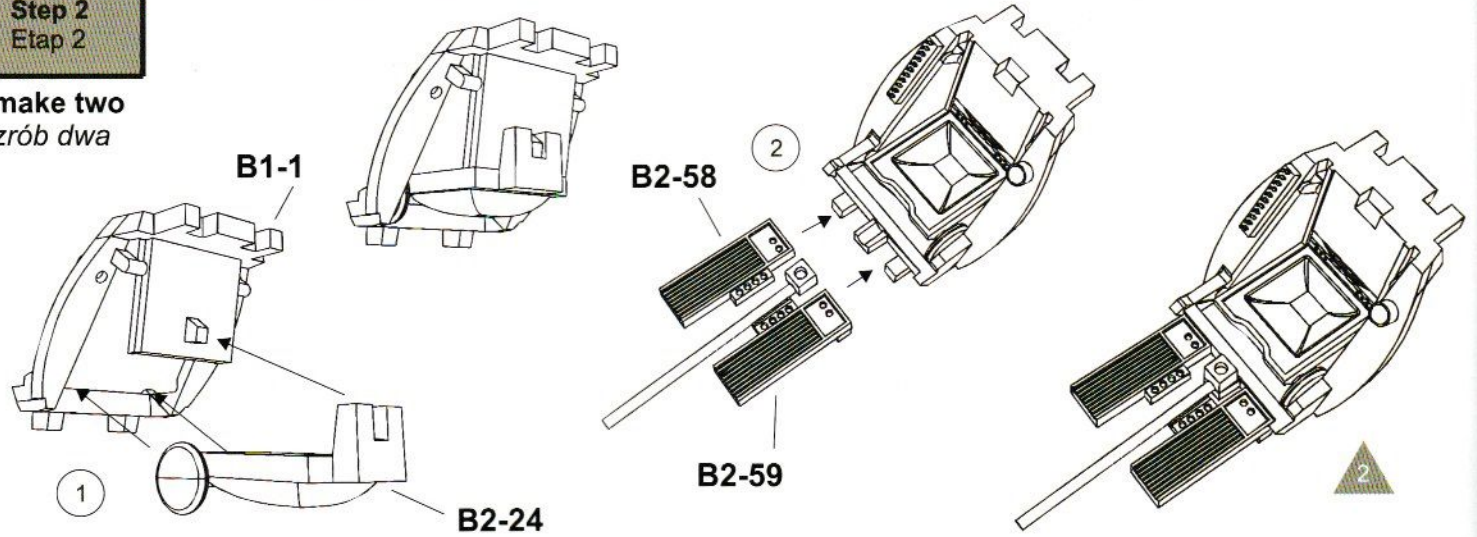
Step 1
Etap 1

make two
zrób dwa



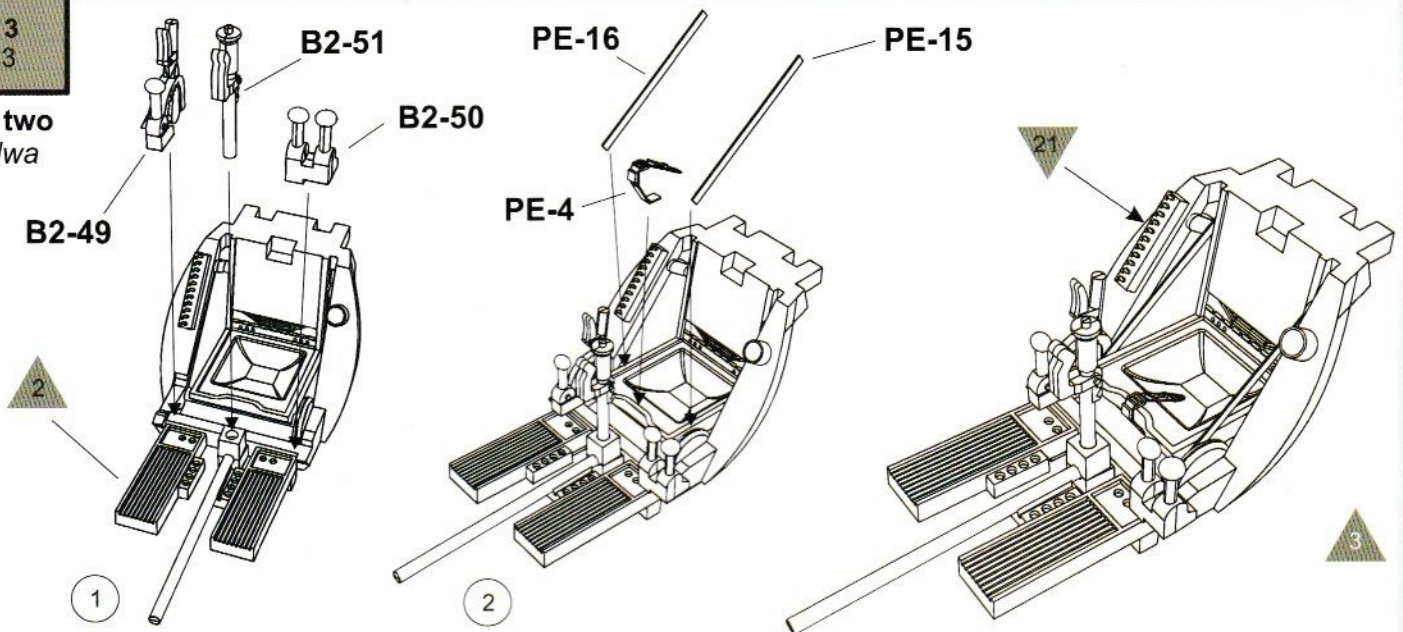
Step 2
Etap 2

make two
zrób dwa



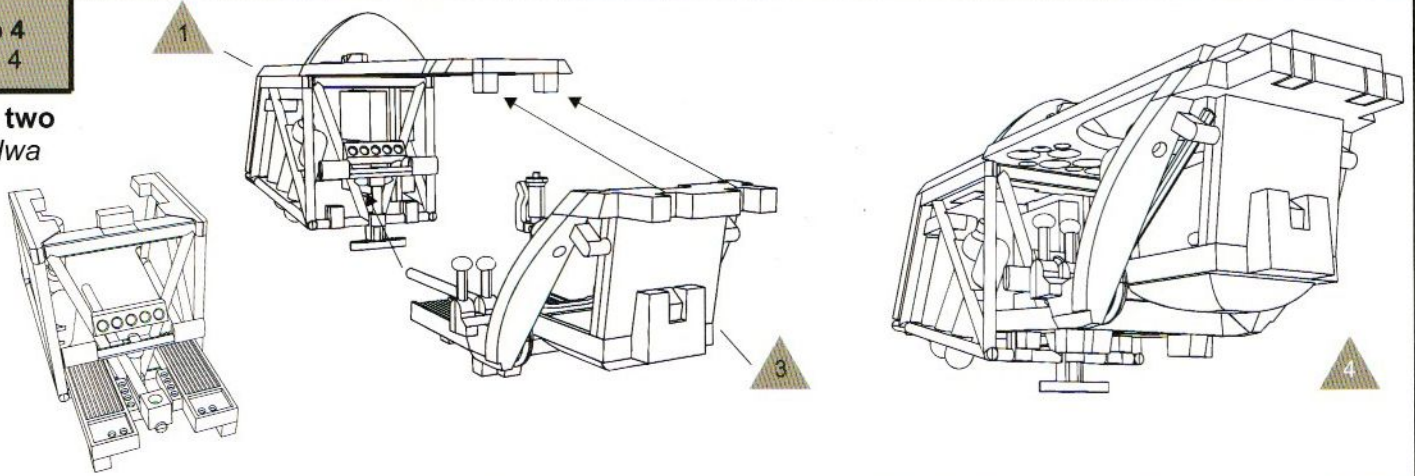
Step 3
Etap 3

make two
zrób dwa



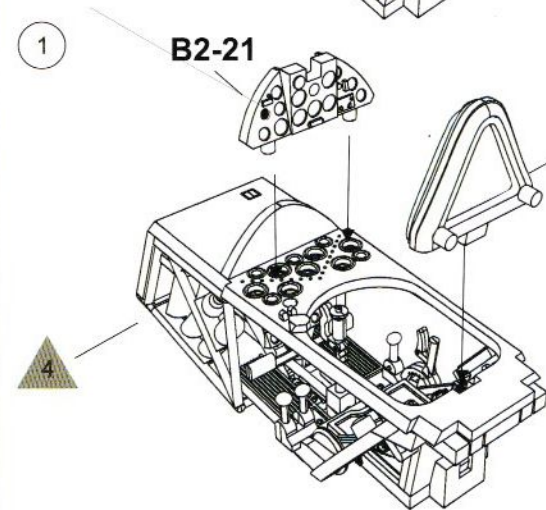
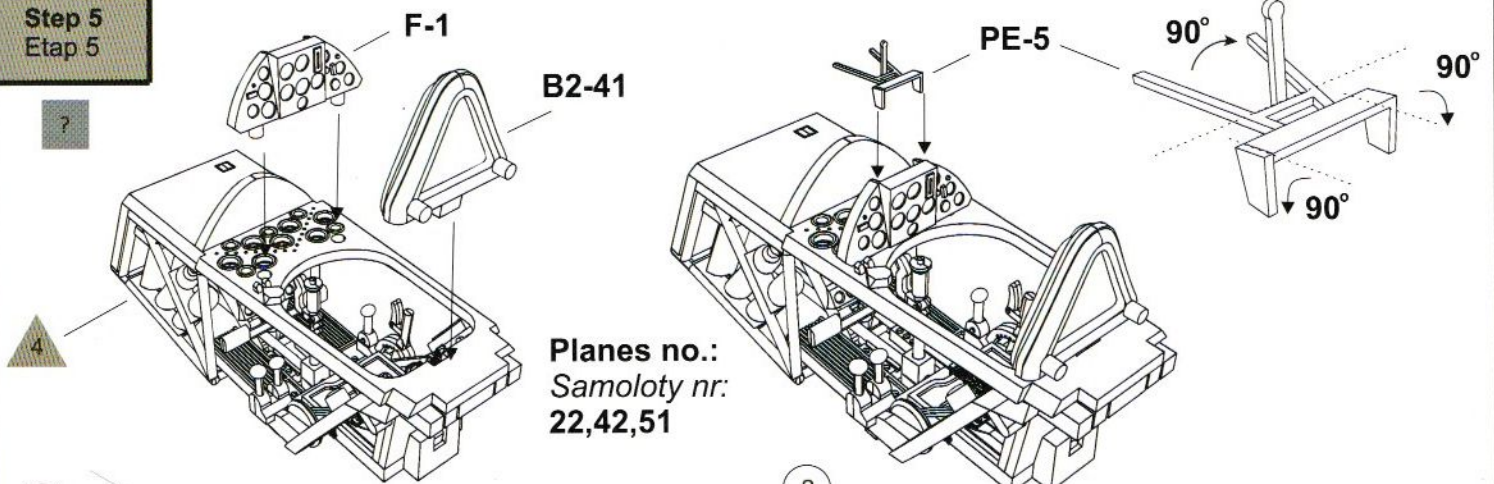
Step 4
Etap 4

make two
zrób dwa



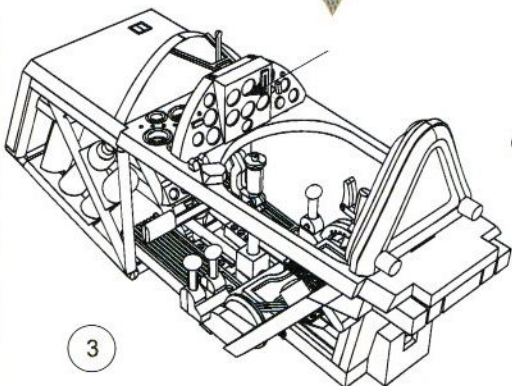
Step 5
Etap 5

?



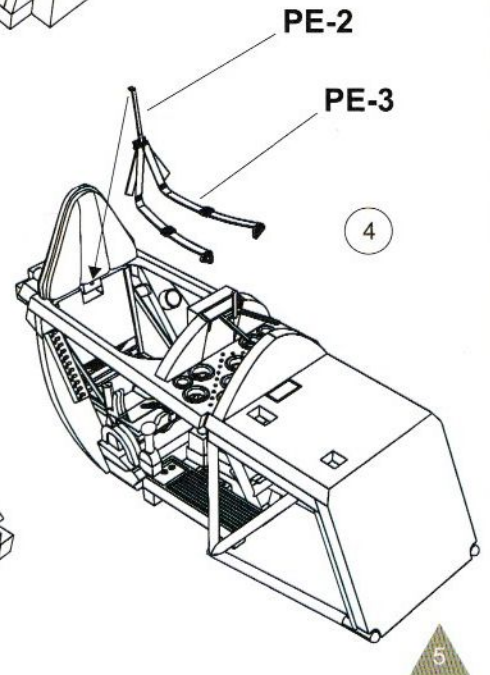
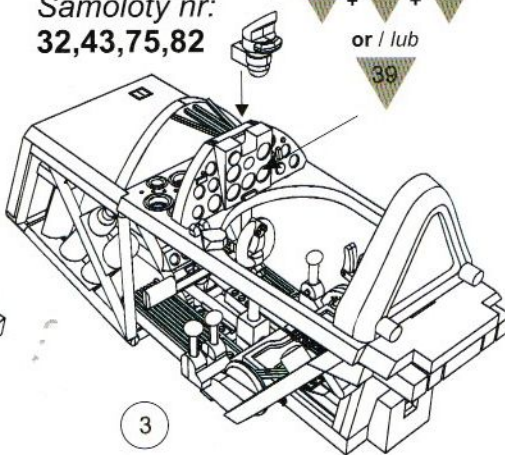
Planes no.:
Samoloty nr:
22,42,51

36 + 37 + 38
or / lub
35



Planes no.:
Samoloty nr:
32,43,75,82

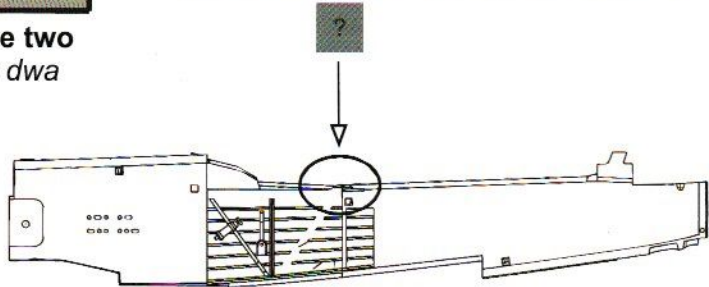
40 + 41 + 42
or / lub
39



Step 6
Etap 6

For closed canopy only, see step 15a
Tylko dla kabiny zamkniętej, patrz etap 15a

make two
zrób dwa



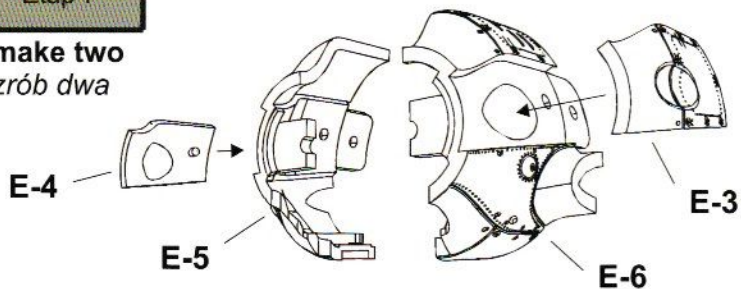
For closed canopy cut off
on both fuselage sides
Dla kabiny zamkniętej, odetnij
w obu połówkach kadłuba



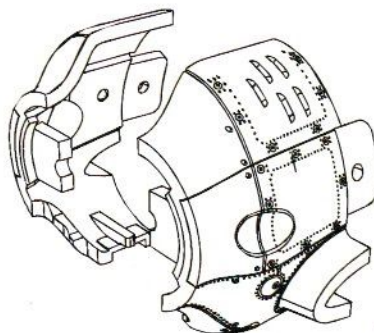
For open canopy (step 15b), please ignore step 6
Dla kabiny zotwartej (etap 15b), zignoruj etap 6

Step 7
Etap 7

make two
zrób dwa

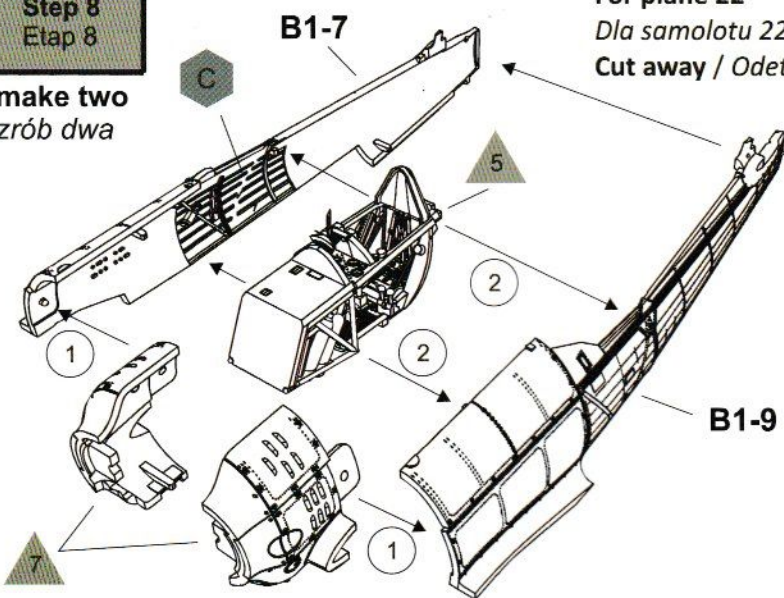


Do not glue the halves
together in this step
Nie sklejał połówek
na tym etapie

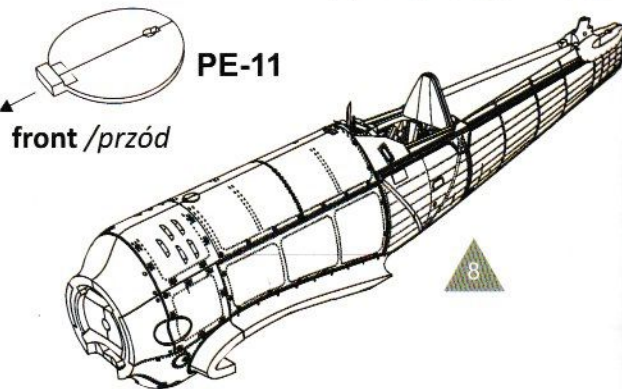
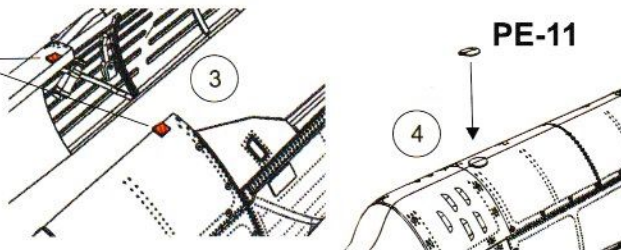


Step 8
Etap 8

make two
zrób dwa

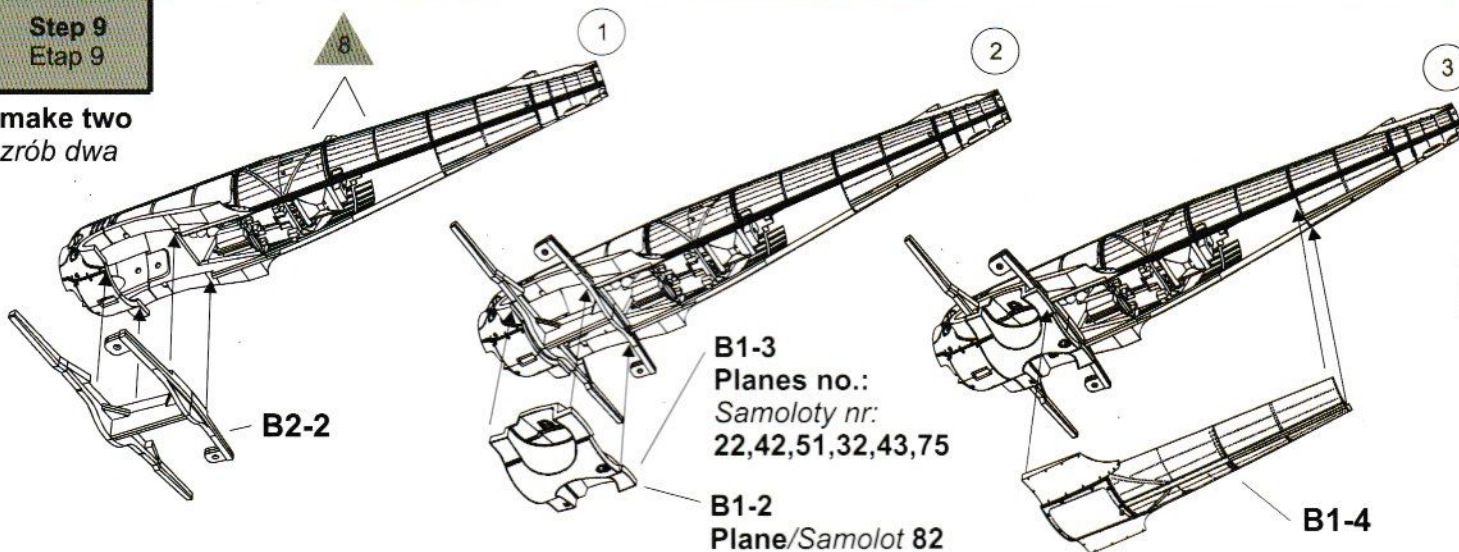


For plane 22
Dla samolotu 22
Cut away / Odetnij



Step 9
Etap 9

make two
zrób dwa



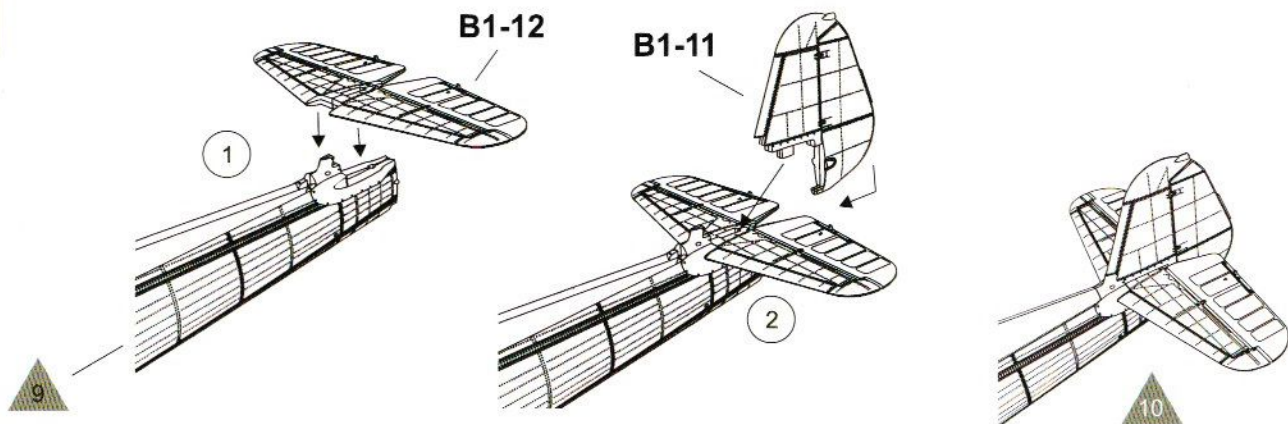
B1-3
Planes no.:
Samoloty nr:
22,42,51,32,43,75

B1-2
Plane/Samolot 82

B1-4

Step 10
Etap 10

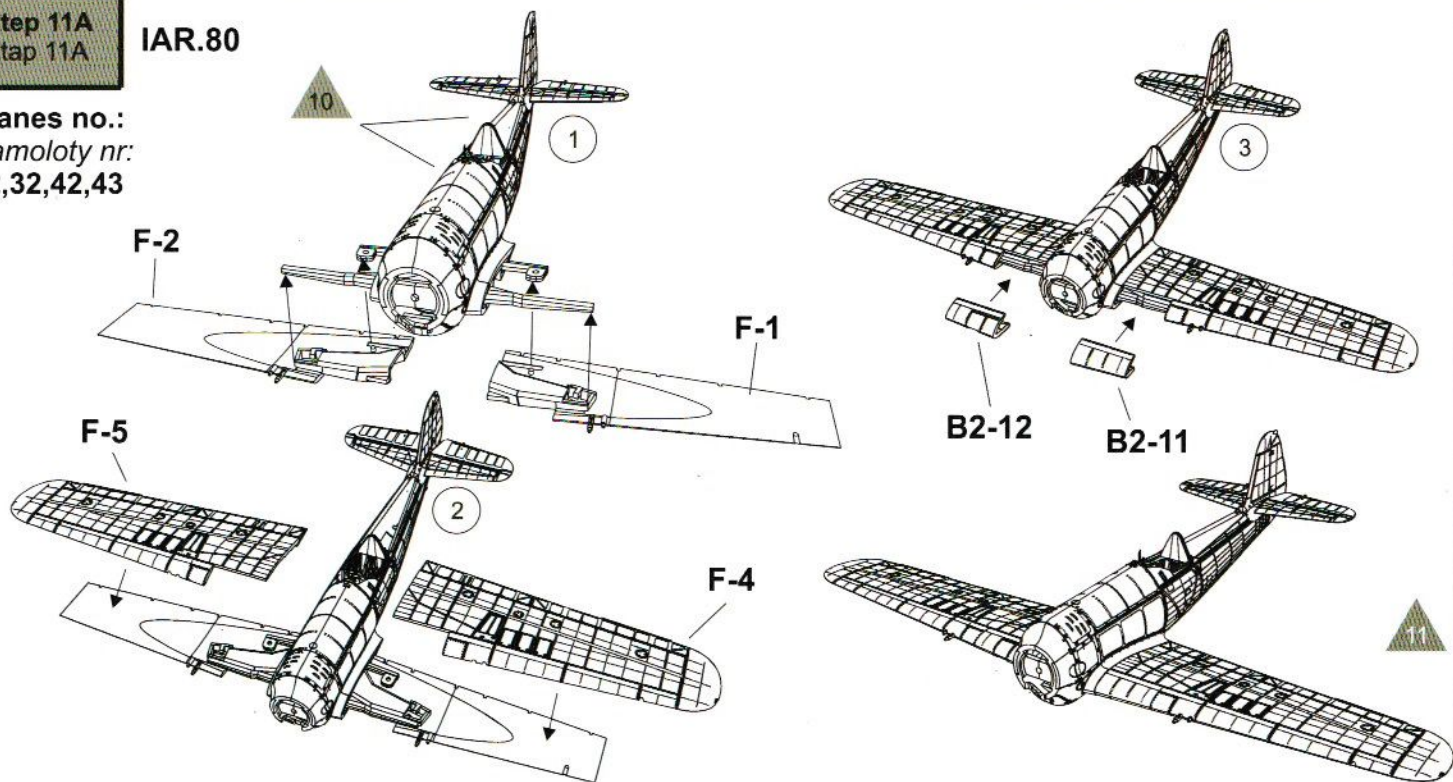
make two
zrób dwa



Step 11A
Etap 11A

IAR.80

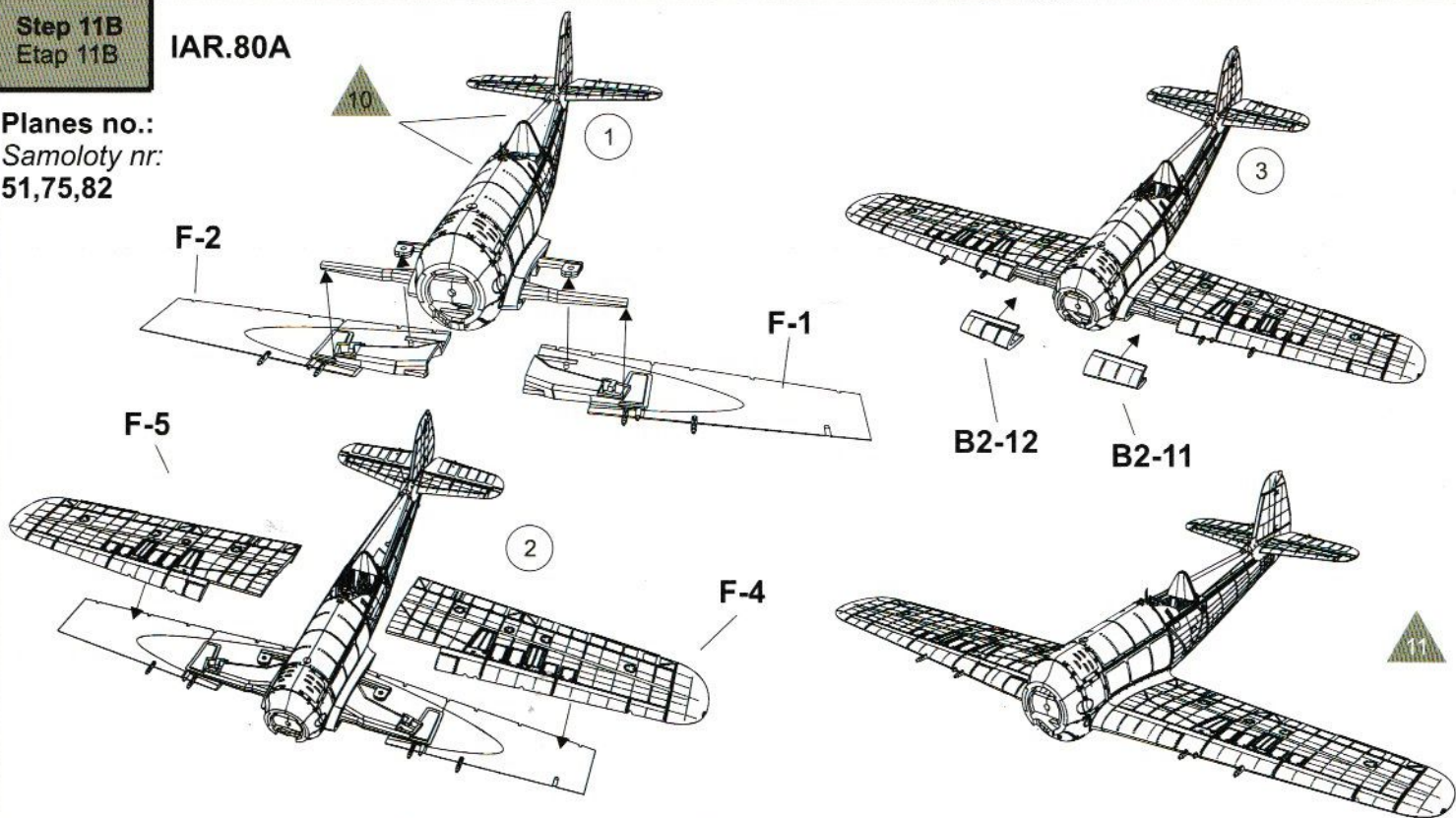
Planes no.:
Samoloty nr:
22,32,42,43



Step 11B
Etap 11B

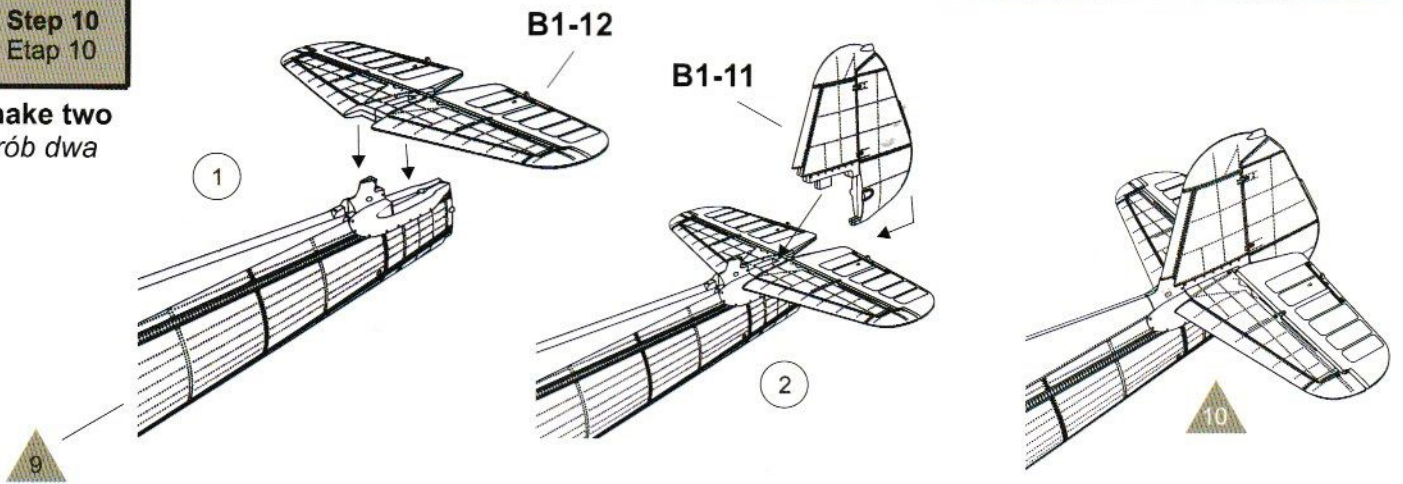
IAR.80A

Planes no.:
Samoloty nr:
51,75,82



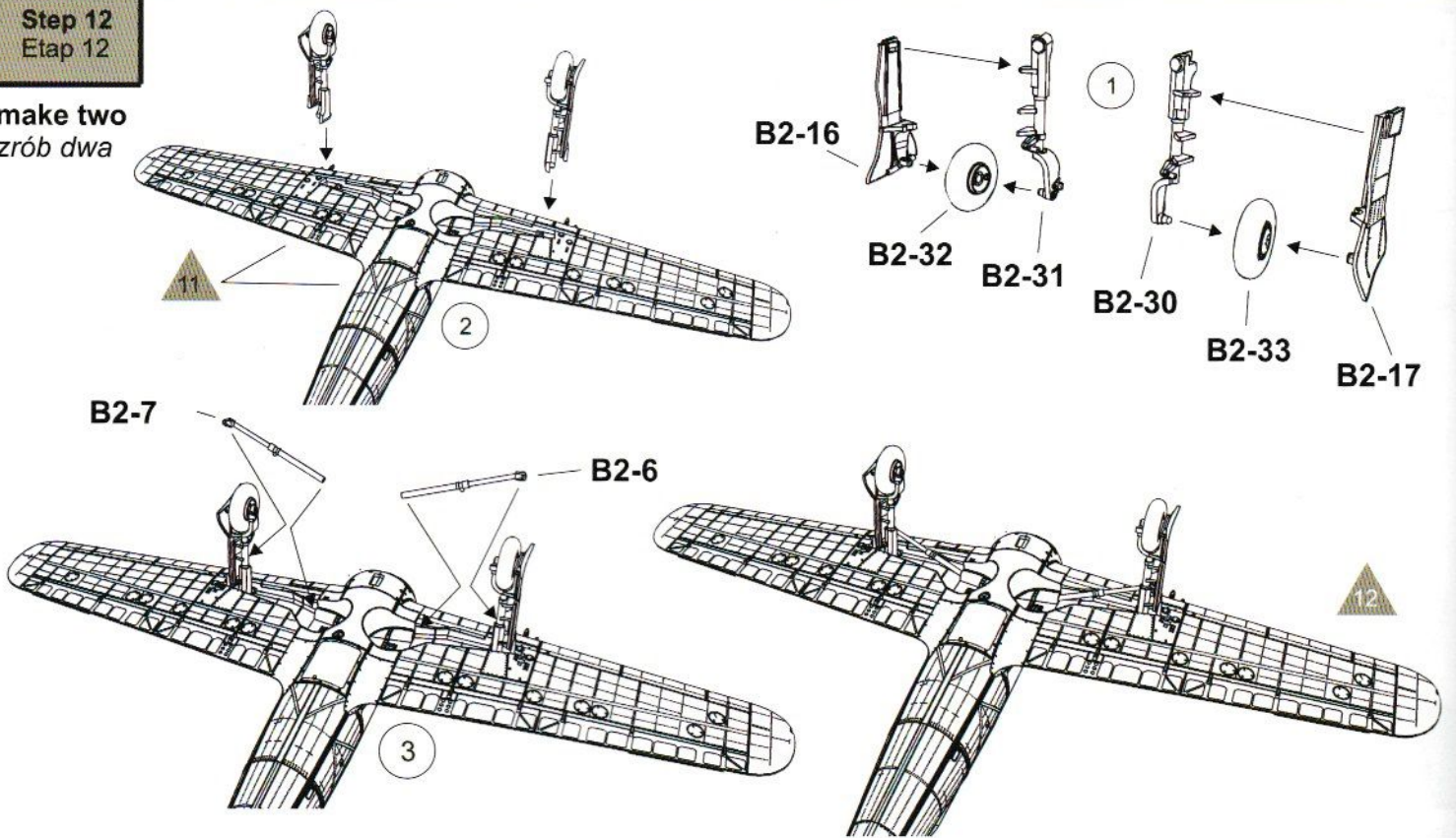
Step 10
Etap 10

make two
zrób dwa



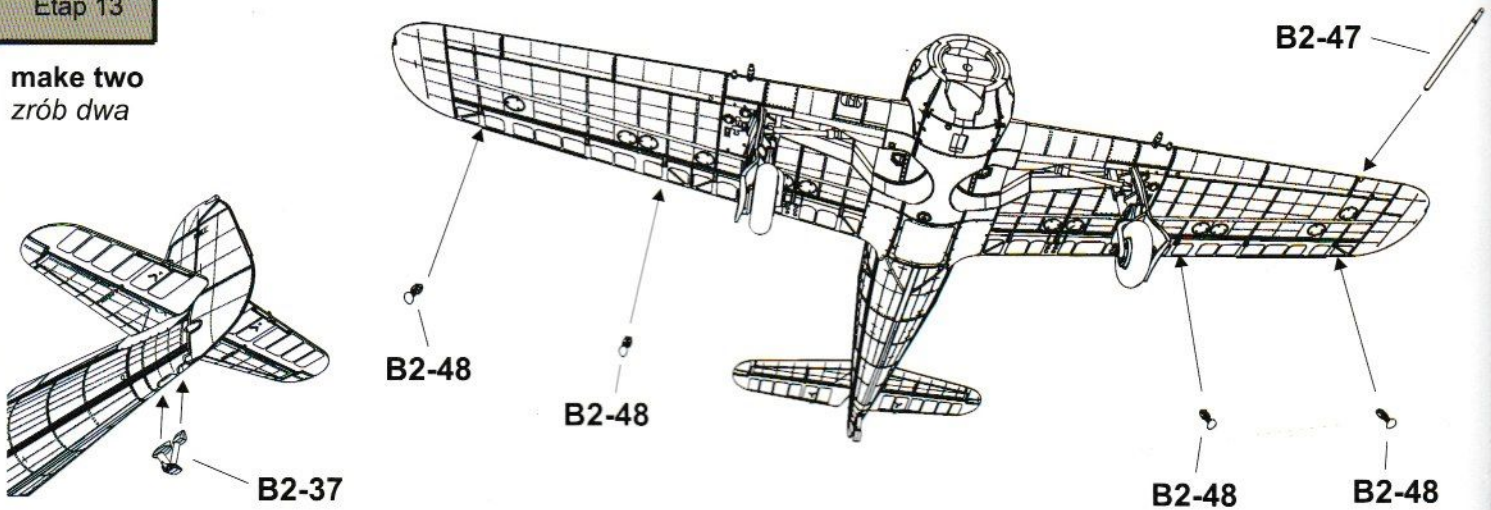
Step 12
Etap 12

make two
zrób dwa



Step 13
Etap 13

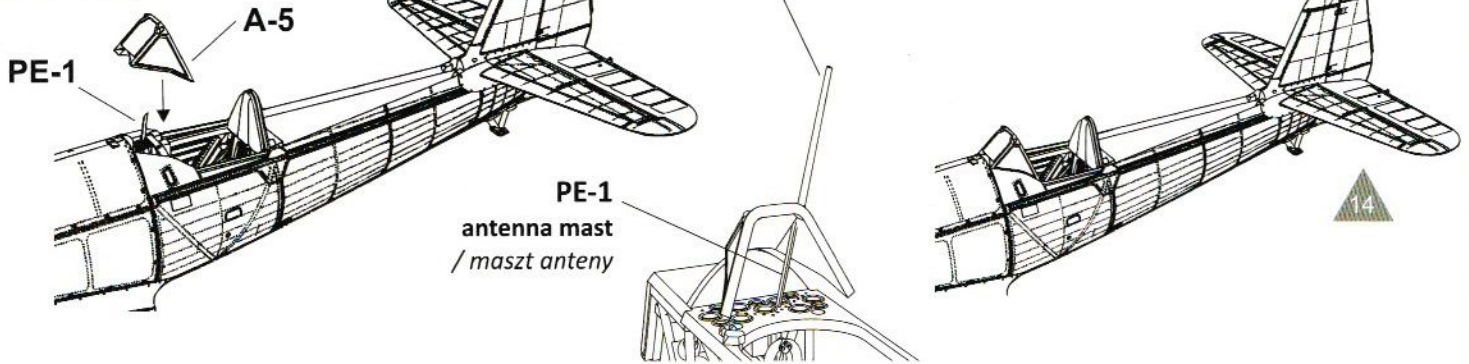
make two
zrób dwa



Step 14
Etap 14

make two
zrób dwa

see step 22
/ patrz krok 22



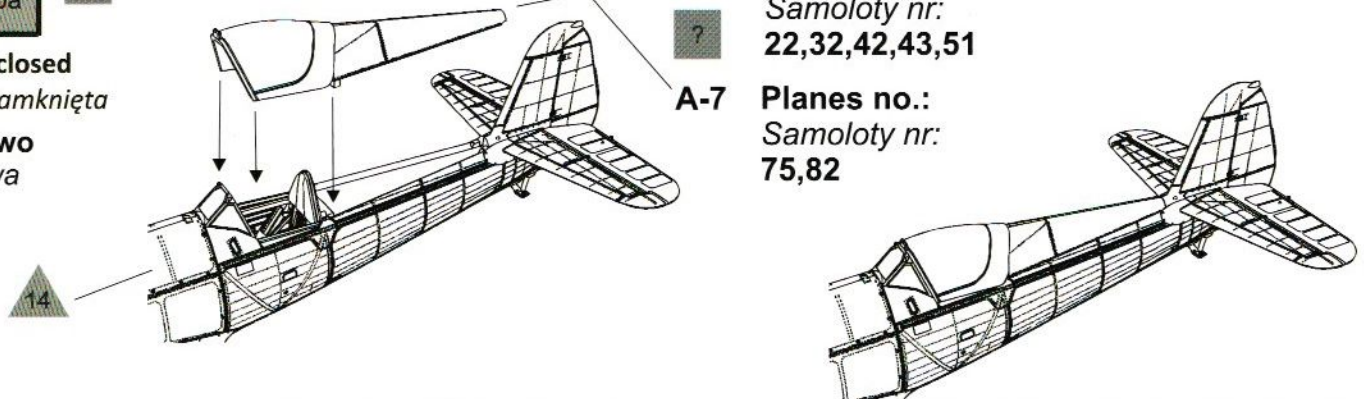
Step 15a
Etap 15a

?

Canopy closed
Kabina zamknięta
make two
zrób dwa

A-3 Planes no.:
Samoloty nr:
22,32,42,43,51

A-7 Planes no.:
Samoloty nr:
75,82



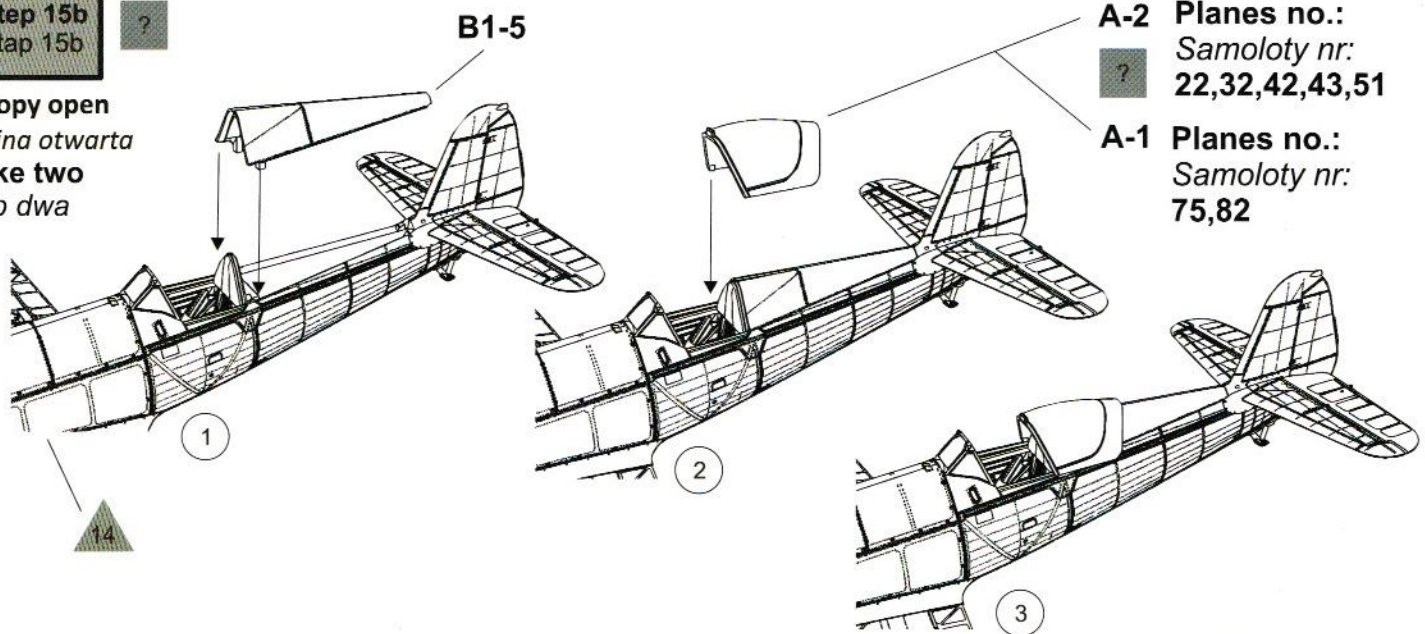
Step 15b
Etap 15b

?

Canopy open
Kabina otwarta
make two
zrób dwa

A-2 Planes no.:
Samoloty nr:
22,32,42,43,51

A-1 Planes no.:
Samoloty nr:
75,82



Step 16
Etap 16

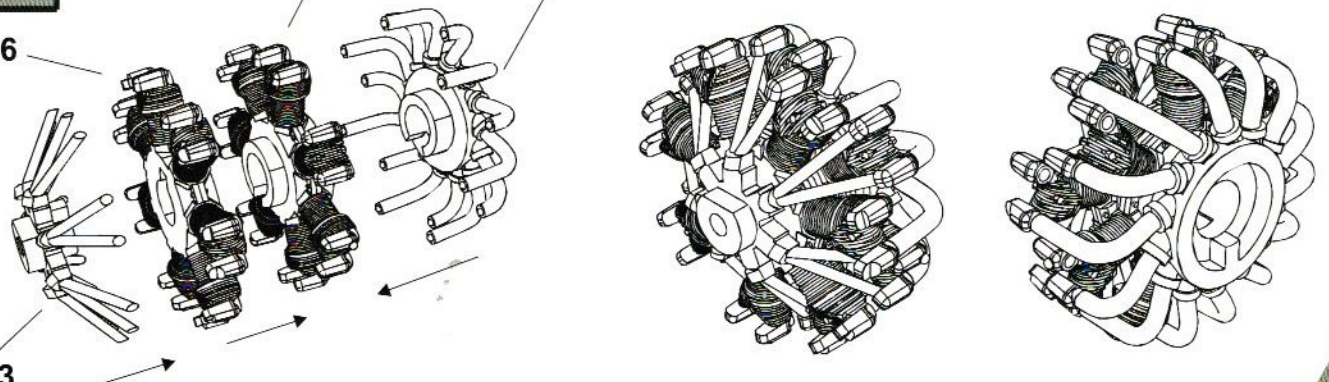
make two
zrób dwa

B1-16

B1-17

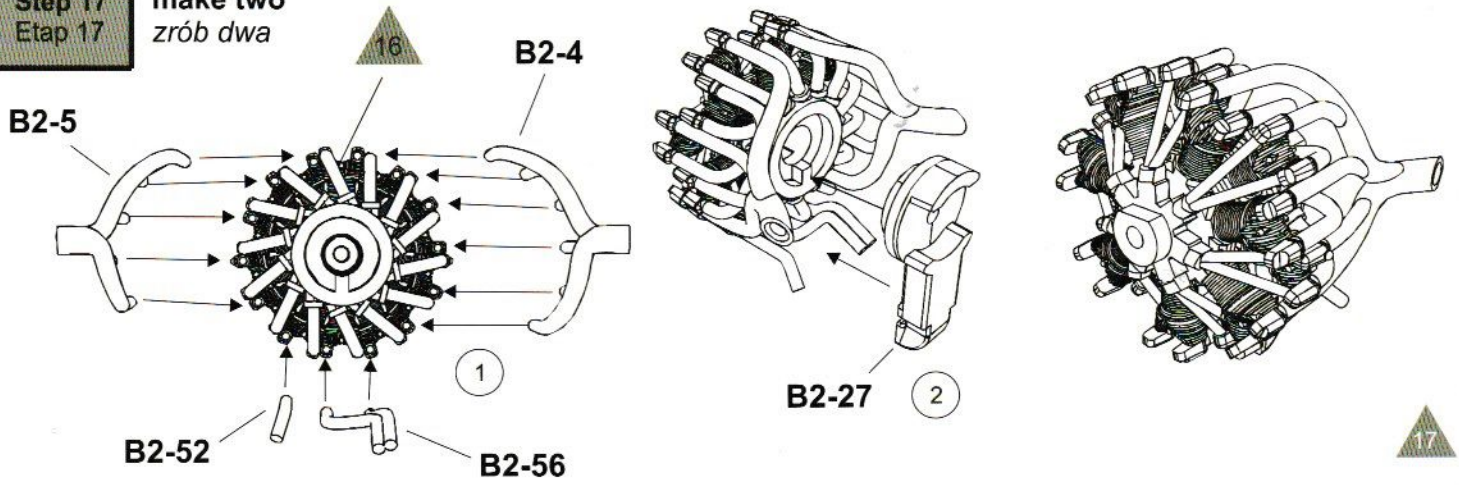
B1-14

B1-13



Step 17
Etap 17

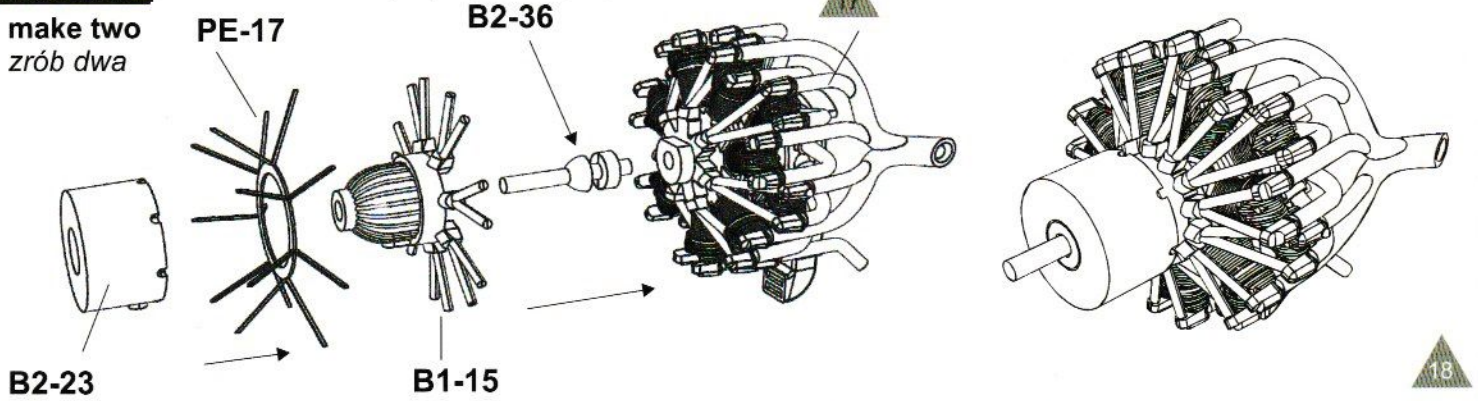
make two
zrób dwa



Step 18
Etap 18

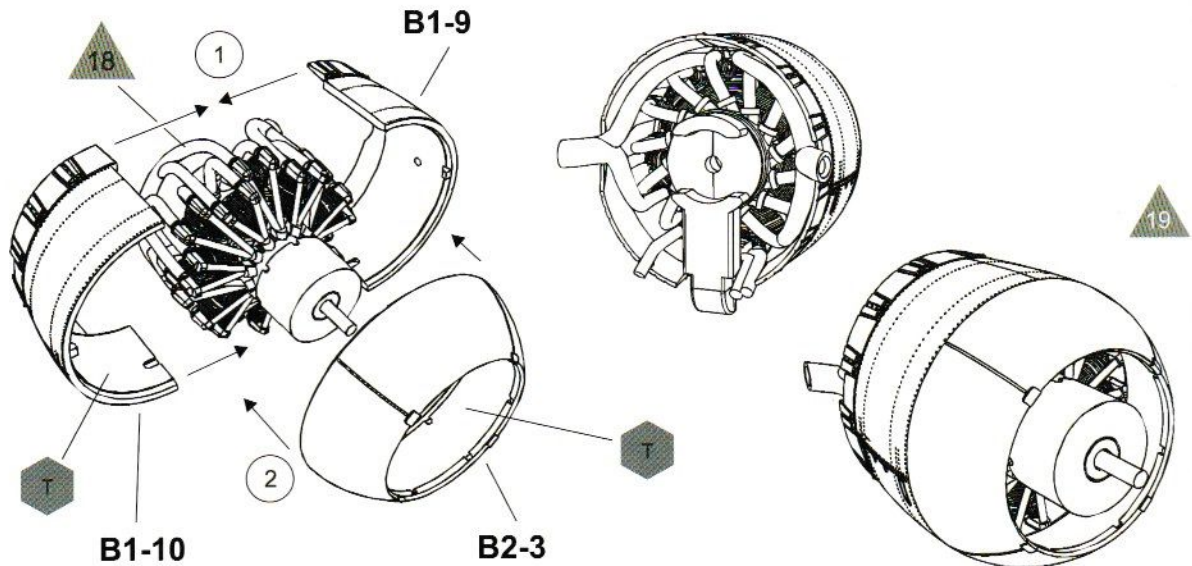
Don't use glue for this part
/Nie używaj kleju dla tej części

make two
zrób dwa



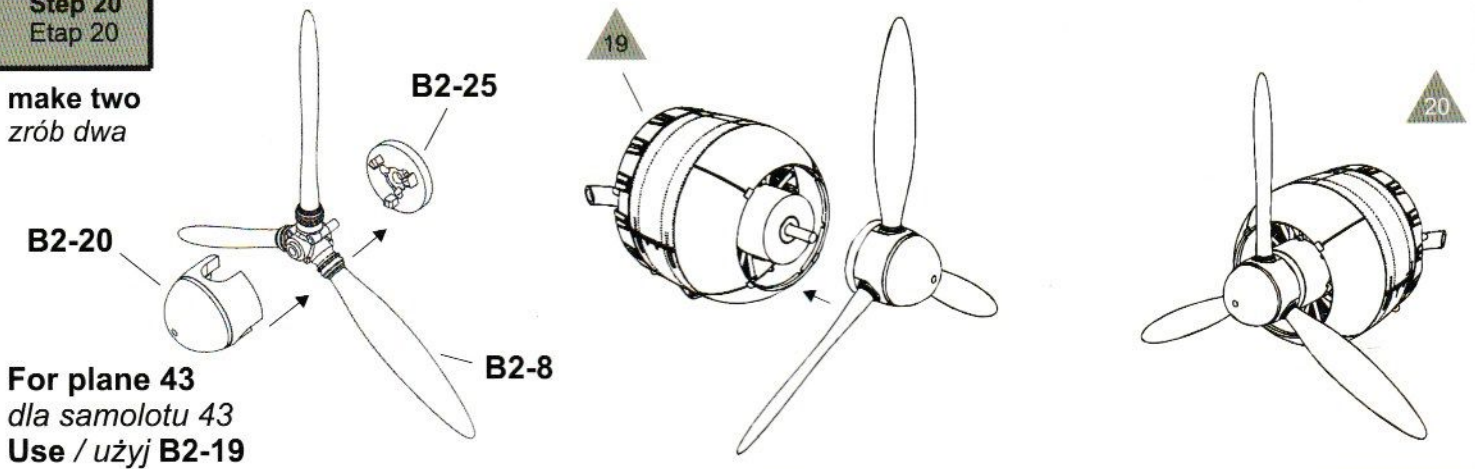
Step 19
Etap 19

make two
zrób dwa



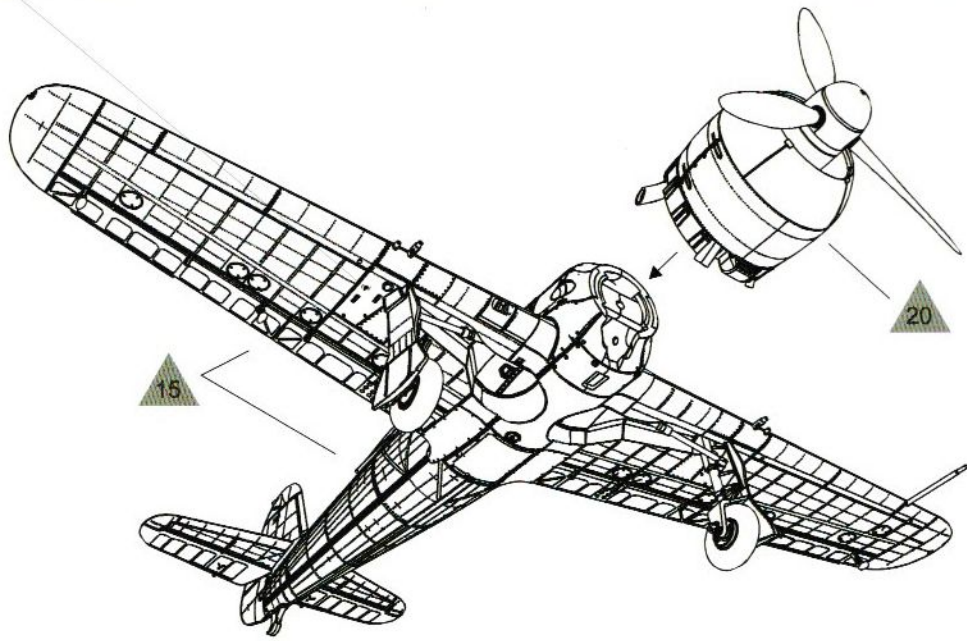
Step 20
Etap 20

make two
zrób dwa

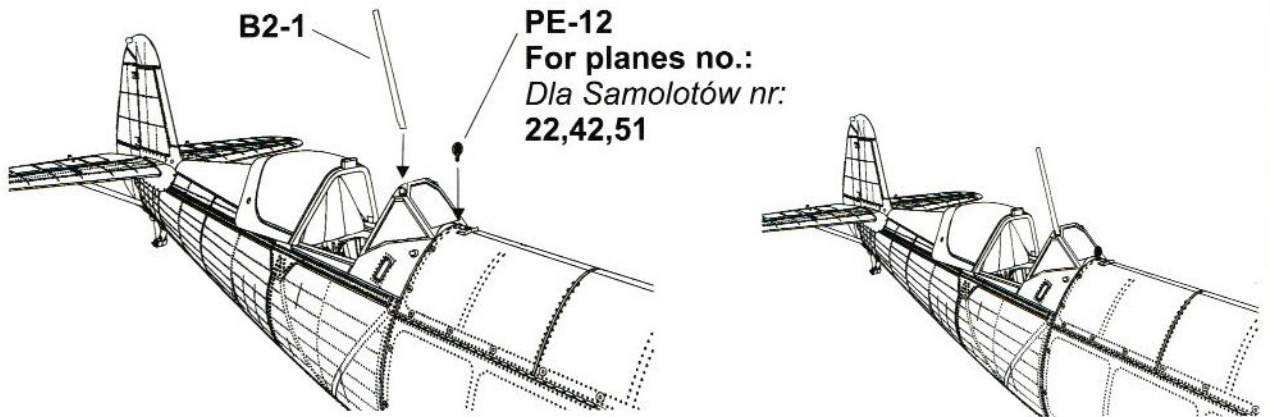


For plane 43
dla samolotu 43
Use / użyj B2-19

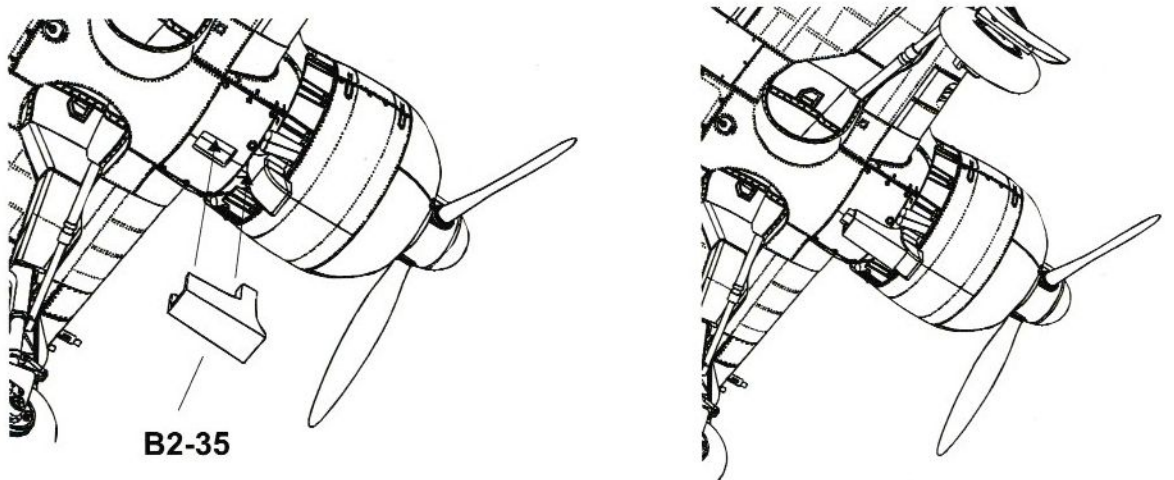
Step 21
Etap 21



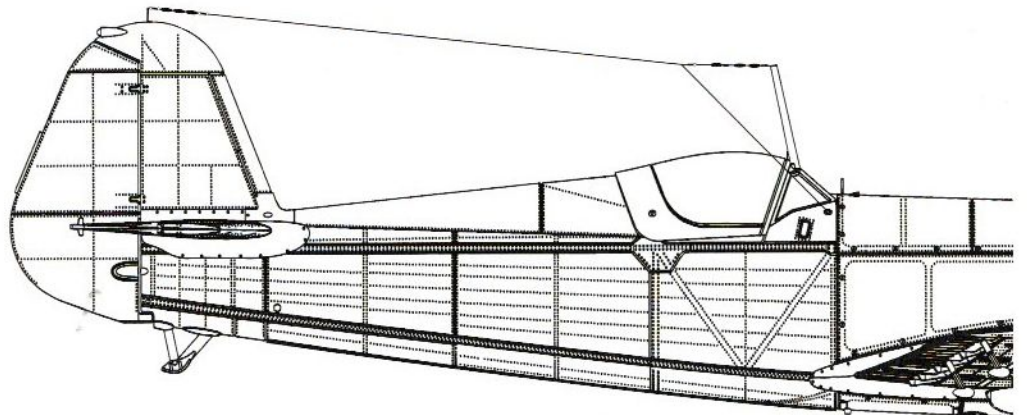
Step 22
Etap 22



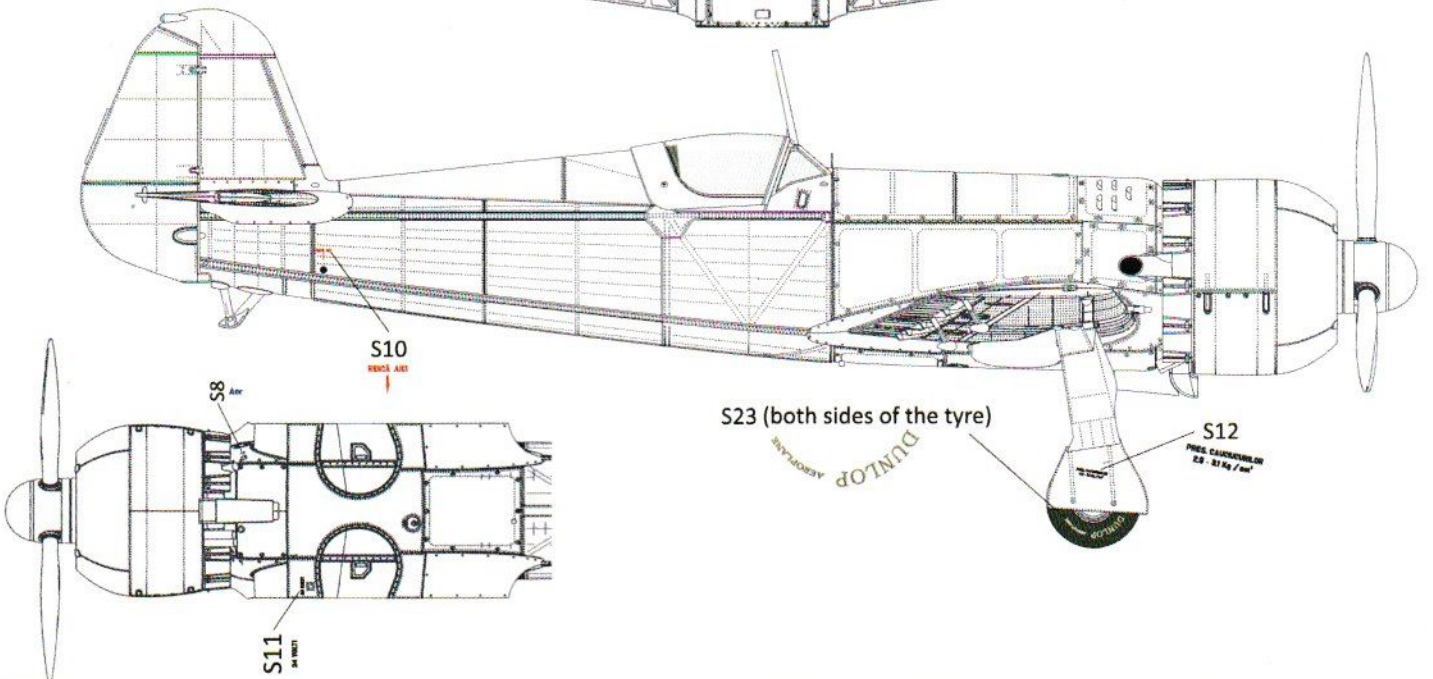
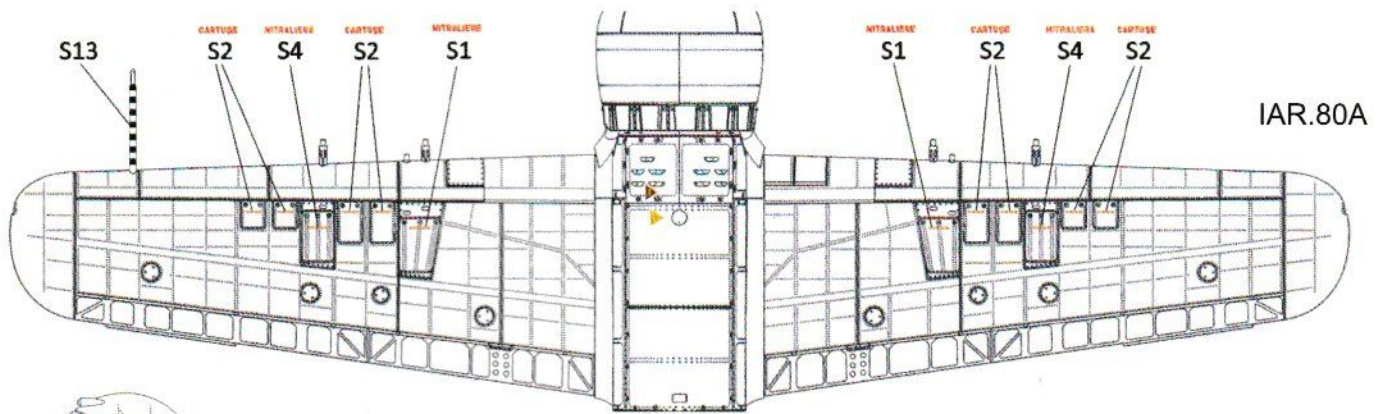
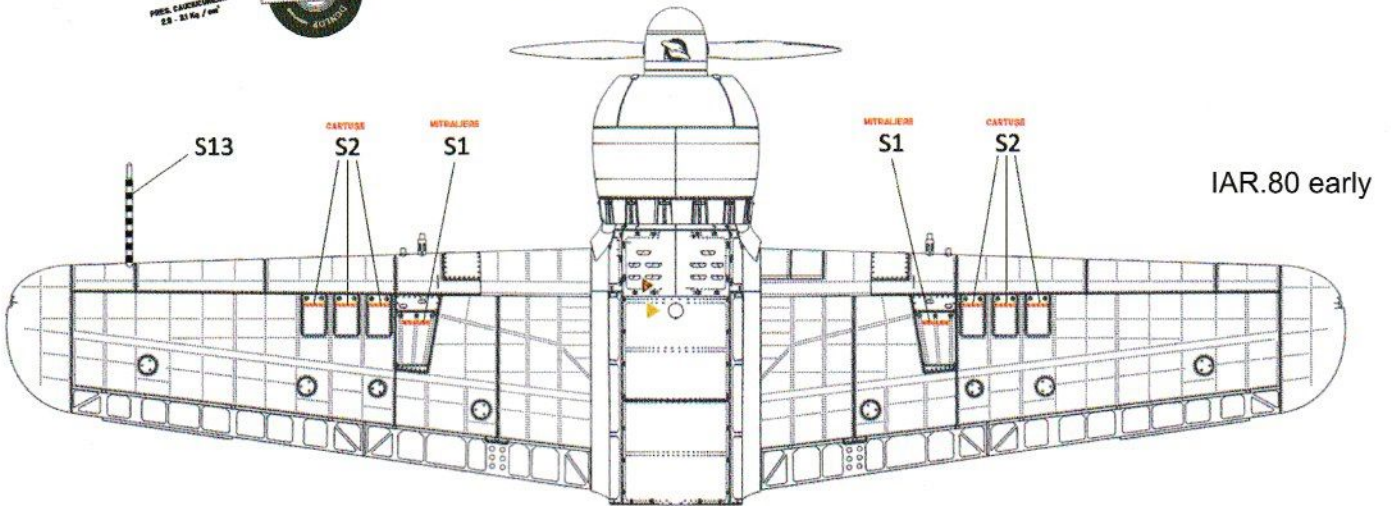
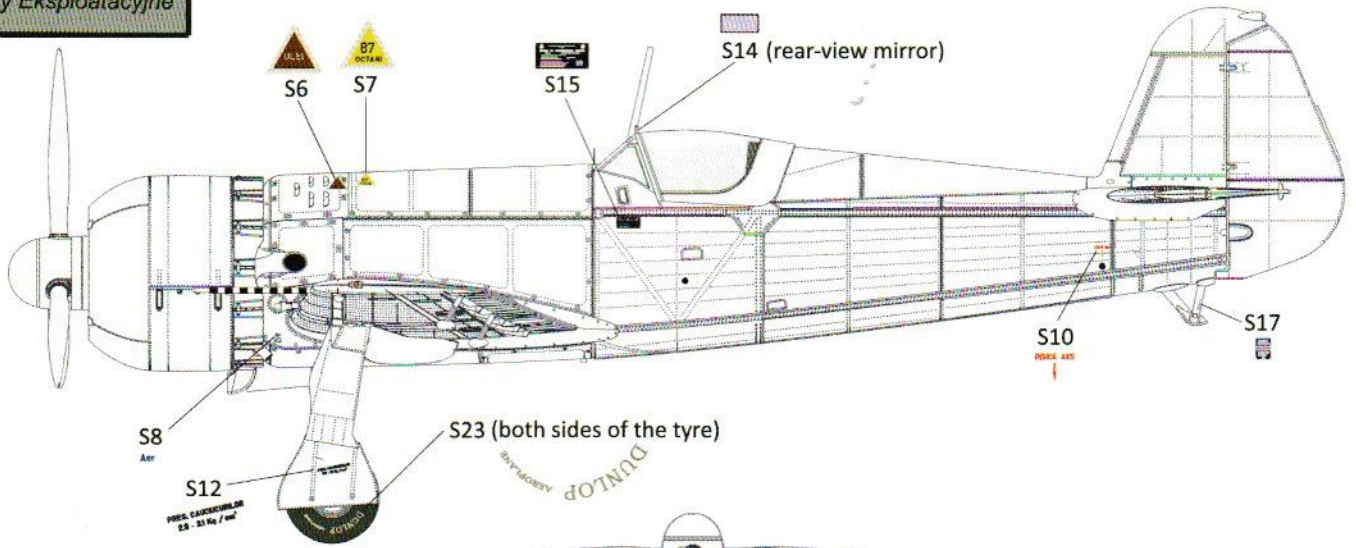
Step 23
Etap 23



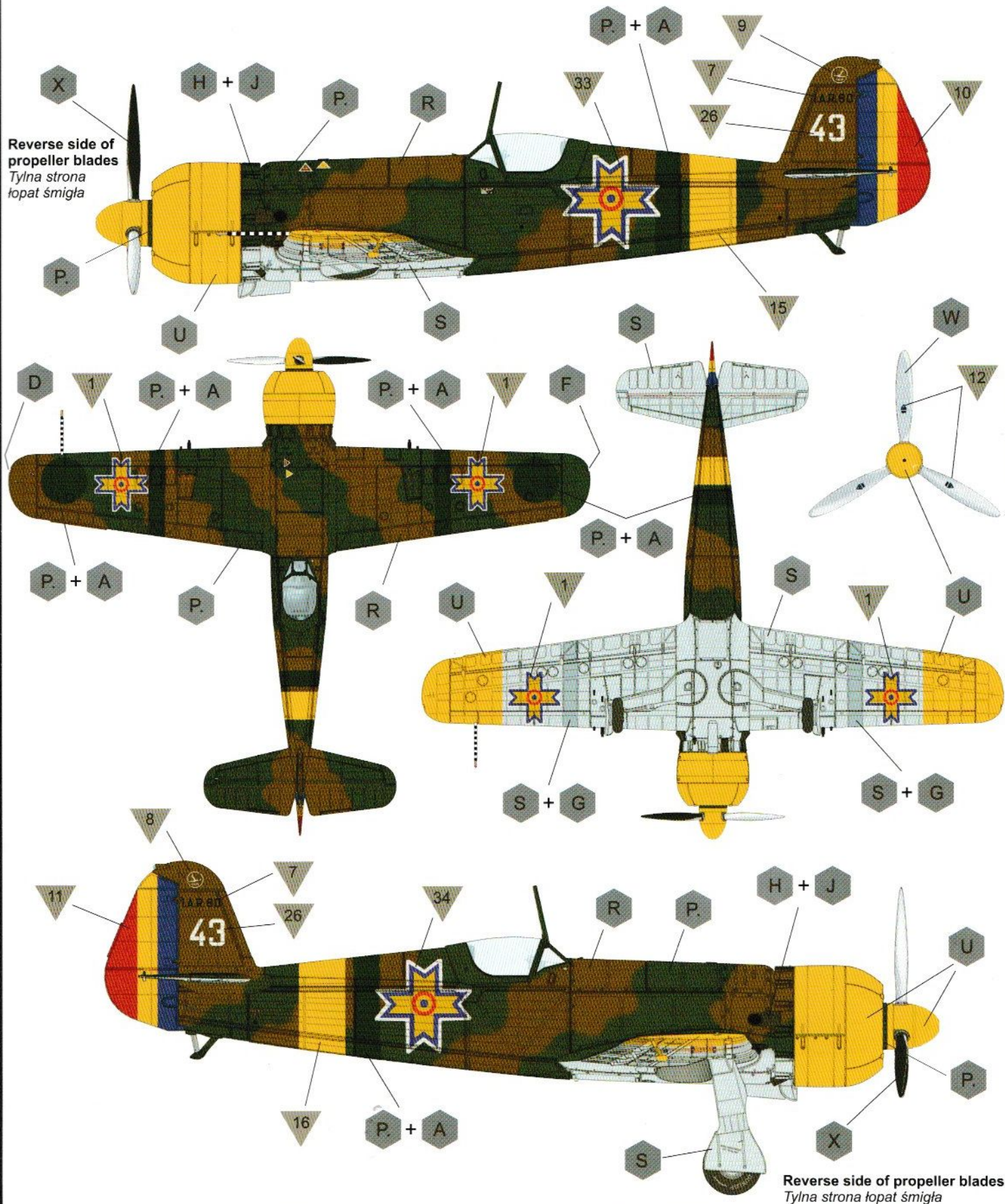
Antenna wire
Linka anteny



Optional - make an antenna wires
Opcjonalnie wykonaj linki anten

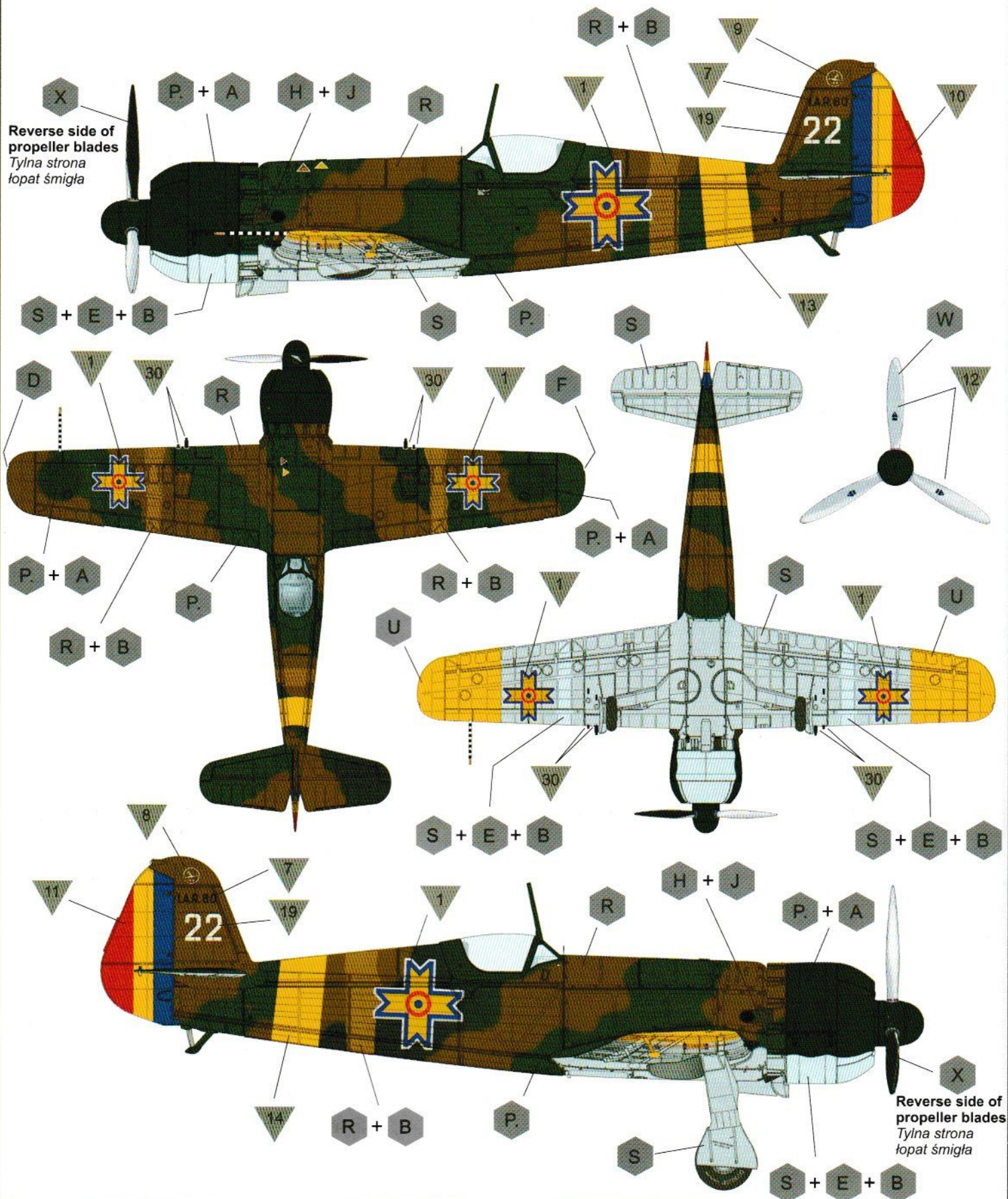


Believed to be photographed on the first or second day of the Barbarossa campaign, while escorting He 111 bombers of Grupul 5 Bombardament, No.43 carried on the fuselage a very non-standard, irregular crosses with pointed tips. National insignia on the wings were on the other hand more standard in shape, applied already in early May and placed quite widely to avoid overlapping with thin yellow bands on the wings (compare airplane No.39 in IBG kit no. 72564). Well-visible are mandatory markings worn by axis airplanes in the first months of the invasion of Soviet Union – 50cm yellow band on the fuselage and yellow wingtips undersurfaces. Interesting fact is that the airplane still carried what looks like an all-yellow engine cover, despite the order introducing Barbarossa markings explicitly mentioning removal of yellow colour from the cowlings. Other previous markings in the form of thin, 25cm bands on the wings and fuselage were overpainted, which most probably also resulted in covering one of the ammo-bay stencils on each wing. Note the long spinner, quite rare on the early I.A.R.80 at that time. In late July, while flown by Ioan Micu (top-scoring Romanian ace of Barbarossa campaign with 8 victories), No.43 crash-landed and overturned near Tulcea, ending its participation in the campaign.



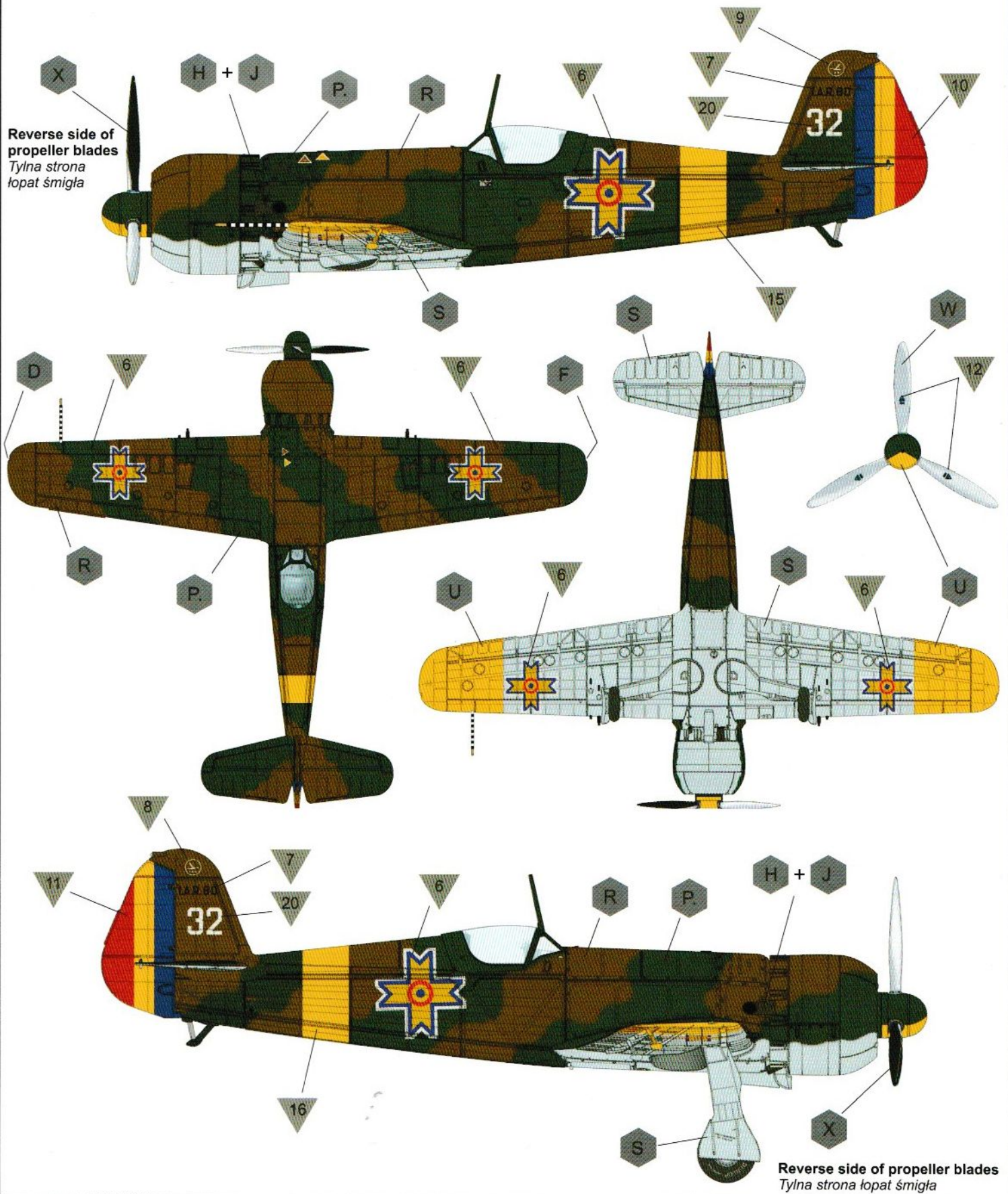
I.A.R.80 early No.22, Escadrila 42/52 Vânătoare, Salz airfield, Transnistria, late August 1941

The airplane was stationed on the Salz airfield together with Macchis C.200 and CANT Z.1007 of Reparto Autonomo di Volo Fotocinematografico, Italian propaganda filming unit commanded by capitano Carlo Maurizio Ruspoli. There are many stories about their common stay at this airfield, including I.A.R.80 fighters escorting Italians, but facts are very difficult to discern from fiction and they all need to be treated with a pinch of salt. Whatever the truth, No.22 is very interesting by being a machine in early configuration, still equipped with ring-and-bead sight and lacking the ventilation scoop in front of the cockpit. It was, however, already equipped with an armour plate behind the pilot seat. Of particular note is the finish of the cowling according to the order then in force – it was re-camouflaged with light blue-grey at the bottom and on top with dark, relatively glossy paint (as was the spinner) – much darker than the dark olive green on the rest of the airframe. On the other hand, thin bands on the wings and fuselage seem to be overpainted in lighter and also glossy colour, believed to be brown. As was the case for No.43, stencils on the central ammo bay on each wing were most likely overpainted. Note the yellow fuselage band was painted at an angle and slightly widened towards the bottom.



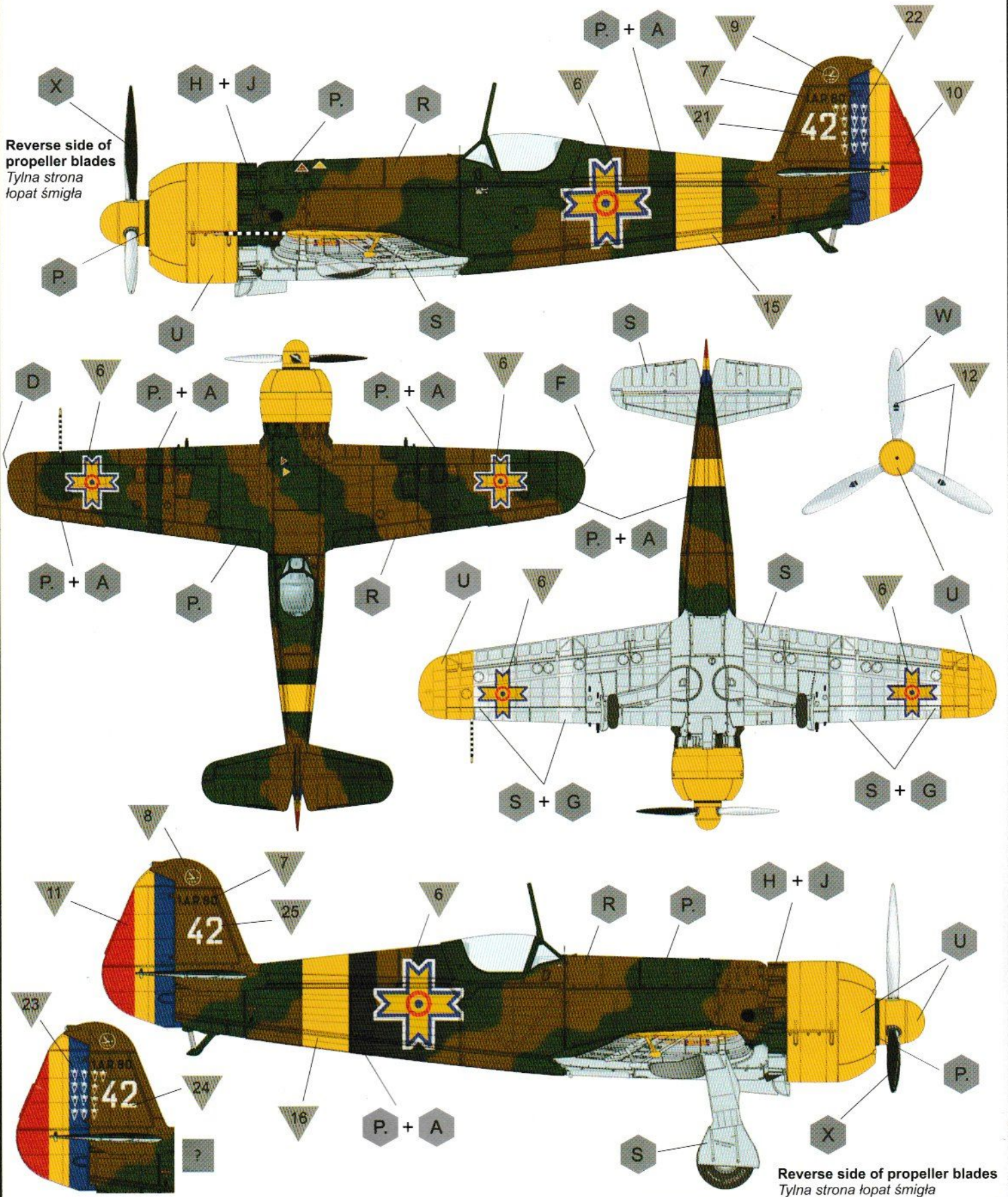
I.A.R.80 early No.32, Escadrila 60 Vânătoare, Sturzeni airfield, Bessarabia, late August 1941

No.32 was damaged on 1st July and sent for repairs, from which it returned in August 1941, joining Esc. 60 Vt. In late August the unit was very active flying numerous strafing and free hunting missions over Odessa. It seems that during the aforementioned overhaul No.32 was at least partially repainted, as its paint job seems to be in immaculate condition, without any overpaints or even scratches. Worth noting is the spinner – at some point of Operation Barbarossa 1/3 of the spinner started to be painted in yellow (or white in some cases), a marking similar to the ones applied to German airplanes and used until 1944.



I.A.R.80 early No.42, Escadrila 42/52 Vânătoare, Salz airfield, Transnistria, early September 1941

No.42 is one of the most mysterious I.A.R. fighters of the 1941 campaign. There is a well-known photograph showing the vertical tail with 13 victory markings, but it is not certain where, when or by whom it was taken. It was reportedly printed in Romanian, German and Italian propaganda magazines, but no individual Romanian pilot scored that high during the Barbarossa campaign. There also exists a photo of No.42 taken in Braşov (where it was sent for repairs), most probably in the second half of September, showing that the airplane did not carry victory markings at that time. This all prompted some researchers to state that the markings were applied using washable paint only on the left side of the tail for propaganda purposes, and this version cannot be excluded. Our reconstruction of No.42 shows how it would look like when stationed at Salz airfield in early September 1941. It also worth to note that apart from being unique in carrying victory markings in 1941, No.42 was also probably a record holder in terms of placement of wing crosses, having them wider apart than any other known I.A.R. fighter and contrasting sharply in that respect with I.A.R.80A No.75 and 82 presented further in this instructions booklet. As was the case for Nos.22 and 43, stencils on the central ammo bay on each wing were most likely overpainted.

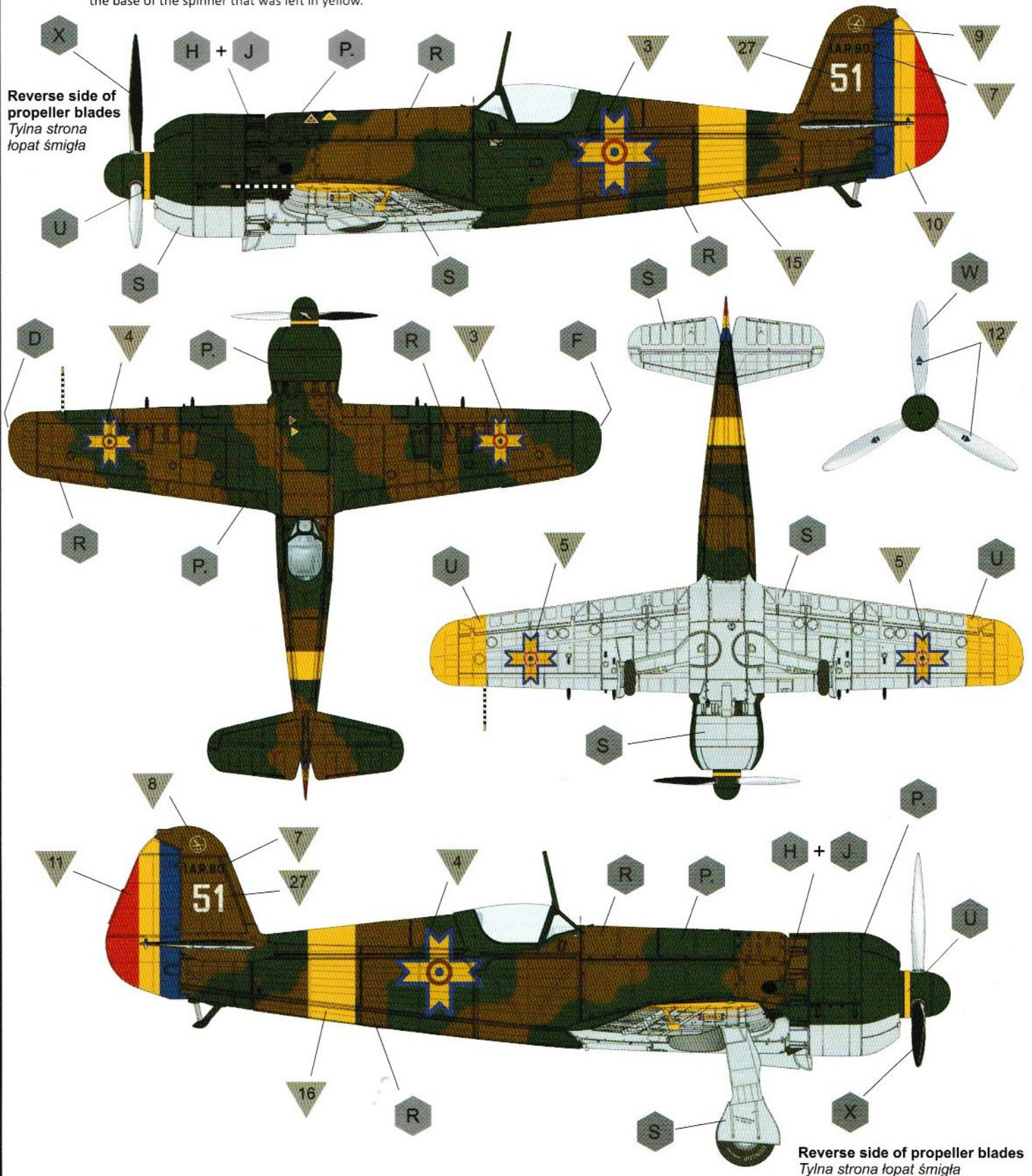


Reverse side of propeller blades
Tylna strona łopat śmigła

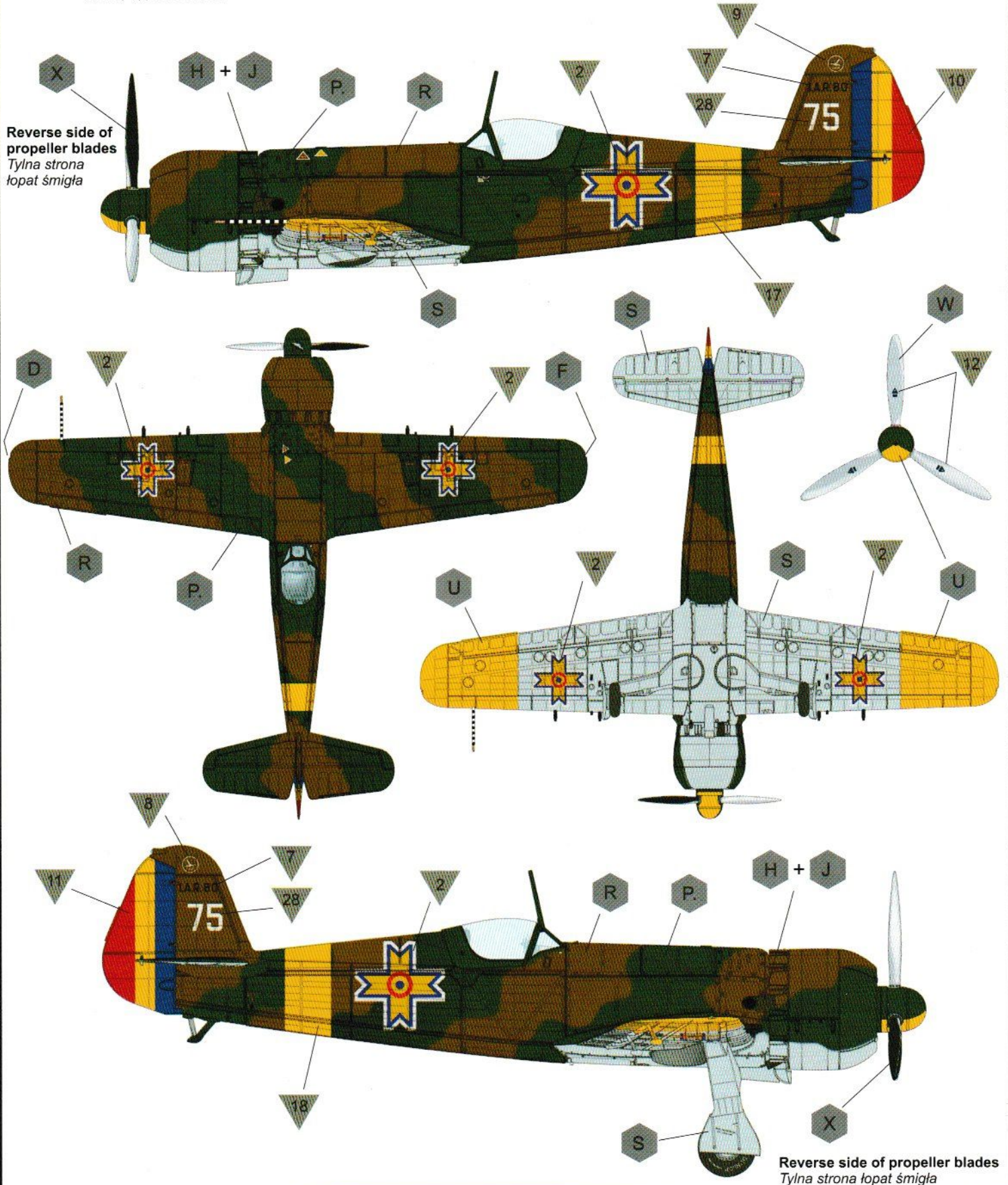
Reverse side of propeller blades
Tylna strona łopat śmigła

I.A.R.80A No.51, Escadrila 59 Vânătoare, flown by Adj.Av. Dumitru Borcescu (2 victories), Mamaia airfield, Romania, August 1941

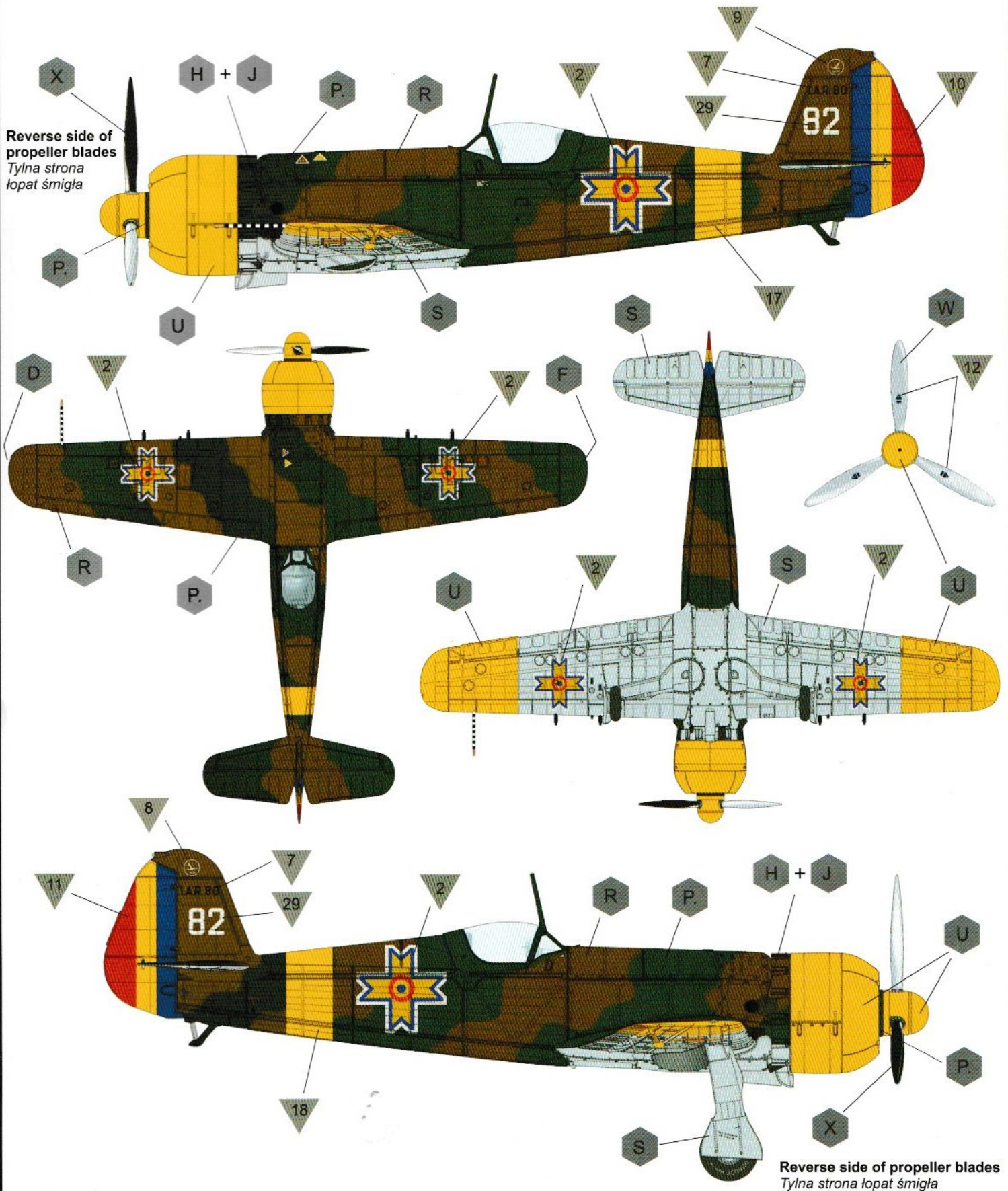
Adj.Av. Dumitru Borcescu was one of the successful fighters of Esc. 59 Vt. with one confirmed and one probable I-16 credited to him during Barbarossa campaign. I.A.R.80 No.51 was the first production aircraft of the six-gun version of the I.A.R. fighter, giving Romanian pilots much needed additional punch. In 1941 these airplanes still carried 'I.A.R. 80' type designation on the fin, but in later years it was rectified by adding letter 'A' as a version suffix. Finish of this airplane is interesting for multiple reasons. Particularly noteworthy is the fact that its crosses lacked white piping. The story behind it is not clear – No.51 was delivered in early May 1941, during period of transition from cockades to crosses and it is not known if the latter were applied in I.A.R. factory or already in the unit. Close examination of photos suggests that red circles were unusually dark, at least on the fuselage. This is believed to be an effect of relatively weak coverage or red paint and the underside colours showing through. That effect was simulated in the decals, please note their exact numbering. It is not known if the airplane ever carried cockades, therefore their traces are not presented in the profiles. As for the thin bands on the fuselage and wings, their overpaints are not clearly identifiable in the photos, but this might suggest brown paint was used in the process and it was applied with more care. Still, stencils on the central ammo bay on each wing (where the bands used to be) are believed to be overpainted. Airplane left the factory with yellow engine cowling that was later overpainted with a straight division line between upper and lower colour, a style that seems to be popular in Esc. 59 Vt. The overpaint did not include the base of the spinner that was left in yellow.



Adj.Av. Vasile Mirilă was another successful Romanian pilot, with 3 victories to his credit (I-16 and unrecognized reconnaissance airplane in 1941, as well as one B-24 in 1944). In August 1941 he was a member of Esc. 59 Vt. stationed at Mamaia together with Hurricane-equipped Esc. 53 Vt. and Bf 109-equipped 1.(J)/Lehrgeschwader 2. The main task of these units was providing air cover for the Romanian Black Sea coast, including strategic port of Constanța, against numerous attacks by Pe-2, DB-3F and SB-2 of Soviet Black Sea Fleet Aviation, as well as Zveno-SPB parasite bombers. I.A.R.80A No.75 was delivered in July 1941 and carried the typical factory-applied finish of that period, with narrowly-placed crosses and very wide yellow wingtips. It is worth noting the shape of national insignia in its 1941 version, with the I.A.R. variant carrying blue and white piping of equal width. Engine cowling is camouflaged, as per the requirements, but it is worth noting the 1/3 of the spinner in yellow – a quick recognition feature that started to be popular during Barbarossa campaign. The I.A.R.80 camouflage scheme was applied without the use of templates, therefore each airplane might have slightly differed even from the next specimen produced. Some general trends can be observed, based on which the individual schemes were reconstructed. No.75 is believed to have carried a full set of factory-applied stencils.




I.A.R. 80A No.82, Escadrila 59 Vânătoare, personal airplane of Cpt.Av. Ernest Vernescu (2 victories), Salz airfield, Transnistria, 10th October 1941
 Cpt.Av. Ernest Vernescu was a commander of the Esc. 59 Vt., a veteran of 43 missions, credited with 2 probable victories over I-16. On 10th October 1941, while on his 44th mission, he was shot down over Odessa by anti-aircraft artillery, becoming the last Romanian pilot to give his life during the Barbarossa campaign, making this marking option particularly meaningful. As for Cpt.Av. Ernest Vernescu's personal airplane, No.82 wore a standard I.A.R. factory camouflage applied between July and August 1941 (as described for No.75) with an exception of the cowling and spinner. The latter were subsequently repainted according to order No. 1333 issued on 29th August 1941 (effective 1st September) that introduced an additional recognition feature for Axis fighters on the Eastern Front - yellow cowlings. The same change was introduced simultaneously on German, Finnish, Slovak (6th September), Hungarian and Italian fighters operating in this theatre. Airplane is believed to have carried a full set of factory-applied stencils.



Individual Airplanes Configuration
Konfiguracje poszczególnych samolotów

Airplane No.	Wing	Spinner	Belly	Canopy	Cockpit ventilation scoop	Gunsight	Instrument board	3D printed seat	3D printed wheels	3D printed flaps
22	4-gun (IAR.80 early)	Short	Flat	Flatter	No	Ring and bead	Earlier	72U052	72U048	72U055 (Early flaps and flaperons)
32	4-gun (IAR.80 early)	Short	Flat	Flatter	Yes	Goerz GM2	Later, with cut out for reflex gunsight	72U052	72U048	72U055 (Early flaps and flaperons)
42	4-gun (IAR.80 early)	Short	Flat	Flatter	Yes	Ring and bead	Earlier	72U052	72U048	72U055 (Early flaps and flaperons)
43	4-gun (IAR.80 early)	Long	Flat	Flatter	Yes	Goerz GM2	Later, with cut out for reflex gunsight	72U046	72U048	72U055 (Early flaps and flaperons)
51	6-gun (IAR.80A)	Short	Flat	Flatter	Yes	Ring and bead	Earlier	72U052	72U048	72U055 (Early flaps and flaperons)
75	6-gun (IAR.80A)	Short	Flat	Blown	Yes	Goerz GM2	Later, with cut out for reflex gunsight	72U052	72U048	72U055 (Early flaps and flaperons)
82	6-gun (IAR.80A)	Short	Bulged	Blown	Yes	Goerz GM2	Later, with cut out for reflex gunsight	72U052	72U048	72U056 (Late flaps)


ALSO AVAILABLE FROM IBG MODELS



IBG MODELS

72U052 - 1:72


IAR.80/81 Pilot's seat with seatbelts
 3d Printed set for IAR.80/81 (June 1941 - mid-1943)



IBG MODELS

72U048 - 1:72

I.A.R.80/81 early wheels (used until 1943)
 3d Printed set for the all IBG Models I.A.R. 80/81 kits



IBG MODELS

72U047 - 1:72

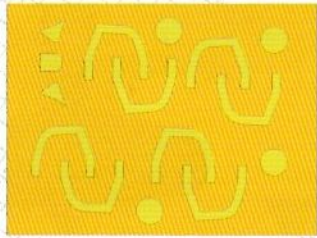
I.A.R.80/81 Exhausts
 3d Printed set for the all IBG Models I.A.R. 80/81 kits

I.A.R. 80/81 Painting masks

IBG MODELS

1/72 - 72M009

for all IBG Models I.A.R. 80/81 model kits




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I.A.R. 81C - Great Air Battles of 1944 1:72
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