

1:72



www.mistercraft.eu

D-225**P-24C/E/F/G 'Balkan Defender'**

GB. Design and development: The PZL P.24 was developed as an export version of the PZL P.11, a gull-wing all-metal fighter designed by Zygmunt Puławski. The P.11 was powered with a license-built Bristol Mercury engine. The second P.24/I prototype, named the "Super P.24", set a world speed record for radial engine-powered fighters (414 km/h). The third P.24/II prototype was the "Super P.24bis" with a more powerful 14Krs engine. The wings had a gull-wing shape, with a thin profile close to the fuselage, to provide a good view for the pilot. This configuration was developed by Zygmunt Puławski and called "the Polish wing". The canopy was closed (apart from prototypes). An internal 360 liter fuel tank in the fuselage could be dropped in case of fire emergency. It had conventional fixed landing gear with a rear skid. The armament was a combination of 20 mm Derrikan FF cannon and 7.92 mm Colt-Browning machine guns in the wings.

Operational history: Despite being a better fighter than the PZL P.11, none were acquired by the Polish Air Force, which preferred to wait for the PZL 50. When it became clear the PZL 50 would not be ready in time to counter the imminent German attack, the PAF briefly considered ordering PZL-24H. The aircraft had greater success abroad, though. Turkey, Turkish P.24s were used for training until the late 1940s. Some were refitted with Pratt & Whitney Twin Wasp engines. Romania: The Romanian Air Force already used PZL P.11Fs built under license in the IAR factory, and decided to acquire the P.24 as well. Romania bought five P.24Es and a production license, and built 25 IAR P.24E aircraft at the IAR factory between 1937 and 1939.^[2] Some components of the P.24E, mainly its tail section, were used in construction of the Romanian low-wing fighter IAR 80. The fighters were used to guard Bucharest, and the Plateau oilfields from Soviet bombers at the start of Operation Barbarossa. Flying from Otopeni military airbase, the PZL P.24 fighters managed to shoot down 37 unescorted VVS bombers. The P.24E was also used for ground attack missions until the end of 1941 and after 1942 it was relegated to training duties because of its obsolescence. Greece: The Royal Hellenic Air Force (EVA) is the only air force during World War II to operate the PZL P.24 as its main fighter type. Two subtypes, thirty P.24F and six P.24G, were ordered and delivered in 1937-38. They were split between three Mirae Dioxeos (Fighter Squadrons): the 21st at Tirkala, 22nd at Thessaloniki and 23rd at Larissa. The only other operational Greek fighters, stationed further south, were eight Bloch MB.151s and two each Gladiator Mk I and Avia B-534 II, both of which were of limited value. When Italy attacked in October 1940, the Polish fighter was the Greeks' only modern type in adequate numbers. However, by 1940, the PZL-24 was no longer a front-runner despite a powerful powerplant and satisfactory armament. It had no speed advantage over the Fiat Cr.42 nor could it outfly the nimble Italian biplane, while it was much slower than the Macchi MC.200 and the Fiat G.50 it was pitted against. Its armament was the only real advantage against the Italian fighters whose reliance on the slow firing Breda-SAFAT 12.7mm machine guns proved detrimental. The PZL P.24F armed with two 20mm Derrikan FF cannon and two MGs gave the Greeks a temporary edge in combat until lack of ammunition and spares forced EVA to re-arm all P.24Fs with 4x Colt-Browning 7.7 mm MG42 machine guns. Overall, the PZLs performed gallantly during the early period of the conflict, holding their own against impossible numerical odds and despite the fact that their main targets were enemy bombers which forced them to fight at a disadvantage against enemy fighters. Italian claims of easy superiority over the Albanian front were vastly over-rated and their kill claims even exceeded the total number of

operational fighters on the Greek side. Total Greek fighter losses -in combat- came to 24 a/c with the Greek fighter pilots claiming 64 confirmed kills and 24 probables (about two third bombers). By April 1941, however, lack of spares and attrition had forced EVA to merge the five surviving PZL-24s into one understrength squadron supported by five Gloster Gladiators Mk I and II and the two surviving MB.151s. These fought hopelessly against the Luftwaffe onslaught in April 1941 scoring 4 kills (two He-111, one Ju-87B and one Do-17) and losing most of their surviving a/c on the ground. None of the Puławski fighters survived. Variants: The P.24A and P.24B models could carry 4 x 12.5 kg bombs, while the P.24C, F and G could carry 2 x 50 kg bombs. P.24This design used the whole tail fuselage section from the P.11c, was powered with a Gnome-Rhône 14Krs engine (930 hp), and was armed with two 20 mm cannon and two machine guns. P.24A It entered production as the P.24A. The P.24B version was armed with four machine guns. The Bulgarian Air Force ordered 14 PZL P.24Bs in 1937-1938. The P.24C was armed with four machine guns and two 50 kg bombs. The Royal Romanian Air Force ordered five PZL P.24E fighters in 1937 and built 25 IAR P.24E aircraft under license. The P.24D was developed for sale to Hungary, but it was not completed, Hungary purchasing the Fiat Cr.32 instead IAR P.24E. The P.24E version was license-built in Romania by Industria Aeronautică Română as the IAR P.24E. The Royal Romanian Air Force ordered five PZL P.24E fighters in 1937 and built 25 IAR P.24E aircraft under license. The P.24F was armed with two cannon and two machine guns and bombs and powered with the more powerful 970 hp (720 kW) Gnome-Rhône 14N-07 engine. P.24GThe last production version was the P.24G, produced from 1937 and powered with the more powerful 970 hp (720 kW) Gnome-Rhône 14N-07 engine. The P.24G was armed with four machine guns and bombs. The Royal Hellenic Air Force bought 30 P.24Fs and six P.24Gs in 1938. Delivered 1937-38. All Es eventually re-armed with 4x Colt-Browning 7.7mm MGs. The P.24H was to be powered with a Gnome-Rhône 14N-21 engine (1,100 hp) and carry four cannon or two cannon and two machine guns, but it was not completed. The P.24H was considered for purchase by the Polish Air Force, but progress was slow due to the P.24's similarity to the PZL P.11, which was already in service, and also interest in the hypothetically superior PZL 50 Jastrząb then under development. P.24JThe P.24J version was to be armed with four cannon and was to be sold for export. The only surviving example of a PZL P.24 in the world, Turkish Aviation Museum, Istanbul^[3]Specifications (P.24A, P.24B, P.24C). General characteristics: Crew: 1, Dimensions: Length: 7.50 m (22.96 ft), Wingspan: 10.71 m (32.80 ft), Height: 2.89 m (8.82 ft), Wing area: 17.90 m² (192.7 ft²), Empty weight: 1,327 kg (2,925 lb), Loaded weight: 1,870 kg (4,121 lb), Max. takeoff weight: 2,000 kg (4,400 lb), Powerplant: 1 x Gnome-Rhône 14Krs 14-cylinder double row radial engine, 900 hp / 693 kW (max) / 671 kW (med), Performance: Maximum speed: Maximum speed: 430 km/h (267 mph), Range: 700 km (435 mi), Service ceiling: 9,000 m (29,527 ft), Rate of climb: 11m/s (12,160 ft/min), Power/mass: 370.6 kW/tonne (451.5 hp/ton).

D. Die PZL P.24 war ein in Polen konstruiertes einmotoriges Jagdflugzeug aus den 1930er-Jahren. Sie war international erfolgreich und wurde in die Türkei, Bulgarien (12 Maschinen), Griechenland und Rumänien exportiert oder (40 P.24E) in Lizenz gebaut, wobei der Großteil der Maschinen (40 P.24A und 26 P.24C) an die Türkei ging. Höchstgeschwindigkeit: 430 km/h.

GB.Numbering of parts • D.Nummerierung von Teilen PL.Numeracja części • F.la Numérotation des pièces • CZ.Císlování dílů • RUS.Нумерация частей

NL.Nummering van onderdelen

ESP.Numeración de las piezas

POR.Numeração das peças

I.Numerazione delle parti

S.Numrering av delar

FIN.Numerointi osien

DEN.Nummerering af dele

NOR.Nummerering av deler

GR.H ορθιμηση των τμημάτων

TUR.Parçaların Numaralandırma

H.Számozása alkatrészek

SK.Císlovanie dielov

Rum.Numerotarea pieselor

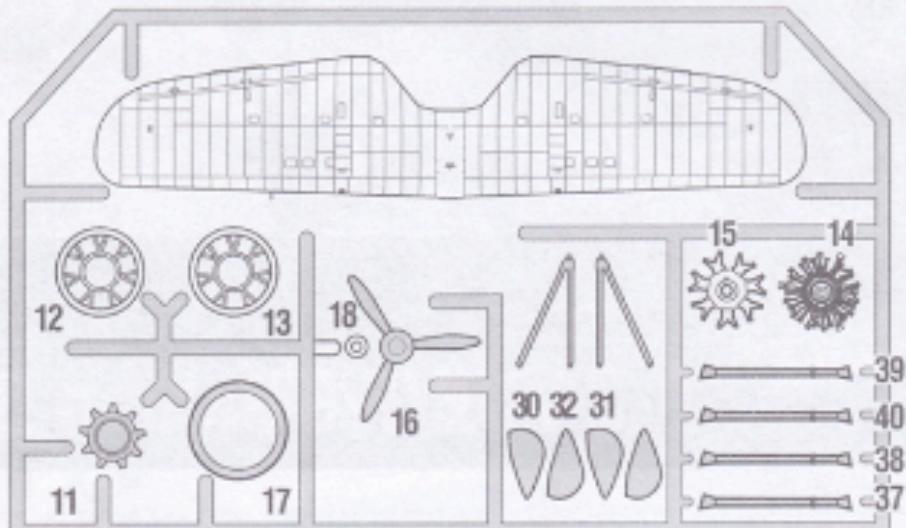
BUL.Номериране на части

UA.Нумерація частин

(C)



43



(A)

Parts not used

Nicht benötigte Teile

Elementy nepotrebne

Pieces non utiles

Niet benodigde onderdelen

Piezas no necesarias

Peces não utilizadas

Parti non usate

Într anăndă delor

Tärkeintäteet eivät

Útaké varenadige delo

Delar som ikke er nødvendige

Ненужные детали

и/или дюймовы биржевые

Gerebt parçalar

Nepotrebitne deli

Nel neri hizaslı

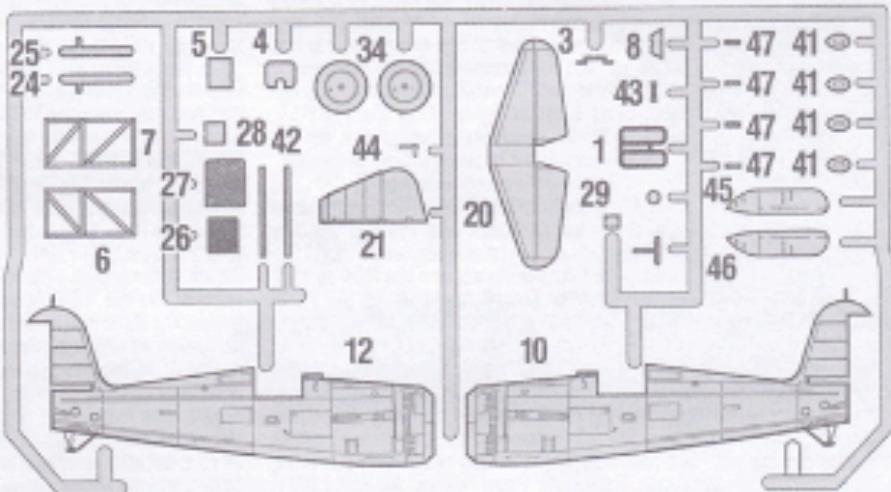
Není obsuzeno

Piese de schimb care nu sunt folosite

Части, которые не используются

Частини не використовуються

(B)



UK: Please note the enclosed safety advice and keep safe for later reference.

D: Belegenden Sicherheitstext beachten und nachschlagbereit halten.

PL: Stosować się do załączonej karty bezpieczeństwa i mieć ją stale do wyjścia.

F: Respecter les consignes de sécurité ci-jointes et les conserver à portée de main.

ML: Read the enclosed safety and security instructions and keep them by hand.

E: Observar y siempre tener a disposición este texto de seguridad adjunto.

I: Seguire le avvertenze di sicurezza allegate e tenerle a portata di mano.

P: Tener en atención el texto de seguridad anexo e guardarlo para consulta.

S: Bekräta tillfogad säkerhetstext och håll den i beredskap.

DK: Hævmede sikkerhedsanvisninger og har den liggende i nærheden.

N: Ha altijd verlagede sicherheitstextet klar til bruk.

RU: Соблюдайте приведенный текст наложенной безопасности, храните его в месте доступа к месту.

GR: Τροποποιήστε και συντηρείστε ασφαλείας και απόδοτα πάντα μέσα στη διάρκεια της χρήσης.

TR: Bütün güvenlik talimatlarını dikkatli okuyup, saklayarak kullanın.

CZ: Dbejte na přiložený bezpečnostní text a mějte jej připraveným k použití.

H: A rendelkezni tudja az utasításokat, vegye figyelembe és tarts a felhasználási használ

SLO: Priladeni varnostna navodila izvedite v jih hranice na vsem delovanju mestu.

Rom: Va rugam sa rețineți statutul de siguranță inclus și păstrați condiții de siguranță pentru referință ulterioară.

BL: Učitajte i obvezno čuvajte priloženo sigurnosno upozorenje.

UA: Зберіть усю захищеною рекомендацією з безпеки та дотримуйтесь безпеки для подальшого використання.

Made for OLYMP AIRCRAFT

Radosław Maleszka

SARBINOWSKA Str.27/19

54-318 WROCŁAW, POLAND

e-mail:olympaircraft@o2.pl

GB.Assembly instruction

- D.Montageanleitung
- PL.Instrukcja montazu
- F.Notice de montages
- Montážní návod
- Инструкция по монтажу

- NL.Montagehandleiding • ESP.Instrucciones de m...
- S.Monteringsanvisning • FIN.Asennusohje • DEN.S...
- TUR.Montaj talimat • H.Szerelési utasítás • SK.M...
- RUS.Инструкция по монтажу



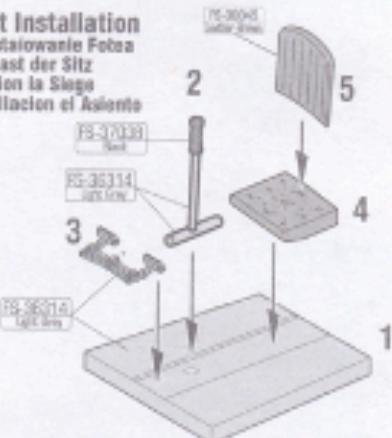
UK.Allow the parts to dry
Bavite se trošku lasko
Pozostavte do vyschnutia
Laissez sécher les pièces
Oderdeken later drogen
Dejar secar las piezas
Dejar secar os componentes
Far asciugare i componenti
Aitta osien kuivata
La deixe torke
Las komponenterne tørke
Låt byggsädet torka
Дать детали высокоту
Ağırakça no şırıp no müstakilce
Yapın parçalarını kuruyanı birekiz
Jednotlivě dle nechtlo zaschnout
Alakötüsekét hagyja száradni
Putile da sestaviti del posudilo
Se les s' se usucă piese
Оставете части да изсъхнат
Дайте високите части се



Repeat same procedure on opposite side
Gleichen Vorgang auf der gegenüberliegenden Seite wiederholen
Taki sami przebieg czynności powtarzaj na stronie przeciwnej
Opérez de la même façon sur l'autre face
Detselde handeling herhalen aan de tegenoverliggende kant
Realizar el mismo procedimiento en el lado opuesto
Repetir o mesmo procedimento utilizando no lado oposto
Stessa procedura sul lato opposto
Upprepa procedurun på motsatta sidan
Tolita sama tolkjönpide kurien viereksellä sisällä
Det samma arbejde gentages på den modsatte side
Gjenta prosedyren på sidan tvären över för
Повторяйте такую же операцию на противоположной стороне
Sıvadı yapın ve sağda devam et
Aynı işlemi karşı tarafta tekrarlayın
Sözünüzdeki sıvadı sağda devam et
Uygulayın ve sağda devam et
Ugrasztva kolyanatva a szemben toljkövet oldalon megismételn
Tali postolak por evili in na suprotnej strani
Repetati aceeași procedură pe partea opusă
Повторите същата процедура на противоположната страна
Повторите ту же процедуру на противоположной стороне

1
STEP

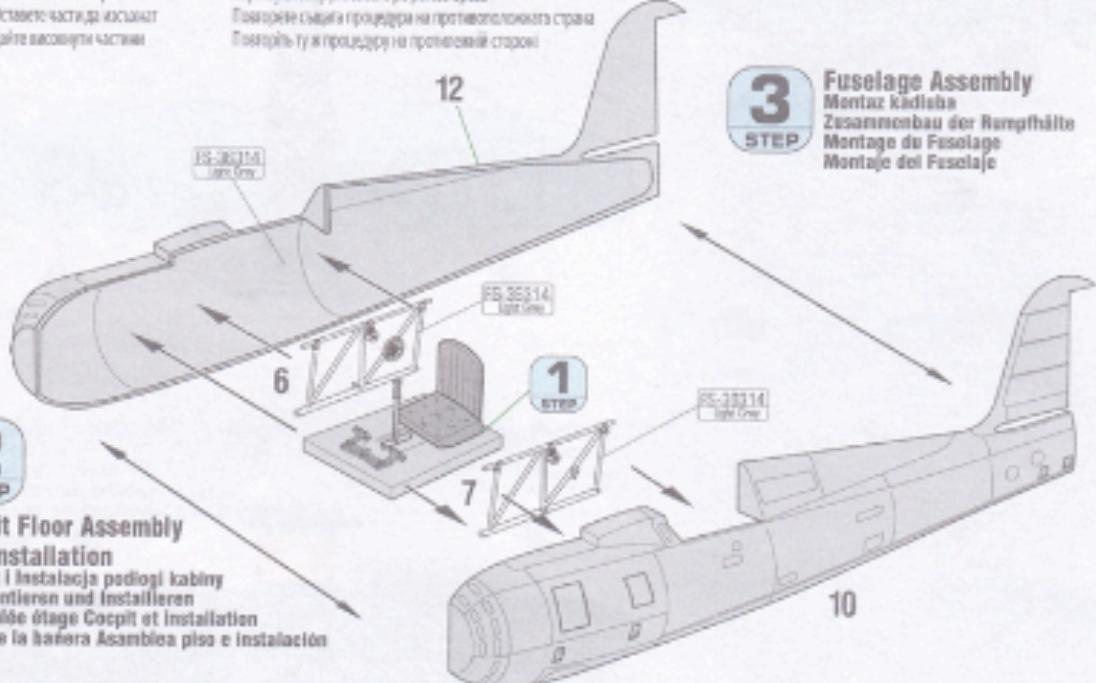
Seat Installation Zainstalowanie fotela Baucaust der Sitz Fixation du Siege Instalación del Asiento



2
STEP

Cockpit Floor Assembly and Installation

Montaż i instalacja podłogi kabiny
Sitz Montieren und Installieren
Assemblée étage Cockpit et Installation
Toldo de la cabina Asamblea piso e Instalación



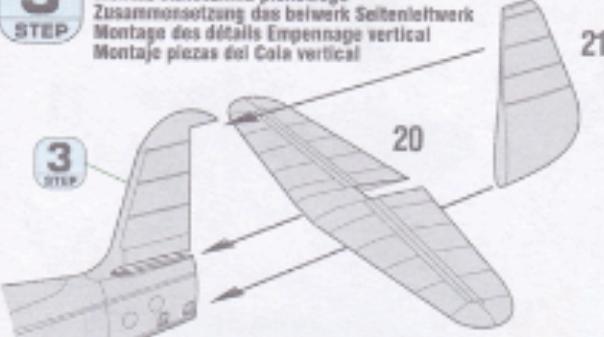
3
STEP

Fuselage Assembly Montaż kadłuba Zusammenbau der Rumpfhälften Montage du Fuselage Montaje del Fuselaje

5
STEP

Tail Fin Parts Assembly

Montaż statecznika poziomego
Zusammensetzung des beiwerk Seitenleitwerk
Montage des détails Empennage vertical
Montaje piezas del Cola vertical



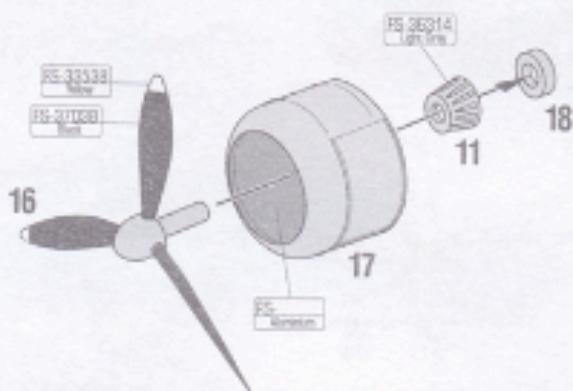
6
STEP

Propeller and Engine Cowling Assembly

Montaż śmigła i Okapowania Silnika
Zusammensetzung der Lüftschraube und Motorabdeckung
Montage du Hélice et Capot de moteur
Montaje de la Propulsor y la Cubierta del Motor

4
STEP

Horizontal Stabilizers Installation Zainstalowanie stateczników poziomych Baucaust der Höhenflossen Fixation des stabilisateurs horizontaux Instalación Estabilizadora



• POR.Instruções de montagem • I.Istruzioni di montaggio
 • Sjedning • NOR.monteringsanvisning • GR.Οδηγίες συναρμολόγησης
 • távod Rum.Adunárea de instrucțiuni • BUL.Събрание инструкция

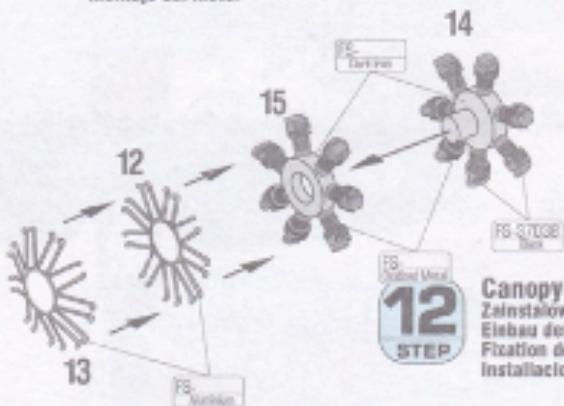
Please note the following symbols, which are used in the
 Bauanleitung: werden. Veuillez noter les symboles
 en tenant compte des symboles facilités à continuer, et à
 ci-dessous les symboles qui sont utilisés dans la suite
 de l'ensemble des symboles; sans mentionner le fait que
 il existe d'autres symboles, mais qui sont utilisés plus
 couramment dans les autres instructions. Пожалуйста обратите
 внимание на следующие символы, которые используются в
 инструкции по сборке.

7
STEP

Engine Assembly
 Montaż Silnika
 Zusammensetzung und Der Motor
 Montage de moteur
 Montaje del Motor

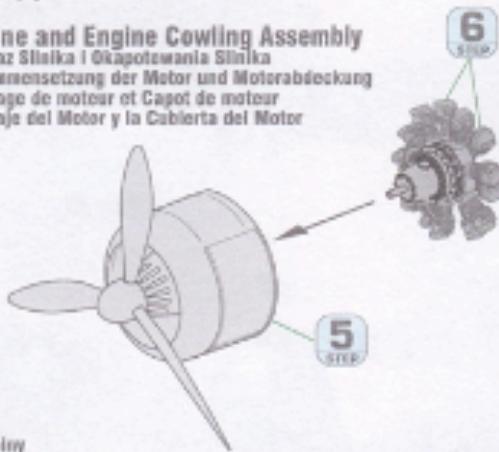
8
STEP

Engine and Engine Cowling Assembly
 Montaż Silnika i Okapotowania Silnika
 Zusammensetzung der Motor und Motorabdeckung
 Montage de moteur et Capot de moteur
 Montaje del Motor y la Cubierta del Motor



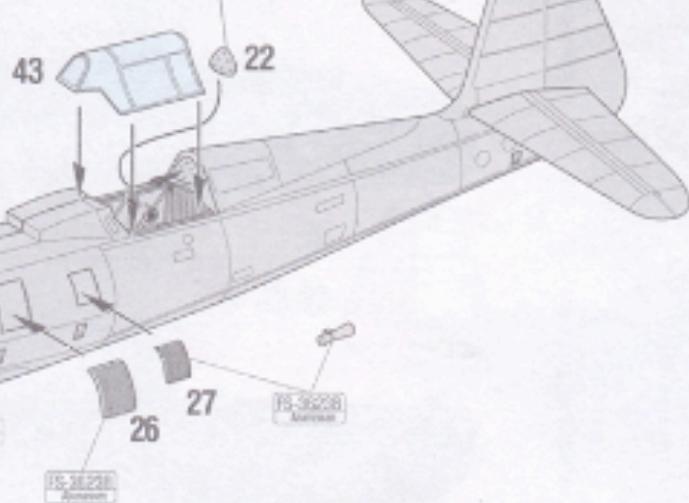
12
STEP

Canopy Installation
 Zainstalowanie Oszony Kabiny
 Einbau der Kabinendach
 Fixation de la Verrière
 Instalación de la Dosal



9
STEP

Exhaust Manifold Installation
 Zainstalowanie Rur wydychowych
 Baucast der Abgaskrümmer
 Fixation de la Conduit d'échappement
 Instalación de la Conducto de tuberías de escape

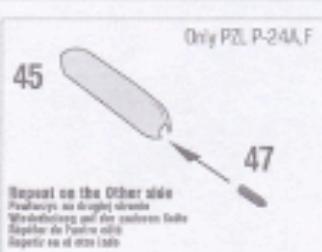


10
STEP

Propeller and Engine Cowling Installation
 Montaż Smigla i Okapotowania Silnika
 Zusammensetzung der Luftschraube und Motorabdeckung
 Fixation du Hélice et Capot de moteur
 Montaje de la Propulsor y la Cubierta del Motor

11
STEP

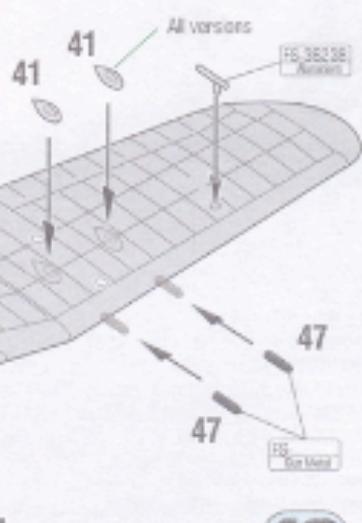
Radiator Installation
 Zainstalowanie Chłodnicy
 Baucast der Kühler
 Fixation le Radiateur
 Instalación el Radiador



14
STEP

20mm Cannon Gondola Installation
 Zainstalowanie gondoli działa kal.20mm
 Baucast das Kanone Gondel
 Fixation le canon 20mm en gondole
 Instalación el cañón 20mm góndola

PZL P-24A,F: 2 x Dorkin cannon 20mm end
 2 machine guns Browning 7.9mm
 PZL P-24B,C,G: 4 x 7.9 Colt browning 7.9mm



13
STEP

Machine gun Installation
 Zainstalowanie Karabina maszynowego kal.7,9mm
 Baucast das Maschinegewehr
 Fixation la mitrailleuse 12,7mm
 Instalación las ametralladoras

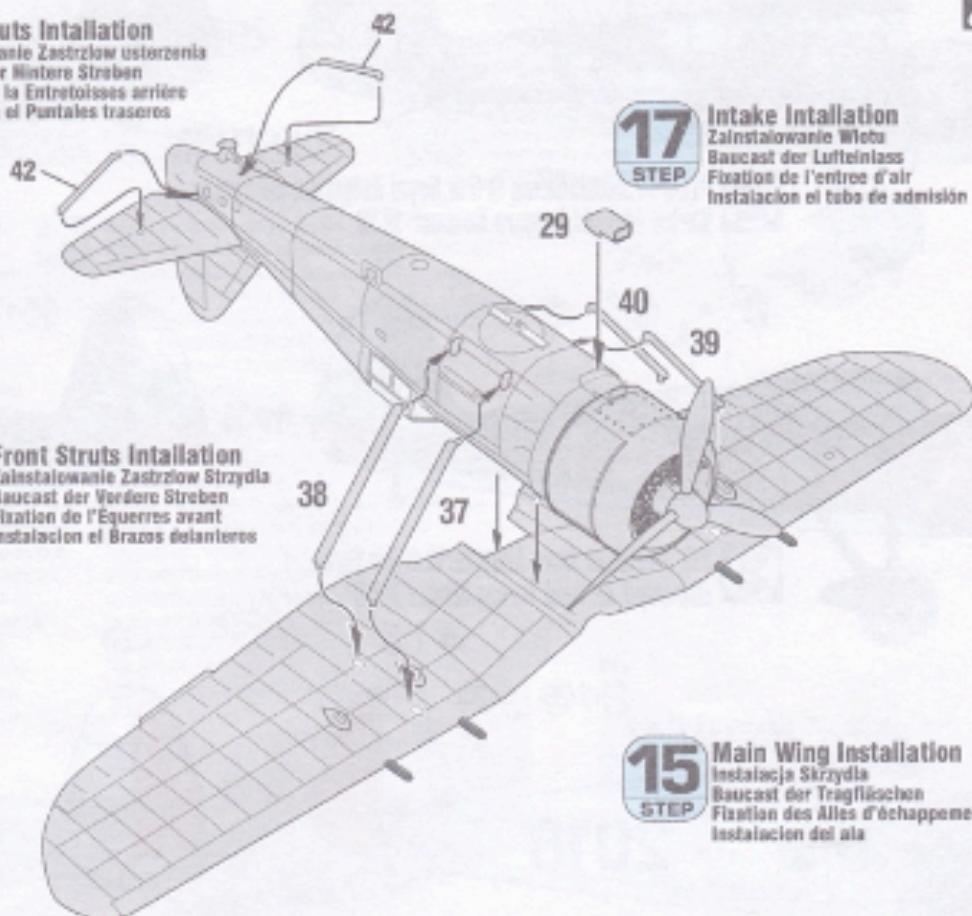


g construction stages. Proszę zwrócić na następujące symbole, które są użyte w poniższych etapach montażowych: Bitki baschim. Sie folgende Symbole, die in den nachfolgenden Schritten, die von Ihnen für die Montage benötigt werden, verwendet werden. Sírvase tener en cuenta los siguientes íconos de construcción: Por favor, preste atención a los símbolos que seguirán más tarde en las próximas etapas de montaje. Si prega di fare attenzione alle seguenti figure di costruzione: Per favor, presto atenzione aos símbolos que seguirão mais tarde nas próximas etapas de montagem. Legg merke til symbolene som benyttes i montørstepptømmene som følger: Dette symboler skal brukes senere i de nærmeste monteringsstegene. Læg vennligst merke til symbolene som benyttes i monteringsstegene som følger: Disse symbolene skal brukes senere i de nærmeste monteringsstegene. Prosje se vidi posment na sledeća simbole ki so pogodni za uporabu, ta enzla igrajte pozornost na to: nepravilno pošljete, ce uvečnjujete.

Edu
Klüber
Przykłady
Collar
Lijnen
Engorgar
Colar
Incellare
Líneas
Línea
Línes
Lini
Kreis
600μm
Sagajima
Lepen
Reaguziani
Lepid
Lipid
Ferrero
Scotia

18
STEP

Rear Struts Installation
Zainstalowanie Zastrzłów usterzenia
Baucast der Hintere Strebens
Fixation de la Entréetoises arrière
Instalación el Puntas traseros



16
STEP

Front Struts Installation
Zainstalowanie Zastrzłów Strzyla
Baucast der Vordere Strebens
Fixation de l'Équerres avant
Instalación el Brazos delanteros



Optional
Wahlweise
Da wybór
Facilitativ
Nur keuze
No engorgar
Alternado
Facilitativa
Valfrit
Valhoetzoest
Valgrift
Valgrift
Ha ustop
ewällacca
Seynol
Volcón
Totals unrint
Kulin ibbae
Facilitativ
Ha ustop
Hedon'szokai

17
STEP

Intake Installation
Zainstalowanie Wlewu
Baucast der Luftfeinlass
Fixation de l'entree d'air
Instalación el tubo de admisión

15
STEP

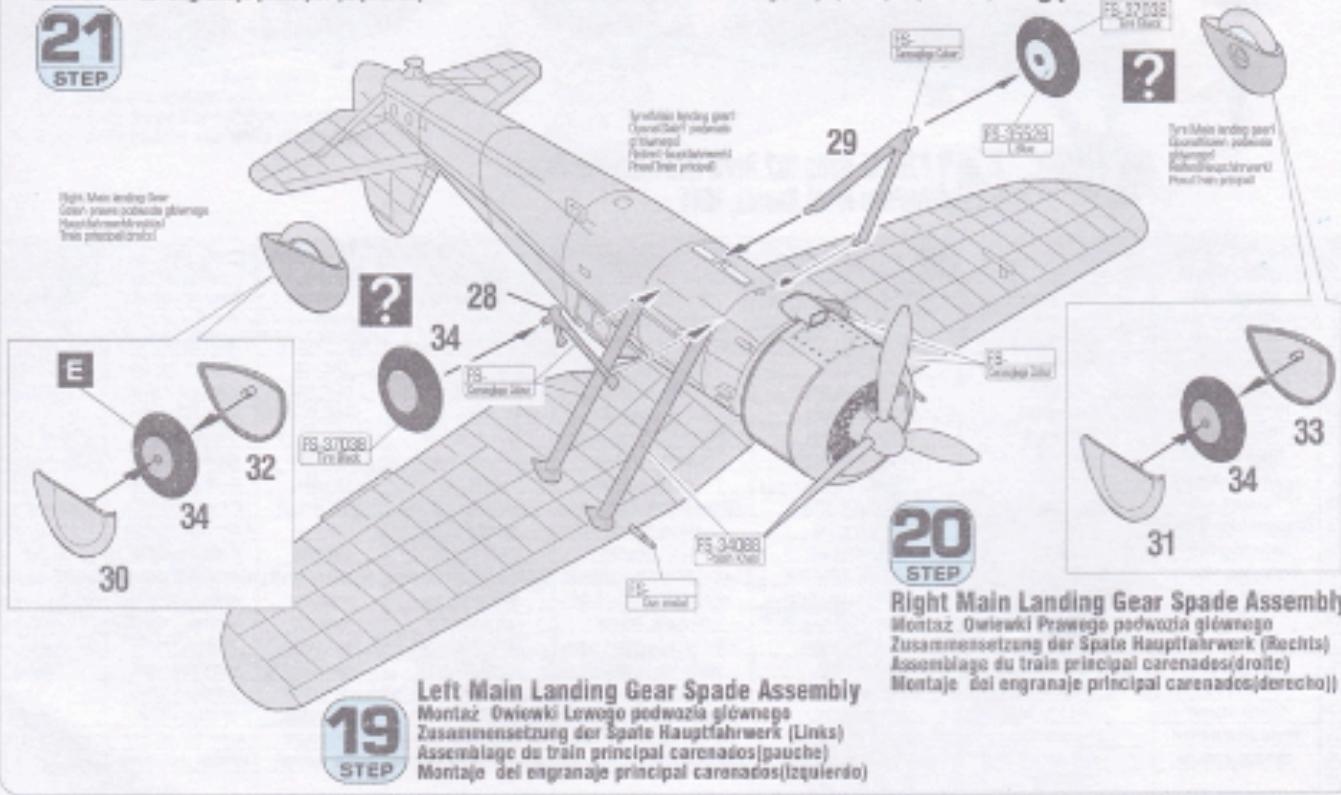
Main Wing Installation
Instalacja Skrzydła
Baucast der Tragflächen
Fixation des Alas d'échappement
Instalación del ala

21
STEP

Left Main Landing Gear Installation
Instalacja Lewego podwozia głównego
Baucast der Hauptfahrwerk (Links)
Fixation du train principal (gauche)
Instalación del engranaje principal (izquierdo)

22
STEP

Right Main Landing Gear Installation
Instalacja Prawego podwozia głównego
Baucast der Hauptfahrwerk (Rechts)
Fixation du train principal (droite)
Instalación del engranaje principal (derecho)



19
STEP

Left Main Landing Gear Spade Assembly
Montaż Owiwki Lewego podwozia głównego
Zusammensetzung der Spate Hauptfahrwerk (Links)
Assemblage du train principal carenados(gauche)
Montaje del engranaje principal carenados(izquierdo)

20
STEP

Right Main Landing Gear Spade Assembly
Montaż Owiwki Prawego podwozia głównego
Zusammensetzung der Spate Hauptfahrwerk (Rechts)
Assemblage du train principal carenados(droite)
Montaje del engranaje principal carenados(derecho)

Marking & Painting

I PZL-24, 21 Nira, Royal Greek Air Force
Larissa Airfield, Greece, May 194



2 PZL-24B, 21st Bittellien Orlak, Royal Bulgarian Air Force
Kartlov Airfield, Bulgaria, Summer 1939



5 PZL-24E, factory to
Okocie Airfield, Po



3 PZL-24C, 5ncu Hava Allay, Turkish Air Force
Etimesgut Airfield, Turkey, Winter 1940



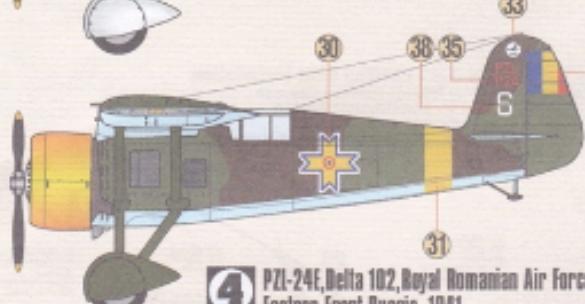
B PZL-24C, 51ncu Hava Allay, Turkish Air Force
Etimesgut Airfield, Turkey, Winter 1940



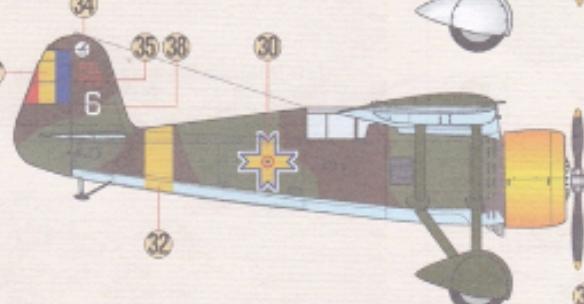
25 ? 26



25 ? 26

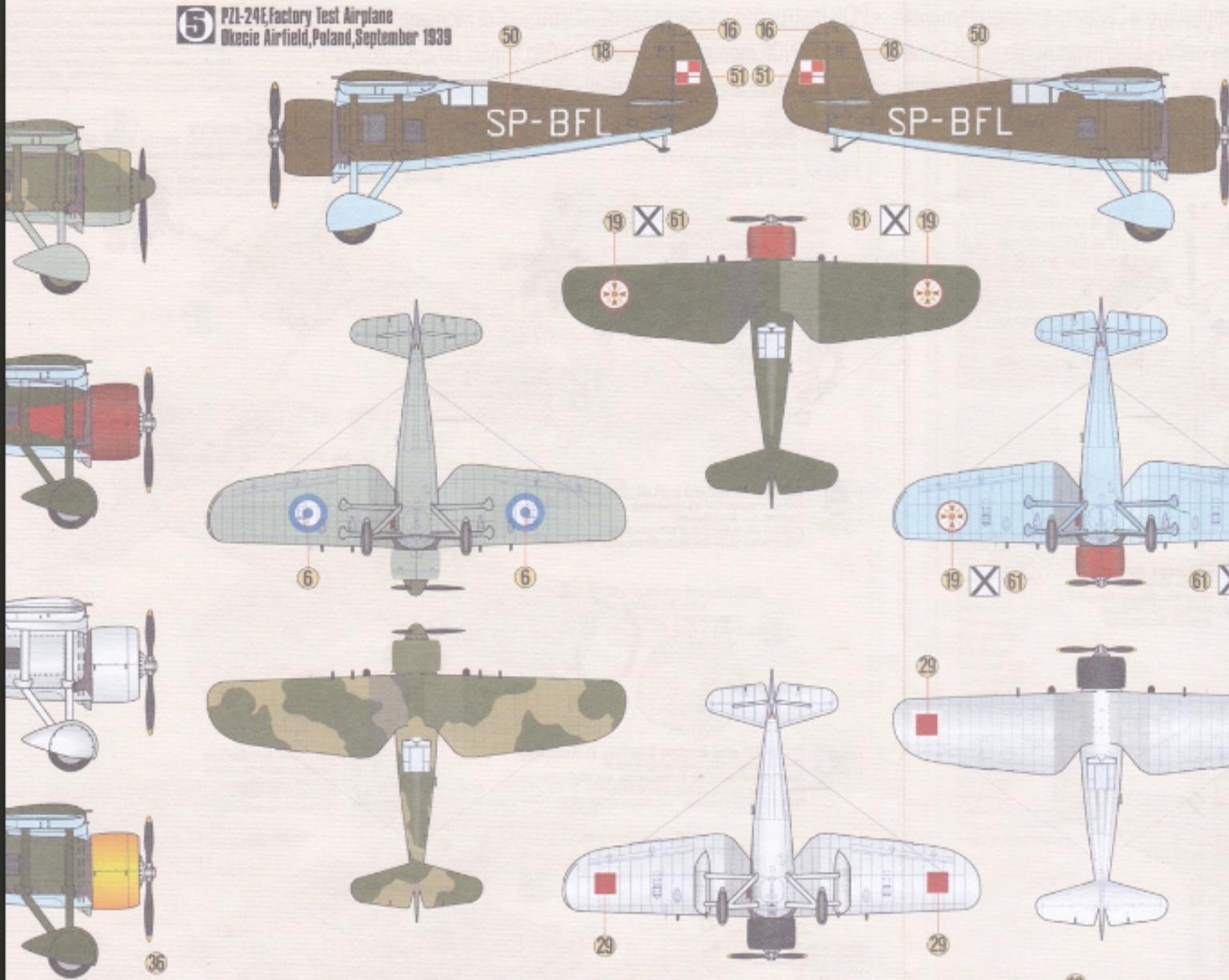


4 PZL-24E, Delta 102, Royal Romanian Air Force
Eastern Front, Russia, 1941

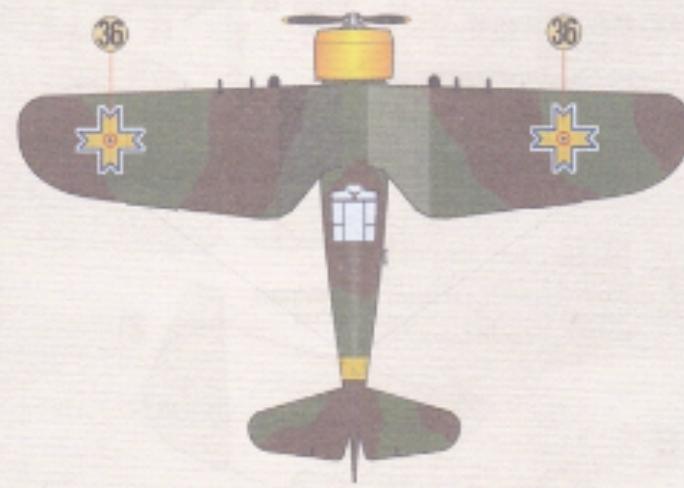
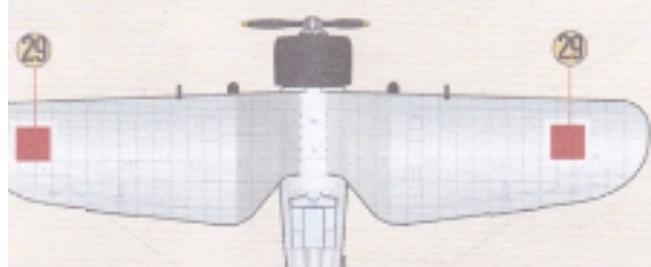
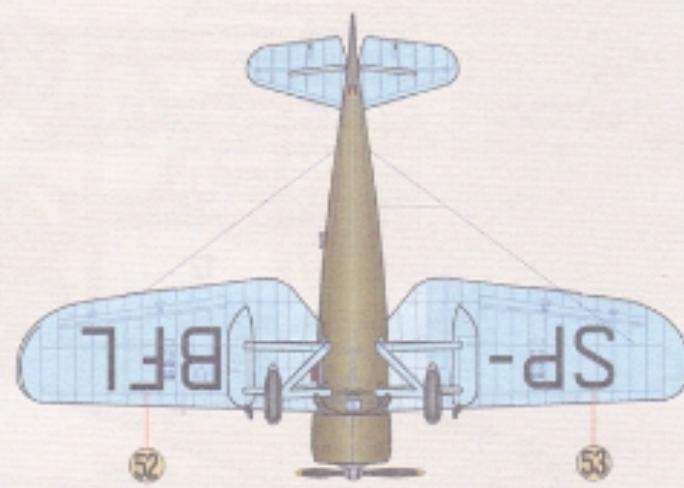
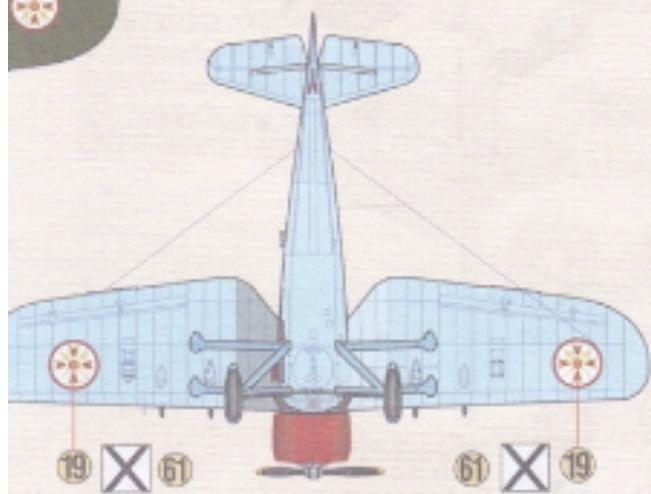
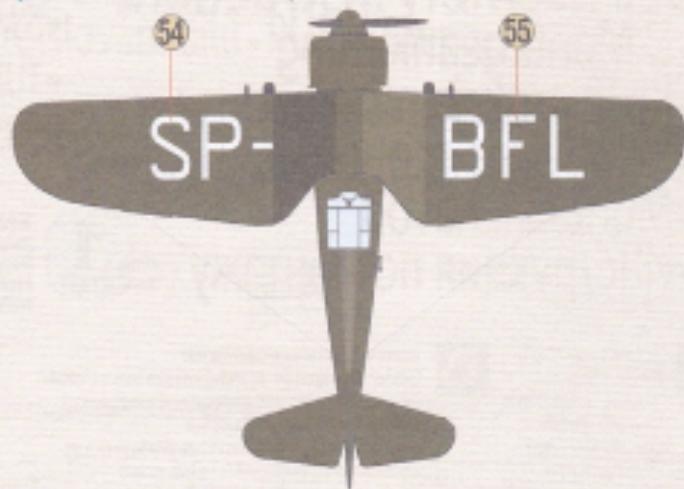
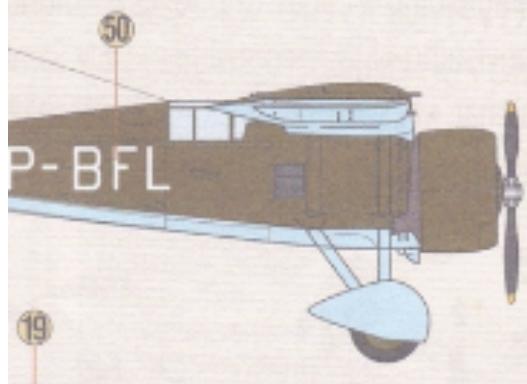


31
Hungarian Air Force

5 PZL-24E, Factory Test Airplane
Okocie Airfield, Poland, September 1939



Notice: Stencil data decal (Blue colour) is for information only. Possible to obtain as separate sheet.



Uwaga: Opisy eksploracyjne służą do celów informacyjnych. Możliwość nabycia osobnego arkusza: olympaircraft@o2.pl

