

# EuroFOX Microlight – BMAA Inspectors Seminar



The EuroFOX



Tail wheel



Nose Wheel

# Agenda

- Introduction and Welcome
  - Aeropro profile
  - EuroFOX in the UK history
  - EuroFOX variations
  - Inspection points – permit
  - MPD's & SB's
  - Home build inspection points
  - Flying characteristics
  - Questions
- 
- Lunch at a convenient time



Air-Britain Photographic Images Collection

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# Aeropro manufacturers of the EuroFOX

- Aeropro Slovakia started in in 1990 with the EuroFOX
- There are 4 Aeropro owners, 3 are aeronautical engineers, 25 employees in total.
- The Aeropro factory at Nitra Airfield was built in 2004, it is 100% company owned with no debt. Approx 800 s/m
- Aeropro is a “one product” company – The EuroFOX.
- The first aircraft was produced in 1989, now 500 in the field. Nose and Tail wheel variants.
- The EuroFOX is approved as a “ready to fly microlight at 472.5kgs” in all European countries, Germany was the first in 1995, the rest of the world receives the 560 kg EuroFOX.



# Aeropro manufacturers of the EuroFOX

- The EuroFOX has an excellent safety record, with no fatalities or any in service structural failures.
- Estimated fleet flying hours is at least 200,000
- Quality assurance programs are embedded in established Aeropro factory systems for the last 26 years.
- G INFO shows 64 EuroFOX aircraft on the UK register
- 2015/6 UK factory approval







# Latest EASA approval of Aerop



DOUHA-BE/11-1

**DOPRAVNÝ ÚRAD**  
TRANSPORT AUTHORITY

**NÁRODNÉ POVOLENÍ VÝROBNÍ ORGANIZACE**  
NATIONAL PRODUCTION ORGANISATION APPROVAL CERTIFICATE

**FORMULÁR 55A**  
FORM 55A

Značka: SK.NPOA.003  
Reference:

Podľa § 23 zákona č. 143/1998 Z. z. z 2. apríla 1998 o civilnom letectve (letecký zákon) a o zriaďovaní a doplnení niektorých zložiek v zriaďovaní letectva a o zriaďovaní dodávateľských podmienok uvoľnených náhle, Dopravný úrad overuje:

Pursuant to §22 of the Act No. 143/1998 Civil of April 2, 1998, on Civil Aviation (Aviation Act) and amendment of some acts and subject to the conditions specified below, Transport Authority hereby certifies:

**AEROPRO, s.r.o.**  
DIEB 126  
949 07 Nitra  
IČO: 34142215

ako výrobnú organizáciu v súlade s Postupom Dopravného úradu č. 52014, opäťovať na výrobu výrobkov, častí a zariadení uvedených v prílohe a schválení a na vydávanie súvisiacich osvedčení s povolením uvedených osvedčení.

as production organisation in compliance with Procedure of the Transport Authority No. 52014 approved to produce products, parts and appliances listed in the attached approval schedule and issue related certificates using the above reference.


**PODMIENKY:**  
CONDITIONS:


1. toto povolenie je obmedzené v rozsahu, podľa priložených podmienok povolenia a  
The approval is limited to that specified in the enclosed terms of approval, and
2. toto povolenie si vyžaduje dodržiavanie postupu uvedených v popise schválenej výrobní organizácie a  
This approval requires compliance with the procedures specified in the approved production organisation exposition, and
3. toto povolenie je platné, pokiaľ schválená výrobná organizácia plní ustanovenia popisu výrobní organizácie podľa národných postupov a Postupu Dopravného úradu č. 52014  
This approval is valid while the approved production organisation remains in compliance with National Production Organisation Approval and Procedure of the Transport Authority No 52014
4. za predpokladu, pokiaľ sú splnené všetky podmienky zostávajúce platné na neobmedzený čas, pokiaľ nebolo štátom vnutené, nahradené, pozastavené alebo zrušené.  
Subject of compliance with the foregoing conditions, this approval shall remain valid for an unlimited duration unless has previously been suspended, superseded, suspended or revoked.

Dátum pôvodného vydania: 10. FEB. 2015  
Date of original issue:

Dátum tejto verzie: 12. FEB. 2015  
Date of this revision:

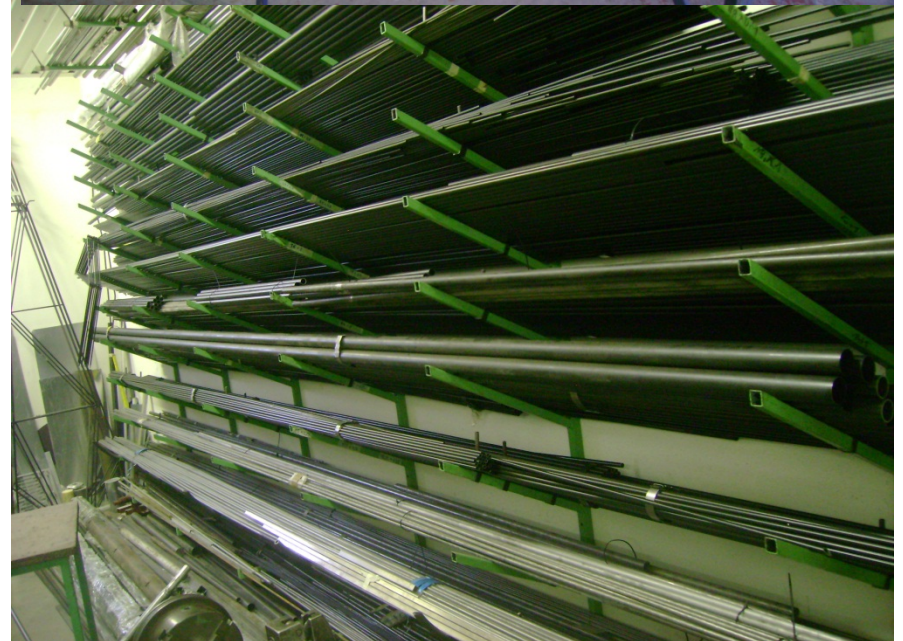
Číslo zmeny: 0  
Revision No:

Podpis:   
Signature:



Form 55A







# Aeropro Stock and Stores



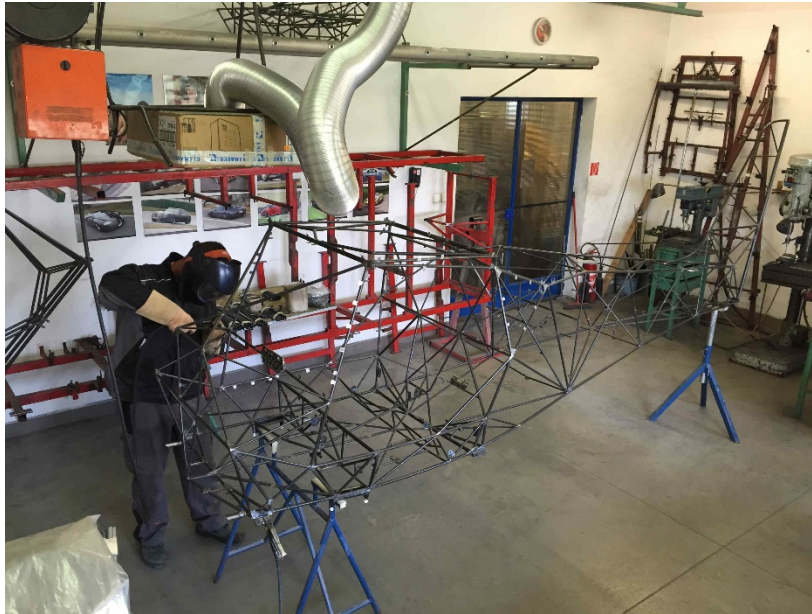


# Material stocks – always same supplier

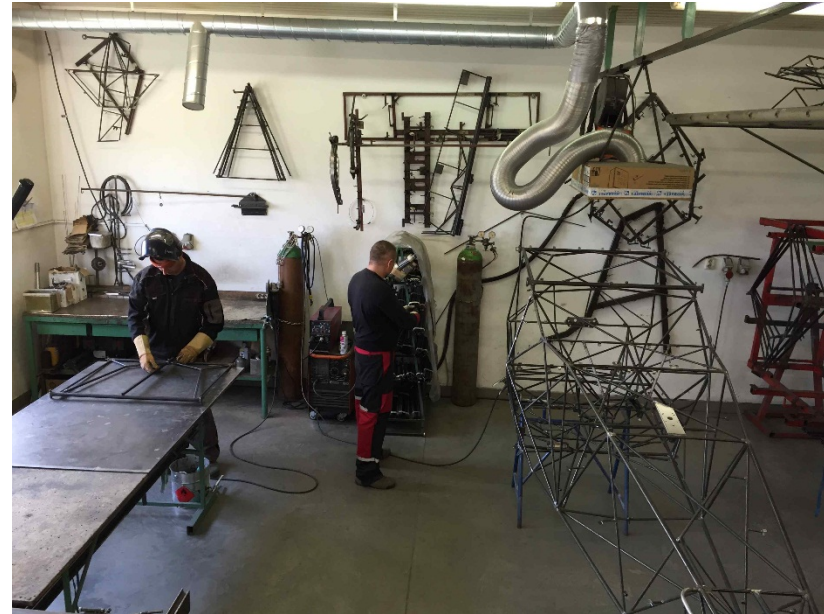


# Aeropro Welding shop

Fuselage welding – with full jig shown in red



Other jigs, Slovak CAA approved welders





# Aeropro Covering shop - Stitts polyfibre

Polybrushing a rudder



Initial assembly of various components to the fuselage





# Wing assembly and covering room



# Paint shop – temperature & humidity controlled





# Aeropro Main and final assembly shop

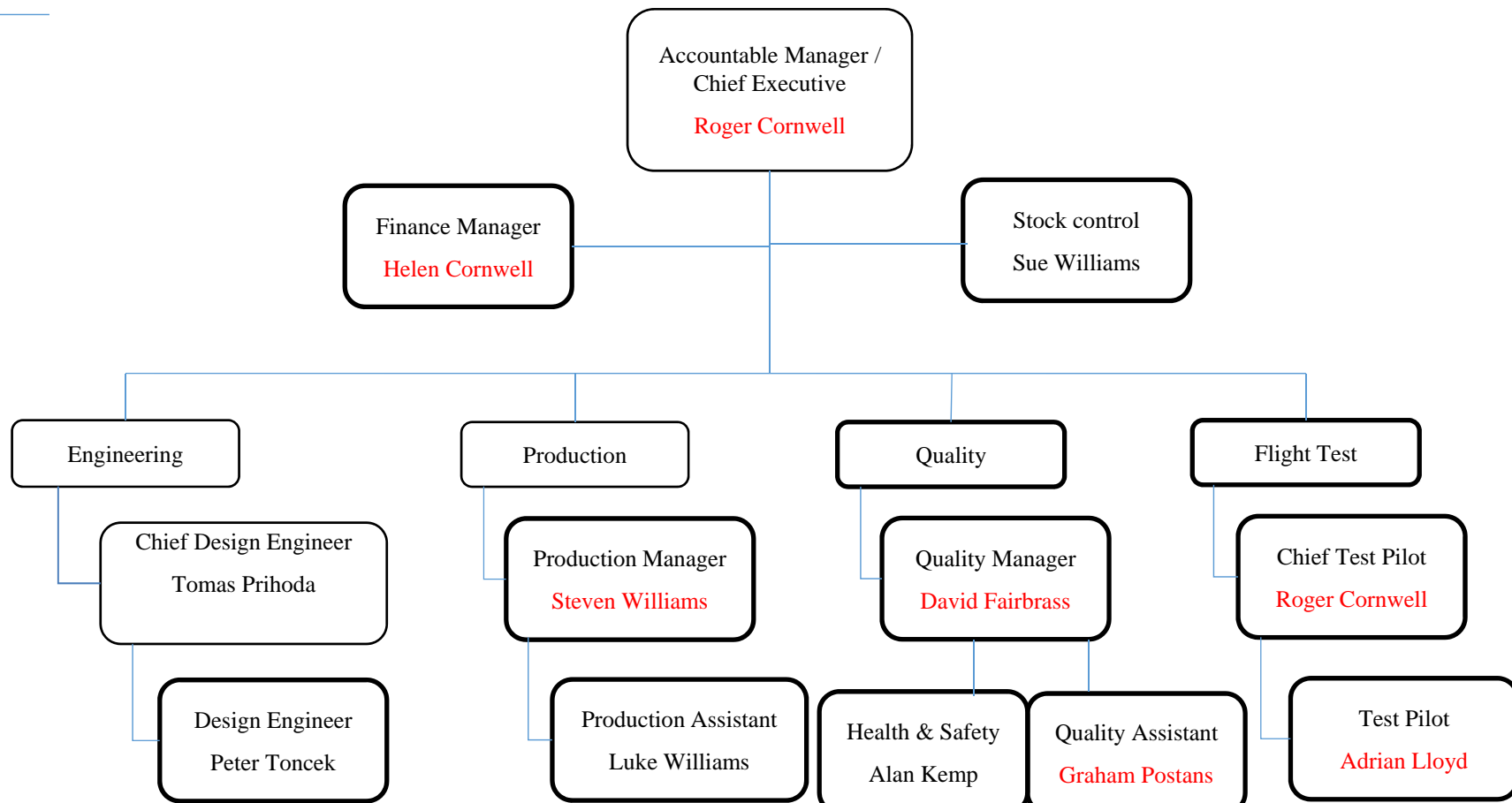




# EuroFOX History in UK

- In 2006 a UK agent was appointed
- This agent started but did not finish the UK approval (via BMAA kit built)
- 2010 the unapproved first UK aircraft G JONX, was sold as the agent folded
- Late 2010 EuroFOX Aviation (Roger C) was appointed agent for the EuroFOX
- 2011 BMAA, Paul W (acting on behalf of G JONX new owner) and Roger C, the EuroFOX was approved as a kit build in the UK at 450kg and 472kg
- 2011 EuroFOX also approved under LAA for 560 kg kit

# Organisation Chart



# EuroFOX Microlight variants

- Microlight nose wheel 912 UL or ULS
- Microlight tail wheel 912 UL or ULS
- All variants at 450kgs or 472 kgs MAUW under BMAA
- All variants kit or factory build



# MPD and SB's EuroFOX specific

Due to the longevity of the EuroFOX and the continuous improvements over 27 years, there is not a lot to affect the UK versions

- MPD's – None
- SB1 – undercarriage bolt – correct fitting
- SB2 – rudder centering spring – correct assembly
- Both SBs arose due to inadequate build descriptions in the original build manuals (written by us in the UK).
- Neither of these SB's apply to any EuroFOX outside the UK as they are all factory built by Aeropro, only the UK takes a kit.

# Inspection points – permit renewal EuroFOX specific over and above your normal inspection

The main points to look for on permit renewal are:

- Tangs on elevator trim cable tab – not too tight or any corrosion
- Elevator and rudder hinges have some play, check its not excessive – pins are softer
- Tailwheel – play on the assembly – check not excessive
- Rudder cables not polishing at fuse exit point – lube or grit may have been caused this
- Undercarriage clamp bolts
- Seats out – bell cranks nuts and bolts not turning (seizes and not acting as bearing). Same also for other castle nuts and bolts
- Full stick travel in roll – check the rod ends still have movement at extremes

# Inspection points – permit renewal EuroFOX specific over and above your normal inspection

The main points to look for on permit renewal are:

- Check all linkages have movement on rod ends when at full movement
- Teleflex cables – make sure these are glued into the housings at build, otherwise future rudder and steering movement could be restricted
- Rudder centring spring
- Leading edge bolt – needs to be removed and checked for corrosion and lubed (only on aircraft that don't use the wing fold)
- Main control stick column – check for excessive play on the nylon bushings, or too much friction causing pitch stiffness
- Sight gauge tubes for clarity and not too long and creased
- Wing strut rod ends need ACF 50, check for corrosion, applies to all hardware, especially for coastal aircraft
- Nose wheel Teleflex cables clevis pins – check for wire lock in addition to being clipped on (and at the other end by the feet).

# Inspection points – permit renewal EuroFOX specific over and above your normal inspection

The main points to look for on permit renewal are:

- Rear door catch bolt is seated properly and fully – no cable stiction or slack
- Gas struts installed correct way round (body uppermost)
- All Oetiker clamps correctly crimped
- Rudder pedal bushing bolts do not rotate



# Inspection points – initial build

For the initial kit build, all EuroFOX microlights have been inspected by EuroFOX specific inspectors (Adrian, Steve).

This is because we recommend to customers that they use our expertise for the build support package offered by EuroFOX throughout the build.

We have frequent visits and training at Aeropro and being full time EuroFOX people, we know the aircraft intimately.

Test flying is the same, carried out always by Adrian or Roger for consistency in initial set up.

In one LAA build, the customer didn't want any build assistance from us and used their own inspector. This aircraft recently came into Lukes field for inspection, and we found 20 faults and certain things that should never have been passed.

# How does performance compare

- Performance is similar to the Eurostar, in fact we can say it's a high wing Eurostar.
- Vne (CAS) is 143 mph (reduced to 125 for Microlight), genuine cruise at 4200 rpm on the 912 is 100 mph
- STOL –take off roll of less than 100 metres with ULS, Landing roll of 127 metres – much lower than the POH figures
- Endurance – 86 litres of fuel / 12 litres hr max (10 ltrs 912UL) – 6-7 hours
- Excellent visibility
- Robust undercarriage as its rated at 560kg
- Excellent side slipping, very responsive and coordinated
- Twin sticks, centre throttle

Any questions

Thank you for your attention

The End