



LAA TYPE ACCEPTANCE DATA SHEET
TADS 376
EUROFOX 912(S)

Issue 8	Addition of MOD-376-005 weld cluster inspection for '3K' variants in section 2.6 Additional special inspection points added.	Dated 11/11/21	JH
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This TADS is intended as a summary of available information about the type and should be used during the build, operation and permit revalidation phases to help owners and inspectors. Although it is hoped that this document is as complete as possible, other sources may contain more up to date information, e.g. the manufacturer's website.

Section 1 contains general information about the type.

Section 2 contains information about the type that is **MANDATORY** and must be complied with.

Section 3 contains advisory information that owners and inspectors should review to help them maintain the aircraft in an airworthy condition. If due consideration and circumstances suggest that compliance with the requirements in this section can safely be deferred, is not required or not applicable, then this is a permitted judgement call. This section also provides a useful repository for advisory information gathered through defect reports and experience.

Section 1 – Introduction

3.3 UK contact

Factory address: EuroFOX, The Hangar, Wanshurstgreen Farm, Battle Lane Marden, Kent, TN12 9DF.

Postal address: EuroFOX, The willows, Water Lane, Somerford Keynes, Cirencester, Gloucestershire, GL6 6DS.

Tel: 07923 441269 or 07787 847064

Email: eurofoxuk@btinternet.com

Website: www.eurofoxuk.co.uk

1.2 Description

The EuroFOX kit is manufactured by Aeropro s.r.o. in Slovakia. The EuroFOX is a conventional, two-seat, high-wing, tractor engined monoplane. The cockpit is enclosed with side-by-side seating. The fuselage structure is welded steel tube. The wing structure is tubular aluminium spars with sheet aluminium ribs. The wings are braced with external lift struts and jury struts and the wings are easily foldable by one person.

The aircraft is poly-fibre fabric covered and painted. An approved LAA build assist option is available to builders who select the advanced build option. Builders can visit the factory in Slovakia and cover their aircraft under supervision. After painting, the kit is then shipped to the UK for the builder to continue the build in his/her own workshop.

The undercarriage configuration is either conventional (tail-dragger, known as the '2K' variant) or tricycle with glass FRP main-wheel legs (known as the '3K' variant). The fuselage structure is configuration-dependent so the undercarriage configuration cannot be changed post-manufacture. The EuroFOX is also able to be used as a tug aircraft for gliders up to 750 kg MAUW.

Control is through rudder, elevator and manually operated flaperons. The full-span flaperons are of the external-aerofoil or Junkers type. The cockpit controls are



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conventional with dual control columns, dual rudder pedals and a manual elevator trimmer. Brakes are hydraulic disc type; doors are top hinged "gull wing" type.

Each of the 2 wing tanks is of 40 litres capacity and mounted in the wing root supported by the front and rear spars. The wing tanks feed into a 6-litre collector tank (5 litres useable) mounted behind the cockpit seat. A warning light illuminates when there is 4 litres (useable) remaining. The pitot head is mounted underneath the wing. The baggage bay max load capacity is 20kg.

With a maximum gross weight of 560 kg the EuroFOX is only eligible as an SEP Aeroplane under LAA administration. For most examples, any combination of fuel loading, baggage loading and occupant weight, up to the placard maximum, will never place the aircraft outside its C of G range.

The only engine models currently approved in the UK for use in the EuroFOX aircraft are the Rotax 912-UL, 912-ULS, 914-UL and 912-iS. The standard propeller used is a fixed pitch Woodcomp SR200 3-bladed propeller of 1680 mm diameter, a Woodcomp Propuls AE 174 of 1740 mm diameter or a Duc Swirl 3-bladed propeller of 1730 mm diameter. For glider towing, the standard propeller is a ground adjustable Duc 'Windspoon' 3-bladed propeller of 1727 mm diameter. Note that the only propeller(s) approved for an individual aircraft are those listed on the individual aircraft's Operating Limitations document or in the PTL/1 (Propeller Type List) for the type.

Section 2 – Mandatory information for owners, operators and inspectors

At all times, responsibility for the maintenance and airworthiness of an aircraft rests with the owner. Condition No 3 of a Permit to Fly requires that: *"the aircraft shall be maintained in an airworthy condition"*.

2.1 Fast Build Kit 51% Compliance

The technical leaflet TL1.11 will be updated to show the contents of the accepted fast build kit.

2.2 Build Manual

EuroFOX fast Build Manual – Edition V10 October 2014 (minor revisions may have been made since that date)

EuroFOX base kit build manual supplement – TBA.

EuroFOX build manual appendix for 912iS version 2 November 2014.

EuroFOX build manual appendix for 914-UL version 1 January 2015.

2.3 Build Inspections

Build inspection schedule 'Eurofox'.

Inspector approval codes A-A, A-M, K.

Inspector signing off final inspection also requires 'first flight' endorsement.



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2.4 Flight Manual

EuroFOX POH with flight supplement and maintenance manual, all supplied with the delivery of each kit.

2.5 Mandatory Permit Directives

None applicable specifically to this aircraft type.

Also check the LAA website for MPDs that are non-type specific ([TL 2.22](#)).

2.6 LAA Required Modifications (including LAA issued AILs, SBs, etc)

The modifications (to the standard aircraft as produced by Aeropro) required by the LAA for acceptance of the type in the UK are as follows:

- MOD-376-001 Tail fin increased in height by 120 mm to improve directional stability.
- MOD-376-002 [deleted]
- MOD-376-003 Addition of rudder centring spring.

For the Rotax 912-iS installation, the following modification is mandatory:

- MOD-376-004 Modified electrical wiring diagram issue 1 dated 19/5/14

For glider towing, the following modifications are mandatory:

- 1 Fuselage for Tow version with accessories (Tost Hook, fuselage mounted mirror, release handle and cable).
- 2 Extra fuselage strengthening plates for mounting the tow hook.
- 3 [deleted]
- 4 Electric FACET back up fuel pump (912-ULS installations only).
- 5 Duc 'Windspoon' 3-bladed 1727 mm diameter propeller.
- 6 Fireproof sleeving of firewall-forward fuel pipe.

The following in-service airworthiness requirements apply:

- [MOD-376-005](#) Fuselage Structure Under Seat Pan Weld Inspection (Tricycle gear '3K' variant only)

2.7 Additional engine operating limitations to be placarded or shown by instrument markings

Notes:

- Refer to the engine manufacturer's latest documentation for the definitive parameter values and recommended instruments.
- Where an instrument is not fitted, the limit need not be displayed.

Refer to the engine manufacturer's latest documentation for the definitive parameter values. The EuroFOX can be fitted with Rotax 912-UL (80 hp), 912-ULS (100 hp) or 912-iS (100 hp).



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With Rotax 912-UL engine:

Maximum CHT: 150°C
Max Coolant Temp: 120°C (with 50/50 Glycol/water coolant)
Max Coolant Temp: 150°C (with waterless coolant)
Oil Temp Limits: 50°C to 140°C (Normal 90-110°C)
Oil Pressure: 2-5 bar
Minimum Fuel Pressure: 0.15 bar

With Rotax 912-ULS engine:

Maximum CHT: 135°C
Max Coolant Temp: 120°C (with 50/50 Glycol/water coolant)
Max Coolant Temp: 135°C (with waterless coolant)
Oil Temp Limits: 50°C to 130°C (Normal 90-110°C)
Oil Pressure: 2-5 bar
Minimum Fuel Pressure: 0.15 bar

With Rotax 912-iS engine:

Max Coolant Temp: 120°C
Oil Temp Limits: 50°C to 130°C (Normal 90-110°C)
Oil Pressure: 2-5 bar
Fuel Pressure: 2.8-3.2 bar

2.8 Control surface deflections

Aileron	Up: 18° +/- 2° Down: 8.5° +/- 1°
Wing Flap	Down: 0° to 20° +/- 2°
Elevators	Up: 30° +/- 2° Down: 27° +/- 2°
Elevator trim tab	Up: 30° +/- 3° Down: 30° +/- 3°
Rudder	Left 27° +/- 2° Right 27° +/- 2°

2.9 Operating Limitations and Placards

(Note that the wording on an individual aircraft's Operating Limitations document takes precedence, if different.)

Maximum number of occupants authorised to be carried: Two
The aircraft must be operated in compliance with the following operating limitations, which shall be displayed in the cockpit by means of placards or instrument markings:

Aerobatic Limitations

Intentional spinning is prohibited.
Aerobatic manoeuvres are prohibited.

Loading limitations

Maximum Total Weight Authorised: 560 kg



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CG Range: 259mm to 442mm aft of datum.

Datum Point is: leading edge of the wing (inboard). Plus 50mm to cater for forward swept wings. POH describes with diagrams and moment arms.

Engine Limitations

Maximum Engine RPM: 5800

Maximum continuous engine RPM: 5500

Airspeed Limitations

Maximum Ind. Airspeed: 143 Mph

Maximum Ind. Airspeed flaps extended 93 Mph

Maximum Ind. Airspeed, manoeuvring (V_A): 110 Mph

Other Limitations

The aircraft shall be flown by day and under Visual Flight Rules only.

Smoking in the aircraft is prohibited.

Maximum baggage weight: 20 kg

Aircraft must be maintained in accordance with Aeropro Checklist B Service/Maintenance plan.

Applicable only to those individual aircraft fitted with a ballistic parachute installation, an additional operating limitation must be included stating that the installation must be maintained in accordance with the instructions in the Stratus Magnum 601 manual.

Towing of Gliders

This aircraft, when equipped with an approved glider tow hook installation, is approved for towing gliders, provided that:

- a) The aircraft is operated for private purposes only, not for aerial work
- b) The loaded weight of glider towed shall not exceed: 750 kg
- c) The number of gliders in tow shall not exceed one
- d) The maximum number of persons carried in the towing aircraft and glider in combination shall not exceed three
- e) A weak link must be fitted to the towing cable with a breaking load which shall not exceed 300 kg
- f) Airspeed while towing shall not exceed the maximum permitted towing airspeed for the glider under tow.
- g) A serviceable cylinder head temperature indicating system shall be installed and the cylinder head temperature shall not exceed 135°C. For Suffix -01 engines, a serviceable coolant temperature indicating system shall be installed in place of the CHT indicating system and the coolant temperature shall not exceed 120°C. These limitations shall be marked with a red radial line on the cylinder head or coolant temperature indicator.*
- h) DUC Windspoon propeller must be fitted for aerotowing operations.
- i) The glider towing hook, its attachments to the airframe, the release mechanism and mirror installation must be inspected for condition and checked for operation at each 50 hour check.

Additional Placard

"Occupant Warning - This Aircraft has not been Certificated to an International Requirement"

* For earlier aircraft with 912-ULS engines, the note regarding 'Suffix -01' engines does not appear on the Operating Limitations. Similarly, the Operating Limitations for earlier aircraft with 912-iS engines incorrectly show a requirement for a CHT gauge rather than a coolant temperature gauge. Should an aircraft with a 'Suffix -01' 912-ULS engine or 912-iS engine be retro-fitted with towing equipment, please contact LAA Engineering to arrange for the Operating Limitations to be changed.



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Fireproof identification plate must be fitted to fuselage, engraved or stamped with aircraft's registration letters.

2.10 Maximum permitted empty weight

<i>Model</i>	<i>Engine</i>	<i>Maximum empty weight</i>
EuroFOX (560 kg MTOW)	Rotax 914-UL – 115 hp	375 kg (Typical 310 kg)
EuroFOX (560 kg MTOW)	Rotax 912-ULS – 100 hp	375 kg (Typical 295 kg)
EuroFOX (560 kg MTOW)	Rotax 912-UL – 80 hp	378 kg (Typical 290 kg)
EuroFox (560 kg MTOW)	Rotax 912-iS – 100 hp	375 kg (Typical 310 kg)

Note. The above include glider tow hook and any combination of any options.

Section 3 – Advice to owners, operators and inspectors

3.1 Maintenance Manual

Maintenance Manual includes manufacturer's maintenance schedule for the airframe. For airframe rigging information consult build manual. For engine maintenance consult engine manufacturer's schedule.

3.2 Standard kit features and Options

The listing below shows the standard kit features and additional factory options that have been accepted by the LAA:

Aircraft standard features:

- Single-handed quick fold wings
- 86 litres fuel capacity in 2 wing tanks and a header tank behind cockpit seat.
- 5 point engine mount
- 3 blade Woodcomp propeller
- Wheel spats
- Steerable nose or tail wheel
- Composite flapperons
- Manually operated 2 stage flapperons
- Hydraulic disc brakes
- Poly-Fibre fabric covering
- Rotax 912 or 912S (with soft start)
- Panel mounted low fuel warning light
- Gas strut "gull wing" lockable doors – (can fly with doors open)
- Dual rudder pedals on P1 side
- Stainless steel firewall and stainless steel exhaust
- 2 panel mounted air vents
- Dual control sticks with dual PTT
- High power lightweight battery
- Acrylic screen, Lexan doors
- Tinted roof skylight
- Panel mounted hand operated "T" brake with parking lock
- 20kg large luggage bay
- Four point safety harness x 2



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- Manually operated elevator trimmer and flap levers
- Push-pull throttle (see note in section 3.5)
- Main undercarriage tyres SAVA 15x6.00/6prl
- Nose wheel tyre 12x4

Aircraft options:

1. Panel operated oil radiator covering flap (for rapid oil warming at start up)
2. Toe brakes P1 and P2
3. Floor mounted parking brake
4. Cabin heating
5. Carburettor hot air system
6. Dual landing lights
7. Wing tip strobes
8. Oil inspection hatch in top cowl
9. Rotax electric back up fuel pump
10. Extension seat cushions or thinner seat cushions
11. Nose wheel shimmy damper
12. Extra-large Tundra tyres for taildragger variants (800x6.00)
13. Angle of attack mast and pressure head (installed by factory during wing build)
14. Manifold pressure gauge
15. Washable air filter
16. Electrically operated Tost retract winch with guillotine system (see section 2.6 for mandatory modifications/equipment when towing)
17. Engine GRP cowling with separate air intake for fin cooling
18. Stratos Magnum 601 parachute system (contact LAA Engineering if this option is to be retrofitted)
19. Vernier throttle (see note in section 3.5)
20. Door vents
21. Engine mount for Rotax 912-iS installation
22. Extended noseleg for Rotax 912-iS installation
23. Alternative upper and lower engine cowlings with single radiators are standard for Rotax 912-iS/914-UL installations and optional for Rotax 912-UL/-ULS versions
24. EarthX ETX18B lithium iron phosphate battery in place of original battery (aircraft electrical system must conform to 'Eurofox Circuit Diagram LAA Lithium Battery modification Version 1 October 2015')

3.3 Manufacturer's Information (including Service Bulletins, Service Letters, etc)

In the absence of any over-riding LAA classification, inspections and modifications published by the manufacturer should be satisfied according to the recommendation of the manufacturer. It is the owner's responsibility to be aware of and supply such information to their Inspector.

<i>Ref</i>	<i>Date</i>	<i>Description</i>	<i>Applicability</i>
SB 01/2014	15/10/14	Rudder centring assembly	All variants
SB 02/2015	27/2/15	Inspection of undercarriage guide bracket bolt (see also LAA/AWA/15/03)	All variants
SB 03/2016 v2	1/11/16	Replacement of undercarriage guide bracket bolts (see also LAA/AWA/16/07)	Taildragger variants
SB 04/2016	24/11/16	Checking of elevator trim cable assembly (see also LAA/AWA/16/08)	All variants



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3.4 Special Inspection Points

- Wing lift strut to fuselage bolt to be replaced at 500 hours.
- The throttle spring on the carburettor must be adjusted so that the system does not have a strong tendency to spring to 'full throttle' when the throttle knob is released, or require a strong pull to keep it in the closed position.
- With Rotax engine fitted, Rotax 912 series installation checklist to be completed (apart from flight test section) as part of final inspections prior to applying for Permit to Fly.
- Where the tow winch is fitted, the retaining knots in the tow rope that attach to the weak-link bullet have been known to start pulling through. Where possible, use a double knot with a visible tail to help indicate the start of a knot failure.
- Port side trip tray (912-UL or 912-ULS installations) to have connecting pipe to take any drip tray fuel clear of the exhaust system.
- With the 914-UL installation, the manifold pressure gauge needs to measure absolute pressure rather than pressure relative to local atmosphere.
- On examples fitted with 912iS engines the exhaust brackets should be inspected regularly as they have a tendency to break.
- A weld cluster under the seat pan of the tricycle gear '3K' variant must be inspected at least every 100 flying hours. Discovery of a failed weld cluster underneath the seat pan of tri-gear glider tug prompted the release of this mandatory inspection requirement as detailed in [MOD-376-005](#)

EuroFOX Undercarriage

The LAA administered fleet includes a number of EuroFOX aircraft which are used by gliding clubs as tugs. These aircraft work hard and naturally accumulate far more flight cycles than their 'private use' siblings. There have been a few issues recently concerning the nose wheel undercarriage '3K' version of the EuroFOX:

1. Nose Undercarriage Shock Absorber Wear

One aircraft had the nose leg suspension unit fail, possibly due to a lack of lubrication of the shock absorber. Fortunately, the check cable worked as intended and prevented any further damage occurring.

The shock absorber unit comprises of a number of rubber discs mounted on a central tube which slides over another tube as the nose leg moves.

The wear occurs between the two tubes and although Aeropro have recommended lubricating the tubes, there is scant information in the maintenance manual regarding this.

Excessive greasing of the tubes may well exacerbate wear if the grease becomes contaminated with dirt, so some form of dry lubricant may be preferable. What is certain, is that the shock absorber should be disassembled regularly (based probably on flight cycles as well as hours or calendar time) and inspected for wear.

2. Nose Undercarriage Leg Collapse

A EuroFOX glider tug had the nose undercarriage leg fail just below where the shock absorber attachment leg is welded to the nose leg. This occurred whilst the aircraft was taxiing in after landing and resulted in a shockloaded engine and damage to the propeller and engine cowlings.

It is entirely possible that the nose undercarriage leg had been weakened over the years (it had accumulated around 7500 landings in seven years of operation) rather than that particular landing being harder than normal.

3. Nose Wheel Incorrectly Installed

The nose wheel tyre had been replaced prior to the incident flight. Unfortunately, on refitting the wheel assembly, it appears that the nose wheel axle missed the holes in the nose leg fork and the wheel was only held in place by the clamping pressure of the nose wheel axle bolt and nuts against the fork.

On landing, the nose wheel assembly including the nose wheel fairing appear to have been pushed up the leg until the nose leg fork contacted the ground, pitching the aircraft over onto its back.

The EuroFOX maintenance manual does not currently fully describe the installation of the nose wheel assembly. Normal maintenance practices apply and in circumstances such as this where visual access is restricted, it is imperative that the installation is carefully checked prior to releasing the aircraft to service.

3.5 Operational Issues

1. *Safety Spot* references

The following *Safety Spot* articles are relevant to EuroFOX aircraft:

Light Aviation [January 2014](#) *Glider release failure*

Glider tow release failure due to the cable outer was manufactured from incorrect material. One other aircraft found to have incorrect material outer.

Light Aviation [November 2014](#) *In flight rudder jam*

Nodule device that connects to spring tensioner on rudder centring mechanism rotated on thread and jammed between pedals. See [SB 01/2014](#).

Light Aviation [November 2016](#) *Undercarriage failure*

Heavily used glider tug Eurofox undercarriage failed from suspected fatigue failure of attachment bolt. [SB 03/2016 v2](#) issued detailing replacement and slight redesign of undercarriage attachment.

Light Aviation [December 2016](#) *Elevator trim cable failure*

Heavily used glider tug Eurofox elevator trim cable failed due to severe angle cable made to go through and seized U-clamps. [SB 04/2016](#) issued to inspect and lubricate assembly.

Light Aviation [September 2018](#) *Rudder pedal failure*

Rudder pedal failure on taxi likely caused by overstress incident from a challenging aerotow a few days earlier. Pilot possibly braced against the pedals when fearing a collision.

2. The standard throttle control is a simple push-pull device. A Vernier throttle control may be fitted, but testing has found that although fine control of the throttle setting is accurate when the control is twisted, setting an accurate engine speed by means of the coarse push-pull mechanism on this type of throttle can be difficult.
3. When pilots are used to types with 'heavier' controls, care should be taken to avoid 'riding' the brakes and putting unnecessary loads on the rudder pedals. Riding the brakes will increase take-off distances and increase fuselage loads on landing.



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4. The guillotine on the Tost towing system is very effective and can release a towed aircraft easily even when there is tension in the rope. Approximately 3m of rope is lost when chopped. Do not hesitate to guillotine if the tow becomes dangerous.
5. If the tow rope fails to retract fully, land the aircraft as if the rope is fully deployed.
6. Optimum tow rope retract speed is approximately 70 knots for clean retraction. At speeds less than 60 knots the rope can hit the tail wheel assembly. Maximum retract speed is 75 knots.

3.6 Standard Modifications

No Standard Modifications are currently issued for this type.

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Please report any errors or omissions to LAA Engineering: engineering@laa.uk.com