



LAA TYPE ACCEPTANCE DATA SHEET
TADS 386
TL-3000 SIRIUS

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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

1.1 UK contact

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1.2 Description

The TL-3000 Sirius is a single-engined two-seat high wing monoplane design of mainly carbon composite construction. Each strut-braced wing panel is fitted with an integral fuel tank in the root area. The cockpit is equipped with conventional side doors, hinged at the top, allowing straightforward access to the side-by-side seating arrangement. The horizontal tail is a conventional one-piece tailplane/elevator fitted with a cable-operated trailing edge trim tab. The wing is of conventional design. The wing panels are bolted to the fuselage centre-section carry-through structure at the fuselage side. Drag and torsion loads are fed from wing to fuselage via the trailing edge root-fitting. The wing panels are fitted with conventional ailerons and slotted flaps. The aircraft has a fixed tricycle undercarriage with steerable nosewheel.

The aircraft is manufactured from carbon sandwich for all structural components, with aluminium and steel fittings where appropriate, using the same construction techniques as already used by TL for the low-wing Sting aircraft. The cowlings and other fairings and the main landing gear legs are formed from composite materials.

The Rotax 912-ULS engine is fitted to this aircraft using the standard installation detailed in the construction manual. Powermax 3-bladed 1748mm diameter constant speed propellers and Kiev 273/1700 ground adjustable propellers have been approved on this engine.



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The Rotax 912iS engine is also fitted to the type. A composite Powermax 3-bladed propeller of 1748 mm diameter has been approved on this engine. To facilitate fuel management, the fuel system includes a small header tank on the aft side of the firewall and port and starboard feeder fuel pumps to move fuel from the wing tanks to the header tank. The electrical system is also changed compared with the 912-ULS installation to accommodate the electrical requirements of the injected 912iS engine and its associated fuel and management systems.

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

2.1 Fast Build Kit 51% Compliance

The following items must be carried out by the builder to satisfy the 51% rule:

Preparatory work	Inspect incoming fuselage kit Inspect flying control components Inspect tail kit components Inspect wing kit components Inspect undercarriage components Inspect engine installation components
Fuselage	Install brackets and fittings Fabricate cables, wires and lines Install cables, wires and lines Install windows, doorframe and fittings Fabricate and install engine mounting attachment reinforcement
Wings	Install cables, wires and lines Install and rig wings and lift struts to fuselage Install aileron trim tab Install and rig aileron Install and rig flap
Tail	Install and rig elevator trim tab Install and rig elevator Install rudder brackets and fittings Inspect and install empennage
Undercarriage	Fabricate cables, wires and lines Assemble wheels, brakes, tyres, landing gear Fabricate fairings Install landing gear components
Powerplant	Install engine Install cowlings Install propeller Install fuel system components Install firewall



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Cockpit	Install instrument panel Fabricate seats Install seats Fabricate electrical loom Install electrical systems Install avionics Install aerials Install lights Adjust rudder pedal assembly
Final assembly	Install yoke, aileron, rudder and flap pushrods Apply external markings Install placards and registration marks Ground tests

2.2 Build Manual

TL-3000 Sirius Build Manual (UK) v2.31 (Jan 2019) and TL-3000 Sirius Build Manual (UK) Part 2 v2.31 (Jan 2019), or later, have been accepted by LAA.

These are available from TL Sting UK Ltd.

2.3 Build Inspections

Build inspection schedule 88 (TL3000 Sirius).
Inspector approval codes AC-1 or A-A or K. Inspector signing off final inspection also requires 'first flight' endorsement.

2.4 Flight Manual

Pilot's Operating Handbook TL-3000 Sirius has been accepted by the LAA. This is available from TL Sting UK Ltd.

A supplement is required for operation with the Rotax 912iS engine, V1.3 dated 29/8/18 or later.

2.5 Mandatory Permit Directives

None applicable specifically to this aircraft type.

Also check the LAA website for MPDs that are non-type specific ([TL2.22](#)).

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

None.



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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.

With Rotax 912-ULS engine:

Maximum CHT: 135°C
Max Coolant Temp: 120°C (with 50/50 Glycol/water coolant)
Oil Temp Limits: 50°C to 130°C (Normal 90-110°C)
Oil Pressure: 2-5 Bar
Max EGT: 880°C
Minimum Fuel Pressure: 0.15 bar

With Rotax 912iS engine:

Max Coolant Temp: 120°C
Oil Temp Limits: 50°C to 130°C (Normal 90-110°C)
Oil Pressure: 2-5 Bar
Max EGT: 950°C
Minimum Fuel Pressure: 2.8 bar

2.8 Control surface deflections

Ailerons (wing trailing edge to aileron trailing edge)	Up: 15° ±2° Down: 9° ±2°
Elevators (elevator trailing edge to top tip of rudder)	Up: 19.5° ±2° Down: 11° ±2°
Elevator tab	Up: 23° ±2° Down: 35° ±2°
Rudder (centre of fuselage to rudder bottom tip)	120 mm ± 20 mm
Flap (wing trailing edge to flap trailing edge)	0° ±2° 15° ±2° 24° ±2°

2.9 Operating Limitations and Placards

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

1. Maximum number of occupants authorised to be carried: Two
2. 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:

- 2.1 Aerobatic Limitations
Aerobatic manoeuvres are prohibited.



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Intentional spinning is prohibited.

- 2.2 Loading Limitations
 - Maximum Total Weight Authorised: 600 kg
 - CG Range: Limits 305 mm to 435 mm aft of the datum point
 - Datum point is: the wing leading edge at the root
 - Maximum baggage weight: 20 kg (well distributed)

- 2.3 Engine Limitations
 - Maximum Engine RPM: 5800
 - Maximum continuous engine RPM: 5500
 - Maximum CHT: 135°C
 - Max Coolant Temp: 120°C (with 50/50 Glycol/water coolant)
 - Oil Temp Limits: 50°C to 130°C (Normal 90-110°C)
 - Oil Pressure Limits 2 to 5 Bar
 - Fuel Pressure Limits: Rotax 912-ULS: 0.15 to 0.5 Bar
Rotax 912iS: 2.8 to 3.2 Bar

- 2.4 Airspeed Limitations
 - Maximum Indicated Airspeed: 138 kts
 - Max Indicated Airspeed, Flaps Extended: 75 kts
 - Manoeuvring Speed, Va: 108 kts
 - Normal Operating Limit Vno: 115 kts

- 2.5 Other Limitations
 - The aircraft shall be flown by day and under Visual Flight Rules only.
 - Smoking in the aircraft is prohibited.

Additional Placards:

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

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

2.10 Maximum permitted empty weight

Not applicable.

Section 3 – Advice to owners, operators and inspectors

3.1 Maintenance Manual

Maintenance Manual TL-3000 Sirius has been accepted by the LAA. This is available from TL Sting UK Ltd.

3.2 Standard Options

- 1. Garmin G3X Touch EFIS
- 2. Garmin G3X autopilot*
- 3. TL Ultralight strobes, navigation and landing lights



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4. TL Ultralight parking brake
5. Galaxy 6/600 SD S-LSA recovery parachute system (contact LAA Engineering prior to retrofitting)
6. Heated seats
7. Floscan 201 fuel flow sensor for use with EFIS units
8. Skydrive coolant-type carb heater
9. Andair duplex fuel tank selector valve for 912-ULS installation (standard UK supply from 2019)

* Note that autopilot installations need to be individually approved by LAA Engineering due to the testing required. If fitting retrospectively, please contact LAA Engineering. If fitting as part of initial build, please include completed forms [LAA/IC-APR](#) and [LAA/IC-APP](#) with your build paperwork.

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.

None known.

3.4 Special Inspection Points

Nil.

3.5 Special Test Flying Issues

Nil.

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