



**LAA TYPE ACCEPTANCE DATA SHEET**  
**TADS 400A**  
**SLING 4 TSi**

Issue 1	Initial Issue	Dated 19/05/22	JV
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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 Sling 4 TSi is a Single Engine Piston, four-seat, low-wing aeroplane of conventional layout and riveted aluminium construction powered by a Rotax 915iS engine. It is produced in South Africa, as a kit complying with the 51% rule. The aircraft has integral fuel tanks occupying the wing leading edge sections forward of the main spar. The crew are seated within an enclosed cockpit featuring twin gull wing doors. The undercarriage is of fixed tricycle type, with a steerable nosewheel, the main gear being of aluminium spring leaf type while the nosegear is of telescopic type.

The only engine model currently approved in the UK for use in the Sling 4 TSi is the Rotax 915iS. This is fitted in conjunction with an Airmaster AP430CTF-WWR72B three bladed constant speed propeller.

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.

The fuel tank capacity comprises two tanks of 99 litres either side with a useable capacity of 97 litres (earlier models had two tanks of 88 litres/86 litres useable). If auxiliary extended range tanks are fitted as an option then the fuel capacity each side increase by 26 litres/25 litres useable, making a total useable fuel capacity of 244 litres.



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**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 Kit 51% Rule Compliance**

On the basis of an informal comparison with other kits that have already been accepted by the LAA as 51% compliant, the standard kit is considered to meet the intent of the 51% rule without further proof being needed. Refer to section 3.2 for accepted quick-build options.

**2.2 Build Manual**

"Sling 4 TSI KAI" (Kit Assembly Instruction) supplied with kit.

**2.3 Build Inspections**

Build inspection schedule 92 (Sling 2, 4 and 4TSI).  
Inspector approval codes A-A, A-M, K. Inspectors must also have a '4SA' approval for approving build stage inspections. Inspector signing off final inspection also requires 'first flight' endorsement.

**2.4 Flight Manual**

Sling 4 TSi Pilot's Operating Handbook "DC-POH-001-X-F-3.1 – Revision 3.1"– Supplied with kit. Always check company [website](#) for further revisions.

**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)**

The following modifications are required by LAA:

Removal of central elevator mass balance weight and corresponding adjustment of elevator trim tab range, in accordance with Sling Notification 0009 dated 9/12/21.



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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 915iS engine:

Maximum Manifold Pressure: 1730 hPa  
Maximum EGT: 950°C  
Max Coolant Temp: 120°C  
Oil Temp Limits: 50°C to 130°C  
Oil Pressure 0.8-7 Bar (2-5 bar normal)  
Fuel Pressure 2.9-3.1 Bar

2.8 Control surface deflections

Ailerons	Up: 24 ±2° Down: 24 ±2°
Elevator	Up: 32 ±2° Down: 22 ±2°
Elevator tab	Up: 5 ±5° Down: 25 ±5°
Rudder	Left: minimum 23 ±2° Right: minimum 23 ±2°
Flap	Up: 0° Down: 34 ±3°

2.9 Operating Limitations and Placards

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

1. Occupants  
Maximum number of occupants authorised to be carried: Four  
Minimum number of occupants authorised to be carried: One pilot.  
No-one shall be carried except minimum crew during flights for the purpose of public exhibition and demonstration flying.
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.  
Intentional spinning is prohibited.
  - 2.2 Loading Limitations  
Maximum Total Weight Authorised: 950 kg  
CG Range: 1847 mm to 2043 mm aft of datum  
Datum Point is: 52 mm aft of the front propeller flange  
Maximum baggage weight: 35 kg



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- 2.3 Engine Limitations  
Maximum Engine RPM: 5800  
Maximum Continuous Engine RPM: 5500
- 2.4 Airspeed Limitations  
Maximum Indicated Airspeed ( $V_{NE}$ ): 155 kts  
Max Indicated Airspeed Flaps Extended: 85 kts  
Maximum structural speed,  $V_{no}$ , and Maximum Manoeuvring Speed,  $V_a$ :  
135 kts
- 2.5 Other Limitations  
The aircraft shall be flown by day and under Visual Flight Rules only.  
To avoid possible fuel starvation, other than as required for crosswind landings, side slipping is prohibited.  
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

2.11 Airframe safe life

Maximum airframe safe live is 1600 flying hours, beyond which the aircraft may not be flown.

**Section 3 – Advice to owners, operators and inspectors**

3.1 Maintenance Manual

Aircraft are to be maintained in accordance with the Sling 4 TSi Maintenance Manual "DC-MAM-001-X-F-1.1" or later revision.

3.2 Manufacturer's/Standard Options

The listing below shows the factory options that have been accepted by the LAA:

1. Auxiliary Fuel Tanks
2. Quick Build Fuel Tanks, Fuselage, Canopy and Wing
3. Toe Brakes
4. Tosten CS-8 Stick Grips (note that stick buttons must comply with the policy set out in [TL 3.21](#) unless otherwise agreed with LAA Engineering)



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5. Garmin G3X 2-axis autopilot with GMC 507 controller\*
6. Magnum 901 airframe parachute system

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.

All Manufacturer's information including Operating and Maintenance Manuals, Information Letters, Notifications, Safety Alerts and Service Bulletins are available on the company website <https://slingaircraft.com/owner-support/sling-tsi/>

Safety alerts:

<i>Reference ID</i>	<i>Description</i>
<a href="#">0011-1410219</a>	Replacement of fuel pump assembly for aircraft fitted with 915iS and 912iS engines

Service bulletins:

<i>Reference ID</i>	<i>Description</i>
<a href="#">0002-11022021</a>	Reinforcement of Upper Fuselage Join – Rev 2
<a href="#">0014-04092019</a>	Rivet replacement on centre and wing spars - Rev 1
<a href="#">0015-26032019</a>	Modifications to main axle mounts
<a href="#">0016-26032020</a>	Modification of ECU standoffs
<a href="#">0017-01072020</a>	Potential risk of shearing of control stop plate rivets
<a href="#">0018-28072020</a>	Inspection of rudder cable oval sleeves
<a href="#">0019-01102021</a>	Throttle cable replacement in 912 iS and 915 iS fitted aircraft

Information letters:

<i>Reference ID</i>	<i>Description</i>
<a href="#">005-21042017</a>	GPS Signal being lost
<a href="#">009-20052019</a>	Increase VNE from 145 KIAS to 155 KIAS
<a href="#">011-11122019</a>	Control stick grip inspection

Notifications:

<i>Reference ID</i>	<i>Description</i>
<a href="#">0005-20112017</a>	Loss of Mode C on the transponder of the Garmin G3X
<a href="#">0008-04062021</a>	Potential risk of trim tab disconnecting from elevator
<a href="#">0009-10122021</a>	Removal of elevator centre balance weights

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\* If installing as part of initial build, please submit forms [LAA/IC-APP](#) and [LAA/IC-APR](#) with build completion paperwork; if installing retrospectively, please contact LAA Engineering prior to fitting.



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3.4 Special Inspection Points

None known

3.5 Operational issues

None known

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Please report any errors or omissions to LAA Engineering: [engineering@laa.uk.com](mailto:engineering@laa.uk.com)