



**LAA TYPE ACCEPTANCE DATA SHEET
TADS 072A
ACROSPORT II**

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| Issue 2 | Note added to section 3.4 on fuselage corrosion. Formatting/editorial changes. | Dated 20/06/13 | JV |
| Revision A | Minor wording change in section 2.7. Control deflections added to section 2.8 Addition of Standard Modifications at section 3.6 Minor editorial changes. | Dated 01/03/19 | JV |

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

No UK contact.

Plans available from Acrosport Inc, PO Box 462, Hales Corner, Wisconsin, WI 53130, USA.

Tel: 001 414 529 2609

1.2 Description

The Acrosport 2 is a wire braced, two-seat, open-cockpit biplane of classic appearance. It has a welded steel tube fuselage and tail surfaces, and wooden wings; the whole being fabric covered. The Acrosport 2 is built from a set of drawings available from Acrosport Inc. Materials kits are available from [Aircraft Spruce and Specialty](#). Pre-welded fuselages were formerly available from Wag-Aero Inc. Although not competitive with the similar-looking Pitts Special aircraft, the easier to fly Acrosport 2 is cleared for aerobatics by the LAA. The Acrosport 2 is cleared by the LAA with Lycoming O-320, O-360 and IO-346 engines.

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"*.



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2.1 Fast Build Kit 51% Compliance

Not applicable – the AcroSport 2 is a plans-built aircraft.

2.2 Build Manual

'How to build the Acro Sport'. All other essential information provided on the drawings.

2.3 Build Inspections

Build inspection schedule 1D (wood/metal biplane).
Inspector approval codes A-A or A-W. Inspector signing off final inspection also requires 'first flight' endorsement.

2.4 Flight Manual

Nil known.

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)

Nil.

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.

2.8 Control surface deflections

| | |
|-----------|-------------------------|
| Ailerons | Up: 25° Down: 25° |
| Elevators | Up: 30° Down: 30° |
| Rudder | Left: 32° Right: 32° |



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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 permitted as follows, not exceeding +4g or -2g: inside loops, rolls, stall turns, half loop and roll out, half roll and dive out.
Intentional spinning is permitted.
 - 2.2 **Loading Limitations**
Maximum Total Weight Authorised: 691 kg (1520 lbs)
CG Range: 0.75" forward of datum to 5.0" aft of datum.
Datum Point is: leading edge of lower wing with top longeron horizontal.
 - 2.3 **Engine Limitations**
Maximum Engine RPM: 2700
 - 2.4 **Airspeed Limitations**
Maximum Indicated Airspeed: 180 mph
 - 2.5 **Other Limitations**
The aircraft shall be flown by day and under Visual Flight Rules only.
Smoking in the aircraft is prohibited.
Solo flight from rear seat only.

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.

In addition, when certain types of metal propeller are fitted, RPM avoid bands need to be specified in accordance with the propeller TCDS requirements regarding 'vibrationwise approval'.

2.10 Maximum permitted empty weight

Not applicable.



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Section 3 – Advice to owners, operators and inspectors

3.1 Maintenance Manual

LAA is not aware of any particular maintenance schedule made available by Acrosport Inc, and owners and inspectors should maintain these aircraft using the CAA LAMS schedule as a guide.

3.2 Standard Options

Nil.

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.

Nil known for this type: Acrosport Inc newsletter provided advice on building and operating Acrosport II aircraft, but Acrosport have not promulgated service bulletins as such.

For early plans sets pre 1984, refer Acrosport newsletters dated September 1982 and May 1984 which contain useful information on early drawing updates.

3.4 Special Inspection Points

- Builder interpretation of areas which are sparsely detailed on the drawings, such as fuel tank, engine controls, exhaust system, cowlings, wheel brakes, cockpit harness etc.
- One aspect that demands particular attention from an inspection point of view is that these aircraft are aerobatic, and are normally used as such. They are regularly subjected to greater loads and stresses than non-aerobatic types. Deferred defects, which may be perfectly safe on a docile type, may have catastrophic implications on an aircraft capable of violently manoeuvring. A particularly high standard of vigilance should be exercised when inspecting aerobatic types especially on the integrity of the structural components and flying control systems. By way of example, a few years ago a Starduster Too aircraft (non-LAA) crashed fatally when flying wires became detached from the wing due to the loss of the retaining bolt. It had been recently imported from the USA and the nut that should have retained the bolt was thought to have been missing for some time. It is therefore essential that access holes be provided in the wings and other areas in order to permit adequate inspection of critical structural assemblies, such as flying wire and strut attachments.
- Inspectors should also consider the general implications of cockpit safety applicable to an aerobatic aeroplane. A few years ago in the UK a Skybolt aircraft (non-LAA) crashed fatally when, it's thought, the fire extinguisher came loose in the cockpit during aerobatics and knocked out the pilot.
- While its wider undercarriage makes it more benign on the ground than the similar Pitts biplanes, like most biplanes the Acrosport 2 may be easily groundlooped in inexperienced hands, particularly on tarmac. Therefore special attention should be



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paid to the lower wing integrity, with wrinkles in the fabric and bruised wingtips being investigated fully. Such incidents could cause damage to the wing spars and these should be carefully checked for cracks and other problems.

- Fuselage Cracking: cracking has been found in the tubular structure in the area of the main undercarriage connection to the fuselage during a re-fabric. This area is very difficult to inspect as it is under the seat when the aircraft is fully rigged.

3.5 Special Test Flying Issues

Aerobatics and spinning schedule to be completed in addition to standard schedule at initial flight testing if aerobatics and spinning to be cleared.

Acrosport suggest the following indicated speeds:

Normal climb and approach: 80 mph

Cruise: 120 mph

Loops, stall turn, cuban eight, roll off the top: 140 mph

Rolls: 120 mph

Flick rolls: 90 mph

Max airspeed for full control deflection: 130 mph

3.6 Standard Modifications

The following Standard Modifications have been approved on the type. The Standard Modification leaflet associated with each modification (published on the website) must be followed and an [LAA/MOD1](#) form completed and return to LAA Engineering in each case (see also [TL 3.06](#)).

| <i>Standard Mod no.</i> | <i>Issue</i> | <i>Description</i> |
|-------------------------|--------------|----------------------------------|
| 10300 | 1 | Dent resistant GRP leading edges |

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