

ACROSPORT II

Issue 1 Initial Issue

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1. USA contact

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2. Description

The Acroport 2 is a wire braced two seat open cockpit biplane of classic appearance, with a welded steel tube fuselage and tail surfaces, and wooden wings, the whole being fabric covered. The Acroport 2 is built from a set of drawings available from Acroport 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 Acroport 2 is cleared for aerobatics by the LAA. The Acroport 2 is cleared by the LAA with Lycoming O-320, Lycoming O-360 and IO-346 engines.

3. Fast Build Kit 51% Compliance

Not applicable – the Acroport 2 is a plans built aircraft.

4. Build Manual

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

5. 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.

6. Maintenance Manual

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

7. Flight Manual

Nil known.

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None applicable specifically to this aircraft type, but note

MPD: 1998-019-R1 Flexible Fuel Tubing Applies to all permit aircraft

9. LAA Mandatory Modifications

Nil

10. Service Bulletins

Nil known

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.

11. Standard Options

An enclosed cockpit modification has been cleared by the LAA (G-OJDA)
Moulded fibreglass wing leading edge skins have been accepted by the LAA (G-OJDA)

12. 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 sometime. 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.

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- 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 in-experienced hands, particularly on tarmac. Therefore special attention should be 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.

13. Operating Limitations and Placards

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 permitted.

Aerobatic manoeuvres permitted as follows, not exceeding +4g or -2g:
inside loops, rolls, stall turns, half loop and roll out, half roll and dive out.

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.

Engine Limitations

Maximum Engine RPM: 2700

Airspeed Limitations

Maximum Indicated Airspeed: 180 mph

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 Placard

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

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'.

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

14. 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

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Flick rolls: 90 mph

Max airspeed for full control deflection: 130 mph

15. Control surface deflections

Ailerons	Up:	TBD	(lower wing)
	Down:	TBD	(lower wing)
Elevators	Up:	TBD	
	Down:	TBD	
Rudder	Left	TBD	
	Right	TBD	
Elevator tab	Up and down	TBD	

Approved:



F.R. Donaldson
Chief Engineer

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