



LAA TYPE ACCEPTANCE DATA SHEET
TADS 345
SHERWOOD SCOUT

| | | | |
|---------|-----------------------------|----------------|----|
| Issue 6 | Added seat locking MPD & SB | Dated 07/03/22 | JP |
|---------|-----------------------------|----------------|----|

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

TLAC, Little Snoring Airfield, Little Snoring, Fakenham, Norfolk, NR21 0JL.

Tel: 01328 878809
Email: sales@g-tlac.com
Website: www.g-tlac.com

Note that earlier kits were supplied by Reality Aircraft of Salisbury.

1.2 Description

The Sherwood Scout (formerly known as the Escapade) is a two-seat, high-wing monoplane seating two side-by-side available in kit form for amateur construction, originally from Reality Aircraft but latterly from TLAC. It shares the same basic format and much of the detail design of the long-established Avid Flyer and Kitfox type aircraft.

Construction is based around a fabric-covered, chrome-molybdenum steel tubular framework. Controls are conventional 3-axis, with 3-stage flaps. Although the type has been designed to be convertible between tricycle and taildragger configurations, only the taildragger configuration has been approved by the LAA. The larger 'tundra' tyres must also be fitted.

The type is normally fitted with a geared Rotax 912-UL or 912-ULS engine. Installations of UL Power 260i and Jabiru 2200A engines have also been approved. The aircraft was originally developed as a microlight with a max gross weight of 450 kg, under the auspices of the BMAA. The design has been evaluated by the LAA as an aeroplane with a maximum gross weight of 499 kg.

It is possible to transfer a BMAA microlight version to an LAA 'group A' version provided the LAA mandatory modifications listed in section 2.6 have been embodied. Contact LAA Engineering if you intend to do this.



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The Scout variant incorporates some changes from the earlier Escapade variant: a larger empennage (longer spar rudder and elevators, including aerodynamic balances at the tips, squared off fin and tailplane tips, additional control surface hinges, additional fuselage bracing), rudder centring system, flap gap seals and additional door latches.

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 kit has been checked to comply with the 51% amateur build criteria. Appendix 1 shows the breakdown of the minimum number of tasks that the amateur builder must complete.

A 'build assist' programme is available from the factory, which provides builders with guidance and assistance during the early stages of construction. The basic breakdown of tasks required to be completed by the builder remains the same as Appendix 1, but there is scope for the builder assisting in some tasks that the factory normally completes and for the factory to provide extra pairs of hands to help the builder manoeuvre large assemblies.

2.2 Build Manual

Escapade Builders Instruction Manual revision 4.

2.3 Build Inspections

Build inspection schedule 9 (tubular aircraft). Inspector approval codes A-A or A-M or K. Inspector signing off final inspection also requires 'first flight' endorsement.

2.4 Flight Manual

Escapade Operator's Manual, issue 1 AL3. Note that this refers to the microlight version and the parameters on an aircraft's LAA Operating Limitations document take precedence; however, manual gives good general advice relating to the type.

2.5 Mandatory Permit Directives

Table with 4 columns: CAA MPD, Associated Docs, Subject, Applicability. Row 1: MPD 2007-009, n/a, Pitch trim tab, Escapade microlights^1

^1 Note that MPD 2007-009 only applies to the microlight version. The range of trim tab movements noted in that MPD are, in any case, as specified in section 2.8 below.



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[MPD 2022-004-E](#) [TLAC SB 2021-001](#) Seat locking Escapade and Sherwood Scout, all s/n²

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)

- MOD/345/001 Increase tail bracing wires from 3/32" to 1/8" to comply with factored cable load requirements.
- MOD/345/002 Add spacers at the joint between the elevator pushrod and the torque tube lever in the cockpit, to allow the attach bolt to be pinched up tight to prevent the rod-end rotating about the bolt with movements of the elevator.
- MOD/345/003 Restriction to tailwheel configuration only. Balloon-type mainwheel tyres must be fitted.
- MOD/345/004 Fitment of upgraded, strengthened main undercarriage legs, main undercarriage 'vee' and undercarriage attachment bolts.

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-UL engine:

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

2.8 Control surface deflections

| | |
|----------------------|-------------------------------|
| Ailerons | Up: 30° ±5° Down: 30° ±5° |
| Elevators (Scout) | Up: 28° ±2° Down: 28° ±2° |
| Elevators (Escapade) | Up: 28° ±2° Down: 16° ±2° |
| Elevator tab | Up: 20° ±5° Down: 40° ±5° |
| Rudder | Left 28° ±2° Right 28° ±2° |

² Note that compliance with the pre-flight inspection part of MPD 2022-004-E does not need to be recorded prior to flight.



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|------|---------------------------------------|
| Flap | Down 0° - 15° ±2° - 28° ±2° - 40° ±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.
Intentional spinning is prohibited.
 - 2.2 Loading Limitations
Maximum Total Weight Authorised: 499 kg
CG Range: 9.0" to 15.5" aft of datum
Datum Point is: a point 1.25" aft of the wing leading edge
 - 2.3 Engine Limitations
Rotax 912-UL and 912-ULS:
Maximum Engine RPM: 5800
Maximum continuous engine RPM: 5500

Jabiru 220A:
Maximum Engine RPM: 3300
 - 2.4 Airspeed Limitations
Maximum Indicated Airspeed (V_{NE}): 120 kts IAS
Max Indicated Airspeed Flaps Extended: 67 kts IAS
 - 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

Maximum permitted empty weight
912-UL engine: 317 kg
912-ULS engine: 314 kg



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Section 3 – Advice to owners, operators and inspectors

3.1 Maintenance Manual

The operator’s manual contains some type-specific maintenance requirements, otherwise refer to TL2.19.

3.2 Standard Options

1. Electric pitch trim system with LED-type position indicator.
2. Skyflash wingtip strobes.
3. Flap gap seals (TLAC drawing WGA14308)
4. Flap infill panels (TLAC drawing W470SA)

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.

| Associated Docs | Subject | Applicability |
|----------------------------------|--------------|--------------------------------------|
| TLAC SB 2021-001 | Seat locking | Escapade and Sherwood Scout, all s/n |

3.4 Special Inspection Points

1. In February 2010, the BMAA alerted its owners to the possibility of cracks developing in horizontal tail support struts. Cracks had been found in a number of examples where the tubular steel strut had been flatted to facilitate attachment to the tailplane spar. The paint in that area should be checked for cracks or blistering. The strut should be robustly pulled and twisted to help identify any cracks present. Should any struts be suspect, they should be removed from the aircraft, the affected end cleaned of paint and the area inspected more closely (e.g. using a dye-penetrant test).
2. Following a suspected gust-load incident, flutter was experienced on a mechanically operated trim-tab, resulting in rapid oscillations of the control column. It was discovered that the Bowden cable outer had slipped through the retaining clamp at the elevator end, resulting in enough slack to allow the tab to flutter under the right conditions. Operators with the mechanical trim-tab system should check the Bowden cable clamp as part of the daily inspection.
3. A fatal accident during take-off involving an Escapade in November 2021 is thought to have been as a result of the pilot’s seat not being correctly locked in place prior to take-off and the secondary seat restraint strap not being utilised. The seat may have slid back on the seat track causing the pilot to lose control. During annual inspections (or following a heavy landing), check the seat track alignment, the correct operation of the locking pin and that secondary seat restraint strap for fit, location, condition and action. The AAIB



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issued [AAIB Special Bulletin S3/2021](#) on 14 December 2021 concerning the incident.

3.5 Operational Issues

1. The following *Safety Spot* articles are relevant to Sherwood scout/ Escapade aircraft:

Light Aviation [December 2014](#) *Tail Spring Failure*

Showing the importance of regular inspection, the article notes an Escapade aircraft that suffered a tail spring failure.

Light Aviation [July 2013](#) *Reality Escapade Fuel Leak*

Article notes an Escapade aircraft suffering a fuel leak from poor fuel tubing, article discusses the importance.



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Appendix 1 – Fast build kit task breakdown

| | Accomplished By | |
|--|------------------|---------|
| | Kit Manufacturer | Amateur |
| FUSELAGE | | |
| 1. Fabricate Special Tools or Fixtures | 1 | |
| 2. Fabricate Longitudinal Members | 1 | |
| 3. Fabricate Bulkheads and Cross Members | 1 | |
| 4. Assemble Fuselage Basic Structure | 1 | |
| 5. Fabricate Brackets and Fittings (internal fuse brackets and mounts) | 1 | |
| 6. Install Brackets and Fittings (internal fuse brackets and mounts) | 1 | |
| 7. Fabricate Control Cables, Wiring, and Fluid Lines | | 1 |
| 8. Install Control Cables, Wiring, and Fluid Lines | | 1 |
| 9. Prepare and Install Fuselage Covering | | 1 |
| 10. Fabricate Windshield/Windows/Canopy | | 1 |
| 11. Install Windshield/Windows/Canopy | | 1 |
| 12. Assemble Doors and Windows, Glazing and Latches | | 1 |
| 13. Assemble and Install Control Sticks, Mixer and Control Push Rods | | 1 |
| WINGS | | |
| 1. Fabricate Special Tools or Fixtures | 1 | |
| 2. Fabricate Wing Spars | 1 | |
| 3. Fabricate Wing Ribs | 1 | |
| 4. Fabricate Wing Trailing Edge | 1 | |
| 5. Fabricate Drag/Anti-Drag Truss Members | 1 | |
| 6. Fabricate Wing Brackets and Fittings | | 1 |
| 7. Fabricate Wing Tip Brackets | | 1 |
| 8. Assemble Basic Wing Structures | 1 | |
| 9. Install Wing Trailing Edge | 1 | |
| 10. Install Drag/Anti-Drag Truss | 1 | |
| 11. Fabricate Control Cables, Wires and Lines | | 1 |
| 12. Install Control Cables, Wires, and Lines | | 1 |
| 13. Prepare and Fit Wing Covering | | 1 |
| 14. Install Pitot Static System | | 1 |
| 15. Install Wing jury Struts | | 1 |
| 16. Install and rig Wings | | 1 |
| 17. Fabricate and Assemble Wing Transport Struts | | 1 |
| FLIGHT CONTROLS | | |
| 1. Fabricate Special Tools or Fixtures | 1 | |
| 2. Fabricate Aileron Spars | 1 | |



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|--|---|---|
| 3. Fabricate Aileron Ribs | 1 | |
| 4. Assemble Aileron Structure | 1 | |
| 5. Cut/Trim and Assemble Aileron Leading and Trailing Edge | 1 | |
| 6. Fabricate Aileron Brackets and Fittings | 1 | |
| 7. Install Aileron Brackets and Fittings | | 1 |
| 8. Prepare and Install Aileron Covering | | 1 |
| 9. Install and Rig Aileron | | 1 |
| 10. Fabricate Flap Spars | 1 | |
| 11. Fabricate Flap Ribs or Cores | 1 | |
| 12. Assemble Flap Structure | 1 | |
| 13. Cut/Trim and Assemble Flap Leading and Trailing Edge | 1 | |
| 14. Fabricate Flap Brackets and Fittings | 1 | |
| 15. Install Flap Brackets and Fittings | | 1 |
| 16. Prepare and Fit Flap Covering | | 1 |
| 17. Install and Rig Flap | | 1 |
| 18. Fabricate Elevator Spars | 1 | |
| 19. Fabricate Elevator Ribs | 1 | |
| 20. Assemble Elevator Structure | 1 | |
| 21. Fabricate and Weld Elevator Trailing Edge | 1 | |
| 22. Fabricate Elevator Brackets and Fittings | | 1 |
| 23. Install Elevator Brackets and Fittings | | 1 |
| 24. Prepare and Fit Elevator Covering | | 1 |
| 25. Fabricate Elevator Trim System | | 1 |
| 26. Install Elevator Trim System | | 1 |
| 27. Install and Rig Elevator | | 1 |
| 28. Fabricate Rudder Spar | 1 | |
| 29. Fabricate Rudder Ribs | 1 | |
| 30. Assemble Rudder Structure | 1 | |
| 31. Fabricate and Weld on Rudder Trailing Edge | 1 | |
| 32. Fabricate and Install Rudder Brackets and Fittings | | 1 |
| 33. Install Rudder Cockpit Control System | 1 | |
| 34. Prepare and Fit Rudder Covering or Skin | | 1 |
| 35. Fabricate Rudder Trim Tab | | 1 |
| 36. Install Rudder Trim Tab | | 1 |
| 37. Install and Rig Rudder | | 1 |
| EMPENNAGE | | |
| 1. Fabricate Special Tools or Fixtures | 1 | |
| 2. Fabricate Spars | 1 | |
| 3. Fabricate Ribs | 1 | |



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| | | |
|---|---|---|
| 4. Fabricate Leading and Trailing Edges | 1 | |
| 5. Weld Empennage Assemblies | 1 | |
| 6. Fabricate Brackets and Fittings | | 1 |
| 7. Assemble Empennage Structures | | 1 |
| 8. Install Fittings | | 1 |
| 9. Fabricate Cables, Wires, and Lines | | 1 |
| 10. Install Cables, Wires and Lines | | 1 |
| 11. Prepare and Install Empennage Covering | | 1 |
| LANDING GEAR | | |
| 1. Fabricate Special Tools or Fixtures | 1 | |
| 2. Fabricate Struts | 1 | |
| 3. Fabricate Brakes System | | 1 |
| 4. Fabricate Cables, Wires and Lines | | 1 |
| 5. Assemble Wheels, Brakes, Tires, Landing Gear | | 1 |
| 6. Install Landing Gear System Components | | 1 |
| 7. Prepare and Fit Landing Gear Covering | | 1 |
| 8. Assemble and Install Tailwheel and Steering Gear | | 1 |
| PROPULSION | | |
| 1. Fabricate Special Tools of Fixtures | 1 | |
| 2. Fabricate Engine Mount | 1 | |
| 3. Fabricate Engine Cooling System/Baffles | 1 | |
| 4. Fabricate Induction System | 1 | |
| 5. Fabricate Exhaust System | 1 | |
| 6. Fabricate and Install Engine Controls | | 1 |
| 7. Fabricate Brackets and Fittings For Ancillary Components | | 1 |
| 8. Fabricate Cables, Wires and Lines | | 1 |
| 9. Assemble Engine | 1 | |
| 10. Install Engine, Engine ECU and Items Listed Above | | 1 |
| 11. Cut and Trim from base mouldings Engine Cowling | | 1 |
| 12. Install Engine Cowling and Associated fittings and brackets | | 1 |
| 13. Install Propeller | | 1 |
| 14. Fabricate Fuel Tank and Header Tank | 1 | |
| 15. Install Header Tank Hoses and Fittings | | 1 |
| 16. Install Fuel Tank | 1 | |
| 17. Fabricate Fuel System Components | 1 | |
| 18. Install Fuel System Components | | 1 |
| COCKPIT/INTERIOR | | |
| 1. Fabricate Instrument Panel | | 1 |
| 2. Install Instrument Panel and Instruments | | 1 |



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|---|------------|------------|
| 3. Fabricate Seat | 1 | |
| 4. Install Seat | | 1 |
| 5. Fabricate Electrical Wiring, Controls/Switches | 1 | |
| 6. Install Electrical System Controls/Switches | | 1 |
| 7. Assemble and Install Flap Control System | 1 | |
| 8. Assemble and Install Control Columns' and Mixer | 1 | |
| 7. Fabricate and Install Floor | | 1 |
| 8. Fabricate and Install Luggage Bay Floor and Bulkhead | | 1 |
| TOTAL PROCESSES | 54 | 60 |
| TOTAL PERCENTAGE OF PROCESSES | 47% | 53% |

----- END -----

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