



LAA TYPE ACCEPTANCE DATA SHEET  
TADS 134  
CORBY STARLET

Issue 5	New format. Change of contact details for obtaining plans.	Dated 19/03/18	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

There is no UK agent, but plans are available from:

John Corby  
4B/29 Clovelly Road  
Hornsby  
NSW 2077  
Australia

Tel: +61 2 9482 9650  
Email: [jcorby@tpg.com.au](mailto:jcorby@tpg.com.au)

(Plans were formerly supplied by CSN of the USA.)

### 1.2 Description

The Corby Starlet is a very small single seat aircraft of Australian origin, of all wood construction, built from a set of plans. Some prefabricated parts and materials kits are also available from CSN.

The Starlet is a low wing aircraft with a tailwheel undercarriage and either an open cockpit or a fixed windscreen and rearward-sliding canopy. The Starlet is normally fitted with a converted VW engine of 1600-1834cc, alternatively the Jabiru 2200A may be fitted. 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.

Despite its small size, the Starlet is an SEP Aeroplane in the UK and may not be classified as a microlight.



**LAA TYPE ACCEPTANCE DATA SHEET**  
**TADS 134**  
**CORBY STARLET**

Although designed as a semi-aerobatic aircraft, the Starlet is not cleared for aerobatics or spinning in the UK due to not being designed to UK aerobatic strength requirements or recommended by the designer for intentional spinning.

**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**

Not applicable – plans built aircraft.

**2.2 Build Manual**

Starlet ‘Supplementary Building Notes’ plus construction drawing set provides all required information, consisting of the following:

- Drawing:
1. Three View General Arrangement Drawing
  2. Perspective Cutaway and Design Summary
  3. Fuselage Frame Assembly
  4. Fuselage Bulkheads and Formers
  5. Fuselage General Assembly
  6. Control System Layout
  7. Powerplant Installation - Misc. Details
  - 7A. Powerplant Installation - Misc. Details
  - 7C. Hapi Engine Installation – Misc. Details
  8. Wing General Assembly
  9. Wing – Aileron Ribs
  10. Wing Spars Attach Fittings
  11. Aileron Construction Controls Installation
  12. Horizontal Tailplane Construction
  13. Vertical Tailplane Construction
  14. Main Landing Gear Construction Assembly
  15. M.G.L. Beam, Tailwheel Details
  16. Alternate One-Piece Wing Spar
  17. Fuel Tank Misc. Details

**2.3 Build Inspections**

Build inspection schedule 1 (wooden aircraft).

Inspector approval codes A-A or A-W. Inspector signing off final inspection also requires ‘first flight’ endorsement.

**2.4 Flight Manual**

None available. Pilot’s Notes provided with plans set.



LAA TYPE ACCEPTANCE DATA SHEET  
TADS 134  
CORBY STARLET

2.5 Mandatory Permit Directives

None applicable specifically to this aircraft type but 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.

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 VW:                   Max CHT: 225C Max  
                                  EGT: 800C Max  
                                  Oil temp: 90C Max  
                                  Oil pressure Min 2.5 Kg/sq cm @3000 RPM

With Jabiru 2200A:   Max CHT: 210C  
                                  Oil temp: 50-110C  
                                  Oil pressure 125-525 kPa @3100 RPM

2.8 Control surface deflections

Ailerons	Up: 15° Down: 15°
Elevators	Up: 30° Down: 20°
Rudder	Left: 25° Right: 25°

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: One
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.



**LAA TYPE ACCEPTANCE DATA SHEET  
TADS 134  
CORBY STARLET**

- 2.2 Loading Limitations  
Maximum Total Weight Authorised: 700 lbs (750 lbs with structural reinforcements, applicable to one-piece wing spar version only)  
CG Range: 220 mm to 299 mm aft of datum  
Datum Point is: leading edge of the wing at the root.
- 2.3 Engine Limitations  
Maximum Engine RPM: 3300 (Jabiru and most VW conversions)
- 2.4 Airspeed Limitations  
Maximum Indicated Airspeed ( $V_{NE}$ ): 138 knots
- 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

Fuel tank contents may vary slightly between examples so it is not possible to define a universal maximum empty weight. With full fuel tank, aircraft must be able to carry a pilot weighing 170 lbs without exceeding max permitted gross weight.

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

3.1 Maintenance Manual

Nil known. In the absence of a manufacturer's schedule, consult LAMS schedule. For Jabiru engine, refer to engine manufacturer's maintenance schedule.

3.2 Standard Options

1. Open cockpit or sliding canopy
2. One-piece or two-piece wing
3. VW or Jabiru engine
4. Structural reinforcements to one-piece spar version to allow increased max gross weight of 750 lbs
5. Variations to wing and undercarriage position on fuselage to suit weight of engine installation (dimension K on fuselage drawings)
6. Alternative VW engine installation with modified firewall and steel tube engine mount, to accommodate engines with accessory cases, e.g. HAPI, Diehl etc. Also drawing number 7C sheet 2 showing alternative kinked lower diagonal in engine mount to accommodate 'Dragonfly' type inlet manifold.
7. Seat back bulkhead moved back 2" for greater cockpit space



**LAA TYPE ACCEPTANCE DATA SHEET**  
**TADS 134**  
**CORBY STARLET**

**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.

- SL99/1 Spinner installation and maintenance – check for cracks or other signs of distress at each pre-flight check, check tighten screws every 50 flying hours and dismantle and check at each 100 flying hours.
- SB99/1 Main landing gear bolt inspection and replacement at each 300 landings.

The Corby Starlet newsletter available from CSN provides much detailed advice on building and operating Starlets, including the above service information. Builders and owners are strongly advised to purchase back issues and subscribe to CSN newsletter.

**3.4 Special Inspection Points**

- Avoid adding extra weight at all costs.
- With VW engine, design of conversion to be agreed with LAA Engineering as there is no standard design of VW conversion. 'Peacock' VW conversion drawings are available from LAA Engineering, but these drawings are now many years old and not all parts called up are still available. Dual ignition system (of an accepted type) required. LAA VW Engine Build checklist to be completed during build up of engine to record critical measurements. Refer to SPARS section on VW engines. With 1834 conversion, oil cooler will almost certainly be required, and careful ducting to achieve adequate cylinder cooling. Compression ratio must be set up (usually no more than 8.0:1) using choice of cylinder base shims if required. With 1834cc conversions, failing to use base shims usually results in excessively high compression ratio and consequent excessively short engine life.
- With VW conversion, if gravity feed is used, check gravity flow from downstream side of carburettor float valve (by removing float chamber bowl or float chamber drain plug) rather than at carburettor fuel inlet. If an automotive carburettor (eg Stromberg CD150) is used with gravity feed, the carburettor float valve is often found to provide inadequate or very marginal flow. This is because automotive carburettors are set up for use with a pump-fed installation not gravity feed. The fuel pressure from a pump allows a carb float jet of only about 1.5 mm diameter to be used, this restricts the flow too much with the much lesser fuel pressure in a typical gravity fed system. This is a common cause of lean running and engine failure. This is cured by fitting a larger diameter jet to the float valve, (typically 2.5 to 3mm diameter) or carefully opening up the existing jet and lapping it in with a household brass polish. CSN 116 refers.
- With VW engine, quality of fit of propeller hub on crankshaft nose is critical to security of propeller mounting in flight.

**3.5 Special Test Flying Issues**

- Adequacy of engine cooling.
- The Starlet is very responsive, with very powerful controls, especially the rudder. Particular care required with directional control on the ground until the quick response rate has been mastered, especially on tarmac or in crosswinds. The



**LAA TYPE ACCEPTANCE DATA SHEET**  
**TADS 134**  
**CORBY STARLET**

aircraft is also very light on the tail when empty and care required to prevent nosing over when starting the engine.

- With Jabiru engine It is imperative that the cylinder head bolts and tappets are checked at 5, 10, 15 and 20 hours. Omitting this check can lead to head leaks and damage at around 25-50 hours. Have a good look around the rocker boxes and make sure oil is present and that there are no signs of overheating in the form of burnt lacquered oil. New engines with hydraulic tappets need only to have the head bolts checked.
- With Jabiru engine, encourage test pilot to work the engine quite hard to avoid glazed piston bores, vary rpm settings and do not fly at low power settings for too long.

----- END -----

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