LAA TYPE ACCEPTANCE DATA SHEET
TADS 304
JODEL 1050-M1

Issue 2	New format. Change of take-off weight.	Dated 16/01/2017	JV
Revision A	Addition of Safety Spot articles. Minor editorial changes.	Dated 13/12/2019	MR

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

Pete Smoothy, Airworld (UK), PO Box 1835, Winslow, MK18 3ZS

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1.2 Description

The Jodel 1050-M1 is a four seat low-wing tailwheel undercarriage touring aeroplane of all wood fabric-covered construction, previously factory produced as a type certified aeroplane but now supplied in the form of a set of drawings. The engine fitted is a Continental 0-200A.

The Jodel 1050-M1 is categorised as an SEP Aeroplane (colloquially referred to as 'group A') in the UK.

The standard LAA-accepted drawings for building the 1050-M1 are of French origin, originally supplied by SAB of Beaune. The drawings for a Jodel 1050-M1 'clone' supplied by Frank Rogers of Australia as the 'Sky Prince' are not accepted by the LAA at this time, as they have not been reviewed by the LAA.

The Jodel 1050-M1 design built in accordance with the SAB drawings for the type certificated version has been accepted as a LAA 4-seat aircraft. However we are not familiar with the drawings for the 1050 M1 supplied by Frank Rogers. From our previous experience with the Jodel 150, Mr Rogers incorporated various changes to the design in his drawings, all with the best of intentions but any such changes have to be proven to be satisfactory before the aircraft can be cleared by the LAA. Any modifications, material substitutions, etc, must only be incorporated if specifically cleared by LAA Engineering.

The agreement that the LAA have reached with the CAA is at present that for four-seaters, only certified engines and propellers are used, and that all materials used in the construction are aircraft-approved materials. In addition, your LAA inspector must contact LAA Engineering to discuss four-seat aircraft build procedures, and his acceptability for the inspection of the project, prior to carrying out the first inspection stage.

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.

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

Not applicable: plans-built aircraft. However the LAA information pack for the Jodel D18 provides much useful guidance information equally applicable to the 1050-M1.

2.3 Build Inspections

Build inspection schedule 1 (wood aircraft).
Inspector approval codes A-A or A-W. Inspector must be approved specifically for four seat aircraft inspection. Inspector signing off final inspection also requires 'first flight' endorsement.

2.4 Flight Manual

None available. See French Fiche number 34 for additional flight information.

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 installation of a shoulder harness is mandatory for all LAA Jodels. A scheme is on file at LAA for fitting a diagonal strap type shoulder harness to the 1050-M1.

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.

Minimum oil pressure: 0.7 kg/sq cm
Maximum oil temperature: 107 °C
Min fuel pressure: 0.09 kg/sq cm

2.8 Control surface deflections

(See Fiche 34 for additional data)

Ailerons	Up: 12° Down: 12°
Stabilator	Up: 9.5° Down: 12°
Elevator tab	Up: 11° Down: 3°
Rudder	Left: 25° (28° for fixed fin) Right: 25° (28° for fixed fin)

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: four

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: 780 kg
   Maximum Landing Weight: 740 kg
   CG Range: 320 mm to 565 mm aft of datum point.
   Datum Point is: the leading edge of the rectangular portion of the wing.

   2.3 Engine Limitations
   Maximum Engine RPM: 2750 rpm

   2.4 Airspeed Limitations
   Maximum Indicated Airspeed (V_{NE}): 270 km/hr
   Max Indicated Airspeed Airbrake Extended: 155 km/hr

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

Not applicable.

Section 3 – Advice to owners, operators and inspectors

3.1 Maintenance Manual

Reference to maintenance instructions and/or where to source the maintenance manual. Reference to engine/prop manufacturers' manuals.

3.2 Manufacturer's/Standard Options

Fabric can be attached by bonding to the wing ribs with Super-seam cement (or equivalent) rather than rib stitching, but only if rib cap strips are fitted and fabric anchored at wing dihedral break in accordance with Jodel drawing G1 and translated covering notes available from LAA.

3.3 Manufacturer's Information (including Service Bulletins, Service Letters, etc)

Avions Robin SB 102 – inspection of fuel quantity senders and sender wells for corrosion, fitting of cover plates to prevent water ingress.

Also AD 69.71 Requires replacement of mild steel stabilator tab hinges with stainless steel equivalents to avoid problems with corrosion and seizure.

Also AD 64.26.23 requires modification of pre-1966 'Jacottet' trim tab control unit restricting the clearance of the operating handle along its axis.

61.6.13 Replacement Of Plastic Propeller Spinners.

Since 1961 the use of the originally supplied plastic spinners has been disallowed. Only genuine Jodel spinners made from aluminium alloy may be used after that date.

61.14.14 Elevator Pulley Support On The 'Stick' Torsion Tube**.**

The earlier type of bracket structure supporting the forward elevator cable pulley (at base of stick) was to be modified to the later standard, fully enclosing the pulley. If there is any doubt that this assembly is other than either built as the later standard or

modified to be, please contact LAA for full details. Assemblies manufactured post 1961 should be satisfactory.

62.10.17 Calibration Of Fuel Gauge.

By 1961, calibration of the front and rear fuel tank dip sticks was required. Contact LAA for full information when required.

62.15.18 Fuel Tank Selector Control Cock - Modification. (see also 73.142)

In order to avoid a possible fuel system failure caused by a disconnection of the fuel tank selector control, fit the component JODEL 10 A3 (or similar).

This component is fitted with a 4 mm diameter bolt to the lower part of the control rod of the operating wheel and covers both the control socket and the ball joint in such a way that it is impossible to disconnect the socket when moving the shaft in its axis. The taper pin connecting the ball joint to the shaft will also be shielded.

This modification was required to have been embodied by 1974. Contact LAA for full copy of AD when required.

63.11.20 Adjustment Of Aileron Cables.

This AD requires a check of the aileron cable tensions and condition of the turnbuckle locking wire installation. Cable tension should be in the region 8 to 14 kg and the neutral position of the ailerons (stick vertical) should be either within the wing profile or within the limits 0-5 mm above the trailing edge of the wing.

This AD requires repetitive inspection every 50 hours or three months, whichever is the sooner, and whenever there is substantial climate change (i.e. humidity and temperature). For LAA aircraft the 50 hour and three month inspections may be deferred to 75 hours or the next Permit renewal inspection (respectively) - whichever is the sooner.

64.26.23 Elevator Tab Control - Fitting Of Screw To Jacottet Case No. 12.487.

This AD, requiring modification by installation of a 3 mm diameter screw on the tab control case restricting the clearance of the operating handle along its axis was to be accomplished by 1966. Inspectors or owners unable to determine that this AD has been complied with should contact LAA for full copy of AD.

66.6.26 Aileron Double Pulley Assembly - Inspection And / Or Modification.

There has been several failures of the brazing on the pins that retain the aileron pulley supports, (four pins per aircraft), situated roughly mid-point on each wing. By 1966 all above model Jodels were manufactured with welded rather than brazed pins and all previously manufactured aircraft had to be modified accordingly.

Using a torch and mirror, LAA inspectors should check that all LAA affected Jodels have welded pins rather than brazed. Contact LAA for copy of AD when required.

66.26.30 Front Seat Structure.

Inspect front seat structure for cracks around the seat webbing retaining holes. Repairs to cracks should be carried out by insertion of welded tubes.

This AD requires repetitive inspection every 100 hours and annually (at Permit renewal).

89.074 Inspection Of Quick-Disconnect Link On Safety Harness.

In order to prevent the harness quick-disconnect links coming unscrewed the nuts should be secured with a split pin. Contact LAA for full information if required.

010.06.79 Stabilator Attachment - Inspection For Corrosion.

Remove the stabilator bearing attachment plates (x 4 per aircraft) located each side of the upper rear longerons and inspect for evidence of corrosion. Corroded plates should be replaced with new parts.
Applies to all Jodels fitted with an all-moving tailplane. For the amateur built, the AD is not a legal requirement but nevertheless LAA policy is that it should be treated as mandatory. The AD requires removing the stabilator bearing attachment plates (x 4 per aircraft) located each side of the upper rear longerons and inspect for evidence of corrosion. Corroded plates should be replaced with new parts.

This AD requires repetitive inspection every three years. (Note: Subsequent inspection is not required when plates have been replaced with Rollasons supplied steel plates).

3.4 Special Inspection Points

- Wooden Structure - Damage And Deterioration
  Jodels are well known for their tendency to ground loop if mishandled on landing. The undercarriage is designed to collapse sideways in such a way that there is a good chance the wing spar will remain undamaged. However, instances of spar damage are known to have occurred even after apparently benign ground loop incidents. Very thorough inspection will be required after all such events. Other parts of the wooden structure particularly prone to damage are the engine firewall area behind the metal bulkhead, where moisture and oil soakage can lead to early deterioration, and in the aft fuselage tail-post area where these contaminants are also likely to collect. These areas are always worth examining closely and special attention should be given to keeping drain holes clear.
- Wing Trailing Edge Attachment Bolts
  Jodel wing trailing edge attachment bolts (x 2) are known to be particularly subject to corrosion. It is considered wise to remove these bolt every couple of years and renew as necessary. Replacement bolts are available from Jodel parts suppliers.

3.5 Operational Issues

The following *Safety Spot* articles are relevant to Jodel 1050 aircraft:

Light Aviation Feb 2019 Wooden aircraft inspection.

Brief discussion on wooden aircraft structures not being inspected as often due to synthetic fabrics having longer service life.

Light Aviation Mar 2015 Jodel 1050 Glue failure

Having suffered a ground loop, the rear fuselage of a Jodel has sustained major damage. Initially believed to have been a strike against a runway light, it became

apparent that the ground loop was induced by an offset tailwheel due to glue failure in the rear fuselage.

Light Aviation Oct 2013 Jodel landing lights

Brief discussion and update on the Perspex landing light cover discussed in article below.

Light Aviation Jan 2013 Jodel: Landing lamp failure

A failed landing light Perspex cover causing an aircraft to crash is discussed. The cover being of polycarbonate and not heated formed causing cracks at the leading edge.

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