LAA TYPE ACCEPTANCE DATA SHEET
TADS 854
PIPER J3C-65

Issue 1	Initial issue	Dated 25/4/14	JV

These TADS are intended as a summary of available information about the type and should be used during the 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

The UK Vintage Piper Owners Club is very active and is a useful source of information, contact enquries@vintagepiper.com or visit their website www.vintagepiper.co.uk.

Piper spares and service information are available from a number of sources in the UK including:

- Bygone Aviation (www.bygoneaviation.com) 07961 308243
- Airworld (Aircraft Spruce agent, www.airworlduk.com) 01296 714900
- LAS Aerospace (Aircraft Spruce agent, www.lasaero.com) 01837 658081

In the US, Piper parts can be obtained from Univair Aircraft Corporation, 2500 Himalaya Rd, Dept SA, Aurora, CO 80011, USA, tel. 001 303 3758882 (www.univair.com) or directly from The Piper Aircraft Corporation, 2926 Piper Drive, Vero Beach, Florida 32960 (www.piper.com/parts). The Cub Club (www.cubclub.org) is another source of useful information.

1.2 Description

The Piper J3C-65 is a small, two-seat aircraft in a tandem configuration. It has a high monowing with struts and a tailwheel. The C-65 designation signifies that the aircraft are fitted with Continental A-65 engines. A number of aircraft on the LAA fleet have been modified to accept larger engines.

These aircraft originally operated on Certificates of Airworthiness. At one time, it was permitted to transfer these aircraft onto Permits to Fly under the auspices of the LAA; however, the CAA have since deemed that as the type has not been declared 'orphaned' in the USA, aircraft are no longer permitted to transfer to Permits to Fly.

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 Flight Manual

Not known.

2.5 Mandatory Permit Directives

MPD 1995-01	Compliance with ADs	Continued compliance with all ADs and other mandatory requirements applicable when aircraft was on C of A.

MPD 1995-001 is issued to make ADs mandatory for aircraft formerly eligible for a C of A but now issued with a Permit to Fly. There are currently no other MPDs published which apply specifically to the Piper J3C-65 aircraft.

Also check the LAA website for MPDs that are non-type specific (TL2.22).

The Airworthiness Directives included below are only those that apply to the airframe. It does not take account of ADs that might apply to fitted equipment, such as engines, propellers and instruments. The EASA and the FAA websites should be checked for any more recent ADs.

AD	*Title*	*Applicability*	*Summary*
46.37.01	Fuel strainer gasket	S/n 14027 and up	To prevent possible failure of the fuel strainer bowl, replace gaskets only with the 1/8" cork and neoprene gasket supplied by Piper. The bowl seat nut should be tightened only finger tight. The bowl should be carefully examined for signs of flaws or cracks and should be replaced if any are found. Contact LAA for full copy of AD and Piper SB No. 89 if required.
46.37.02	Fuel strainer bowl	S/n 14027 to 17959	Check fuel strainer bowl is properly orientated with IN adjacent to firewall and OUT facing carburettor. Contact LAA for full copy of AD and Piper SB No. 91 if required.
47.50.03	Canvas seat inspection		Check canvas, eyelets and lacing is in good condition on front and rear seats. Check also that canvas is taut and that adequate clearance exists between canvas and elevator control system. Contact LAA for full copy of AD and Piper SB No. 45 when required. This AD requires repetitive inspection every 100 hours, but for LAA aircraft may be deferred to the following Permit renewal inspection or up to 150 hours - whichever is the sooner.

47.50.06	Shock strut cracks		Inspect the undercarriage shock struts for cracks at the ends of the stop bolt slides. Damaged struts shall be properly repaired or replaced. Only leather stop discs, Piper p/n 81232-13, shall be used. Contact LAA for full copy of AD and Piper SB No. 103 when required.
49.14.01	Elevator connector tube fitting	S/n 14027 and up	Inspect fittings (Piper p/n 40861) at each end of elevator connector tube (Piper p/n 40261) to determine that the end fittings are riveted to the tube with two rivets 90 degrees apart. If they are not, contact LAA for full copy of AD and Piper SB No. 111. Full forward position of the control stick will expose the rearward fitting and full rearward position of the stick will expose the forward fitting.
50.05.01	Nicopress sleeves		This AD requires inspection of Nicopress sleeves in the control system of affected aircraft manufactured between November 1945 and November 1946. Contact LAA for full copy of AD if required. LAA Note: There should be no control cables this old installed on any LAA aircraft!
52.07.03	Lift strut rework		Wing struts manufactured prior to 1952 must be modified in accordance with this AD. Contact LAA for full copy of AD and Piper SB No. 120 if required.
58.01.07	Control system turnbuckles		To preclude the possibility of failures of the fork end of the turnbuckles in the control system, the following inspection is necessary. Failures of the fork end of the turnbuckles have occurred in the area covered by the safety wire. This results from binding caused by the attaching bolt being drawn up too tightly on the fork end of the turnbuckle. Inspect the turnbuckle to horn attachment at the elevators, rudder and ailerons to determine that an AN 23-12 clevis bolt is installed with one AN 960-10 washer under the nut. This assembly should be free to swivel.
58.12.02	Aileron hinge brackets		Some aileron hinge reinforcing brackets p/n 10931-02, supplied from 1954 to 1958, were fabricated from aluminium instead of the required steel. Check and renew if necessary. Contact LAA for full copy of AD and Piper SB No. 165 if required.
68.05.01	Exhaust mufflers		Inspect exhaust system and hardware for condition. Dismantle muffler heat exchanger unit to inspect internally. Pressure test muffler if effective visual inspection is not possible. Contact LAA for full copy of AD and Piper SL No. 324 when required. This AD requires repetitive inspection every 50 hours, but for LAA aircraft may be deferred to the next Permit renewal inspection or up to 75 hours - whichever is the sooner. When electing to defer inspection beyond 50 hours, a serviceable proprietary aircraft carbon monoxide Ddetector must be fitted in the aircraft cockpit in full view of the occupants.
78.10.03	Failure of Engine Mount		This AD applied to Lycoming engined aircraft only. None in UK.

85.06.04	Fuel Tank Drain		To prevent accumulation of water in fuselage and wing fuel tanks, quick drain valves (and tubing in the case of fuselage tanks) must be fitted in place of existing drain plugs. Parts are available from Piper spares dealers. The following placard must be fitted: ”DRAIN ALL FUEL SUMPS BEFORE FIRST FLIGHT OF EACH DAY". Contact LAA for full copy of AD when required.
99.01.05 R1	Wing lift struts and forks (supersedes AD 93.10.06)		The purpose of this AD is to prevent in-flight separation of the wing from the aircraft caused by corroded wing lift struts or cracked forks. Its drafting is extremely confusing and unhelpful to the reader; however, the important points of the text are produced below. Wing struts must be inspected for internal corrosion every two years. The normal method of inspection is by securing 1/4" graph paper to the lower 11" of the top and bottom surfaces of all wing struts. Using a Maule 'Fabric Tester', apply pressure at a scale reading of 80 in each of the grid blocks. Remove paper and examine strut for dents that will be indicative of internal corrosion and local weakness of material. If this test produces perceptible dents or if there is external corrosion then the strut must be renewed. An acceptable alternative method of inspection is by ultrasonic inspection, but only when in experienced hands. In this case the AD provides a scheme to follow and is available from LAA on request. Subsequent to inspection, corrosion inhibitor must be applied internally to the struts and the words ‘NO STEP’ must be applied to the lower end of each strut. These last two items were previously recommended, but are now mandatory. The following options exist for the renewal of struts: a. Replace with new Piper-supplied wing struts which are to same design as original. Two yearly inspections will remain applicable in this case. b. Fit new Piper or Univair sealed wing struts. These incorporate a re-designed fork end and terminate the requirement for repetitive inspection in accordance with this AD of struts and forks ends. Note: do not drill holes into new sealed strut assemblies to attach clips or other hardware, otherwise they again become subject to the two yearly internal inspections. c. Fit new F Atlee Lodge struts. These are then subject to re-inspection in accordance with this AD every 5 years. Wing strut fork ends must be removed and crack tested by the magnaflux method every 500 hours and rejected if found cracked. Regardless of condition, on reaching 2,000 hours they must be renewed. Replacement fork ends must be manufactured with rolled threads. Various options for renewal exist: a. Replace as per original using new Piper supplied forks. New parts are then subject to the same 500 hour inspection cycle and retirement at 2,000 hours.

			b. Replace with new Piper or Univair sealed strut assemblies that incorporate a re-designed fork end. These terminate the requirement for further repetitive inspection in accordance with this AD of struts and forks. c. Replace with new F Atlee Dodge strut forks. This terminates the requirement for further repetitive inspection in accordance with this AD of forks ends. Contact LAA for full copy of AD and Piper SB Nos. 528 and 910 when required. This AD requires repetitive inspection as detailed in the text above. LAA Note: Apart from being the most recent ADs affecting all LAA Piper aircraft it is noteworthy as a failure in the strut or fork end could well be catastrophic. The LAA's recommendation is that new Piper or Univair sealed strut assemblies are fitted at the earliest opportunity.

2.5 Generic Requirements (GR) CAP 747 and Civil Aircraft Airworthiness Information and Procedures (CAAIP) CAP 562

Airframe

Item	*Description*	*Requirement*
GR 8 (Was AN 20)	Fabric covering	See GR for guidance
GR13 (Was AN 61)	Fire resistant furnishings	See GR for guidance
GR 24 (was AN 35)	Light Aircraft Piston Engine Overhaul Periods	See GR for guidance
CAP 562	CO contamination	See CAP 562 Leaflet B-190 for guidance (Replaces AN 40)
CAP 562	Deterioration of wooden structures	See CAP 562 leaflets 51-10 and 51-20 for guidance (Replaces AN 50)
CAP 562	Metal structures and corrosion/protection	See CAP 562 Leaflets 51-50 and 51-60 for guidance (Replaces AN 73)

Propeller

CAP 562 leaflet 61-10 (was AN4)	Eligible propeller type	If engine/propeller combination is not on Exemplar AAN, check CAP 562 leaflet 61-10 for listing or record individual approval

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)

Refer to the engine manufacturer's latest documentation.

2.8 Control surface deflections

Refer to TCDS A-691.

2.9 Operating Limitations and Placards

(Note that the wording on an individual aircraft's Operating Limitations document takes precedence, if different.)

Refer to TCDS A-691.

Additional Placards:

"Occupant Warning - This Aircraft has not been Certificated to an International Requirement" (note that this must be visible from each seat).

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

Piper aircraft 'maintenance schedules' are available from most of the sources listed in section 1.1 and every owner should obtain one, making it available to their LAA inspector.

For engine, propeller and equipment refer to manufacturers' maintenance instructions.

3.2 Standard Options

Refer to TCDS A-691.

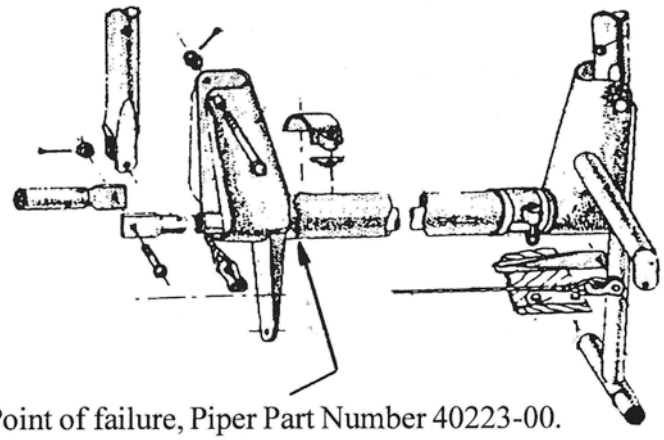
3.3 Manufacturer's Information (including Service Bulletins, Service Letters, etc)

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.

Manufacturer's information available at: www.piper.com/technical-publications-documents/

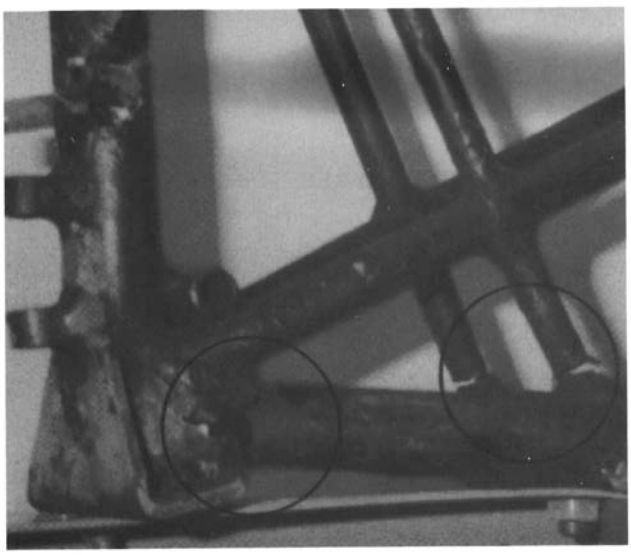
3.4 Special Inspection Points

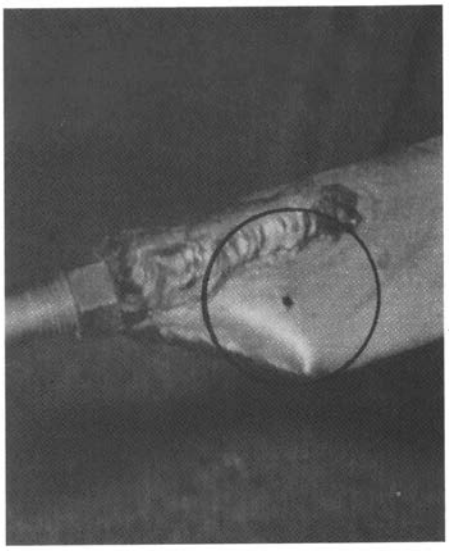
- This type is on the list of types that, by virtue of its configuration, the CAA exempts from requiring a shoulder harness on the front seat (as otherwise required by the ANO). A number of aircraft have had front shoulder harnesses fitted over the years, with varying degrees of effectiveness. Note that shoulder harnesses running down the seat back are not recommended because of the risk of this geometry causing spinal compression in a crash. Ref CAA ORS4 No. 1008 (or as re-issued).
- In October 1995 an LAA Piper J3 aircraft was preparing for flight when, during pre-take off checks, the pilot found the controls had gone sloppy. It was later discovered that the torque tube shaft between front and rear control columns had sheared at a point adjacent to the weld connecting shaft to rear column. Front column had elevator control but no aileron. Rear column had no elevator control and only sloppy ailerons. The aircraft was built in 1946 and had flown around 1600 hours. It is not known what external causal factors might have existed. An inspection of this area for cracks is recommended. See diagram below.



Point of failure, Piper Part Number 40223-00.

- Much of the LAA Piper fleet was built in the 40's and 50's and being largely constructed from steel tube, corrosion is a problem for owners and inspectors to be continuously alert for.





THESE PHOTOS SHOW ADVANCED CORROSION TO A VAGABOND FUSELAGE TAIL END, CORRODED & CRACKED RIGHT THROUGH IN THREE PLACES & THE SORT OF CORROSION AD 99.01.05 IS INTENDED TO DISCOVER (J3 WING STRUT).

3.5 Special Test Flying Issues

None.

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