



LAA TYPE ACCEPTANCE DATA SHEET
TADS 322
C42 IKARUS

Issue 7	Updated agent contact details. Updated and additional manufacturer's service bulletins.	Dated 28/03/18	JV
Revision A	Addition of section 3.6 (standard modifications)	Dated 29/03/19	JV
Revision B	Addition of Safety Spot articles	Dated 11/12/19	JH
Revision C	Addition of TIN-04-2020 to section 3.3	Dated 03/04/20	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

3.3 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

The type was previously marketed by Aerosport, Fly Buy Ultralights and Red Aviation.

1.2 Description

The Ikarus C42 is a small two-seat high wing aeroplane of mixed construction, manufactured in kit form or as a complete aircraft by Comco-Ikarus in Germany. Factory built examples are dealt with by the BMAA, and are only approved as microlights. The LAA deals with the kit versions, which can be either a microlight or SEP Aeroplane (colloquially known as 'Group A'). The airframe primary structure is of bolted and riveted aluminium tube construction, the fuselage being given its external shape by non-structural composite mouldings. The flying surfaces are covered with pre-stitched reinforced fabric envelopes. The aircraft is equipped with a tricycle undercarriage. The only engines approved for use in the Ikarus are the Rotax 912-UL and 912-ULS.

The C42 FB UK is a microlight with a max gross weight of 450 kg. The C42 FB100 VLA model is an SEP Aeroplane with a maximum gross weight of 473 kg. The FB100 VLA model is identical to the FB UK model except that the FB100 VLA model requires an improvement to the fireproof qualities of the firewall, incorporation of a pitot static



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drain and the addition of a placard alongside the ASI which provides a chart of the ASI position errors.

The factory-built models are designated Ikarus C42 FB 80 and Ikarus C42 FB 100 (depending on engine fit) to distinguish them from the kit built variants.

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

The technical leaflet TL.11 shows the contents of the accepted fast build kit. Note that it is essential that the major assemblies (wings, fuselage, etc) are supplied in component form requiring assembly by the builder, so that the inspector is able to inspect the separate components and so that the builder is tasked with assembling these major assemblies as part of the 51% rule 'major portion' requirements.

2.2 Build Manual

Assembly Manual – Ikarus C42.

2.3 Build Inspections

Build inspection schedule 42 (Ikarus C42 aircraft).
Inspector approval codes A-A or A-M or K or (for microlight model) M.
Inspector signing off final inspection also requires 'first flight' endorsement.

2.4 Flight Manual

C42 Owners' Manual OHB/C42/001.
Supplement for Aircraft in the Group A Category.

2.5 Mandatory Permit Directives

Applicable specifically to this aircraft type:

2004-005 R1	Elevator horn cracking
2004-013	Stub axle shock absorber attachment cracking
2007-007	Fouling of rear fuselage composite fairing
2007-008	Cracking of weld on wing root rib
2016-004	Fuselage – main fuselage tube – inspection for cracking
2016-006	Propeller – forward hub – inspection for cracking



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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)

A number of modifications are required to be incorporated in order for it to be able to be accepted in the UK by the LAA. These modifications were embodied by factory service bulletins 1-18 as below, and are mandatory for the issue of a Permit to Fly. The manufacturer has undertaken to supply each of the modifications above in all UK-supplied kits, but builders/owners must be careful to ensure that the actions required by these bulletins are embodied. Ikarus parts, assemblies or complete aircraft supplied other than through Red Aviation may not comply with the UK approved design standard.

On the FB100 VLA model, the addition of a pitot static system drain, improved firewall and additional placard regarding ASI position errors are mandatory. LAA mod 11097 refers.

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

With Rotax 912-ULS engine:

Maximum CHT: 135°C
Max Coolant Temp: 120°C (with 50/50 Glycol/water coolant)
Oil Temp Limits: 50°C to 130°C (Normal 90-110°C)
Oil Pressure: 2-5 Bar
Minimum Fuel Pressure: 0.15 bar

2.8 Control surface deflections

Ailerons	Up: 20° ±2° Down: 14° ±2°
Elevators	Up: 30° ±3° Down: 20° ±3°
Elevator tab	Up: 1-5° Down: 22-28°
Rudder	Left: 32° ±3° Right: 32° ±3°
Flap	Down: TBD



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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: FB UK: 450 kg; VLA 100: 473 kg
CG Range: 350 mm to 560 mm aft of datum.
Datum Point is: leading edge of the wing at the root.
 - 2.3 **Engine Limitations**
Maximum Engine RPM: 5800.
Maximum continuous engine RPM: 5500 for Rotax 912-UL, 5300 for Rotax 912-ULS.
 - 2.4 **Airspeed Limitations**
Maximum Indicated Airspeed (V_{NE}): 139 mph
Max Indicated Airspeed Flaps Extended: 72 mph
 - 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.

Microlight models must be fitted with mandatory microlight weight placard per TL2.11

2.10 Maximum permitted empty weight

<i>Model</i>	<i>Engine</i>	<i>Max empty weight</i>
C42 FB UK	Rotax 912-UL	268 kg
C42 FB UK	Rotax 912-ULS	265 kg
C42 FB100 VLA	Rotax 912-ULS	288 kg

Levelling datum: upper surface of tailplane level

Moment arm of crew: 400mm aft of datum

Moment arm of fuel: 950mm aft of datum



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Section 3 – Advice to owners, operators and inspectors

3.1 Maintenance Manual

C42 Owner's Manual OHB/C42/001. For engine maintenance refer to Rotax maintenance schedule.

3.2 Standard Options

The listing below shows the factory options that have been accepted by the LAA.

1. 65 litre fuel tank
2. Second 50 litre fuel tank
3. Composite wing tips
4. Wing leading edge modification MDS/C42FBUK/034

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.

Service bulletins 1-18 are considered mandatory by the LAA.

Bulletins are contained in a [compilation document](#) from the agent.

<i>Ref</i>	<i>Issue</i>	<i>Description</i>
SB-1	1	Revised seat harness attachment points
SB-2	1	Clevis pins with split pins
SB-3	1	Drain holes in elevator
SB-4	1	Pitot static tube security
SB-5	1	Revised fuel filter
SB-6	1	Exposed terminals
SB-7	1	Relay supports (sharp corners)
SB-8	1	Rose joints binding
SB-9	1	Jury strut clearance
SB-10	1	Short bolts in critical areas
SB-11	2	Vapour return system
SB-12	1	Hinge bolt security
SB-13	2	Rudder return springs
SB-14	1	Incorrect screws in critical areas
SB-15	1	Electrical fuel pump check valve in bypass
SB-16	1	Elevator horn cracking – factory built
SB-17	3	Elevator horn cracking – kit built
SB-18	1	Stub axle cracking
SB-19	1	Exhaust inspection around heater jacket
SB-20	1	Installation of CO ₂ detector
SB-21	1	Seat support tube rotation
SB-22	1	Incorrect length bolts fitted
SB-23	1	Incorrect length bolts fitted to stub axle
SB-24	1	Bolts in rudder horn fouling on rear composite
SB-25	1	Crack in weld on wing root rib



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SB-26	1	Wing leading edge spar
SB-27	1	Engine mount crack
SB-28	2	Throttle arm
SB-29	2	Main fuselage tube (TIN-01-2018 rev 1)
SB-30	1	Neuform propeller
SB-31	2	Cracking of A-strut (TIN-02-2018 rev 1)
SB-33	1	Control surface corrosion and cracking (TIN-04-2020 rev 1), see also LAA/AWA/20/05

3.4 Special Inspection Points

- Correct shank length of bolts. Metric bolts must be carefully chosen of correct length to ensure that the threaded portion doesn't bear on holes in components, using an additional washer if required to accommodate a longer bolt. Pay particular attention to checking that bolts are of correct length.
- Take care to avoid over-torquing the un-bushed bolts passing through the wing spar tubes, to avoid distorting the tubes out of round.
- It is essential that the hinge bolts for the movable control surfaces are locked in place with the correct thread-locking compound to prevent any possibility of the hinge bolts rotating through 90° and jamming the control.
- The throttle spring on the carburettors must be adjusted so that the system does not have a strong tendency to spring to 'full throttle' when the throttle knob is released, or require a strong pull to keep it in the closed position.
- Rotax 912 series installation checklist to be completed (apart from flight test section) as part of final inspections prior to applying for Permit to Fly.

3.5 Operational Issues

The following Safety Spot articles are relevant to C42 Ikarus aircraft

Light Aviation issue [April 2009](#)

Engine frame cracks

Engine frame mounts found with cracks suspected to be from nose heavy bounces on landings and tight bend radii of engine mounts.

Light Aviation issue [June 2010](#)

Throttle cable linkage

If right hand occupant pushes on the rearmost part of the right hand side panel with their foot then they could interfere with throttle linkage and cause the throttle to stick.

Light Aviation issue [December 2015](#)

Neuform propeller hub cracks

Neuform propeller hub found with severe cracking. Important to tailor in spinner removal to inspect beneath.

Light Aviation issue [August 2016](#)

Fuselage boom cracks

Large cracks found under fabric and foam coverings of fuselage boom, difficult to inspect area. Potential to cause structural failure.

3.6 Standard Modifications

The following Standard Modifications have been approved on the type. The Standard Modification leaflet associated with each modification (published on the website) must



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be followed and an [LAA/MOD1](#) form completed and return to LAA Engineering in each case (see also [TL 3.06](#)).

<i>Standard Mod no.</i>	<i>Issue</i>	<i>Description</i>
C42/011	1	65 litre fuel tank
C42/019	1	Flying with doors removed

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