CIVIL AVIATION AUTHORITY – SAFETY REGULATION GROUP

MICROLIGHT TYPE APPROVAL DATA SHEET (TADS)

NO: BM-68 ISSUE: 10

TYPES: **Ikarus C42 FB80 and Ikarus C42 FB80 Bravo**
Ikarus C42 FB100 and Ikarus C42 FB100 Bravo

(1)	MANUFACTURER:	Mr Malcolm Stewart t/a Red-Aviation, Halfpenny Green Airport, Hangar 6, Wolverhampton, Bobbington, Stourbridge, Staffordshire, DY7 5DY
(2)	UK IMPORTER:	N/A
(3)	CERTIFICATION:	BCAR Section S Issue 2 dated August 1999
(4)	DEFINITION OF BASIC STANDARD:	Build Standard Sheet referenced in Procedure P.01, "Control and Storage of Drawings, Configuration Control"

(5) COMPLIANCE WITH THE MICROLIGHT DEFINITION

(a)	MTOW	450 kg pre Performance Aviation Mod C42PAUK/001 472.5 kg post Performance Aviation Mod C42PAUK/001
(b)	No. Seats	2
(c)	Maximum Wing Loading	36 kg/m² at 450 kg
(d)	Vso	37 mph (32 kt) IAS at 450 kg
(e)	Permitted range of pilot weights	55 – 172 kg total, Max 120 kg per seat
(f)	Typical Empty Weight (ZFW)	257.5 kg
(g)	ZFW + 172 kg crew + 1 hr fuel (10 kg C42 FB 80 & 12.5 kg C42 FB 100)	439.5 kg C42 FB80 442 kg C42 FB100
(h)	ZFW + 86 kg pilot + full fuel (50 litres / 36 kg) (65 litres / 47 kg)	 379.5 kg 390.5 kg
(i)	Max ZFW at initial permit issue	C42 FB80 268 kg Pre Performance Aviation Mod C42PAUK/001 290.5 kg post Performance Aviation Mod C42PAUK/001 C42 FB100 265.5 kg pre Performance Aviation Mod C42PAUK/001 288 kg post Performance Aviation Mod C42PAUK/001

Note: References in this TADS to C42 FB 80 and C42 FB100 must also be taken to include C42 FB80 Bravo and C42 FB100 Bravo respectively unless otherwise stated. The Bravo models are introduced by Performance Aviation Mod C42PAUK/002 and approved by AAN BMAA-1045.

(6) POWER PLANTS

Designation	*C42 FB80*	*C42 FB80*	*C42 FB80*	*C42 FB80*	*C42 FB80*	*C42 FB80 Bravo* *Serial No: 1110-7175*
Engine Type	*Rotax 912 UL*	*Rotax 912 UL*	*Rotax 912 UL*	*Rotax 912 UL*	*Rotax 912 UL*	*Rotax 912 UL*
Reduction Gear	*2.27:1*	*2.27:1*	*2.27:1*	*2.27:1*	*2.27:1*	*2.27:1*
Exhaust System	*Heggerman*	*Heggerman*	*Heggerman*	*Heggerman*	*Heggerman*	*Heggerman*
Intake System	*Twin carburettor*	*Twin carburettor*	*Twin carburettor*	*Twin carburettor*	*Twin carburettor*	*Twin carburettor*
Propeller Type	*Warp Drive 2 blade*	*Ecoprop 170R 110/3 3 blade*	*Warp Drive 3 blade*	*Neuform Fixed Pitch 3 blade*	*Kiev prop 263/1700 3 blade*	*Kiev prop 263/1700 3 blade*
Propeller Dia x Pitch	*68" x 25° @ 400 mm from hub edge*	*170 cm x 20° @ 75% radius*	*68" x 21° @ 400 mm from hub edge*	*175 cm x 23° @ 310 mm from hub edge*	*170 cm x 24° @ 350 mm radius*	*170 cm x 24° @ 350 mm radius*
Noise Type Cert No.	*179M*	*179M*	*179M*	*179M*	*179M*	*179M*
AAN approving configuration	*27832*	*27832*	*29023*	*29073 Addendum 1*	*BMAA - 1047*	*29359*

Designation	*C42 FB100*	*C42 FB100*	*C42 FB100*	*C42 FB100*	*C42 FB100*	*C42 FB100*
Engine Type	*Rotax 912 ULS*	*Rotax 912 ULS*	*Rotax 912 ULS*	*Rotax 912 ULS*	*Rotax 912 ULS*	*Rotax 912 ULS*
Reduction Gear	*2.43:1*	*2.43:1*	*2.43:1*	*2.43:1*	*2.43:1*	*2.43:1*
Exhaust System	*Heggerman*	*Heggerman*	*Heggerman*	*Heggerman*	*Heggerman*	*Heggerman*
Intake System	*Twin carburettor*	*Twin carburettor*	*Twin carburettor*	*Twin carburettor*	*Twin carburettor*	*Twin carburettor*
Propeller Type	*Warp Drive 3 blade*	*Ecoprop 170R 130/3 3 blade*	*GSC Tech-III 3 blade*	*Neuform Fixed Pitch 3 blade*	*Neuform Variable Pitch 3 blade*	*Kiev Prop 283/1800 3 blade*
Propeller Dia x Pitch	*68" x 25° @ 400 mm radius*	*170 cm x 20° @ 75% radius*	*68" x 25° @ 400 mm from hub edge*	*175 cm x 27° @ 310 mm from hub edge*	*180 cm x 24 to 31° @ 310 mm from hub edge*	*180 cm x 24° @ 485 mm radius*
Noise Type Cert No.	*179M*	*179M*	*179M*	*179M*	*179M*	*179M*
AAN approving configuration	*27832 Addendum 1*	*27832 Addendum 1*	*27832 Addendum 1*	*29073*	*29089*	*BMAA-1044*

Designation	*C42 FB100*
Engine Type	*Rotax 912 ULS*
Reduction Gear	*2.43:1*
Exhaust System	*Heggerman*
Intake System	*Twin carburettor*
Propeller Type	*Neuform Fixed Pitch 3 blade*
Propeller Dia x Pitch	*175 cm x 25° @ 310 mm from hub edge giving an MGSRPM of 5100*
Noise Type Cert No.	*179M*
AAN approving configuration	*BMAA-1057*

Note: The maximum ground static engine RPM (MGSRPM) quoted is an indicative value achieved by a correctly pitched propeller.

(7) MANDATORY LIMITATIONS:

(a)	Max Take-Off Weight		450 kg pre Performance Aviation Mod C42PAUK/001 472.5 kg post Performance Aviation Mod C42PAUK/001
(b)	CG Limits		
		Aft Limit	560 mm aft of datum
		Fwd Limit	350 mm aft of datum below 450 kg 366 mm aft of datum above 450 kg
(c)	CG datum		Wing Leading Edge
(d)	Cockpit Loadings		Total
		Min	55 kg
		Max	172 kg Max 120 kg per seat
(e)	Never Exceed Speed		139 mph (121 kt) IAS 103 mph (90 kt) IAS Post Aerosport Mod. C42/019, Flying Without Doors
(f)	Manoeuvring Speed		94 mph (82 kt) IAS 80 mph (70 kt) IAS Post Aerosport Mod. C42/019, Flying Without Doors
(g)	Permitted Manoeuvres		Maximum bank angle 60° Non Aerobatic Normal acceleration limits, +4g / -2g
(h)	Fuel Contents (Max Usable)		50 litres (Pre Aerosport Mods C42/005 and /011) 65 litres (Post Aerosport Mod C42/011) 100 litres (Post Aerosport Mod C42/005)

(i) Power Plant

Engine	Rotax 912 UL	Rotax 912 ULS
Max RPM	5800	5800
MAX CHT*	150 °C	135 °C
MAX EGT	N/A	N/A
Fuel Spec	Unleaded MOGAS Minimum Fuel Grade MON 83, RON 91, AKI 87 AVGAS 100LL Avoid prolonged use of AVGAS	Unleaded MOGAS Minimum Fuel Grade MON 85, RON 95, AKI 91 AVGAS 100LL Avoid prolonged use of AVGAS
Engine Oil Spec	API Class SF or SG	API Class SF or SG
Gearbox oil spec	N/A	N/A
Fuel/Oil Mix	N/A	N/A
Max Coolant Temperature *	120 °C	120 °C
Oil Pressure	2 to 5 bar	2 to 5 bar
Oil Temperature	50 °C to 140 °C	50 °C to 130 °C
Fuel Pressure	N/A	N/A

* For engine S/N with Suffix -01 Coolant Temperature is monitored. Otherwise (older engines) CHT is monitored.

(8) INSTRUMENTS REQUIRED:

ASI	Altimeter	RPM	CHT or Coolant Temperature	Oil Temperature	Oil Pressure	Compass	VSI	Slip ball
Required (0 to 150 mph / 130 kt min.)	Required	Required 0-6000 rpm	Required	Required	Required	Optional	Optional	Optional

(9) CONTROL DEFLECTIONS:

Elevator UP:	30° ± 3°	Tailplane trim tab UP:	1° to 5° (relative to elevator)
Elevator DOWN:	20° ± 3°	Tailplane trim tab DOWN	25° ±3° (relative to elevator)
Ailerons UP:	20° ± 2°	Rudder LEFT:	32° ± 3°
Ailerons DOWN:	14° ± 2°	Rudder RIGHT:	32° ± 3°
Flaps (DOWN):	4.5°, 15° and 42°	(relative to the fuselage tube)	

(10) PILOT'S NOTES, MAINTENANCE MANUALS REFERENCES:

10.1 Manuals approved for use with this aircraft

C42 Owner's Manual	OHB/C42/001
Neuform Variable Pitch Propeller, Assembly and Maintenance Manual	NAM/C42/001
Neuform Variable Pitch Propeller, Operating Manual	NOM/C42/001

10.2 The following placards are to be fitted:-

(a) Flight Limitations Placard (to be visible to pilot)

See Annex D.

(b) Engine Limitations Placard (to be located near to engine instruments)

See Annex D.

(c) Fuel Limitations Placard (to be located near to filler cap)

See Annex D.

(d) Switches

See Annex D.

(e) Parachute System

See Annex D.

(11) MANDATORY MODIFICATIONS / SERVICE BULLETINS / AIRWORTHINESS DIRECTIVES ETC:

See Annex A for required modifications.

(12) MINIMUM PERFORMANCE AT MAX TAKE-OFF WEIGHT (450 kg)

Rate of Climb:	C42 FB80	700 fpm at 70 mph (60 kt) IAS.
	C42 FB100	1000 fpm at 70 mph (60 kt) IAS.
Stall or Minimum Flying Speed:	37 mph (32 kt) IAS at MTOW / idle / full flap.	

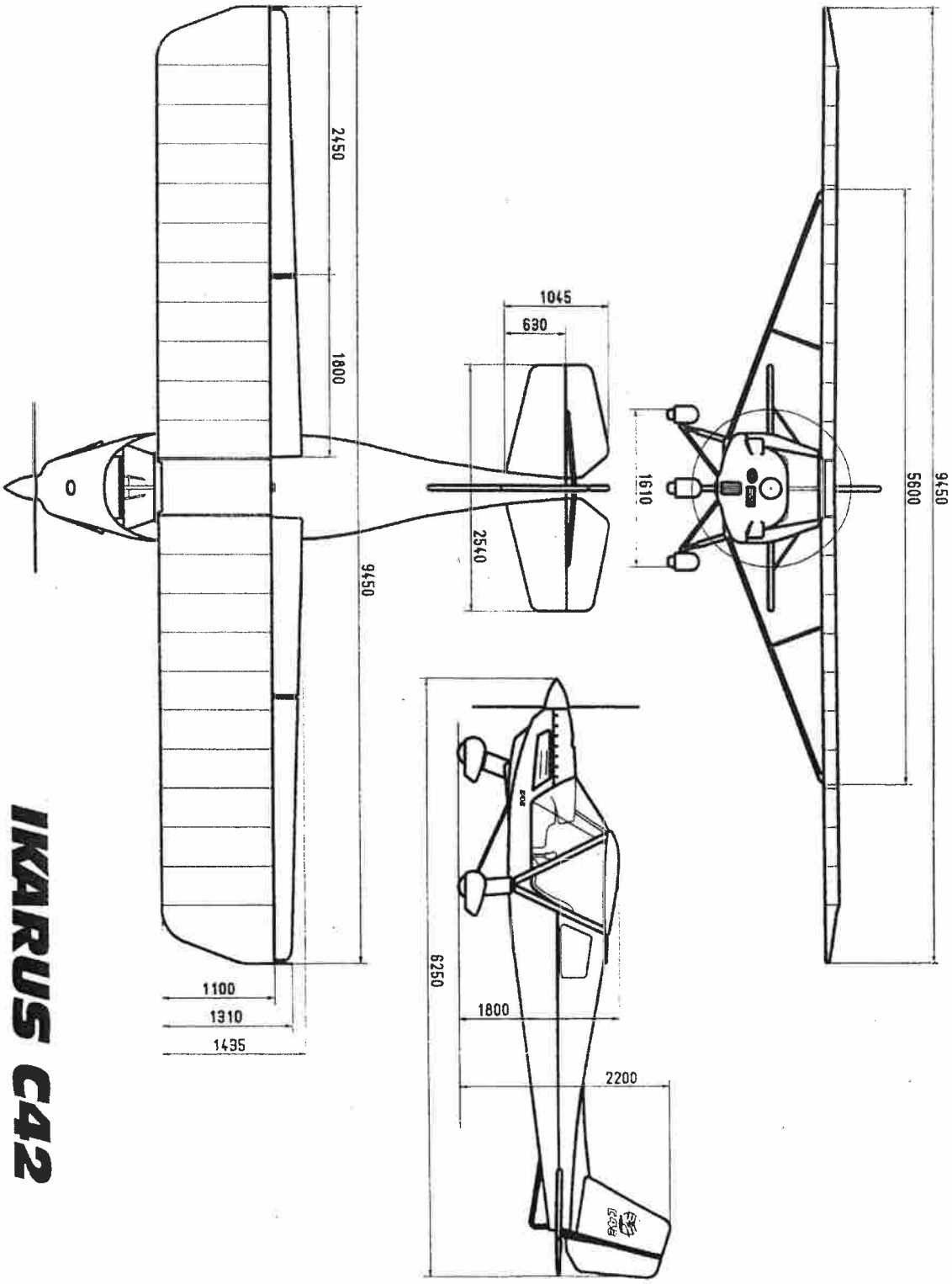
Issue History

Issue No.		Reason and signatory
1	20/10/03	Initial Issue.
2	18/12/03	Ikarus C42 FB80 now approved by AAN 27832. Note deleted from page 1. OSB 16 added to Annex A.
3	02/11/04	Flybuy Ultralights Ltd address amended. Warp Drive 3 blade propeller added as alternative for C42FB 80. OSB 18 added to Annex A.
4	11/01/05	65 Litre Fuel Tank, Modification C42/011, added.
5	10/10/05	Company name and address changed. Neuform Fixed Pitch 3 blade propeller added as alternative for C42 FB100, Modification C42/006. Falcon Artificial Horizon, Modification C42/003 added. Samsonite Luggage Case, Modification C42/004 added. Additional 50 Litre Fuel Tank, Modification C42/005 added. Vertical Card Compass, Modification C42/012 added. Filser ATR 500 Transceiver, Modification C42/016 added. Filser TRT 600 Transponder, Modification C42/017 added. Flying Without Doors, Modification C42/019 added. Seat Load Limit Increase to 120 kg, Modification C42/020 added. Filser ATR 600 Transceiver, Modification C42/022 added.
6	06/12/05	Neuform Variable Pitch 3 blade propeller added as alternative for C42 FB 100, Modification C42/007. Neuform Fixed Pitch 3 blade propeller added as alternative for C42 FB 80, Modification C42/027. Minimum Performance values in para (12) amended.
7	10/03/11	Company name and address changed. Flybuy, Aerosport or Performance Aviation added as descriptor to various modifications. Flap Deflections added to paragraph (9). OSB 24 and OSB 25 added to Annex A. References to Performance Aviation Mods C42PAUK/001 to /005 added. Parachute System Placards added to Annex D.
8	13/04/11	Reference to Performance Aviation Mods: C42PAUK/006 and /012 added.
9	08/08/12	Company name and address changed. C42 FB80 Bravo Serial No. 1110-7175 added to paragraph (6).

10	07/08/17	Company name and address changed. C42 FB100 designation table added to paragraph (6). Coolant temperature limits and associated note added to Power Plant limitations table at paragraph (7)(i). Coolant temperature limitations added to instruments required at paragraph (8). Mandatory Modifications / Service Bulletins updated at Annex A :- Main Fuselage Tube Cracking Modification OSB 29 added, Neuform Prop Hub Cracking OSB 30 added. Optional modifications list at Annex B re-identified as "Red-Air / Red Aviation Optional Modifications" and Optional Modifications 26 through 32 added. Placarded engine limits amended at Annex D to include 120 deg. C max Coolant Temperature applicable to both 80hp and 100 hp engines with S/N with Suffix -01.

A D Goudie 7 August 2017

Illustration of Aircraft - 3 View



ANNEX A – MANDATORY MODIFICATIONS / SERVICE BULLETINS

Flybuy Owners Service Bulletin	OSB 16	Elevator Horn Cracking
Flybuy Owners Service Bulletin	OSB 18	Stub Axle Cracking
Aerosport Owners Service Bulletin	OSB 24	Rudder Horn Bolt Clearance
Aerosport Owners Service Bulletin	OSB 25	Wing Root Rib Weld Cracking
Red Aviation Owners Service Bulletin	OSB 29	Main Fuselage Tube Cracking
Red Aviation Owners Service Bulletin	OSB 30	Neuform Prop Hub Cracking

ANNEX B - APPROVED OPTIONAL MODIFICATIONS

The installation of all optional modifications is to be inspected by an inspector from an Organisation approved by the CAA for the purpose and an entry made in the appropriate logbook(s). Note that other approved modifications may exist which are not listed here.

Flybuy/Aerosport Optional Modifications

1.	Landing Light	42UKA11.10.00
2.	Strobe	42D03.05.00
3.	MIPS	42E10.02
4.	Composite Wing Tips	42CA00
5.	Folding Wings	42A07.00
6.	Microair 760 VHF COM (CAA Approval LA 301068) and Lynx Intercom	42J01A01.00
7.	Provision for ICOM A22E or ICOM A3 VHF COM and Lynx Intercom	42J01A01.01
8.	Microair T2000 Transponder (CAA Approval VC 01206)	42J02A01.00
9.	65 Litre Fuel Tank	C42/011
10.	Falcon Artificial Horizon	C42/003
11.	Samsonite Luggage Case	C42/004
12.	Additional 50 Litre Fuel Tank	C42/005
13.	Vertical Card Compass	C42/012
14.	Filser ATR 500 Transceiver	C42/016
15.	Filser TRT 600 Transponder	C42/017
16.	Flying Without Doors	C42/019
17.	Seat Load Limit Increase to 120 kg	C42/020
18.	Filser ATR 600 Transceiver	C42/022

Performance Aviation Optional Modifications

19.	472.5 kg Weight Increase (an approved Parachute System must also be fitted)	C42PAUK/001
20.	Introduction of Ikarus C42 FB80 Bravo and Ikarus C42 FB100 Bravo	C42PAUK/002
21.	Junkers Reserve Parachute	C42PAUK/003
22.	Beringer Brakes	C42PAUK/004
23.	Kiev 283/1800 Propeller	C42PAUK/005
24.	Galaxy Reserve Parachute	C42PAUK/006
25.	Kiev 263/1700 Propeller	C42PAUK/012

Red-Air / Red Aviation Optional Modifications

26.	FUNKE ATR833 Radio	C42RAUK/02
27.	FUNKE TRT800H Transponder	C42RAUK/03
28.	Super B 5200 LiFePO4 Battery	C42RAUK/09
29.	Cowl flap with Warning light (Bravo only)	C42RAUK/10
30.	Sailplane Tow Kit	C42RAUK/12
31.	Tubular engine mount (Bravo only)	C42RAUK/15
32.	Electric Flaps	C42RAUK/19

ANNEX C - WEIGHING INFORMATION

1.	CG Datum:	Wing Leading Edge
2.	Weighing attitude:	Stabiliser horizontal
3.	Mainwheel moment arm:	See Owner's Manual for individual aircraft
4.	Nosewheel moment arm:	See Owner's Manual for individual aircraft
5.	Fuel moment arm:	950 mm aft of datum
6.	Crew moment arm:	400 mm aft of datum
7.	Crew weights:	Minimum 55 kg / maximum 172 kg
8.	Aft CG Limit:	560 mm aft of datum
9.	Fwd CG Limit:	350 mm aft of datum below 450 kg 366 mm aft of datum above 450 kg

ANNEX D

EXAMPLE PLACARDS

(a) Flight Limitations Placards (to be visible to pilot)

V_{NE}	139 mph (121 kt)
V_{FE}	72 mph (63 kt)

Flying Without Doors
V_{NE} 103 mph (90 kt)
V_A 80 mph (70 kt)

This aircraft has not been certified to an international requirement.
Aerobatics and spinning prohibited.
Flight by day and in VFR only.
Smoking prohibited.

Empty weight *	
Date of Weighing	
Max. Weight * **	**450 kg**
Max cockpit load	**172 kg**
Min. cockpit load	**55 kg**
Max. load per seat	**120 kg**
Max. permitted fuel at max. cockpit load **	**litres**
Max. permitted cockpit load with max. fuel **	**kg**

* This must match the most recent W&CG report for the aircraft.
** Actual values to be entered following the most recent W&CG report for the aircraft
*** 472.5kg with Mod. C42PAUK/001 and an approved Parachute System.

(b) Engine Limitations Placard (to be located near to engine instruments)

For the 80hp:

RPM max. (5 mins)	5800 rpm
RPM max. continuous	5500 rpm
Oil pressure	2 – 5 bar
Oil Temp.	Min. 50°C
Oil Temp.	Max. 140°C
CHT*	Max. 150°C

* For engine S/N with Suffix -01, CHT replaced with Coolant Temp. Max. 120°C

For the 100hp:

RPM max. (5 mins)	5800 rpm
RPM max. continuous	5300 rpm
Oil pressure	2 – 5 bar
Oil Temp.	Min. 50°C
Oil Temp.	Max. 130°C
CHT*	Max. 135°C

* For engine S/N with Suffix -01, CHT replaced with Coolant Temp. Max. 120°C

(c) Fuel Limitations Placards

Usable Fuel Capacity 50 Litres
or
Usable Fuel Capacity 65 Litres
or
Usable Fuel Capacity 100 Litres

For the 80 hp Rotax:

Unleaded MOGAS
Minimum Fuel Grade
MON 83, RON 91, AKI 87
AVGAS 100LL
Avoid prolonged use of Avgas

For the 100 hp Rotax:

Unleaded MOGAS
Minimum Fuel Grade
MON 85, RON 95, AKI 91
AVGAS 100LL
Avoid prolonged use of Avgas

(d) Switches

All switches are to be marked with function and sense (up=on, down=off).

(e) Parachute System

Within pilots view:

Occupant Warning
The parachute recovery system installation has been approved by BMAA on the basis that, as far as is practicable to demonstrate, it will create no hazard to the aeroplane, its occupant(s) or ground personnel whilst the system is not deployed; and that when properly maintained, the risk of malfunction, deterioration or inadvertent deployment is minimised. The BMAA has not approved the system itself or considered the circumstances, if any, in which it might be deployed. The effectiveness of the system for the safe recovery of the aeroplane has not been demonstrated.

Close to deployment handle:

WARNING – EMERGENCY PARACHUTE
Pull Handle Firmly to Deploy
Unapproved Equipment - see Pilot's Handbook

On exterior of aircraft, close to parachute breakthrough panel:

DANGER

and:

Ballistic Recovery System

United Kingdom Civil Aviation Authority

MPD No: 2004-005 R1

Issue Date: 5 May 2004

MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2004-005 R1 FLY BUY ULTRALIGHTS

Subject: Elevator horn cracking.

Applicability: Fly Buy Ultralights Ikarus C42 variants FB UK, FB 80, FB 100 and FB 100 VLA microlights.

Reason: A crack has been found on one of the elevator horn plates on an Ikarus C42 microlight that had flown 59 hours. The crack appeared at the welded junction of the right hand horn plate with the collar tube, at the plate's rear edge, and appears to be associated with a small weld undercut at that point. Drawing 42UKD02.06.00, Issue 26/10/2002, Elevator Horn Assembly refers. This MPD has been raised to Revision 1 to extend the compliance period for the kit built microlights.

Compliance: Replace the elevator horn assembly with a modified component in accordance with Fly Buy Ultralights Owner's Service Bulletins OSB 16 Issue 1 dated 17 December 2003 for factory built microlights and OSB 17 Issue 3 dated 30 April 2004 for the kit built microlights. The modified component part number 42UKD02.06.00, Issue 10/12/03 has an improved weld pattern. Factory built microlights must have had the Elevator Horn Assembly replaced by 17 March 2004 in accordance with OSB 16 Issue 1 and kit built microlights must have the Elevator Horn Assembly replaced by 5 June 2004 in accordance with OSB 17 Issue 3.

Prior to the replacement of the elevator horn assembly, factory built microlights must be operated in accordance with the terms of Owner's Service Bulletin OSB 16 and kit built microlights in accordance with OSB 17.

Copies of the Owner's Service Bulletins may be obtained from:

Fly Buy Ultralights Ltd
Shaw Lane, Shifnal
Telford, Shropshire, TF11 9PN

Tel: 01952 461181
Fax: 01952 462654

Record compliance with this MPD in the aircraft log book.

The original MPD became effective 8 March 2004, this MPD becomes effective on 7 May 2004.

Enquiries regarding this MPD should be referred to Mr Nigel Davis, Certification and Approvals Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573309 Fax: 01293 573976 E-mail: nigel.davis@srg.caa.co.uk

United Kingdom
Civil Aviation Authority

MPD No: 2004-013

Issue Date: 12 October 2004

MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2004-013 FLY BUY ULTRALIGHTS

Subject: Stub axle shock absorber attachment cracking

Applicability: Fly Buy Ultralights Ikarus C42 Variants FB UK, FB 80, FB 100 and FB 100 VLA microlight aeroplanes.

Reason: Two cracked stub axles have been found on Ikarus C42 microlight aeroplanes in Germany. The cracks were found on the 5mm thick plates near the junction with the shock absorber lower attachment bush. The microlight aeroplanes had completed approximately 200 hours. The equivalent component on UK Ikarus C42 microlight aeroplanes, drawing 42UKA09.02.00 Issue 26/10/2003 Stub Axle Assembly, has plates of increased, 6mm thickness.

Compliance: Before further flight from the effective date of this MPD, inspect the stub axles for cracks on microlight aeroplanes with more than 50 hours in accordance with Fly Buy Ultralights Owner's Service Bulletin, OSB 18, Issue 1, dated 29 September 2004. If cracks are found no further flight is permitted until the cracked component has been replaced with a new item of the same part number or specified approved alternative.

Note: The inspection will be required at each 50 hour check on the aircraft and the relevant details have been included in the C42 Owners Manual at Issue 5.

Copies of the Owner's Service Bulletin may be obtained from:

Fly Buy Ultralights Ltd
Shaw Lane, Shifnal
Telford, Shropshire, TF11 9PN

Tel: 01952 461181
Fax: 01952 462654

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 15 October 2004.

Enquiries regarding this MPD should be referred to Mr Nigel Davis, Certification and Approvals Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573309 Fax: 01293 573976 E-mail: nigel.davis@srg.caa.co.uk

United Kingdom Civil Aviation Authority

MPD No: 2007-007

Issue Date: 27 June 2007

MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2007-007 FLY BUY ULTRALIGHTS/AEROSPORT

Subject: Fouling of Rear Fuselage Composite Fairing by Bolts on Rudder Horn.

Applicability: Ikarus C42 FB80 and C42 FB100 microlights and C42 FB UK and C42 FB 100 VLA homebuilt microlights.

Reason: An occurrence has been reported where during a sideslip manoeuvre some temporary restriction of rudder movement was evident. When an investigation was carried out on the ground it was found that there was a small static clearance between the bolts on the rudder horn and the rear fuselage composite fairing but it was suspected that under the airloads of the sideslip manoeuvre the composite fairing had flexed sufficiently to cause the foul and impede the rudder.

Compliance: Before further flight from the effective date of this MPD, carry out the inspection detailed in Aerosport Owner's Service Bulletin OSB 24 Issue 1 dated 20 March 2007. As required in the OSB, ensure that there is a minimum clearance of 10 mm between all parts of the rudder horn and the rear fuselage composite fairing throughout the full range of rudder movement.

Copies of the Owner's Service Bulletin may be obtained from:

Aerosport Ltd
Aerosport House
Wolverhampton Airport
Bobbington
Stourbridge
DY7 5DY

Tel: 01384 221550
Fax: 01384 221560

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 30 June 2007.

Enquiries regarding this MPD should be referred to Mr Nigel Davis, Aircraft Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573309 Fax: 01293 573976 E-mail: nigel.davis@srg.caa.co.uk

United Kingdom Civil Aviation Authority

MPD No: 2007-008

Issue Date: 23 July 2007

MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2007-008 FLY BUY ULTRALIGHTS/AEROSPORT

Subject: Cracking in Weld on Wing Root Rib

Applicability: Ikarus C42 FB 80 and C42 FB 100 microlights and C42 FB UK and C42 FB 100 VLA homebuilt aircraft.

Reason: An occurrence has been reported where during a routine inspection a 20mm long crack was discovered in the weld that joins the wing root rib to the wing leading edge. It is not clear whether this was as a result of a manufacturing fault or fatigue failure or a combination of both possible causes.

Compliance: Before further flight, from the effective date of this MPD, carry out the inspection detailed in Aerosport Owner's Service Bulletin OSB 25 Issue 2 dated 19 July 2007. As required in the OSB, inspect the wing root rib welds for cracks, using dye penetrant techniques as required. Welds on both wing root ribs around the leading and trailing edges must be inspected.

If a crack is found it must be reported to Aerosport and repaired in accordance with an approved procedure and by suitably qualified personnel.

The inspection must be repeated on an annual basis.

Copies of the Owner's Service Bulletin may be obtained from:

Aerosport Ltd
Aerosport House
Wolverhampton Airport
Bobbington
Stourbridge
DY7 5DY

Tel: 01384 221550
Fax: 01384 221560

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 25 July 2007.

Enquiries regarding this MPD should be referred to Mr Nigel Davis, Aircraft Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573309 Fax: 01293 573976 E-mail: nigel.davis@srg.caa.co.uk

Civil Aviation Authority

EMERGENCY MANDATORY PERMIT DIRECTIVE

Number: 2016-004-E

Issue date: 28 June 2016

In accordance with Article 22(1) of The Air Navigation Order 2009, as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.	
Type Approval Holder's Name: Malcolm Stewart t/a Red Aviation	**Type/Model Designation(s):** Ikarus C42
Title:	**Fuselage – Main Fuselage Tube – Inspection for Cracking**
Manufacturer:	Various
Applicability:	Ikarus C42 FB UK Ikarus C42 FB100 VLA Ikarus C42 FB80 Ikarus C42 FB100 Ikarus C42 FB80 Bravo Ikarus C42 FB100 Bravo
Reason:	High hours examples of C42 aircraft have exhibited cracks emanating from the corners of the cut-outs in the main fuselage tube where the nose undercarriage leg and the A-strut are attached. The problem appears primarily to affect high hours early examples of the C42 on which the affected cut outs were made manually. Later models have machined cut-outs which are thought less likely to exhibit the cracking problem. More recently the A-strut attachment has been re-designed and there are no cut-outs for this item in the fuselage tube. At least for the initial issue of the service bulletin, all C42 aircraft must be inspected regardless of the build standard and manufacturing standard of the fuselage tube. If such cracks were allowed to propagate, the structural integrity of the nose undercarriage leg, A-strut and engine mountings may be compromised.
Effective Date:	29 June 2016

Compliance/Action:	Compliance is required as follows, unless previously accomplished: 1. For aircraft with over 2000 hours of operation, carry out the inspection in paragraph 5 of this MPD before further flight. 2. For aircraft with over 1000 hours of operation, carry out the inspection in paragraph 5 of this MPD at the next annual inspection or the next 100 hour inspection, whichever occurs first. 3. Repeat the inspection carried out under paragraph 1 or paragraph 2 of this MPD at 500 hour intervals. 4. If the main fuselage tube has been replaced in an aircraft, the requirements in paragraphs 1, 2 and 3 of this MPD are applicable from the time of installation. 5. Visually inspect the main fuselage tube, inside and outside surfaces, in the vicinity of the nose undercarriage leg and A-strut (if applicable) attachment cut-outs for cracking. See example photographs in the referenced Owner's Service Bulletin. To facilitate the inspection the upper and lower cowlings must be removed as well as the sound deadening foam on the cockpit side of the firewall. If there is doubt whether there is cracking, dye penetrant crack detection may be used in addition to the visual inspection. 6. The aircraft owner may carry out the inspection in paragraph 4, if they consider themselves capable. Alternatively, a BMAA or LAA inspector may carry out the inspection. 7. If any cracks are found, ground the aircraft then inform Red Aviation and obtain and implement a repair scheme before further flight.
ENSURE COMPLIANCE WITH THIS MPD IS RECORDED IN THE AIRCRAFT LOGBOOK	
Reference Publications:	Malcolm Stewart t/a Red Aviation Owner's Service Bulletin Number 29, Issue 1, dated 16 June 2016.
Remarks:	1. This MPD was not posted for consultation because of the urgency of the requirement. *2.* Enquiries regarding this Mandatory Permit Directive should be referred to: GA Unit, Civil Aviation Authority, Safety and Airspace Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR.
	Tel: +44 (0)1293 573988
	E-mail: ga@caa.co.uk

Civil Aviation Authority

EMERGENCY MANDATORY PERMIT DIRECTIVE

Number: 2016-006-E

Issue date: 15 July 2016

In accordance with Article 22(1) of The Air Navigation Order 2009, as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.	
Type Approval Holder's Name: Malcolm Stewart t/a Red Aviation	**Type/Model Designation(s):** Ikarus C42
Title:	**Propeller – Forward Hub – Inspection for Cracking**
Manufacturer:	Various
Applicability:	Ikarus C42 FB UK Ikarus C42 FB100 VLA Ikarus C42 FB80 Ikarus C42 FB100 Ikarus C42 FB80 Bravo Ikarus C42 FB100 Bravo aircraft fitted with a Neuform Ground Adjustable Propeller
Reason:	Cracks have occurred starting from the centre hole in the forward hub on some Neuform propellers. Three aircraft have been affected with hours flown ranging from 400 to 1050. The cause of the cracking is unknown, but several propellers have done over 3,000 hours and one example with 6,500 hours with no problem. It also seems to be only occurring in the UK as the problem has not been reported to Comco-Ikarus on any C42's in Europe, where there are many more flying with Neuform propellers. If such cracks were allowed to propagate, the structural integrity of the propeller may be compromised, possibly resulting in the loss of one or more blades.
Effective Date:	15 July 2016

Compliance/Action:	Compliance is required as follows, unless previously accomplished: 1. Before further flight, carry out the inspection in paragraph 3 below of this MPD. 2. Repeat the inspection in paragraph 3 below of this MPD at annual intervals. 3. Remove the propeller spinner and visually inspect the front hub for evidence of cracking from the centre hole. If there is doubt whether there is cracking, dye penetrant crack detection may be used in addition to the visual inspection. 4. The aircraft owner may carry out the inspection in paragraph 3 if they consider themselves capable. Alternatively, a BMAA or LAA inspector may carry out the inspection. 5. If any cracks are found, ground the aircraft then inform Red Aviation and obtain and implement a repair scheme before further flight.
ENSURE COMPLIANCE WITH THIS MPD IS RECORDED IN THE AIRCRAFT LOGBOOK	
Reference Publications:	Malcolm Stewart t/a Red Aviation Service Bulletin Number 30 Issue 1 dated 5 May 2016.
Remarks:	1. This MPD was not posted for consultation because of the urgency of the requirement. *2.* Enquiries regarding this Mandatory Permit Directive should be referred to: GA Unit, Civil Aviation Authority, Safety and Airspace Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR.
	Tel: +44 (0)1293 573988
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