

CIVIL AVIATION AUTHORITY – SAFETY REGULATION GROUP
MICROLIGHT TYPE APPROVAL DATA SHEET (TADS)



NO: BM-24 ISSUE: 10

TYPE: CHEVVRON 2-32

- | | | |
|-----|---|---|
| (1) | MANUFACTURER | AMF Microflight Ltd / Aviation Enterprises Ltd
(ceased trading)
BMAA is responsible for continued airworthiness |
| (2) | UK IMPORTER | NA |
| (3) | CERTIFICATION | BCAR Section S – Advance copy March 1983
as amended 11 October 1988 |
| (4) | DEFINITION OF
BASIC STANDARD | CA 1000 Iss 3 |
| (5) | COMPLIANCE WITH THE MICROLIGHT DEFINITION | |
| | (a) MTOW | Version B 383 kg
Version C 390 kg |
| | (b) No. Seats | 2 |
| | (c) Maximum Wing Loading | 21.75kg/m ² |
| | (d) V _{so} | 28 kt CAS V B
31 kt CAS V C |
| | (e) Permitted range of crew weights | 55 – 90 kg pilot
0 – 90 kg crew |
| | (f) Typical Empty Weight (ZFW) | 190 kg |
| | (g) Max Allowable ZFW
MTOW - 172 kg crew - 1 hr fuel
(10 litres / 7.2 kg) | Version B 204 kg
Version C 211 kg |

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(6) POWER PLANTS

Designation	Konig 4 cylinder radial	Konig 4 cylinder radial		
Engine Type	SD 570	SD 570		
Reduction Gear	28:60 (2.14:1) Toothed Belt	28:60 (2.14:1) Toothed Belt		
Exhaust System	Konig st st silencer with after muffler	Konig st st silencer with after muffler		
Intake System	Direct	Direct		
Propeller Type	Konig 3 blade wooden	AMF Comp Mk1 3 blade		
Propeller Dia x Pitch	60" dia, 16.5° pitch at root	60" dia, 20° pitch at 0.5m radius		
Noise Type Cert No.	41M Iss 4	41M Iss 4		
AAN approving configuration	19919 Add 2	23508		

(7) MANDATORY LIMITATIONS

- | (a) Max Take-Off Weight | Version B 383 kg
Version C 390 kg | | | | | | | | | | | | |
|----------------------------------|--|-------|--------|------|-------|-----|-------|---|-------|-----|-------|-------|--------|
| (b) CG Limits | Aft limit 30.6% mac aft of datum
Fwd Limit 18.7% aft of datum | | | | | | | | | | | | |
| (c) CG datum | Wing root leading edge
(see Annex C). | | | | | | | | | | | | |
| (d) Cockpit Loadings | <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;"></th> <th style="width: 20%;">Pilot</th> <th style="width: 20%;">Crew</th> <th style="width: 20%;">Total</th> </tr> </thead> <tbody> <tr> <td>Min</td> <td>55 kg</td> <td>-</td> <td>55 kg</td> </tr> <tr> <td>Max</td> <td>90 kg</td> <td>90 kg</td> <td>180 kg</td> </tr> </tbody> </table> | | Pilot | Crew | Total | Min | 55 kg | - | 55 kg | Max | 90 kg | 90 kg | 180 kg |
| | Pilot | Crew | Total | | | | | | | | | | |
| Min | 55 kg | - | 55 kg | | | | | | | | | | |
| Max | 90 kg | 90 kg | 180 kg | | | | | | | | | | |
| (e) Never Exceed Speed, V_{NE} | 77 kt IAS | | | | | | | | | | | | |
| (f) Manoeuvring Speed, V_A | 62 kt IAS | | | | | | | | | | | | |
| (g) Flap Limiting Speed, V_F | 50 kt IAS | | | | | | | | | | | | |
| (h) Permitted Manoeuvres | Stalls, steep turns, max bank angle 60°
Non Aerobatic
Normal acceleration limits, +4 / -2g | | | | | | | | | | | | |
| (i) Fuel Contents (Max Useable) | 32 or 50 litres optional | | | | | | | | | | | | |

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(j) Power Plant

Engine	Konig SD 570	Konig SD 570		
Max RPM	4200 Cont 4400 Max	4200 Cont 4400 Max		
MAX CHT	440 ⁰ F 225 ⁰ C	440 ⁰ F 225 ⁰ C		
Fuel Spec	83 MON or 90 RON minimum unleaded MOGAS to BS(EN)228 or AVGAS 100LL.			
Engine Oil Spec	2 Stroke	2 Stroke		
Fuel/Oil Mix	33:1 Mineral oil	(SB) 50:1 fully synthetic with unleaded fuel		

(8) INSTRUMENTS REQUIRED

ASI	Altimeter	RPM	CHT EGT	Compass	Fuel gauge	VSI	Slip ball
Required	Required	Required	Optional	Required	Required	Optional	Optional

(9) CONTROL DEFLECTIONS

Elevator UP:	17.5° ± 1°	Rudder LEFT:	22° ± 2°
Elevator DOWN:	10° ± 1°	Rudder RIGHT:	22° ± 2°
Ailerons* UP:	33° ± 2°		
Ailerons* Down:	10° ± 2°		

(10) PILOT'S NOTES, MAINTENANCE MANUALS REFERENCES

(10.1) Manuals approved for use with this aircraft.

Flight & Maintenance Manual for Chevron 2-32, 2-32A, 2-32B

(10.2) See Annex D for details of the placards that are to be fitted.

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

See Annex A for MPDs.

Service Bulletins - Mandatory, Alert & PTNF only. Minor, optional & recommended not included.

SB No	Date	Classification	Subject
8	16/01/89	Immediate	Fuel tank sender joint leak
11	24/05/89	Mandatory	Wing covering
13	03/07/89	Alert	Engine vacuum take off
15	25/09/90	Alert	Front wing pickup assembly
19	21/12/90	Mandatory	Loose wooden prop blades
20	05/02/91	Alert	Earth buss corrosion
21	22/07/91	Alert	Split Flap op push rod
22	22/07/91	Alert	Adjustable rudder pedals
25	22/07/91	Alert	Spark plug cap retention
27	30/10/91	Mandatory	Engine big end bearings (temp)
29	19/02/92	Mandatory	Engine big end bearings (final)
32	01/01/94	PTNF	Main UC mounting pads
33	30/06/94	Mandatory	Engine top rear mounting bolt
36	22/05/95	Mandatory	Fuel tank capacity
37	22/05/95	PTNF	Wood prop blade security
40	01/09/95	Mandatory	Fuel gauge calibration
41	19/11/95	PTNF	Fuel boost pump
46	15/04/96	Mandatory	Cracked engine frame
49	04/09/97	Mandatory	Position of flap idler drive bracket
53	07/04/00	Mandatory	Cracked prop hubs

(12) MINIMUM PERFORMANCE AT MAX TAKE-OFF WEIGHT

Rate of Climb: 375 fpm at 38 kt IAS

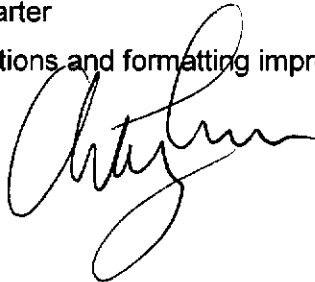
Stall or Minimum Flying Speed: 2-32B 29 kt IAS at MTOW / idle
2-32C 30 kt IAS at MTOW / Idle

ISSUE HISTORY

CIVIL AVIATION AUTHORITY – SAFETY REGULATION GROUP
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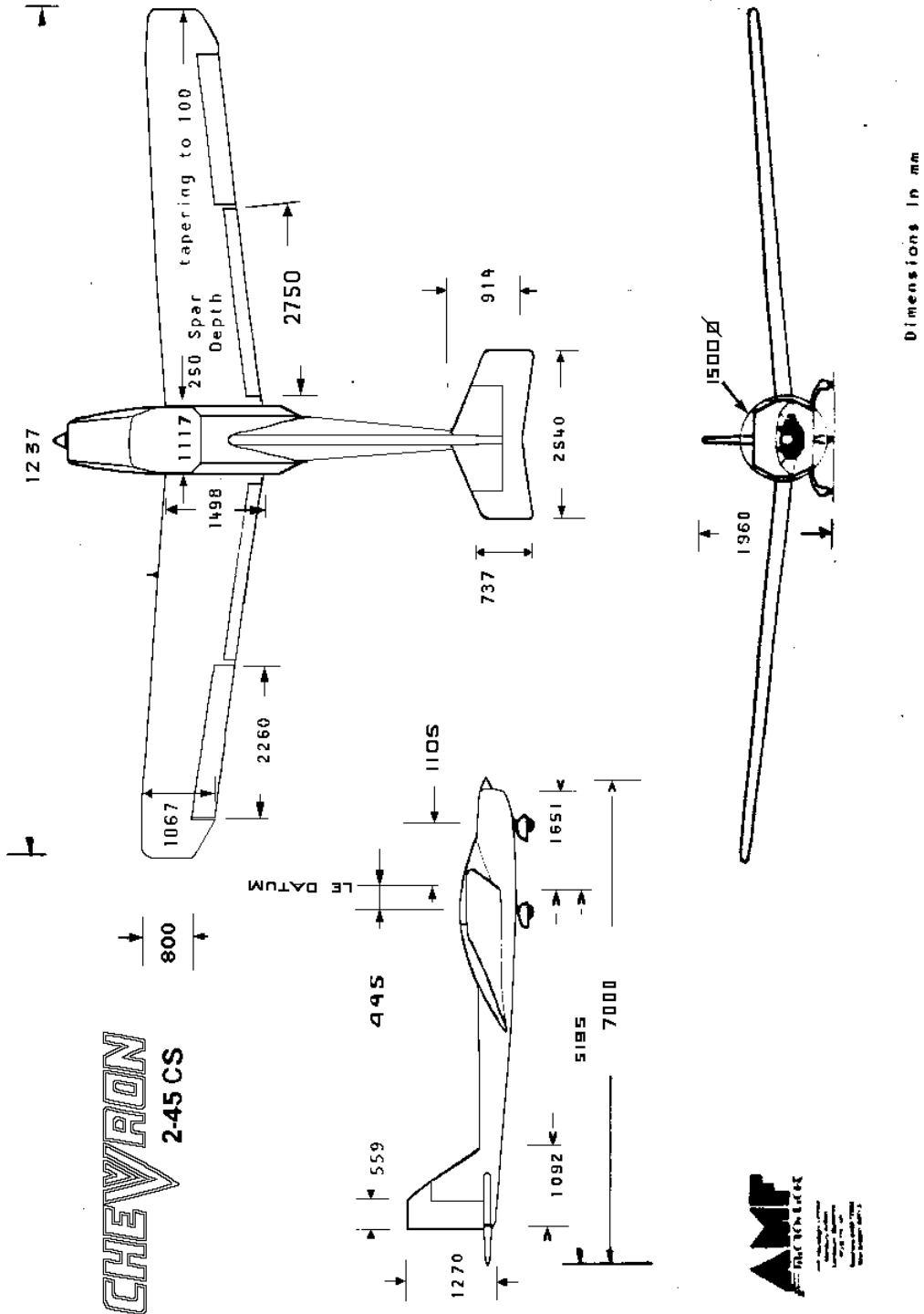
<u>Issue No.</u>	<u>Reason and signatory</u>
1 14/08/87	Initial issue W A Bevan
2 09/06/88	Addition of noise certification information and approved modifications list W A Bevan
3 06/12/88	Amendment of certification basis, c.g. range, pitch control deflections and additional approved modifications W A Bevan
4 00/01/89	Change to fuel capacity and additional approved modifications W A Bevan
5 15/03/89	Clarification of the MTOW limitation W A Bevan
6 18/04/90	Increase in MTOW, corrections to engine details and additional approved modifications W A Bevan
7 13/06/91	Increase in MTOW (Mod 60) and additional approved modifications W A Bevan
8 13/08/93	Update of approved modifications W A Bevan
9 03/09/03	Revised to new format & update of approved mod list A M Carter
10 04/03/13	Corrections and formatting improvements A Love



**CIVIL AVIATION AUTHORITY – SAFETY REGULATION GROUP
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ILLUSTRATION OF AIRCRAFT - 3 VIEW



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ANNEX A – MANDATORY MODIFICATIONS

MPD 1995-018	Wing covering (SB11)
MPD 1995-019	Engine big end bearings (SB29)
MPD 1995-088	Loose wooden propeller blades (SB19)
MPD 1995-096	Engine main mounting bolts (SB33)
MPD 1995-104	Fuel tank capacity (SB 36)
MPD 1997-018	Position of flap idler drive bracket (Mod 111)

ANNEX B - APPROVED OPTIONAL MODIFICATIONS

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

<u>Mod</u>	<u>Intro at Serial No</u>	<u>Description</u>
1	006	Carbon tape mfr change
2	006	Rudder pedal bungee
3	004	Ignition switch guard
4	004	Brake pivot float
5	006 only	Rear fuselage carbon type change
6	004	Flap mod
7	002 only	Omnibus Mod – prototype mods to TA standard (becomes Chevron 2-32A)
8	006	Lock flaps
9	006	Add fixed trim tab
10	007	Dual throttle option
11	007	Seat back adjustment
12	007	Manual Update
13	007	Carburettor change
14	007	Suppressed plug
15	007	Modified aileron setting angle now 10 down, 33 Up
16	004	Fuel boost pump
17	008	Flap root rib
18	008	Flap drive brg thrust flange
19	008	Flap handle inner tube
20	009	Reversed air intake / exhaust
21	009	New elevator
22	009	New wing covering material
23	009	Wheel mud scraper option
24	009	Compass binnacle
25	002	Wheel datum position correction

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<u>Mod</u>	<u>Intro at Serial No</u>	<u>Description</u>
26	009	Increased flap deflection
27	<i>Not used</i>	
28	010	Icom radio installation
29	010	Compass console
30	010	Flap Indicator light
31	010	Improved wheel brake
32	010	Fuel pressure monitor
33	010	Air filter
34	010	Additional cooling blades
35	010	Pilots manual amendment 6
36	011	Reinforced wing covering
37	007	Mk II elevator (smaller)
38	011	Canopy frame
39	013	Cockpit strut
40	006	Fuel filler tube extension for temporary limit to max fuel cap
41	All	Inc max tow to 842 lbs
42	014	Cranked stick
43	004	Electric generator
44	016	Adjustable rudder pedals
45	012	Optional silencer
46	003	Spark plug type
47	004	Wing cover fix top
48	<i>Not used</i>	
49	004	EGT option
50	004	Trim tab
51	016	Navigation lights
52	004	Carb heat
53	004	Air filter
54	<i>Not used</i>	
55	004	Inc control deflections
56	019 only	Special flap handle
57	<i>Not used</i>	
58	019	Tillotson carb
59	008 only	Rudder pedal extensions
60	026	Drag flaps/ inc mtow to 860 lbs / wing loading to 22.16 kg/sqm
61	022	Hydraulic disc brakes
62	<i>Not used</i>	
63	025	Tillotson carb primer
64	027	Total energy probe
65	033	Composite propeller
66	029	Plug cap retainer

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<u>Mod</u>	<u>Intro at Serial No</u>	<u>Description</u>
67	033	Big end bearings
68	033	Aileron push rod bearings
69	Cancelled	
70	033	Rudder elevator pivot brg material
71	033	Modified Generator mounting
72	Cancelled	
73	All	Carb connection hose length
74	035	Main UC lay up
75	Cancelled	
76	033	Aileron push rod joint
77	Cancelled	
78	036	Limbach engine
79	All	Wood prop blade shim if dried
80	As reqd	Konig engine flywheel sleeve
81	As reqd	Main UC mount tube reinforce
82	As reqd	Engine top pulley fix
83	Cancelled	
84	037	Fuel drain insert
85	037	Cockpit side and seat back stiffening
86	037	Wing tip mod 2.45 to 2.32
87	036	Konig engine frame gusset
88	039	UD carbon 100 to 125 gm/sq m
89	039	LED spec change
90	039	Starter cable 12 to 16 sq mm
91	039	Seat back materials change
92	039	Canopy latch mod
93	039	Rudder pedal
94	012 only	Plated crankshaft
95	039	Firewall material
96	039	Higher arm rest
97	012 only	Fuel tank sender fix
98	012 only	Rear fuse rudder push rod fix
99	037	Engine ignition coil new type
100	037	Spinner anti chafe tape
101	GN only	GN repair
102	038	Kevlar spec change
103	039	Exhaust gasket
104	Cancelled	
105	Cancelled	
106	VOO only	Tank shape mod
107	ZZ only	Nosewheel tube brg

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<u>Mod</u>	<u>Intro at Serial No</u>	<u>Description</u>
108	XX only	Main spar repair
109	040	Tillotson carb inlet mldg
110	Cancelled	
111	040	Flap lever stop
112	040	Mk 2 wheel brake disc
113	040	Spark plug for tilltoson carb BPR 7HS
114	041	Fuel cap
115	VIP only	Temp. Fuel capacity limiter
116	TRJ only	Hugh Bland ferry tank mod – discontinued
117	002 only	Carbon fibre silencer casing
118	All	New prop hub
119	VIP only	Nosewheel bolt

ANNEX C
WEIGHING INFORMATION

1. CG Datum: Wing root leading edge
2. Weighing attitude: Top of rear fuselage level
3. Mainwheel moment arm: 0.438 m aft of datum
4. Nosewheel moment arm: 1.162 m fwd of datum of datum
5. Fuel moment arm: 0.334 m aft of datum
6. Crew moment arm: 0.157 m fwd of datum
7. Crew weights: Minimum 55 kg / maximum 90/180 kg
maximum reducible, not below 86 kg, if req
8. Aft CG Limit: 0.261 m aft of datum
9. Fwd CG Limit: 0.080 m aft of datum

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ANNEX D
EXAMPLE PLACARDS

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

FLIGHT LIMITATIONS PLACARD		
CHEVRON 2-32 C G - ????		
CREW & BAGGAGE	55 - 180	KG
EMPTY WEIGHT*	190	KG
MTOW	390	KG
V _{NE} (IAS)	77	KT
V _A (IAS)	62	KT
V _{FE} (IAS)	50	KT
AEROBATICS & SPINNING PROHIBITED		
NO SMOKING		

* This must match the most recent W&CG report for the aircraft.

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

A placard showing the limitations for all indicated engine parameters is to be mounted close to the engine instruments. Alternatively limitations shown as coloured markers (red for danger, amber for caution) on the instruments

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

The example below is based on an empty aircraft weight of 190kg and a fuel tank capacity of 50 litres

FUEL	
Capacity 50 Litres	
Cockpit Weight (kg)	Max. Fuel Load (litres)
180	27
175	34
170	41
165	48
164	FULL
90 RON minimum unleaded to BS(EN)228 or AVGAS 100LL	

(d) Switches

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