CIVIL AVIATION AUTHORITY – SAFETY REGULATION GROUP

MICROLIGHT TYPE APPROVAL DATA SHEET (TADS)

NO: BM62 ISSUE: 3

TYPE: Thruster T600N 450 JAB

(1) MANUFACTURER: Thruster Aircraft (UK)
Continued Support: Thruster Aircraft LLP
North Hanger
Wickenby Airfield
Langworth, Lincs
LN3 5AX

(2) UK IMPORTER: N/A

(3) CERTIFICATION: BCAR Section S Issue 2

(4) DEFINITION OF BASIC STANDARD: Mod TAS001 Issue 1 dated 18 April 1995. Master Drawing List form F20 [450] Issue 1 dated 1st May 2000, Mod TAS 020 and Mod TAS 022

(5) COMPLIANCE WITH THE MICROLIGHT DEFINITION

(a)	MTOW	450	kg
(b)	No. Seats	2	
(c)	Maximum Wing Loading	28.68	kg/m²
(d)	Vso	31.5	kn CAS
(e)	Permitted range of seat loading*	55-90	kg per seat
(f)	Typical Empty Weight (ZFW)	262	kg
(g)	Max ZFW + 172 kg crew + 1 hr fuel (21litres /15 kg)	450	kg
(h)	Max ZFW + 86 kg pilot + full fuel (21litres /15 kg)	389	kg
(i)	Max ZFW at initial permit issue	267	kg

**Note: It is the Pilot's responsibility that the aircraft is not flown outside the permitted MTOW*

(6) POWER PLANTS

Designation	T600N [450]			
Engine Type	Jabiru			
Reduction Gear	None			
Exhaust System	Jabiru			
Intake System	Single Air Filter			
Propeller Type	Warp-Drive 2 Blade			
Propeller Dia x Pitch	64" @ 8.5 deg at tip			
Noise Type Cert No.	44m Issue 17			
AAN approving configuration	AAN27393			

(7) MANDATORY LIMITATIONS:

(a) Max Take-Off Weight 450 kg

(b) CG Limits
Aft Limit: 501mm Aft of datum
FWD Limit: 415mm Aft of datum @ MTOW 450kg

(c) CG datum Front Leading Edge Spar

(d) Cockpit Loadings

	Port	Starboard	Total
Min:	55 kg	Either Seat	55 kg
Max:	86 kg	86 kg	180 kg

(e) Never Exceed Speed 102 KIAS

(f) Manoeuvring Speed 71 KIAS

(g) Permitted Manoeuvres
30° Nose up / 30° nose down
Non Aerobatic
Normal acceleration limits, +4 / -2g

(h) Fuel Contents (Max Useable) 49.7 Litres

(i) Power Plant (see Table below)

Engine	Jabiru 2200A 4 Stroke			
Max RPM	3300 RPM			
MAX CHT	175degC 348degF			
MAX EGT	Not Fitted			
Fuel Spec	AVGAS 100 LL & AVGAS UL91 & 100/130 Leaded and Unleaded Automotive Gas above 95 Octane Ron			
Engine Oil Spec	See Manual			
Gearbox oil spec	N/A			
Fuel/Oil Mix	Fuel Only			
Coolant Temperature	Air Cooled			
Oil Pressure	Min 31psi Max 76 psi			
Oil Temperature	Min 15 deg C (59degF) Max 118degC (224degF)			
Fuel Pressure	N/A			

(8) INSTRUMENTS REQUIRED:

ASI	Altimeter	RPM	CHT / EGT	Compass	Oil Temp	Oil Pressure	VSI	Slip ball
Required 0 to 160KIAS	Required 0-20,000ft	0-4000	CHTonly 0-700^0 F 0-370^0 C	Optional	Require 0-150^0 C 0-327^0 F	Required 0-10 Bar 0-140psi	Optional	Optional

(9) CONTROL DEFLECTIONS:

Elevator UP:	30deg ± 2deg	Tailplane trim UP:	N/A
Elevator DOWN:	30deg ± 2deg	Tailplane trim DOWN	N/A
Ailerons* UP:	40deg ± 2deg	Rudder LEFT:	25deg ± 2deg
Ailerons* Down:	30deg ± 2deg	Rudder RIGHT:	25deg ± 2deg

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

10.1 Manuals approved for use with this aircraft**.**

(a) POH 210-074, Jabiru 2200 Instruction and maintenance manual

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)

A placard is to be fitted showing fuel capacity (litres), fuel type(s), fuel:oil ratio (if relevant) and if MTOW can be exceeded with full fuel and maximum cockpit weight, the fuel loads at MTOW for cockpit weights of 180kg / 170kg / 160kg etc. at 10kg intervals down to the maximum fuel load. An example is shown at Annex D.

(d) Switches
See Annex D.

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

See Annex A for required modifications.

Annual Bettsometer test is to be carried out to **1320** grammes with wing sails fitted and tensioned to flight. Test must be to both upper and lower surfaces.

(12) MINIMUM PERFORMANCE AT MAX TAKE-OFF WEIGHT

Rate of Climb:	658 fpm at 55 IAS.
Stall or Minimum Flying Speed:	37 IAS at MTOW / idle.

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Issue History

Issue No.		Reason and signatory
1	18/05/2000	Initial Issue
2	05/11/2007	Editorial Corrections A J MAXWELL
3	30/10/2010	Editorial Corrections, Corrections to Cockpit Loading, Control Deflections, AAIB Safety action addition of "Area Of Special Attention" ANNEX E A LOVE

Illustration of Aircraft - 3 View

Illustration of Aircraft – Photograph

ANNEX A - MANDATORY MODIFICATIONS

1. None

NB: A definitive list of Mandatory actions is to be obtained by reference to CAA published Mandatory Permit Directories. The list on this TADS is not necessarily up-to-date. Also see Thruster website @ www.thruster.co.uk for latest information.

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. Also see Thruster website @ www.thruster.co.uk for latest information.

Thruster Mod	Date	Title
TAL 03-3	12/02/1992	Rotax Exhaust After Muffler
TAL 03-9	12/02/1992	GRP Wheel Spats
TAS 010	10/07/1997	Ultralam Wing Skins
TAS 013	02/12/1997	Ivo Prop Installation
TAS 018	29/09/1997	Disabled Person Mod “Crip Kit”
TAS 026	01/03/2004	Lever for existing Bungee Trim System
TAS 030	01/03/2004	Carburettor Inlet Heater
TAS 031	01/03/2004	Wing Strobe Lights
TAS 033	01/03/2004	Roll Trim Bias
TAS 034	01/03/2004	Battery Isolator Switch
TAS 035	01/03/2004	Extended Control Colum Stick (Training Aid)
TAS 037	01/03/2004	Wider Nose Wheel

ANNEX C
WEIGHING INFORMATION

1.	CG Datum:	Front of Leading Edge Spar Tube
2.	Weighing attitude:	Wings Level Fuse Tube Horizontal
3.	Mainwheel moment arm:	767.5mm Aft of datum
4.	Tailwheel moment arm:	750mm Fwd of datum
5.	Fuel moment arm:	1030 mm Aft of datum
6.	Crew moment arm:	a) 423 mm Aft of datum (Forward Seat Position) b) 448 mm Aft of datum (Mid Seat Position) c) 473 mm Aft of datum (Rear Seat Position)
7.	Crew weights:	Minimum 55 kg / maximum 90 kg (maximum reducible, not below 86 kg, if required)
8.	Aft CG Limit:	501 mm Aft of datum
9.	Fwd CG Limit:	415 mm Aft of datum

ANNEX D

EXAMPLE PLACARDS

1. On cockpit fascia

OPERATIONAL LIMITATIONS
THE AIRCRAFT MUST BE OPERATED IN
COMPLIANCE WITH THE OPERATING
LIMITATIONS STATED IN THE FORM OF
PLACARD MARKINGS AND MANUALS.
NO AEROBATIC MANOUVRES
INCLUDING SPINS ARE PERMITTED

2. Adjacent to fuel cock

FUEL
–ϕ–
OFF
–θ–
ON

3. Adjacent to master switch on Instrument panel

MASTER
ON
↑
↓
OFF

4. On cockpit fascia adjacent to A.S.I.

V_A 71Kias / V_{NE} 102Kias

5. Adjacent to Fuel pump switch on Instrument panel

FUEL
PUMP
ON
↑
↓
OFF

6. On Keeltube at rear of Engine [Port and Starboard]

DANGER PROPELLER ARC

7. On roof Panel adjacent to Trim Cord

ELEVATOR TRIM
PULL ←←————NOSE UP

8. On cockpit fascia adjacent to RPM gauge

MAX RPM 3300

9. On cockpit fascia

C of G LIMITS
0.389m TO 0.501m AOD
COCKPIT LOADING
MAX 172KG
MTOW 450KG

10. On cockpit fascia

WARNING
IT IS THE RESPONSIBILITY OF THE PILOT IN COMMAND TO ENSURE THAT THE C OF G AND MTOW ARE WITHIN OPERATIONAL LIMITS

11. On cockpit fascia

COCKPIT LOAD (kg)	**ALLOWABLE FUEL (LITRES)**

*[**Note:** This Placard is completed by Thruster Air Services for each individual Aircraft prior to its release.]*

12. On cockpit fascia

NO SMOKING
FASTEN SEATBELTS

13. Adjacent to Oil Pressure gauge on Instrument panel *

MAX OIL PRESSURE 76 PSI
MIN OIL PRESSURE 31 PSI

14. Adjacent to CHT gauge on Instrument panel

MAX CHT 175 deg C

15. Adjacent to Oil Temp. gauge on Instrument panel

MIN OIL TEMP 15deg C
MAX OIL TEMP 118deg C

* ***The Placard displayed will be either Metric or Imperial units dependant on the scaling of the Gauge fitted.***

16. On cockpit fascia.

CLASSIFICATION

SMALL LIGHT AEROPLANE

17. On Fuel Tank adjacent to filler cap

FUEL AVGAS 100LL & AVGAS 100/130
Leaded and Unleaded Automotive Gasoline
Above 95 Octane Ron
CAPACITY 49.7 LITRES USABLE

18. On seat rail adjacent to Throttle lever both Port and Starboard.

POWER ON
↑
↓
POWER OFF

19. On cockpit fascia.

AIRCRAFT TYPE T600N (450) JAB

REGISTRATION……..

Ser No. …….

EMPTY WEIGHT: DATE WEIGHED
…….Kg ……..

20. On cockpit fascia adjacent to Key Start Switch

TURN TO START

ANNEX E

Areas for Special Attention During Inspections

1. Carburettor Heating System to minimise risk of Carburettor Icing. An accident caused by Carburettor Icing has been reported which was due in part to the Electric Carburettor Heating system being fitted on the inlet of the Carburettor rather than the outlet in the vicinity of the butterfly valve. Check that the installation is correct and operational.