CIVIL AVIATION AUTHORITY – SAFETY REGULATION GROUP

MICROLIGHT TYPE APPROVAL DATA SHEET (TADS)

NO: BM 73 ISSUE 2

TYPE: Thruster T600N 430kg [450Kg Airframe powered by Rotax 503]

(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 TAS 001 Issue 1 dated 18 April 1995
Master drawings list F10 (T600N) Issue 1 dated 2 Jan 1997
List form F20 (450) Issue dated 1st May 2000, Mod TAS 020 and Mod TAS 040

(5) COMPLIANCE WITH THE MICROLIGHT DEFINITION

(a)	MTOW	430	kg
(b)	No. Seats	2	
(c)	Maximum Wing Loading	25	kg/m²
(d)	Vso	35	kts IAS
(e)	Permitted range of seat loading*	55-86	kg per seat
(f)	Typical Empty Weight (ZFW)	240	kg
(g)	Max ZFW + 172 kg crew + 1 hr fuel (21litres /15kg)	430	kg
(h)	Max ZFW + 86 kg pilot + full fuel	358	kg
(i)	Max ZFW at initial permit issue	243	kg

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

INVESTOR IN PEOPLE

(6) POWER PLANTS

Designation	*T600N*		
Engine Type	*Rotax 503 DCDI-2V*		
Reduction Gear	*B-Type 2.58:1*		
Exhaust System	*Rotax straight. After Muffler Optional*		
Intake System	*Air Filter*		
Propeller Type	*Brolga 3 Blade*		
Propeller Dia x Pitch	*68" x 09 º*		
Noise Type Cert No.	*44M Issue 11*		
AAN approving configuration	***AAN BMAA 1016***		

(7) MANDATORY LIMITATIONS:

(a)	Max Take-Off Weight		430 kg		
(b)	CG Limits	Aft Limit:	495mm Aft of datum		
		FWD Limit:	389mm Aft of datum		
(c)	CG datum		(See Annex C)		
(d)			Port	Starboard	Total
	Cockpit Loadings	Min:	55 kg	- 0	55 kg
		Max:	86 kg	86 kg	180 kg
(e)	Never Exceed Speed		80 KIAS		
(f)	Manoeuvring Speed		60 KIAS		
(g)	Permitted Manoeuvres		30° Nose up / 30° nose down Non Aerobatic Normal acceleration limits, +4 / -2g		
(h)	Fuel Contents (Max Useable)		40 Litres (39.7 Litres)		
(i)	Power Plant		(see Table below)		

Engine	*T600N* *Rotax 503* *DCDI-2V*			
Max RPM	6500			
MAX CHT	250°C (480°F)			
MAX EGT	650°C (1200°F)			
Fuel Spec	Mogas min RON 91 (mon83) leaded or non leaded or Avgas fuel 100LL (blue) mixed 50:1 with 2 stroke oil			
Engine Oil Spec	Two stroke			
Gearbox oil spec	SAE 140-API-GL5			
Fuel/Oil Mix	50:1			
Coolant Temperature	-na-			
Oil Pressure	-na-			
Oil Temperature	-na-			
Fuel Pressure	-na-			

(8) INSTRUMENTS REQUIRED:

ASI	Altimeter	RPM	CHT / EGT	Compass	Coolant temp	Fuel Pressure	VSI	Slip ball
Required 0 to 100 Kts min.)	Required	Required	Required	Optional	n/a	n/a	Optional	Optional

(9) CONTROL DEFLECTIONS:

Elevator UP:	30° +/- 2°	Tailplane trim UP:	-na-
Elevator DOWN:	30° +/- 2°	Tailplane trim DOWN	-na-
Ailerons UP:	40° +/- 2°	Rudder LEFT:	25° +/- 2°
Ailerons Down:	30° +/- 2°	Rudder RIGHT:	25° +/- 2°

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

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

(a) Pilot Operating Handbook POH Part Number 210-076
(b) Rotax Operators 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 ETC:

See Annex A for required modifications.

NB: A definitive list of Mandatory actions and Service Bulletins is to be obtained by reference to CAA and the Thruster Aircraft Website [www.thruster.co.uk]

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:	Rotax 503 - 393 fpm at 45-50 KIAS.
Stall or Minimum Flying Speed:	35 KIAS at MTOW / idle.

(13) APPROVED OPTIONAL MODIFICATIONS
See Annex B

CIVIL AVIATION AUTHORITY – SAFETY REGULATION GROUP

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NO: BM 73 ISSUE 2

Issue History

Issue No.		Reason and signatory
1		New Type Acceptance Data Sheet A J MAXWELL
2	05/05/12	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

T600N

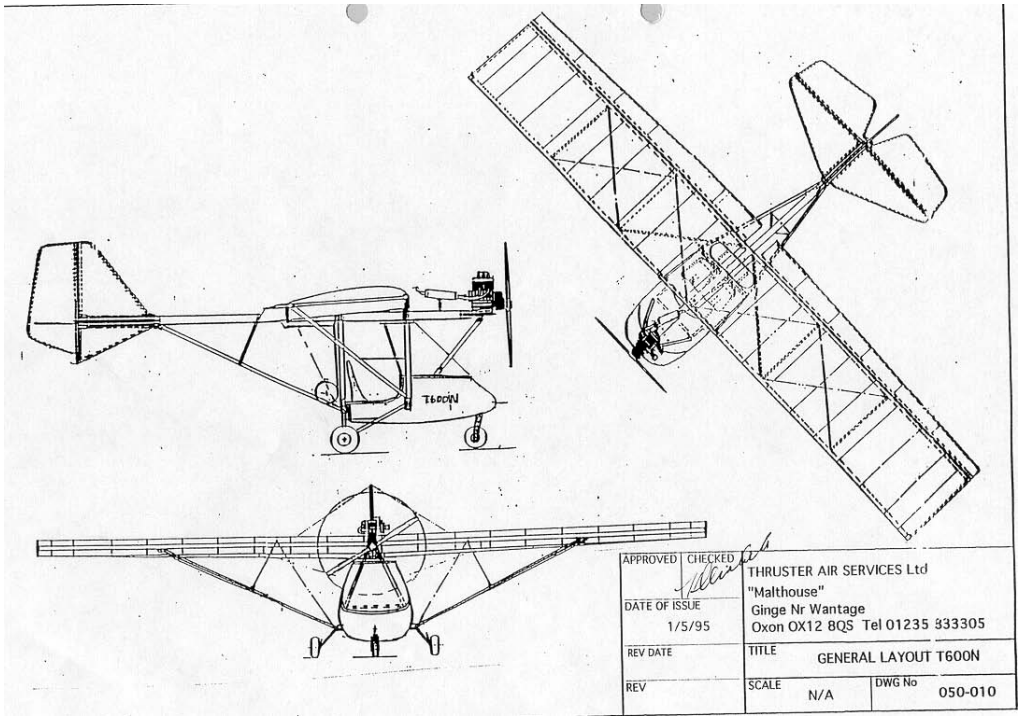

Illustration of Aircraft - Photograph

T600N

ANNEX A – MANDATORY MODIFICATIONS

1. None

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.

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 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:	1030mm 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 86 kg
8.	Aft CG Limit:	495 mm Aft of datum (Empty Weight)
9.	Fwd CG Limit:	389 mm Aft of datum (Empty Weight)

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 60Kias / V_{NE} 80Kias

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 6500

9. On cockpit fascia

C of G LIMITS
0.389m TO 0.495m AOD
COCKPIT LOADING
MAX 180KG
MTOW 430KG

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)
180	
170	
160	
150	

***[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 EGT gauge on Instrument panel *

MAX EGT 650 deg C (1200 degF)

14. Adjacent to CHT gauge on Instrument panel*

MAX CHT 250 deg C (480 degF)

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

15. On cockpit fascia

CLASSIFICATION

MICROLIGHT

16. On Fuel Tank adjacent to filler cap

FUEL GRADE: RON 90 MIN
FUEL OIL MIX 50:1
CAPACITY 40 LITRES
39.7 USABLE

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

POWER
ON
↑
↓
POWER
OFF

18. On cockpit fascia.

AIRCRAFT TYPE T600N 430

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.