

BRITISH MICROLIGHT AIRCRAFT ASSOCIATION
MICROLIGHT TYPE ACCEPTANCE DATA SHEET (TADS)

NO: BMO-19 ISSUE: 2

TYPE PANTHER XL & TYPHOON XL/PANTHER

Applicable only to the individual aircraft with the following Serial (Construction) Nos:
 KND-01; JM-01; TME-01; HP-01; T7841157XL; T6841165XL.

- (1) MANUFACTURER: Wing: Solar Wings (UK)
 Trike: Ultrasports (UK)
- (2) UK IMPORTER: N/A
- (3) CERTIFICATION BASIS: BCAR Section S, Advance Issue dated March 1983 in accordance with CAA document dated 17th January 1986, ref: 9/30/UL18
- (4) DEFINITION OF BASIC DESIGN STANDARD: Not available but see Appendices.
- (5) DIMENSIONS/WEIGHTS FOR COMPLIANCE WITH MICROLIGHT DEFINITION
- (a) Wing area (inc canard area, excluding winglets): 17.46 m²
 (b) Span: 10.36 m
 (c) Standard Mean Chord: 1.68 m
 (d) Dry Empty Weight: 145 kg
 (e) Max Take-Off Weight: 350 kg
 (f) Wing Loading (Weight Empty/Wing Area): 8.3 kg/m²
 (g) Wing Loading (Max Take-Off Weight/Wing Area): 20.05 kg/m²
 (h) Fuel Capacity: 23 litres

DOCUMENT ISSUE STATUS

Issue Number	Revision Reference	Date	Authorisation	Pages affected	Valid pages at this Issue number 2	
					Page No.	Page Issue
1	Introduced by MAAN1071	16/10/92	BMAA	All new		
2*	Letter*	26/10/92	BMAA	1, 2, 5.	1	2
					2	2
					3	1
					4	1
					5	2
					6	1
					7	1

*Issue 2 changed to identify individual aircraft applicability by Serial Nos. in order to clarify use of this TADS (other Panther XL Types are covered by TADS BM5); this issue also adds one additional power unit variant and clarifies Designations in Section (6).

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(6) POWER PLANTS

Designation	Panther XL & Typhoon XL Panther	Panther XL & Typhoon XL Panther	Typhoon XL Panther	Panther XL	Panther XL
Engine Type	Fuji Robin EC44PM Inv'td	Fuji Robin EC442PM Inv'd	Fuji Robin EC44PM Inv'td	Fuji Robin EC44PM Upr't	Fuji Robin EC44PM Upr't
Reduction Gear/ratio	2.63:1	2.63:1	2.66:1	2.6:1	2.63:1
Exhaust System	Nicklow	Rotaflow	Nicklow	Nicklow	Nicklow with after muffler
Intake System	-	-	-	-	-
Propeller Type	Newton 2 blade	Newton 2 blade	Romain 2 blade	Newton 2 blade	Romain 2 blade
Propeller Dia x Pitch	60" x 32"	60" x 32"	60" x 32"	60" x 32"	60" x 32"
Noise Type Cert. No.	7M Iss 2	7M Iss 2	7M Iss 1	7M Iss 1	7M Iss 1

Noise requirement

	1 Seat	2 Seat	BCAR Reference
Registered Pre 1/4/86	80 dBA	84 dBA	N3-6, 3 Iss 4
Registered Post 1/4/86	76 dBA	80 dBA	N3-6, 4 Iss 4

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(7) MANDATORY LIMITATIONS: (* indicates which are placarded)

- *(a) Max Take-off Weight: 350 kg
- (b) C G Limits: N/A
- (c) C G Datum: N/A
- *(d) Cockpit Loadings

	<u>Front</u>	<u>Rear</u>	<u>Total</u>
Pilot or Ballast (min)	55 kg	- kg	55 kg
Pilot or Ballast (max)	90 kg	100 kg	190 kg
- (e) Permanent Ballast, Weight and Position: None
- (f) Empty C G: N/A
- *(g) Never Exceed Speed: 67 mph
- *(h) Manoeuvring Speed: 67 mph
- *(i) Manoeuvre Limitations: Non-aerobatic
Pitch < ± 30° Roll < 60°
- *(j) Fuel Contents (Max Usable): 22 litres
- (k) Power Plant: See Table below

ENGINE	Fuji Robin EC44PM	Fuji Robin EC44 2PM		
Max RPM	7200	7200		
Max CHT	N/A	N/A		
Max EGT	N/A	N/A		
Fuel Spec	92 Oct (min) Petrol/oil	92 Oct (min) Petrol/oil		
Engine Oil Spec	Non-detergent 2-stroke mixg	Non-detergent 2-stroke mixg		
Gearbox Oil Spec	N/A	N/A		
Fuel/Oil Mix	40:1	40:1		
Oil Pressure	N/A	N/A		
Oil Temp	N/A	N/A		
Coolant Temp	N/A	N/A		

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(8) INSTRUMENTS REQUIRED FOR TYPE ACCEPTANCE:

<u>ASI</u>	<u>Altimeter</u>	<u>RPM</u>	<u>CHT</u>	<u>Compass</u>	<u>EGT</u>	<u>Coolant Temp</u>
Required	Required					
	(wrist worn acceptable)					

9) CONTROL DEFLECTIONS (3-AXIS SYSTEMS): N/A

<u>Pitch Control</u>	Up:	Down:
<u>Tailplane Trim</u>	Up:	Down:
<u>Ailerons</u>	Up:	Down:
<u>Rudder</u>	Left:	Right:
<u>Steering</u>	Left:	Right:
<u>Spoilers</u>		

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

BMAA document MAAN 1071;
BMAA document TS 001;
Solar Wings SW/406/1;
see also Appendix to this document.

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

BMAA Inspectors' Manual and as indicated in Appendix 1 to this document

(12) APPROVED OPTIONAL MODIFICATIONS

Fuel Tank, A Snowling G-MMTT Drawing 2 Issue C.

(13) MINIMUM PERFORMANCE AT 188 kg T/O WEIGHT:

Rate of Climb: 385 ft/minute

Climb Speed: 40 mph

Stall or Minimum Flying Speed: 31 mph

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Note: G A Drawings and/or colour photographs illustrating the principal features of the aircraft described herein, shall be attached to, and form part of, this Data Sheet.

<u>Issue</u>	<u>Date</u>	<u>BMAA Authorisation</u>
1	16 Oct 1992	
2	26 Oct 1992	<i>P. E. Owen</i>

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Appendix 1

Additional Documentation and provisions

Ultrasports Trike/XL Wing aeroplanes must satisfy the build and design for the Solar XL wing and in addition the design, modification and inspection provisions set out in BMAA document TS 001 (latest issue). The areas affected are as follows:

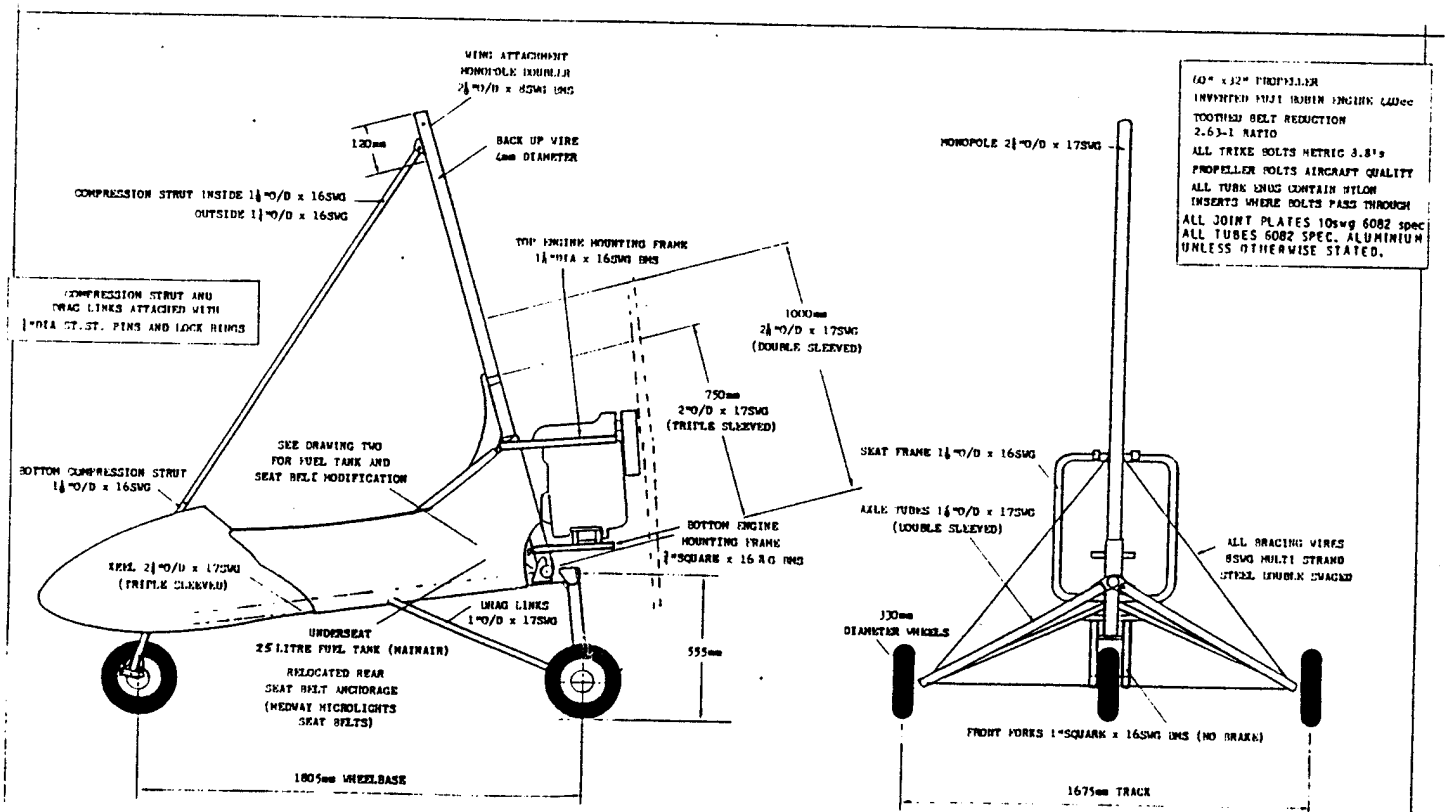
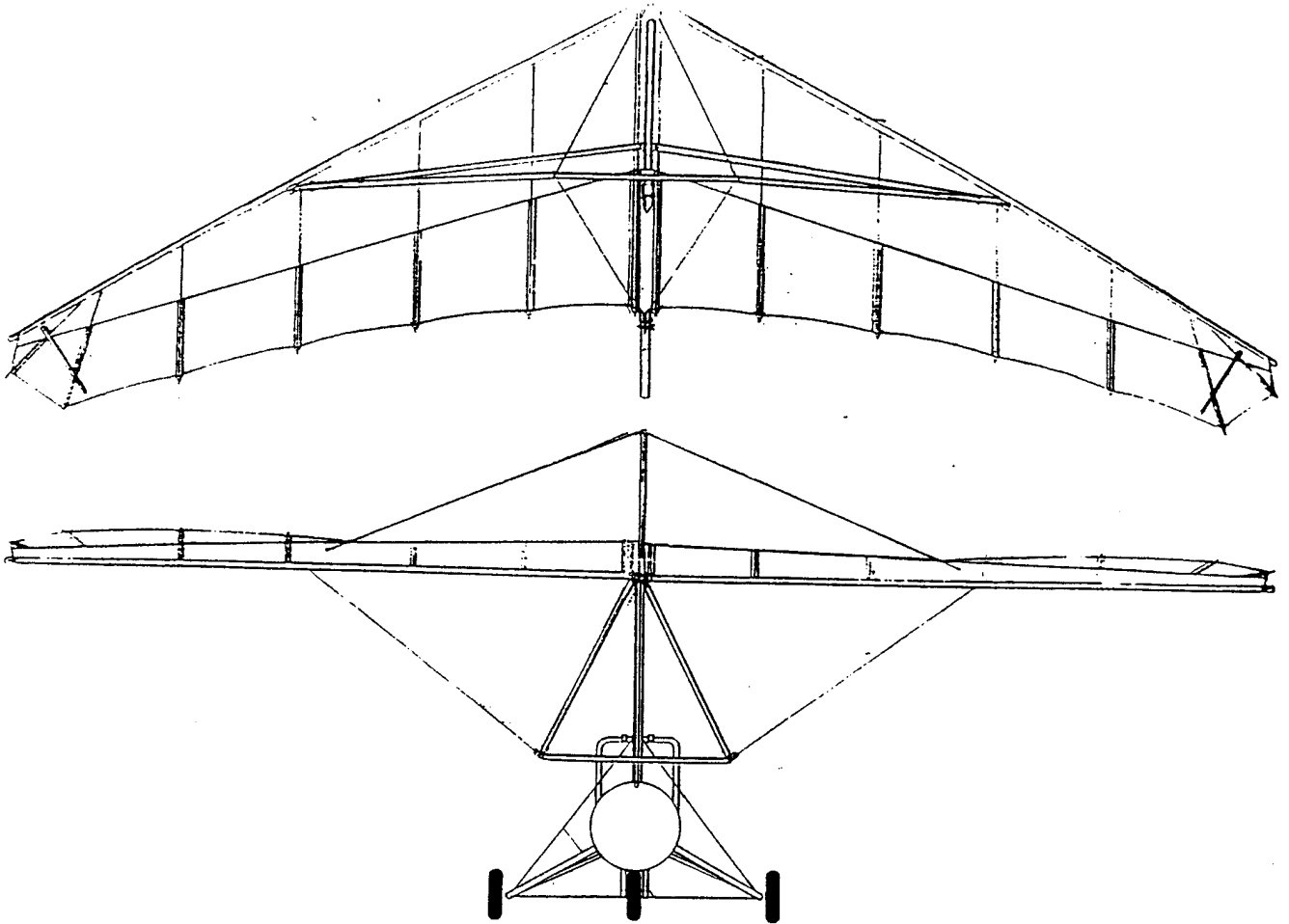
a) Modifications

General: back-up cable in main trike upright.
S 627 Non flexible coatings
S 786 Safety helmet placard
S 901 Powerplant installation details.
S 967 Fuel tank (if located above engine)
S 993 Fuel lines
S 995 Fuel cock installation if applicable (and applicability)
S 1141 Ignition switch wiring
S 1303 1) Airspeed indicator
S 1303 2) Altimeter placard (if applicable)
S 1541 Placards

b) Inspection

S 605 Welds on: engine supports, seat frame, front wheel assembly.
Condition of: Axle bracing, keel at rear footrest attachment.
S 607 Propeller shaft nut.
S 627 Seat frame attachment points.
S 775 Windshield, where fitted.
S 785 Safetey harness and attachment.
S 901 Powerplant installation.
S 925 Propeller clearance, particularly from wing cables.
S 951 Fuel system tank pick-up and vapour lock potential.
S 959 Unusable fuel.
S 967 Fuel tank installation.
S 975 Fuel tank vents.
S 1301 Installed equipment.

In addition, Inspectors must pay attention to the relevant "Spotlight" and Defect Warning Reports in the BMAA Inspectors Manual and those as issued from time to time by the BMAA Chief Inspector.



40" x 32" PROPELLER
 INVERTED MJI RUBIN ENGINE 420cc
 TOOTHED BELT REDUCTION
 2.63:1 RATIO
 ALL TRIKE BOLTS METRIC 3.8's
 PROPELLER BOLTS AIRCRAFT QUALITY
 ALL TUBE ENDG CONTAIN NYLON
 INSERTS WHERE BOLTS PASS THROUGH
 ALL JOINT PLATES 105wg 6082 SPEC
 ALL TUBES 6082 SPEC. ALUMINIUM
 UNLESS OTHERWISE STATED.

GENERAL ARRANGEMENT OF ULTRA SPORTS PANTHER TRIKE UNIT G-MMTT