

CIVIL AVIATION AUTHORITY – SAFETY REGULATION GROUP

MICROLIGHT TYPE APPROVAL DATA SHEET (TADS)

**NO: BM - 12 ISSUE: 2**

TYPE	PIPISTRELLE
(1) MANUFACTURER:	Southdown Aerostructure Ltd Lasham Airfield, Lasham, nr Alton, Hants  BMAA is responsible for ensuring continued airworthiness
(2) UK IMPORTER:	The first two airframes are largely constructed of components manufactured by Aerostructures SA, France. This company no longer exists.
(3) CERTIFICATION:	BCAR SECTION S Advance Issue (1983)
(4) DEFINITION OF BASIC STANDARD:	Build standard: Document ref. SA/10/1, issue 1, 30 December 1985 Design standard: Document ref. SA/6/1
(5) COMPLIANCE WITH THE MICROLIGHT DEFINITION	
(a) MTOW	249 kg
(b) No. Seats	1
(c) Maximum Wing Loading	18.5 kg/m <sup>2</sup>
(d) Permitted range of pilot weights	70 - 105 kg per seat
(e) Typical Empty Weight (ZFW)	132 kg
(f) ZFW + 86 kg pilot + full fuel (14.5 litres / 10.4 kg)	228 kg
(g) Max allowed ZFW at initial permit issue	150 kg

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**(6) POWER PLANTS**

Designation	JPX	
Engine Type	PUL 505	
Reduction Gear	Direct drive	
Exhaust System	Southdown Aerostructure Drawing No. SA/P2C/4901	
Intake System	Filter only	
Propeller Type	Southdown Aerostructure Drawing No. SA/P2B/4902	
Propeller Dia x Pitch	0.9m x 0.52m	
Noise Type Cert No.	22M issue 1	
AAN approving	18896(P) Addendum 1	

**(7) MANDATORY LIMITATIONS:**

- |                                 |   |
|---------------------------------|---|
| (A) Max Take-Off Weight         | 249 kg  |
| (B) CG Limits                   | <i>Aft limit</i> 519mm aft of datum<br><i>Fwd Limit</i> 426mm aft of datum              |
| (C) CG datum                    | Wing leading edge, 590mm outboard of aircraft centre-line with rear fuselage horizontal |
| (D) Cockpit Loadings            | Min 70 kg<br>Max 105 kg   |
| (E) Never Exceed Speed          | 62 knots IAS  |
| (F) Manoeuvring Speed           | 52 knots IAS  |
| (G) Permitted Manoeuvres        | Aerobatic manoeuvres, including spins, are prohibited                                   |
| (H) Fuel Contents (Max Useable) | 14.5 litres   |

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(I) Power Plant

Engine	JPX PUL 505	
Max RPM	4600	
Max CHT	250°C	
Max EGT	N/A	
Fuel Spec	4-star MOGAS	
Engine Oil Spec	2 stroke oil (non-detergent)	
Gearbox oil spec	N/A	
Fuel/Oil Mix	40:1	
Max. Coolant Temp.	N/A	
Max. Oil Pressure	N/A	
Min. Oil Pressure	N/A	
Oil Temperature	N/A	

(8) INSTRUMENTS REQUIRED:

ASI	Altimeter	RPM	EGT	Compass	Coolant temp	CHT	Fuel Pressure	VSI	Slip ball
Required	Required	Required	Optional	Optional	Optional		Optional	Optional	Optional

(9) CONTROL DEFLECTIONS:

Elevator UP:	100 mm ± 8 mm	Tailplane trim UP:	N/A (Spring trim)
Elevator DOWN:	130 mm ± 10 mm	Tailplane trim DOWN	N/A
Ailerons UP:	135 mm ± 10 mm	Rudder:	Surfaces
Ailerons DOWN:	80 mm ± 6 mm		UP 85 mm ± 6 mm
Spoilers:	Automatically operate with ailerons		DOWN 105 mm ± 6mm (V-tail arrangement)

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

10.1 Manuals approved for use with this aircraft.

- (a) Pilot's Handbook Document Ref. SA/5/1
- (b) Maintenance Manual Document Ref. SA/5/2
- (c) Engine Manual Document Ref. SA/5/3

10.2 The following limitations 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

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

See Annex A for required modifications.

(12) MINIMUM PERFORMANCE AT MAX TAKE-OFF WEIGHT

Rate of Climb:	370 fpm
Stall or Minimum Flying Speed:	29 knots IAS (at idle)

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Issue History

<u>Issue No.</u>	<u>Reason and signatory</u>
1	01/01/86 Initial Issue W A Bevan
2	08/07/03 Document revised to new format

J Barratt

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Illustration of Aircraft



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ANNEX A – MANDATORY MODIFICATIONS

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.

ANNEX C - WEIGHING INFORMATION

1. CG Datum: Wing leading edge, 590 mm outboard of aircraft centre-line with rear fuselage horizontal (positive aft)
2. Weighing attitude: Aircraft to be weighed with the tail-boom horizontal
3. Mainwheel moment arm: 255 mm aft of datum
4. Tailwheel moment arm: 3060 mm aft of datum
5. Fuel moment arm: 250 mm aft of datum (14.5 litres maximum capacity)
6. Crew moment arm: N/A
7. Crew weights: Minimum 70 kg / maximum 105 kg  
(maximum reducible, not below 86 kg, if required).
8. Aft CG Limit: 519 mm aft of datum
9. Fwd CG Limit: 426 mm aft of datum

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ANNEX D - PLACARDS

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

Max take-off weight not to exceed 249 kg  
CG limits between 426 mm and 519 mm AOD  
Cockpit loadings must be between 70 and 105 kg  
 $V_{NE}$  62 knots IAS  
 $V_A$  52 knots IAS  
Aerobatic manoeuvres including spins are prohibited

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

A placard showing the limitations for all the indicated engine parameters is to be mounted close to the engine instruments. This requirement need not be complied with for limitations shown as coloured markers (red for danger, amber for caution) on the instrument displays.

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

Max usable fuel contents 14.5 litres.  
Fuel/oil ratio 40:1 2-stroke oil  
Fuel specification: 4-star MOGAS



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ANNEX E - POINTS FOR SPECIAL ATTENTION

In service, the following points have been found to be commonly recurring problems, and Inspectors must give special attention to the following both during initial approval, and during later inspections.

1. (blank)
2. (blank)
3. (blank)
4. (blank)
5. (blank)
6. (blank)
7. (blank)
8. (blank)
9. (blank)
10. (blank)