CIVIL AVIATION AUTHORITY
SAFETY REGULATION GROUP

MICROLIGHT TYPE ACCEPTANCE DATA SHEET (TADS)

NO:BMO-11 ISSUE 2

TYPE

PTERODACTYL PTRAVELLER (Canard Variants)

(1) MANUFACTURER:

FREEDOM FFLERS INC, P O BOX 749, TEXAS 75088
(Original Manufacturer: PTERODACTYL LTD, WATSONVILLE, CALIFORNIA)

(2) UK IMPORTER:

VARIOUS (None current)

(3) CERTIFICATION BASIS:

BCAR Section S, requirement listed in CAA document dated 17 January 1986 ref:9/30/UL18

(4) DEFINITION OF BASIC STANDARD:

NOT AVAILABLE

(5) DIMENSIONS/WEIGHTS FOR COMPLIANCE WITH MICROLIGHT DEFINITION

(a) Wing area (inc canard area, excluding winglets): 16.1m²
(b) Span: Main 10.06m, Canard 2.44m (nom)
(c) Standard Mean Chord: 1.50m (Main)
(d) Dry Empty Weight: 93kg to 109kg
(e) Max Take-Off Weight: 226kg
(f) Wing Loading (Weight Empty/Wing Area): 5.78kg/m² to 6.77kg/m²
(g) Wing Loading (Max Take-Off Weight/Wing Area): 14.0kg/m²

(6) POWER PLANTS

<table>
<thead>
<tr>
<th>Designation</th>
<th>PTERODACTYL</th>
<th>PTERODACTYL</th>
<th>PTERODACTYL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine Type</td>
<td>FUJI ROBIN EC34PM INVERTED</td>
<td>FUJI ROBIN EC34PM INVERTED</td>
<td>FUJI ROBIN EC34PM INVERTED</td>
</tr>
<tr>
<td>Reduction Gear</td>
<td>2.86:1</td>
<td>3.1:1</td>
<td>2.8:1</td>
</tr>
<tr>
<td>Exhaust System</td>
<td>NICKLOW</td>
<td>HUNTAIR/ROTAFLOW</td>
<td>HUNTAIR/ROTAFLOW</td>
</tr>
<tr>
<td>Intake System</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Propeller Type</td>
<td>ROMAIN</td>
<td>LAMINATED WOOD</td>
<td>LAMINATED WOOD</td>
</tr>
<tr>
<td>Propeller Dia x Pitch</td>
<td>54&quot; x 33&quot;</td>
<td>54&quot; x 30&quot;</td>
<td>58&quot; X 30&quot;</td>
</tr>
<tr>
<td>Noise Type</td>
<td>81 M DERIVED</td>
<td>81 M Iss 1</td>
<td>81 M Iss 1</td>
</tr>
</tbody>
</table>

Noise requirement

<table>
<thead>
<tr>
<th>Registered Pre 1/4/86</th>
<th>1 Seat</th>
<th>2 Seat</th>
<th>BCAR Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>80 dBA</td>
<td>84 dBA</td>
<td></td>
<td>N3-6, 3 Iss 4</td>
</tr>
<tr>
<td>Registered Post 1/4/86</td>
<td>76 dBA</td>
<td>80 dBA</td>
<td>N3-6, 4 Iss 4</td>
</tr>
</tbody>
</table>

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### MANDATORY LIMITATIONS:

(a) Max Take-off Weight: 226KG (See Appendix 1, modifications)

(b) C G Limits (3-axis aircraft): 0.39m to 0.49m in front of datum

(c) C G Datum: Centre of rear axle

(d) Cockpit Loadings:

<table>
<thead>
<tr>
<th></th>
<th>Front</th>
<th>Rear</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilot and Baggage or Ballast (min)</td>
<td></td>
<td></td>
<td>99kg</td>
</tr>
<tr>
<td>Pilot and Baggage (max)</td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>99kg</td>
</tr>
</tbody>
</table>

(e) Permanent Ballast Weight and Position:

(f) Empty C G (3-axis aircraft): 0.42m to 0.52m in front of datum

(g) Never Exceed Speed: 48 knots 55 mph

(h) Manoeuvring Speed: 31 knots 35 mph

(i) Permitted Manoeuvres: Non Aerobatic

(j) Fuel Contents (Max Useable): 18kg max fuel weight, 5.5 gallons

(k) Power Plant: See Table

<table>
<thead>
<tr>
<th>Engine</th>
<th>FUJI ROBIN EC34PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max RPM</td>
<td>7500</td>
</tr>
<tr>
<td>Max CHT</td>
<td></td>
</tr>
<tr>
<td>Fuel Spec</td>
<td>92 Oct (min) Petrol/Oil</td>
</tr>
<tr>
<td>Oil Spec</td>
<td>Self Mix 2-stroke</td>
</tr>
<tr>
<td>Fuel/Oil Mix</td>
<td>40:1</td>
</tr>
<tr>
<td>Max EGT</td>
<td></td>
</tr>
<tr>
<td>Oil Press</td>
<td></td>
</tr>
<tr>
<td>Oil Temp</td>
<td></td>
</tr>
</tbody>
</table>
(8) INSTRUMENTS REQUIRED FOR TYPE APPROVAL:

<table>
<thead>
<tr>
<th>Instrument</th>
<th>ASI</th>
<th>Altimeter</th>
<th>RPM</th>
<th>CHT</th>
<th>Compass</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20 to 50 mph</td>
<td>Permanently fitted or wrist worn</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

(9) CONTROL DEFLECTIONS (3-AXIS SYSTEMS):

- **Pitch Control**
  - Up: - 21°
  - Down: - 17° relative to horizontal tubes

- **Tailplane Trim**
  - Up: - N/A
  - Down: - N/A

- **Ailerons**
  - Up: - N/A
  - Down: - N/A

- **Rudder**
  - Up: - ....
  - Down: - .....'

- **Steering**
  - Left: - OPTIONAL
  - Right: - OPTIONAL

- **Spoilers**
  - (Optional) up to 90°

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

- Pilot's Handbook (version including BMAA Godfather's additions.)

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

- See Appendix 1

(12) MINIMUM PERFORMANCE AT MAX T/O WT

- Rate of Climb: 600 ft/min (Fuji Robin EC34 engine)

- Stalling Speed:
  - 30 mph (max power) 27 mph (Idle power Forward CG)
  - 24 mph (Idle power Aft CG)
Notes:

1. G A Drawings and/or colour photographs illustrating the principal features of the aircraft submitted for type approval shall be attached to, and form part of, this Data Sheet.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Date</th>
<th>CAA Approval</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1 June 1990</td>
<td></td>
</tr>
</tbody>
</table>

Amendments

Issue 2 Variant with 58" x 30" propeller and 2.8:1 reduction ratio added (as covered in MAAN No 1053)
ADDITIONAL DOCUMENTATION

PTERODACTYLS must satisfy the modification and inspection provisions set out in BMAA document FS001. The areas affected are as follows:

**Modifications**

- Safety helmet placard. (S786)
- Reduction drive spacers. (S901)
- Fuel tank position. (S967)
- Fuel lines. (S993 d)
- Fuel cock. (S995)
- Ignition switch wiring. (S1141)
- Altimeter placard, where appropriate. (ASI)
- (General Information Section) Separate VNE placard and change to placarded MAUW. (S1541)

**Inspection**

- Build standard. (S605)
- Self locking nuts. (S607)
- Corrosion of spar bolts. (S609)
- Cables. (S611)
- 1) Sprung axles, 2) Bolts connecting axle to the 'U' tubes, 3) Holes in the rear down-tubes which hold the engine support bolts, and 4) Brackets connecting the horizontal hang-tubes to the 1" tubes. (S627)
- Turnbuckles. (S689 d)
- Seat condition. (S785)
- Engine installation and electrical bonding. (S901)
- Propeller clearance. (S925)
- Fuel tank interconnection. (S951 b)
- Unusable fuel quantity. (S959)
- Fuel tank installation. (S967)
- Fuel tank vents. (S975 c)
- Function of equipment. (S1301)

In addition: Inspectors must pay attention to the relevant 'Spotlight' and 'Defect Warning' reports in the BMAA Inspectors' Manual.
A general view

Photo 2
A view from 100x away, using 300mm lens, to show front elevation in true proportions

Photo 3
Side elevation from 100x away