MICROLIGHT TYPE ACCEPTANCE DATA SHEET (TADS)

NO: BMO-37 ISSUE: 1

TYPE 130SX/HALF PINT

(1) MANUFACTURER: AERIAL ARTS
TRIKE: MEDWAY MICROLIGHTS

(2) UK IMPORTER: N/A

(3) CERTIFICATION BASIS: Reduced BCAR section S as per CAA letter dated 17/01/86, ref 9/3D/UL18

(4) DEFINITION OF BASIC STANDARDS:
As described in this TADS and MAAN 1157.

(5) DIMENSIONS/WEIGHT FOR COMPLIANCE WITH MICROLIGHT DEFINITION

(a) Wing area 11.9m²
(b) Span 8.84m
(c) Standard Mean Chord 1.34m
(d) Dry Empty Weight 66.5 to 80 kg
(e) Maximum Takeoff weight 170 kg
(f) Wing loading (empty) 5.59 to 6.64 kg/m²
(g) Wing Loading (max t/o weight) 13.79 to 14.21 kg/m²
(h) Fuel Capacity 9 to 25 litres

(6) POWER PLANTS

<table>
<thead>
<tr>
<th>Designation</th>
<th>130sx Half Pint</th>
<th>130sx Half Pint</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine Type</td>
<td>JPX 425 horiz. opposed.</td>
<td>Rotax 377 upright</td>
</tr>
<tr>
<td>Reduction Gear</td>
<td>direct drive</td>
<td>2.58:1</td>
</tr>
<tr>
<td>Exhaust System</td>
<td>JPX</td>
<td>Rotax</td>
</tr>
<tr>
<td>Intake System</td>
<td>filter only</td>
<td>Rotax</td>
</tr>
<tr>
<td>Propeller Type</td>
<td>LeMire JPX</td>
<td>Newton</td>
</tr>
<tr>
<td>Propeller Dia x Pitch</td>
<td>1mx37.5cm</td>
<td>54&quot;x42.5&quot;</td>
</tr>
<tr>
<td>Noise Type Cert No.</td>
<td>20m iss 1</td>
<td>128m iss1</td>
</tr>
</tbody>
</table>
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(7) MANDATORY LIMITATIONS:

(A) Max Take-off Weight 170kg

(B) C G Limits (3-Axis Aircraft): N/A

(C) C G Datum not required - weightshift

(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>55kg</td>
<td>----</td>
<td>55kg</td>
</tr>
<tr>
<td>Pilot and Baggage (Max - JPX engine)</td>
<td>90kg</td>
<td>----</td>
<td>90kg</td>
</tr>
<tr>
<td>Pilot and Baggage (Max Rotax 377 engine)</td>
<td>76kg</td>
<td>----</td>
<td>76kg</td>
</tr>
</tbody>
</table>

(E) Permanent Ballast, Weight and Position: none.

(F) Empty C of G (3-Axis Aircraft): N/A

(G) Never Exceed Speed: 56kt 65mph

(H) Manoeuvring Speed: 49kt 56mph

(I) Permitted Manoeuvres: non-aerobatic (pitch <±30 degrees, bank < 60 degrees)

(J) Fuel Contents (Max Useable): 9 litres to 25 litres

(K) Power Plant: See Table

<table>
<thead>
<tr>
<th>Engine</th>
<th>JPX 425</th>
<th>Rotax 377</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max RPM</td>
<td>4600</td>
<td>6800</td>
</tr>
<tr>
<td>MAX CHT</td>
<td>--------</td>
<td>480 F</td>
</tr>
</tbody>
</table>

Fuel Spec

- MON 83
- RON 90
- minimum octane.

Oil Spec

- self mix 2 stroke
- Castrol TTS or equivalent

Fuel/Oil Mix

- 40:1
- 50:1

Max ECT

- 1200 F

Oil Press

- n/a

Oil Temp

- n/a

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(8) INSTRUMENTS REQUIRED FOR TYPE ACCEPTANCE:

An Airspeed indicator, 0-70mph minimum.
An Altimeter, (which may be worn on the pilots wrist).
For 377 Rotax powered machines, a tachometer.

(9) CONTROL DEFLECTIONS (3-Axis Systems): N/A

<table>
<thead>
<tr>
<th></th>
<th>Up: -</th>
<th>Down: -</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pitch Control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tailplane Trim</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ailerons</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rudder</td>
<td>Left: -</td>
<td>Right: -</td>
</tr>
<tr>
<td>Steering</td>
<td>Left: -</td>
<td>Right: -</td>
</tr>
<tr>
<td>Spoilers</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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


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

None

(12) MINIMUM PERFORMANCE AT MAX TAKE-OFF WEIGHT

Rate of Climb: 400 fps at 28kt 32 mph (JPX engine)
              640 fps (Rotax 377 at 5250 rpm).

Stalling Speed: 25 kt 28 mph

(13) PLACARDS

The following information must be clearly placarded in view of the pilot:

Empty weight
Max and Min cockpit load
Maximum takeoff weight = 170 kg
VNE speed = 65 mph
Manoeuvre limitations. = Pitch, +/-30 degrees. Roll, +/-60 degrees.
WARNING - NO LOOSE ITEMS IN COCKPIT.

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PLACARDS CONT'D.

For the 377 Rotax powered version:
1) The tachometer must be clearly marked at 5250 rpm. and placarded nearby "max rpm 5250."
2) The maximum cockpit loading must be placarded as 76kg.

Close to the fuel tank:
Fuel type, quantity and mix ratio

At the ignition switch:
Ignition on/off

At the fuel tap:
fuel on/off.

ADDITIONAL POINTS TO NOTE FOR INSPECTORS:

1) On the JPX powered version, check the engine mounting carefully for cracks at the mounting holes. The material of the engine mounting plate must be stainless steel (very early machines were aluminium alloy). See BMAA defect report H1.01 (engine mount).

2) See defect reports A2.01 to A2.08 (Aerial Arts Wings.)

3) For a general description, see BMAA "Flightline" magazine test report July-August 1985.

4) Ensure compliance with the general recommendations of BMAA documents WG and TG.

5) Ensure for the 377 powered machines, the RPM limit and cockpit loading limits are placarded.
GENERAL ARRANGEMENT DRAWING OF THE MEDWAY HALF PINT TRIKE.