MICROLIGHT TYPE APPROVAL DATA SHEET (TADS)

NO: BM - 32  ISSUE: 3

TYPE       RAIDER

(1) MANUFACTURER   Powerchute Systems International Ltd (no longer trading)
                  BMAA is responsible for continued airworthiness
                  Replacement canopies may be obtained from Aerochute
                  Industries PTY Ltd, 12 Acheson Place, North Coburg,
                  Victoria 3058, Australia

(2) UK IMPORTER    N/A

(3) CERTIFICATION  BCAR Section S: Advance issue March 1983 plus CAA
                  Draft Paper No. 848

(4) DEFINITION OF  Drawing GA of Raider Issue 1
    BASIC
    STANDARD

(5) COMPLIANCE WITH THE MICROLIGHT DEFINITION

(a) MTOW         215 kg
(b) No. Seats    1
(c) Maximum Wing Loading  6.3 kg / m²
(d) Permitted range of pilot weights 20 – 104 kg
(e) Typical empty weight  98 kg
(f) ZFW + 86 kg pilot + full fuel (29 litres, 21 kg)  205 kg
(g) Max allowed ZFW at initial permit issue¹  108 kg

¹ The maximum ZFW is the lower of [(a)-172kg-1hrs fuel], or [(a)-86kg-full fuel].
(6) POWERPLANTS

<table>
<thead>
<tr>
<th>Designation</th>
<th>Rotax</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine Type</td>
<td>447</td>
</tr>
<tr>
<td>Reduction Gear</td>
<td>2.58:1</td>
</tr>
<tr>
<td>Exhaust System</td>
<td>Rotax plus after muffler</td>
</tr>
<tr>
<td>Intake System</td>
<td>Rotax</td>
</tr>
<tr>
<td>Propeller Type</td>
<td>Powerchute No. 216</td>
</tr>
<tr>
<td>Propeller Dia x Pitch</td>
<td>51” x 44”</td>
</tr>
<tr>
<td>Noise Type Cert. No.</td>
<td>119M</td>
</tr>
<tr>
<td>AAN Approving</td>
<td>20073(P)</td>
</tr>
</tbody>
</table>

(7) MANDATORY LIMITATIONS

(A) Maximum Take-Off Weight 215 kg
(B) Cockpit Loadings
   Min 20 kg
   Max 104 kg
(C) Never Exceed Speed 45 mph IAS
(D) Manoeuvring Speed 32 mph IAS
(E) Permitted Manoeuvres Non-aerobic
(F) Fuel contents (max useable) 29 litres
### Power Plant Specifications

<table>
<thead>
<tr>
<th>Engine</th>
<th>Rotax 447</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max RPM</td>
<td>6500</td>
</tr>
<tr>
<td>Max CHT</td>
<td>250°C</td>
</tr>
<tr>
<td>Max EGT</td>
<td>N/A</td>
</tr>
<tr>
<td>Fuel Spec</td>
<td>83 MON or 90 RON minimum unleded to BS(EN)228, or 97+ octave MOGAS leaded fuel to BS 4040, or AVGAS 100LL</td>
</tr>
<tr>
<td>Engine Oil Spec</td>
<td>2 stroke oil</td>
</tr>
<tr>
<td>Gearbox Oil Spec</td>
<td>API-GL5 or GL6, SAE 140RP OR 85W-140EP as temperature requires</td>
</tr>
<tr>
<td>Fuel / Oil Mix</td>
<td>50:1</td>
</tr>
<tr>
<td>Max Coolant Temp</td>
<td>N/A</td>
</tr>
<tr>
<td>Max Oil Pressure</td>
<td>N/A</td>
</tr>
<tr>
<td>Min Oil Pressure</td>
<td>N/A</td>
</tr>
<tr>
<td>Oil Temperature</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Instruments Required

<table>
<thead>
<tr>
<th>ASI</th>
<th>Altimeter</th>
<th>RPM</th>
<th>EGT</th>
<th>Compass</th>
<th>Coolant Temp</th>
<th>CHT</th>
<th>Fuel Pressure</th>
<th>VSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required</td>
<td>Required</td>
<td>Optional</td>
<td>Not Required</td>
<td>Optional</td>
<td>Not Required</td>
<td>Not Required</td>
<td>Not Required</td>
<td>Optional</td>
</tr>
</tbody>
</table>

### Control Deflections

Conventional powered parachute control lines.
- Steering LEFT: 20°
- Steering RIGHT: 20°
CIVIL AVIATION AUTHORITY – SAFETY REGULATION GROUP

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(10) PILOTS NOTES, MAINTENANCE MANUALS, REFERENCES:

10.1 Manuals approved for operators use with this aircraft


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)
   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: 1000 fpm at SL ISA conditions
Stall or minimum flying speed: 25 mph
CIVIL AVIATION AUTHORITY – SAFETY REGULATION GROUP

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**Issue History**

<table>
<thead>
<tr>
<th>Issue No.</th>
<th>Date</th>
<th>Reason and signatory</th>
</tr>
</thead>
</table>
| 1         | 04/07/89 | Initial Issue
            | F J Tucker                                               |
| 2         | 07/08/97 | To increase maximum take-off weight from 205 kg to 215 kg|
            |          | R J Hardy                                                 |
| 3         | 08/07/03 | Document revised to new format                           |

J Barratt

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Illustration of Aircraft
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. Weighing Attitude: Unimportant. Trike and parachute wing may be weighed separately if required.
2. Crew Weights: Minimum 20 kg. Maximum 104 kg per seat. (Maximum reducible, not below 86kg, if required)
3. Fuel load: 29 litres
4. MTOW: 215 kg
(a) **Flight Limitations Placard (to be visible to pilot)**

Max take-off weight not to exceed 215 kg  
Cockpit loadings must be between 20 and 104 kg  
$V_{NE}$ 45 mph  
$V_A$ 32 mph  
Non-aerobatic

(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)**

A placard is to be fitted showing fuel capacity, fuel type(s), fuel : oil ratio (if relevant).
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)