CIVIL AVIATION AUTHORITY – SAFETY REGULATION GROUP

MICROLIGHT TYPE APPROVAL DATA SHEET (TADS)

NO: BM - 35  ISSUE: 4

TYPE  HORNET R-ZA

(1) MANUFACTURER  Hornet Microlights Ltd, Perseverance Mill, Mill Street, Wibsey, Bradford, West Yorkshire, BD6 3HR (no longer trading)

BMAA is responsible for continued airworthiness

(2) UK IMPORTER  N/A

(3) CERTIFICATION  BCAR Section S Advance Copy March 1983

BCAR Section S Paper 11 October 1988

(4) DEFINITION OF BASIC STANDARD  APL5010 Hornet R-ZA General Assembly

(5) COMPLIANCE WITH THE MICROLIGHT DEFINITION

(a) MTOW  390 kg
(b) No. Seats  2
(c) Maximum Wing Loading  25 kg / m²
(d) Permitted range of pilot weights  75 – 180 kg
(e) Typical empty weight  171 kg
(f) ZFW + 172 kg crew + 1hrs fuel  362 kg
(g) ZFW + 86 kg pilot + full fuel (45 litres, 32 kg)  289 kg
(h) Max allowed ZFW at initial permit issue¹  199 kg

(6) POWERPLANTS

<table>
<thead>
<tr>
<th>Designation</th>
<th>Hornet R-ZA</th>
<th>Hornet R-ZA with mod HR 113</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine Type</td>
<td>Rotax 462 Upright</td>
<td>Rotax 462 Upright</td>
</tr>
<tr>
<td>Reduction Gear</td>
<td>Rotax Gearbox 2.58:1</td>
<td>Rotax Gearbox 2.58:1</td>
</tr>
<tr>
<td>Exhaust System</td>
<td>Rotax under-slung with after muffler</td>
<td>Rotax under-slung, no after muffler</td>
</tr>
<tr>
<td>Intake System</td>
<td>Rotax K&amp;N</td>
<td>Rotax K&amp;N</td>
</tr>
<tr>
<td>Propeller Type</td>
<td>2 Bladed Newton</td>
<td>GSC 3 bladed</td>
</tr>
<tr>
<td>Propeller Dia x Pitch</td>
<td>62” x 46”</td>
<td>62” x 14°</td>
</tr>
<tr>
<td>Noise Type Cert. No.</td>
<td>Short term exemption</td>
<td>129M</td>
</tr>
</tbody>
</table>

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

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(7) MANDATORY LIMITATIONS

(A) Maximum Take-Off Weight 390 kg

(B) Cockpit Loadings
   Min 75 kg (side by side)
   Max 180 kg

(C) Never Exceed Speed 103 mph IAS

(D) Manoeuvring Speed 103 mph IAS

(E) Permitted Manoeuvres Non-aerobatic

(F) Fuel contents (max useable) 45 litres

(G) Power Plant See Table below

<table>
<thead>
<tr>
<th>Engine</th>
<th>Rotax 462</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max RPM</td>
<td>6800</td>
</tr>
<tr>
<td>Max CHT</td>
<td>180 °C</td>
</tr>
<tr>
<td>Max EGT</td>
<td>650°C</td>
</tr>
<tr>
<td>Fuel Spec</td>
<td>83 MON or 90 RON minimum unleaded to BS(EN)228, or 97+ octane MOGAS leaded fuel to BS 4040, or AVGAS 100LL</td>
</tr>
<tr>
<td>Engine Oil Spec</td>
<td>2-stroke</td>
</tr>
<tr>
<td>Gearbox Oil Spec</td>
<td>API-GL5 or GL6, SAE 140EP or 85W-140EP as temp requires</td>
</tr>
<tr>
<td>Fuel / Oil Mix</td>
<td>50:1</td>
</tr>
<tr>
<td>Max Coolant Temp</td>
<td>80°C</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>

(8) 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>Winter</td>
<td>Required</td>
<td>Optional</td>
<td>Optional</td>
<td>Optional</td>
<td>Optional</td>
<td>Optional</td>
<td>Optional</td>
<td></td>
</tr>
</tbody>
</table>

(9) CONTROL DEFLECTIONS

Conventional weightshift controls.
PILOTS NOTES, MAINTENANCE MANUALS, REFERENCES:

10.1 Manuals approved for operators use with this aircraft
Hornet R-Za Operators Manual

10.2 The following placards are to be fitted.
(a) Flight Limitations Placard (to be visible to the pilot)
See Annex D
(b) Engine Limitations Placard
See Annex D
(c) Fuel Limitations Placard
See Annex D

MANDATORY MODIFICATIONS / SERVICE BULLETINS / AIRWORTHINESS DIRECTIVES ETC:

See Annex A for required modifications.

MINIMUM PERFORMANCE AT MAX TAKE-OFF WEIGHT

<table>
<thead>
<tr>
<th></th>
<th>Hornet R-Za</th>
<th>Hornet R-Za with mod HR113</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate of Climb:</td>
<td>422 fpm at 50 mph</td>
<td>530 fpm at 50 mph</td>
</tr>
<tr>
<td>Stall or minimum flying speed:</td>
<td>40 mph</td>
<td>40 mph</td>
</tr>
</tbody>
</table>
Issue History

<table>
<thead>
<tr>
<th>Issue No.</th>
<th>Date</th>
<th>Reason and signatory</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>08/09/89</td>
<td>Initial Issue W A Bevan</td>
</tr>
<tr>
<td>2</td>
<td>04/09/90</td>
<td>W A Bevan</td>
</tr>
<tr>
<td>3</td>
<td>05/10/90</td>
<td>Typographical error of type designation W A Bevan</td>
</tr>
<tr>
<td>4</td>
<td>08/07/03</td>
<td>Document revised to new format</td>
</tr>
</tbody>
</table>

J Barratt
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 wing may be weighed separately if required.
2. Crew Weights: Minimum 75 kg. Maximum 90 kg per seat.
   (Maximum reducible, not below 86kg, if required)
3. Fuel load: 45 litres
4. MTOW: 390 kg

ANNEX D - PLACARDS

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

Max take-off weight not to exceed 390 kg
Cockpit loadings must be between 75 and 180 kg
V_{NE} 103 mph IAS
V_{A} 103 mph IAS
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) and if MTOW can be exceeded with full fuel and 180kg cockpit weight, the fuel loads at
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MTOW for cockpit weights of 180kg / 170kg etc. at no more than 10kg intervals down to the maximum fuel load.

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)