BRITISH MICROLIGHT AIRCRAFT ASSOCIATION

MICROLIGHT TYPE ACCEPTANCE DATA SHEET (TADS)

NO: BMO-7A ISSUE 1

TYPE
Goldwing SP (Konig SC430 engine)

(1) MANUFACTURER: Eurowing Ltd., Unit 20 Dixon Place, East Kilbride, Scotland. (Now ceased trading).

(2) UK IMPORTER: N/A

(3) CERTIFICATION BASIS: BCAR Section S requirements listed in CAA document dated 17th January 1986, ref: 9/30/UL18

(4) DEFINITION OF BASIC DESIGN STANDARD: Not available; a Build Standard is defined by the Goldwing Construction Manual

(5) DIMENSIONS/WEIGHTS FOR COMPLIANCE WITH MICROLIGHT DEFINITION

(a) Wing area (inc canard area, excluding winglets) 12.82 m²
(b) Span: Main 9.14m
     Canard 3.55m
(c) Standard Mean Chord: Main 1.17m
     Canard 0.6m
(d) Dry Empty Weight: 150 kg
(e) Max Take-Off Weight: 264 kg
(f) Wing Loading (Weight Empty/Wing Area): 11.7 kg/m²
(g) Wing Loading (Max Take-Off Weight/Wing Area): 20.5 kg/m²
(h) Fuel Capacity: 4.5 UK gallons (20.43 litres)

DOCUMENT ISSUE STATUS

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POWER PLANTS

<table>
<thead>
<tr>
<th>Designation</th>
<th>Eurowing</th>
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<tbody>
<tr>
<td></td>
<td>Goldwing SP</td>
</tr>
<tr>
<td>Engine Type</td>
<td>König SC430</td>
</tr>
<tr>
<td>Reduction Gear/ratio</td>
<td>1.71:1</td>
</tr>
<tr>
<td>Exhaust System</td>
<td>Transit rear exh. box</td>
</tr>
<tr>
<td>Intake System</td>
<td>-</td>
</tr>
<tr>
<td>Propeller Type</td>
<td>Catto</td>
</tr>
<tr>
<td>Propeller Dia X Pitch</td>
<td>56&quot; x 28&quot;</td>
</tr>
<tr>
<td>Noise Type Cert. No.</td>
<td>62M issue 10</td>
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NOISE REQUIREMENT:

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

1 Seat 76 dBA 80 dBA 84 dBA N3-6, 3 Iss 4
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(7) MANDATORY LIMITATIONS: (* indicates which are placarded)

* (a) Max Take-off Weight: 264 kg

* (b) C G Limits
      19mm-70mm aft of datum.

* (c) C G Datum
      rear face of mainspar attachment lugs.

* (d) Cockpit Loadings
      Pilot or Ballast (min) 55kg Note 1 kg 55kg
      Pilot or Ballast (max) 91kg kg 91kg

Note 1: Minimum is subject to location of removable ballast to maintain
      CG as in (b) above.

(e) Permanent Ballast, Weight and Position: Varies to establish
      correct c.g.

(f) Empty C G: 165mm aft of datum.

* (g) Never Exceed Speed: 70 knots (80 mph)

* (h) Manoeuvring Speed: 42 knots (48 mph)

* (i) Manoeuvre Limitations Aerobatics prohibited (Roll <60° bank)

* (j) Fuel Contents (Max Usable): 4.5 UK gallons (20.43 litres)

(k) Power Plant: See table below

<table>
<thead>
<tr>
<th>Engine</th>
<th>Konig SC430</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max RPM</td>
<td>4400</td>
</tr>
<tr>
<td>Max CHT</td>
<td></td>
</tr>
<tr>
<td>Max EGT</td>
<td></td>
</tr>
<tr>
<td>Fuel Spec</td>
<td>92 Oct (min) Petrol/oil</td>
</tr>
<tr>
<td>Engine Oil Spec</td>
<td>Self mix 2 stroke</td>
</tr>
<tr>
<td>Gearbox Oil Spec</td>
<td>N/A</td>
</tr>
<tr>
<td>Fuel/Oil Mix</td>
<td>50:1</td>
</tr>
<tr>
<td>Oil Pressure</td>
<td>N/A</td>
</tr>
<tr>
<td>Oil Temp</td>
<td>N/A</td>
</tr>
<tr>
<td>Coolant Temp</td>
<td>N/A</td>
</tr>
</tbody>
</table>
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(8) INSTRUMENTS REQUIRED FOR TYPE ACCEPTANCE:

<table>
<thead>
<tr>
<th>ASI</th>
<th>Altimeter RPM</th>
<th>CHT</th>
<th>Compass</th>
<th>EGT</th>
<th>Coolant Temp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required</td>
<td>Required</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>25 to 85 MPH</td>
<td>or equivalent</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

- Pitch Control: Up: 23° to 25° Down: 25° to 28°
- Tailplane Trim: Up: None Down: None
- Ailerons: Up: 20° + or - 5° Down: 1° + or - 1°
- Rudder: Left: 9" at t/e Right: 9" at t/e
- Steering: Left: 5° min Right: 5° min
- Spoilers: Extend with ailerons from closed to 3" out measured at 'outboard tip of spoiler.'

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

- Goldwing Flight Manual Issued by Eurowing Ltd
- König engine manual.
- BMAA microlight maintenance schedule MMS-1

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

- See Appendix 1

(12) APPROVED OPTIONAL MODIFICATIONS

(13) MINIMUM PERFORMANCE AT MAXIMUM TAKE-OFF WEIGHT

- Rate of climb: 270 ft/minute
- Climb speed: 45 kt
- Stall or Minimum Flying Speed: 31 kt (Max power), 32 kt (Idle), aircraft does not stall.

Note: G A Drawings and/or colour photographs illustrating the principal features of the aircraft described herein, shall be attached to, and form part of these data sheets.

Signed for the BMAA:
W.G. Brooks
Chief Technical Officer
8 September 1995
Modifications

The following modifications must be incorporated on each Eurowing Goldwing SP in order to comply with the requirements and to qualify for the issue of the Individual Permit to Fly.

S611 Inspection hole to be cut into undersurfaces of wing to immediate rear of spoiler box in such a way that a replaceable inspection "plug" is provided.

S903 On versions fitted with "Sharps" reduction gear, the reduction shaft must be modified to at least the specifications of "Nicklow" or "Aerotech" reduction gear.

S992 A fire resistant fuel line must be fitted between the engine and the rear bulkhead.

S995 A fuel cock with positive on and off detents or stops is to be provided which can be operated by the pilot in flight. Its ON and OFF positions are to be clearly marked.

S1141 The wiring to the ignition switch, from the engine to the rear bulkhead, must be at least fire resistant or routed forward of fuel carrying components.

S1541 The following placards are to be installed:

(1) "M: 80 mph" (or equivalent as installed ASI annotation)
    "A: 48 mph"
    'Steep Turns: 45 mph'
    'Aerobatics Prohibited'

(2) 'Flight must be in accordance with the loading and C.G. limitations in the Goldwing Flight Manual.'

(3) For aircraft with gloss finished canards 'AVOID FLIGHT IN RAIN'

(4) A permanent placard shall be fixed to the aeroplane, in full view of the occupant and shall state:

THIS AIRCRAFT DOES NOT HAVE A CERTIFICATE OF AIRWORTHINESS NOR HAS IT BEEN SHOWN TO BE IN COMPLIANCE WITH ANY PUBLISHED CODE OF AIRWORTHINESS REQUIREMENTS.
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Appendix 1 (continued)

Inspection

The review of the compliance of the Eurowing Goldwing SP with the airworthiness requirements of the nominated paragraphs of BCAR Section S has indicated a number of areas where particular attention must be given by each BMAA Inspector responsible for inspection of such aeroplanes and these are listed below:

S605 (1) Surface of wing in proximity of main spar; no cracking or crazing allowed. No signs of repair to this area which have not been cleared according to an agreed procedure. Particularly close attention to be paid to lower surface.

(2) Resin bond between elevator and its torque tube.

(3) Condition of resin/glass/foam areas.

(4) Fuselage interface between the mainspar bulkhead and the fuselage sidewalls must be checked for any cracks or delamination.

(5) The foreplane attachment must be checked for any cracking or crazing around the attachment bolts, and for abrasion where the foreplane engages the fuselage structure.

S607 Positive locking of controls hinge bolts and nuts.

S612 Relative incidence between the mainplane and the canard foreplane; measure using straight edges across undersurfaces, as follows:-

<table>
<thead>
<tr>
<th>Mainplane root:</th>
<th>0°</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mainplane tip:</td>
<td>-2°</td>
</tr>
<tr>
<td>Foreplane:</td>
<td>+3°</td>
</tr>
<tr>
<td>Elevator bias*:</td>
<td>0° With respect to Undersurface of foreplane (using 0.25 in shock cord)</td>
</tr>
</tbody>
</table>

* The bias bungee is optional. Ensure that elevator bias allows full movement with extending bias cord to its limit.

S613 Ensure aircraft is finished in light colour to avoid excessive solar heating.

S671 Spoiler slots: ensure sufficiently wide slot to provide free movement of spoiler under all conditions.

S675 Stops on rudder pedals, particularly where modifications to nosewheel assembly have been made.

S721 Where modified undercarriage is used, ensure satisfactory attachment of undercarriage to main structure, checking that attachment points are as the original. NOTE: Whilst the original undercarriage meets the reduced requirements, the use of the latter types of undercarriage is recommended (enabling the use of
balloon type tyres and wheels instead of the original "BMX" bicycle wheels and providing wider track).

S785(d) Condition and retention of pilot safety harness and its components.

S951 Route of fuel line to ensure no likelihood of vapour locks.

S977 Satisfactory in line fuel filter.

S1125 Exhaust system installation to meet S1125.

S1307 Safety harness, inspect as coments for S785.

S1353 Inspect aircraft for compliance with regard to electrical storage batteries and installation.

S1365 Satisfactory capacity of electric cables and ensure correctly routed, as S1365.

In addition, inspectors must pay particular attention to the following:

(1) Compliance with modifications as detailed herewith.

(2) The requirements of the BMMA Inspector's Handbook and to BMMA Defect Warning Nos 022 and 023.

(3) Owners must be advised by the inspector to make regular inspection of the inside of the wing, particularly checking against corrosion of control cables and their fittings. Inspection access is via modification reference S611.
GOLDWING

GOLDWING S.P.