

BRITISH MICROLIGHT AIRCRAFT ASSOCIATION

HOMEBUILT AIRCRAFT DATA SHEET (HADS)

**NO: HM8 ISSUE: 2**

TYPE: Hunt Avon Blade<sup>1</sup>

- (1) MANUFACTURER: Individual aircraft are amateur constructed;  
Designer is J A Hunt, Old Railway Inn, Clydach South,  
Abergavenny, Gwent, NP7 0RD
- (2) UK IMPORTER: N/A
- (3) CERTIFICATION: BCAR SECTION S, (in the modification state at the date of  
manufacture or modification of any example)
- (4) DEFINITION OF BASIC STANDARD: Mainair Betawing Drawing Register 27 April 1994;  
Hunt Avon Blade Construction Drawings, issue 1;  
MAAN for individual aircraft.
- (5) COMPLIANCE WITH THE MICROLIGHT DEFINITION
- |  |   |
|--|---|
| (a) MTOW   | 390 kg                                    |
| (b) No. Seats  | 2   |
| (c) Maximum Wing Loading                                 | 25 kg/m <sup>2</sup>                      |
| (d) V <sub>so</sub>                                      | 34 kn CAS                                 |
| (e) Permitted range of pilot weights                     | 55 – 90 kg per seat.                      |
| (f) Typical Empty Weight (ZFW)                           | 196 kg                                    |
| (g) ZFW + 172 kg crew + 1 hr fuel<br>(28 litres / 20kg)* | 388 kg                                    |
| (h) ZFW + 86 kg pilot + full fuel<br>(50 litres / 36 kg) | 318 kg                                    |
| (i) Max allowed ZFW at initial permit issue <sup>2</sup> | Depends upon engine<br>and fuel capacity. |

\*Based upon 28 litres/hour maximum continuous fuel consumption.

---

<sup>1</sup> During aircraft construction, this HADS is to be used with the Hunt Avon Blade inspection sheets, form BMAA/AW/022 (Hunt 2). If there is a conflict between the two, the latest HADS will always take precedence.

<sup>2</sup> The maximum ZFW is the lower of [(a)-(172kg+1hrs fuel)] or [(a)-(86kg+full fuel)].



**BRITISH MICROLIGHT AIRCRAFT ASSOCIATION**

**HOMEBUILT AIRCRAFT DATA SHEET (HADS)**

**NO: HM8 ISSUE: 2**

(G) Power Plant See Table

Engine	BMW R100RS	
Max RPM	6,000 cont. 6.500 5-mins.	
MAX CHT	490 °F	
MAX EGT	n/a	
Fuel Spec	83 MON or 90 RON minimum unleaded to BS(EN)228 or 97+ octane 4-star or MOGAS leaded fuel to BS 4040	
Engine Oil Spec	See engine manual	
Gearbox oil spec	See gearbox manual.	
Fuel/Oil Mix	n/a	
Oil Press	58 - 72.5psi @ 4,000 RPM / 80°	
Oil Temp	130°C	
Coolant temp	n/a	

(8) INSTRUMENTS REQUIRED:

ASI	Altimeter	RPM	CHT / EGT	Compass	Coolant temp	Fuel Pressure	VSI	Slip ball
Required (to 100 kn / 115 mph min.)	Required	Required	Optional	Optional	Optional	Optional	Optional	Optional

(9) CONTROL DEFLECTIONS:

Conventional weight shift controls

BRITISH MICROLIGHT AIRCRAFT ASSOCIATION

HOME BUILT AIRCRAFT DATA SHEET (HADS)

**NO: HM8 ISSUE: 2**

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

10.1 Manuals approved for use with this aircraft.

- (a) Hunt Avon Blade Operators Manual HAB1 issue 1, AL0.
- (b) Manufacturer's engine manual
- (c) Propeller manual as fitted.

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.
- (d) Switches  
See Annex D.

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

See Annex A for required modifications.

Annual Bettsometer test is to be carried out to 1360 grammes with wing sails fitted and tensioned to flight. Test must be to both upper and lower surfaces.

Also see BMAA Inspectors handbook.

BRITISH MICROLIGHT AIRCRAFT ASSOCIATION

HOME BUILT AIRCRAFT DATA SHEET (HADS)


**NO: HM8 ISSUE: 2**

(12) MINIMUM PERFORMANCE AT MAX TAKE-OFF WEIGHT

Rate of Climb: 645 fpm (BMW variant)

Climb Speed: 42 kn CAS

Stall or Minimum Flying Speed: 34 kn CAS

BMAA Approval:		G B Gratton Chief Technical Officer	15 November 2001
-------------------	---	---	------------------

Issue History

**A** Pre flight-test working document

- 1** With approval of first example, authorised by MAAN 1546. Signatory G B Gratton, BMAA CTO.
- 2** Issue by BMAA, 15 Nov 2001. Addition of mandatory rear seat upper torso restraint (S1307). Authorised by MAAN 1579. Signatory G B Gratton, CTO.

BRITISH MICROLIGHT AIRCRAFT ASSOCIATION

HOME BUILT AIRCRAFT DATA SHEET (HADS)

**NO: HM8 ISSUE: 2**

Figure 1 - Illustration of Aircraft

To be inserted later (not yet available).

Figure 2 – Photograph of the Aircraft

To be inserted later (not yet available)

BRITISH MICROLIGHT AIRCRAFT ASSOCIATION

HOME BUILT AIRCRAFT DATA SHEET (HADS)

**NO: HM8 ISSUE: 2**

ANNEX A – MANDATORY MODIFICATIONS

Modifications

- 1 Fitment of rear seat upper shoulder harness. (Mandatory from 31 December 2001).

Inspection

Special attention to the following areas should be given during inspections:-

None yet apply

ANNEX B - APPROVED OPTIONAL MODIFICATIONS

- 1 Permitted Fuel Tank Options  
(subject to confirmation of no interference with the engine installation).
  - 1.1 Medway Raven-X 27 litre top-tank.with Medway supporting structure and drip tray.
  - 1.2 22 Litre motorboat tank below seat, subject to 56kg side-load test, 1.5psi pressure test and use of either Medway or Mainair twin-tank plumbing.  
[Combined with 1.1]
  - 1.3 49 Litre Pegasus Quantum single main tank (requires modification of drag-link geometry, consult aircraft designer).
  - 1.4 44 Litre Mainair Gemini trike double tank system (combined with upright engine).
  - 1.5 22 Litre Mainair Gemini trike front tank only.

BRITISH MICROLIGHT AIRCRAFT ASSOCIATION

HOMEBUILT AIRCRAFT DATA SHEET (HADS)

**NO: HM8 ISSUE: 2**

ANNEX C

WEIGHING INFORMATION

1. CG Datum: Not relevant (weight shift aircraft).
2. Weighing attitude: Unimportant (weight shift aircraft)
3. Undercarriage moment arm: Not relevant (weight shift aircraft).
4. Crew weights: Minimum 55 per seat  
Maximum 90 kg per seat, 180kg total  
(maximum reducible, not below 86 kg per seat, if required).
5. Fuel Capacity: Varies, see individual aircraft MAAN.

BRITISH MICROLIGHT AIRCRAFT ASSOCIATION

HOMEBUILT AIRCRAFT DATA SHEET (HADS)

**NO: HM8 ISSUE: 2**

ANNEX D

EXAMPLE PLACARDS

(Precise placard format and layout is unimportant so long as all information is represented).

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

<u>Hunt Avon Blade [Engine] [Registration]</u>	
Never Exceed Speed:	_____ IAS
Manoeuvring Speed :	_____ IAS
Pitch Limits:	30° nose down, 30° nose up.
Bank angle limits:	+/- 60°
Empty Weight:	_____ kg *
Max Take-Off Weight:	390 kg
Minimum Cockpit Weight:	55 kg
Maximum Cockpit Weight:	90 kg in each seat.*
Aerobatics prohibited.	

\* This must match the most recent W&CG report for the aircraft. IAS Limitations will be given in the approval MAAN for an individual aircraft.

(b) Engine Limitations Placard (to be located near to engine instruments)

Limitations must be shown as coloured markers (red for danger, amber for caution) on the instrument displays. Alternative means of providing this information require specific agreement by the BMAA Technical Office..

(c) Fuel Limitations Placard (to be located near to filler cap)

<u>FUEL</u>	
Capacity _____ Litres	
<u>(40:1 2-stroke oil / 50:1 2 Stroke oil / do not add Oil)</u>	
<u>Cockpit Weight (kg)</u>	<u>Max. Fuel Load (litres)</u>
180	
170	
....	
.... Or below	<u>(Full Capacity)</u>
83 MON or 90 RON minimum unleaded to BS(EN)228 or 97+ octane 4-star / MOGAS leaded fuel to BS 4040, or AVGAS 100LL	

BRITISH MICROLIGHT AIRCRAFT ASSOCIATION

HOMEBUILT AIRCRAFT DATA SHEET (HADS)

**NO: HM8 ISSUE: 2**

(d) Switches

All switches are to be marked with function and sense (up=on, down=off).

(e) Pitch Trimmer Instructions

PITCH TRIM SLOW ← → FAST
--------------------------

There is also to be a mark on the trimmer cable, which allows visual selection of the neutral position.

(f) ASI Placard

<b>Kn CAS (calibrated)</b>	<b>30</b>	<b>34 V<sub>S0</sub></b>	<b>38 Glide</b>	<b>47 Approach</b>	<b>50</b>	<b>60</b>	<b>68 V<sub>A</sub></b>	<b>70</b>	<b>80</b>	<b>88 V<sub>NE</sub></b>
<b>IAS (indicated)</b>										

*Unless all errors are less than 2 kn a copy of this calibration card must be displayed in the cockpit near to the ASI.*



**UNITED KINGDOM  
CIVIL AVIATION AUTHORITY**

**MPD No: 2001-004**

Issue Date: 3 September 2001

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

### **MPD: 2001-004 MAINAIR SPORTS**

Subject: Upper torso restraint for passengers.

Applicability: Mainair Sports two seat microlights.

Reason: As a result of a recent fatal accident, AAIB Recommendation 2001-52 has been issued. This recommends that manufacturers of UK registered microlight aircraft provide upper body restraint to the rear seats where forward movement of a passenger could cause injury to the pilot. This recommendation was accepted by the CAA.

Compliance: At the next Permit to Fly renewal or before 25 January 2002, whichever is sooner, install shoulder straps for use by passenger, in accordance with Mainair Sports Service Bulletin No 45.

A copy of the Service Bulletin and further information can be obtained from:

Mainair Sports  
Unit B  
Crawford Street  
Rochdale  
Lancashire  
OL16 5NU

Tel: 01706 655134  
Fax: 01706 631561  
Email: [flying@mainairsports.co.uk](mailto:flying@mainairsports.co.uk)

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 7 September 2001.

Enquiries regarding this MPD should be made to the United Kingdom Civil Aviation Authority, Applications and Certification Section, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR Telephone: +44(0)1293 573149 Telefax: +44(0)1293 573993.



# EMERGENCY MANDATORY PERMIT DIRECTIVE



Number: 2016-008-E

Issue date: 3 October 2016

In accordance with Article 41(1) of The Air Navigation Order 2016, as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

<b>Type Approval Holder's Name:</b> P&M Aviation Ltd	<b>Type/Model Designation(s):</b> Pegasus XL-Q variants, Pegasus Quasar variants, Pegasus Quantum variants, Pegasus Quik, Quik, Quik GT450, Quik Lite, Gemini Flash IIA, Mainair Blade variants
<b>Title:</b>	<b>Wing – Luff Line Attachment Webbing – Inspection</b>
<b>Manufacturer:</b>	P&M Aviation Ltd
<b>Applicability:</b>	Pegasus XL-Q variants, Pegasus Quasar variants, Pegasus Quantum variants, Pegasus Quik, Quik, Quik GT450, Quik Lite, Gemini Flash IIA, Mainair Blade variants.
<b>Reason:</b>	<p>The port inner luff line attachment webbing failed on a GT450 wing with 620 hours airtime during taxiing.</p> <p>The polyester webbing loop had chafed against the chrome plated brass eyelet. The webbing wear was visible from the top side, but not from the underside of the sail.</p> <p>A detached luff line is hazardous as it may go into the propeller. Pitch stability in a steep dive or in turbulence would also be compromised.</p> <p>It appears that the eyeleting process has been forming a ridge inside it capable of damaging the webbing. New tooling has been introduced at the Factory to prevent recurrence of the problem.</p>
<b>Effective Date:</b>	3 October 2016
<b>Compliance/Action:</b>	<p>Compliance is required as follows, unless previously accomplished:</p> <ol style="list-style-type: none"><li>1. Before further flight, inspect the luff line attachment webbings in accordance with paragraph 2.1 of P &amp; M Aviation Ltd Service Bulletin 142. If there is no sign of damage to the webbing, the aircraft may continue in service.</li><li>2. Before further flight, inspect the luff line attachment webbings in accordance with paragraph 2.1 of P &amp; M Aviation Ltd Service Bulletin 142. If there is no sign of damage to the webbing, the aircraft may continue in service.</li></ol>

<b>Compliance/Action Cont:</b>	<p>3. If the inspection in paragraph 1 reveals damage to the webbing, it must be replaced or a back-up load path installed in accordance with paragraph 2.3 of P &amp; M Aviation Ltd Service Bulletin 142 before further flight.</p> <p>4. Record the inspection from paragraph 1 and any necessary rectification action from paragraph 2 in the aircraft technical log in accordance with paragraph 3 of P &amp; M Aviation Ltd Service Bulletin 142.</p> <p>5. Repeat the actions in paragraphs 1 and 2 at 50 flight hour intervals.</p>	
<b>ENSURE COMPLIANCE WITH THIS MPD IS RECORDED IN THE AIRCRAFT LOGBOOK</b>		
<b>Reference Publications:</b>	P & M Aviation Ltd Service Bulletin Number 142 Issue 4 dated 23 September 2016	
<b>Remarks:</b>	<p>1. This MPD was not posted for consultation because of the urgency of the requirement.</p> <p>2. Enquiries regarding this Mandatory Permit Directive should be referred to: GA Unit, Civil Aviation Authority, Safety and Airspace Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR.</p>	
	Tel: +44 (0)1293 573988	E-mail: ga@caa.co.uk