

**CIVIL AVIATION AUTHORITY
SAFETY REGULATION GROUP**

MICROLIGHT TYPE ACCEPTANCE DATA SHEET (TADS)

NO: BMO-1 ISSUE: 3

- TYPE Eagle 215B
- (1) **MANUFACTURER:** American Aerolights Inc, 700 Comanche NE, Albuquerque, New Mexico, USA
- (2) **UK IMPORTER:** Aerolite Ltd, Long Marston Airfield, Stratford Upon Avon, Warwickshire
- (3) **CERTIFICATION BASIS:** BCAR Section S (Advance Issue)
Requirements listed in CAA note dated 19 June 1985, Ref 9/30/UL18
- (4) **DEFINITION OF BASIC STANDARD:** Not Available
- (5) **DIMENSIONS/WEIGHTS FOR COMPLIANCE WITH MICROLIGHT DEFINITION**
- (a) Wing area (inc canard area, excluding winglets): 18 m² (193 ft²)
 (b) Span: 10.67m² ((35 ft)
 (c) Standard Mean Chord: 1.52 m (5 ft)
 (d) Dry Empty Weight: 77 kg to 87 kg
 (e) Max Take-Off Weight: 197 kg
 (f) Wing Loading (Weight Empty/Wing Area): 4.28 to 4.83 kg/m²
 (g) Wing Loading (Max Take-Off Weight/Wing Area): 10.94 kg/m²
 (h) Fuel Capacity 4 gallons

(6) **POWER PLANTS**

Designation	Eagle 215B	Eagle 215B	Eagle 215B	Eagle 215B
Engine Type	Cuyuna 215R	Zenoah G-25B1	2 x Chrysler 820	Robin EC25PS
Reduction Gear	2.4:1	2.25:1	3.3:1	2.4:1
Exhaust System	Cuyuna Tuned Exhaust	Zenoah Tuned Exhaust	Twin Chrysler Tuned Exhaust	Fuji Tuned Exhaust
Intake System				
Propeller Type	Ritz, Texan or Farr	Ritz, Texan or Farr	Ritz, Texan or Farr	Ritz, Texan or Farr
Propeller Dia x Pitch	54" x 24" LH Elliptical Tip	54" x 24" RH	54" x 20" RH	54" x 27" LH
Noise Type Cert No.	11M	N/A	11M	11M

Noise requirement

	1 Seat	2 Seat	BCAR Reference
Registered Pre 1/4/86	80 dBA	84 dBA	N3-6, 3 Iss 4
Registered Post 1/4/86	76 dBA	80 dBA	N3-6, 4 Iss 4

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- (7) MANDATORY LIMITATIONS: * To be placarded
- *(a) Max Take-off Weight: 197 kg
 - *(b) C G Limits: N/A
 - (c) C G Datum: N/A
 - *(d) Cockpit Loadings:

	Front	Rear	Total
Pilot or Ballast (min)	-	-	90 kg
Pilot or Ballast (max)	-	-	90 kg
 - (e) Permanent Ballast, Weight and Position: N/A
 - (f) Empty C G: N/A
 - *(g) Never Exceed Speed: N/A
 - *(h) Manoeuvring Speed: N/A
 - *(i) Manoeuvre Limitations: Non-Aerobatic
 - *(j) Fuel Contents (Max Usable): 4 gals
 - (k) Power Plant: See Table

Engine	Cuyuna 215R	Zenoah G25B1	Chrysler 820	Robin EC25PS
Max RPM	N/A	N/A	N/A	N/A
Max CHT	N/A	N/A	N/A	N/A
Max EGT	N/A	N/A	N/A	N/A
Fuel Spec	Petrol	N/A	N/A	Petrol
Engine Oil Spec	2 Stroke Oil Premium Grade	2 Stroke Oil Premium Grade	2 Stroke Oil Premium Grade	2 Stroke Oil Premium Grade
Gearbox Oil Spec				
Fuel/Oil Mix	40:1	25:1	25:1	40:1
Oil Press	N/A	N/A	N/A	N/A
Oil Temp	N/A	N/A	N/A	N/A
Coolant Temp	N/A	N/A	N/A	N/A

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(8) INSTRUMENTS REQUIRED FOR TYPE APPROVAL:

ASI	Altimeter	RPM	CHT	Compass
N/A	Wrist Mounted	N/A	N/A	N/A

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

<u>Pitch Control</u>	Up: - T/E 2" Up	Down:-	Limited by Stop
<u>Tailplane Trim</u>	Up: - N/A	Down:-	N/A
<u>Ailerons</u>	Up: - N/A	Down:-	N/A
<u>Rudder</u>	Left: - N/A	Right:-	N/A
<u>Steering</u>	Left: - N/A	Right:-	N/A
<u>Spoilers</u>	N/A		

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

Eagle Owners Manual

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

See Appendix 1

(12) APPROVED OPTIONAL MODIFICATION

BMM 152 Propeller Change

(13) MINIMUM PERFORMANCE AT MAX T/O WT

Rate of Climb: 500 ft/min

Climb Speed:


Stall or Minimum Flying Speed:

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Notes:

1. G A Drawings and/or colour photographs illustrating the principal features of the aircraft submitted for type approval shall be attached to, and form part of, this Data Sheet.

<u>Issue</u>	<u>Date</u>	<u>CAA Approval</u>
3	28 November 1990	

Issue 3 Optional modification BMM 152 added.
Noise Certificate references added.

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Modifications

The following modifications must be incorporated on each Eagle microlight in order to comply with the requirements and to qualify for the issue of the Individual Exemption.

- (a) A fire resistant fuel line must be fitted.
- (b) The hot exhaust sections of the engine must be shielded from fuel leaks.
- (c) The wiring for the ignition switch must either be fire resistant adjacent to the engine or located so that in the event of an engine fire the engine can be stopped.
- (d) Control system pulleys must be equipped with close fitting guards to prevent the cable from being misplaced or fouled.

In addition as a further condition of Type Acceptance and the granting of Individual Exemptions, the pilot must carry a wrist altimeter if an altimeter is not mounted in the aeroplane and he must wear a protective crash helmet.

Inspection

The review of the compliance of the Eagle 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 Eagle aeroplanes and these are listed below:-

- (a) Although tubing supplied by Aerolite Eagle has been anodised internally, parts obtained from other sources may not be protected in this manner. Inspection of the structure is required to determine that an adequate level of protection against corrosion has been provided.
- (b) Structural cables are plastic coated. These are to be inspected to ensure that the coating is not opaque such that it would hide evidence of cable corrosion.
- (c) Butterfly nuts are used at a number of locations and appear to be prone to corrosion. All corroded nuts are to be replaced and that the condition of the tubing under corroded nuts examined to ensure that its protection is satisfactory.
- (d) The bottom frame at the rear wheel mountings is to be inspected for signs of wear.
- (e) The main frame tubing is to be inspected for signs of trapped moisture or corrosion at the point where the undercarriage mounting is attached.

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- (f) The leading edge tube is to be inspected for signs of damage that may be caused by the wing tip rudder cable pulleys during rigging and de-rigging.
- (g) A check must be made to ensure that the specified amount of elevator travel is available.
- (h) The fabric pocket in which the fuel tank is installed is to be inspected for signs of fuel soakage and deterioration. A fuel soaked fabric pocket is a fire hazard.

In addition the following Service Bulletins, issued by the Eagle Owners and Pilots Association, must be actioned on each Eagle aeroplane when being inspected for the purposes of issuing the Individual Exemption.

- SB 001 Checks on the landing gear base tube for wear and cracks.
- SB 002 Pilots to be aware of the possibility of jamming the handle bar/throttle twist grip when wearing thick gloves.
- SB 003 Check for correct propeller/engine combination.
- SB 004 Check for propeller/keel clearance.
- SB 005 Modifications to fuel tank filler cap.

The following American Aerolight Service Bulletin and News Letters are to be actioned.

SB No A-84-1020 to reinforce main sail trailing edge.

News letter 15.6.82 - Double sleeving of leading edges.

News letter 19 dated 23.12.82 - Inspection of steel drive shafts on Zenoah Eagles, and care to prevent galling of aluminium drive shafts.