

MICROLIGHT TYPE ACCEPTANCE DATA SHEET (TADS)

NO: BMO-56 ISSUE:2

TYPE Lightning DS/Tri-flyer
Lightning DS/Tri-Flyer 440

- (1) MANUFACTURER: WING: Southdown Sailwings.
TRIKE:Mainair Sports.
- (2) UK IMPORTER: N/A
- (3) CERTIFICATION BASIS: Type Acceptance to BCAR section S advance issue 1983 selected paragraphs according to CAA letter ref 9/30/UL18 (type acceptance).
- (4) DEFINITION OF BASIC STANDARDS: See MAAN 1199
- (5) DIMENSIONS/WEIGHT FOR COMPLIANCE WITH MICROLIGHT DEFINITION

- (a) Wing area 18.5 sq.m
(b) Span 10.8 m
(c) Standard mean chord 1.71 m
(d) Dry empty weight 151 kg
(e) Max takeoff weight 334 kg
(f) Empty wing loading 8 kg/sqm
(g) Wing loading at Max weight 18 kg/sqm

(6) POWER PLANTS

Designation	DS/ Triflyer 440	DS/ Triflyer 440	DS/ Triflyer 440	DS/ Triflyer 440	DS/ Triflyer 440
Engine Type	Fujii Robin EC44PM	Fuji Robin EC44PM	Fuji Robin EC44PM	Fuji Robin EC44PM	Fuji Robin EC44PM
Reduction Gear	Tooth Belt 2.66:1	Tooth Belt 2.67:1	Tooth Belt 2.66:1		
Exhaust System	Rotaflow	Rotaflow	Rotaflow		
Intake System	None	-	-		
Propeller Type	Mainair	Mainair	Romain		
Propeller Dia x Pitch	62"x27"	62"x30"	62"x30"		
Noise Type Cert No.	2M issue 4	2M issue 2	2M issue 6		

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(7) MANDATORY LIMITATIONS:

Note: Items marked "*" below MUST be placarded in clear view of the pilot.

- (A) Max Take-off Weight: * 334kg *
- (B) C G Limits (3-Axis Aircraft):
- (C) C G Datum
- (D) Cockpit Loadings: * Front Rear Total
- Pilot and Baggage or Ballast (Min) * 55kg 0 55kg
- Pilot and Baggage (Max) * 80kg 80kg 160kg
- (E) Permanent Ballast, Weight and Position: None
- (F) Empty C of G (3-Axis Aircraft):
- (G) Never Exceed Speed: * 63 mph
- (H) Manoeuvring Speed: * 50 mph
- (I) Permitted Manoeuvres: * Non-aerobatic less than +-45
degrees (pitch) and 60
degrees bank.
- (J) Fuel Contents (Max Useable): * 24 litres.
- (K) Power Plant: See Table

Engine	Fuji Robin EC44PM				
Max RPM	7000				
MAX CHT	250 C				
Fuel Spec	Four star or premium unleaded MOGAS				
Oil Spec	Self mix 2 stroke.				
Fuel/Oil Mix	40:1				
Max EGT	-				
Oil Press	n/a				
Oil Temp	n/a				

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(8) INSTRUMENTS REQUIRED FOR TYPE ACCEPTANCE:

ASI	Altimeter	RPM	CHT	Compass	EGT
yes	can be on pilots wrist	no	no	no	no

(9) CONTROL DEFLECTIONS (3-Axis Systems):

Pitch Control	Up:-	Down:-
Tailplane Trim	Up:-	Down:-
Ailerons	Up:-	Down:-
Rudder	Left:-	Right:-
Steering	Left:-	Right:-
Spoilers		

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

Southdown sailwings Lightning DS owners manual.
Mainair Sports Tri-flyer owners manual.
Fuji Robin EC44PM manual.
BMAA maintenance schedule MMS-1

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

11.1 The aircraft must be inspected to comply with the requirements of TS004 issue 2 and WS001 issue 1.

11.2 The wing trailing edge can approach the propeller in downwind taxi situations despite a static clearance of over 200mm. In order to prevent such possible propeller/sail contact, two additional reflex lines of 2.5mm diameter 7x7 galvanised or stainless cable with the appropriate swages and thimbles must be fitted. The two separate reflex cables must be fitted to the trailing edge at the two inboard unsupported battens, running up to the steel reflex line bracket at the top of the kingpost. The means of attachment to the sail trailing edge should be the same as that used on the existing reflex cables. The additional reflex cable tension should be set so they are just tight in the static condition with the sail unloaded. This setting should ensure that:

a) the propeller/sail clearance cannot drop significantly below the static measurement.

b) The reflex lines are slack in flight.

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11.3 The wing cross-boom pull back cables must be inspected at least annually for fraying where they pass the kingpost, and where they meet the crossboom swage. The cable assembly should be replaced every 200 hours.

11.4 The lower side rigging cables should be of twin 3mm 7x7 Galvanised steel or stainless steel.

(12) MINIMUM PERFORMANCE AT MAX TAKE-OFF WEIGHT

Rate of Climb: 330 fpm at 35mph.

Stalling Speed: 28mph.

* NOTE

Wrist Altimeter permitted provided that -

- (a) A cockpit placard states, "WRIST ALTIMETER MANDATORY" and
- (b) A wrist altimeter is part of the aircraft equipment.

Issue 1	Date 8/12/94	Initial
Issue 2	21/6/95	Type designation to match UK register

BMAA Approval



W.G. Brooks
Chief Technical Officer
21 June 1995