

CIVIL AVIATION AUTHORITY – SAFETY REGULATION GROUP

MICROLIGHT TYPE APPROVAL DATA SHEET (TADS)

NO: BM-59 ISSUE: 2

- TYPE: Rebel SS
- (1) MANUFACTURER: Medway Microlights, Burrow Lane, Middle Stoke,
Rochester, Kent, ME9 9RN
(have responsibility for continued airworthiness)
- (2) UK IMPORTER: N/A
- (3) CERTIFICATION: BCAR Section S Advanced Copy March 1993
BCAR Section S Paper 11 October 1988
BCAR Section S Issue 1, 4 April 1995
- (4) DEFINITION OF BASIC STANDARD: Drawings List of Hybred 44 XL ‘R’ and Rebel SS
Incorporating Mods
- (5) COMPLIANCE WITH THE MICROLIGHT DEFINITION
- | | |
|--|------------------------|
| (a) MTOW | 367 kg |
| (b) No. Seats | 2 |
| (c) Maximum Wing Loading | 24.5 kg/m ² |
| (d) V _{so} | 34 mph IAS |
| (e) Permitted range of pilot weights | 75 - 86 kg per seat. |
| (f) Typical Empty Weight (ZFW) | 165 kg |
| (g) ZFW + 172 kg crew + 1 hr fuel
(16 litres /11.52 kg) | 348.5 kg |
| (h) ZFW + 86 kg pilot + full fuel
(42 litres / 31 kg) | 282 kg |
| (i) Max ZFW at initial permit issue | 183.5 kg |

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(6) POWER PLANTS

Designation	<i>44XL 'R' Mod MM 18 Part A-B</i>			
Engine Type	<i>2SI 690L70</i>			
Reduction Gear	<i>Gear Box 2.62:1</i>			
Exhaust System	<i>2SI</i>			
Intake System	<i>K&N</i>			
Propeller Type	<i>Medway Type 1429 3 Blade</i>			
Propeller Dia x Pitch	<i>62 x26° @ 13.5"</i>			
Noise Type Cert No.	<i>166 M Issue 1</i>			
AAN approving configuration	27241			

(7) MANDATORY LIMITATIONS:

- | | | | |
|---------------------------------|---|-------|--------|
| (A) Max Take-Off Weight | 367 kg | | |
| (B) CG Limits | N/A | | |
| (C) CG datum | N/A | | |
| (D) Cockpit Loadings | Front | Rear | Total |
| | Min 75 kg | - | 75 kg |
| | Max 86 kg | 86 kg | 172 kg |
| (E) Never Exceed Speed | 100 mph IAS | | |
| (F) Manoeuvring Speed | 68 mph IAS | | |
| (G) Permitted Manoeuvres | All aerobatic manoeuvres are prohibited.
Normal acceleration limits, +4 / 0g
Maximum bank angle 60°
30° Nose up / 30° nose down
Whip stalls are prohibited. | | |
| (H) Fuel Contents (Max Useable) | 42 litres | | |

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(I) Power Plant See Table

Engine	2SI 690L70			
Max RPM	6500			
MAX CHT	250°C			
MAX EGT	650°C			
Fuel Spec	Unleaded BS(EN) 228 Fuel : Oil @ 50:1			
Engine Oil Spec	N/A			
Gearbox oil spec	SAE80			
Fuel/Oil Mix	50:1			
Coolant Temperature	88°C			
Oil Pressure	N/A			
Oil Temperature	N/A			
Fuel Pressure				

(8) INSTRUMENTS REQUIRED:

ASI	Altimeter	RPM	CHT / EGT	Compass	Coolant temp	Fuel Pressure	VSI	Slip ball	Oil Temp	Oil Pressure
Required (100mph min.)	Required	Required	Required	Required	Required					

(9) CONTROL DEFLECTIONS: N/A

Elevator UP:	±	Tailplane trim UP:
Elevator DOWN:	±	Tailplane trim DOWN
Ailerons* UP:	±	Rudder LEFT:
Ailerons* Down:	±	Rudder RIGHT:

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

10.1 Manuals approved for use with this aircraft.

(a) Rebel SS Manual Issue 1.

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)

A placard is to be fitted showing fuel capacity (litres), fuel type(s), fuel:oil ratio (if relevant) and if MTOW can be exceeded with full fuel and maximum cockpit weight, the fuel loads at MTOW for cockpit weights of 180kg / 170kg / 160kg etc. at 10kg intervals down to the maximum fuel load. An example is shown at 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.

(12) MINIMUM PERFORMANCE AT MAX TAKE-OFF WEIGHT

Rate of Climb: 600ft/min

Climb speed: 45 mph

Stall or Minimum Flying Speed: 34 mph

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Issue History

<u>Issue No.</u>	<u>Reason and signatory</u>
1	16/03/00 Issue 1 was raised to record the installation of the 2SI 690L70 two stroke engine in accordance with Modification number MM18 parts A & B. C J Whittaker
2	19/06/03 Issue 2 was raised to include additional optional major modifications and MPD Upper Torso Restraint.

JC Barratt

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Illustration of Aircraft - Photograph

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ANNEX A – MANDATORY MODIFICATIONS

1. MPD 2001-006 Upper Torso Restraint for Passengers

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.

None

ANNEX C - WEIGHING INFORMATION

1. CG Datum: N/A
2. Weighing attitude: N/A
3. Main wheel moment arm: N/A
4. Nose wheel moment arm: N/A (units) (direction) of datum
5. Fuel moment arm: N/A (units) (direction) of datum
6. Crew moment arm: N/A (units) (direction) of datum
7. Crew weights: Minimum 75 kg / maximum 86 kg
(maximum reducible, not below 86 kg, if required).
8. Aft CG Limit: N/A (units) (direction) of datum
9. Fwd CG Limit: N/A (units) (direction) of datum

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ANNEX D - EXAMPLE PLACARDS

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

[Type]	[Engine]	[Registration]
Never Exceed Speed:	100 mph IAS	
Manoeuvring Speed :	68 mph IAS	
Stall Speed:	34mph IAS	
Best climb speed:	45 mph IAS	
Best glide speed:	42 mph IAS	
Pitch Limits:	30° nose down, 30° nose up.	
Bank angle limits:	+/- 60°	
Maximum Stall entry rate:	1 kn/s	
Normal Acceleration Limits:	+4 / 0g	
Empty Weight:	165 kg *	
Max Take-Off Weight:	367 kg	
Minimum Cockpit Weight:	75 kg	
Maximum Cockpit Weight:	86 kg in each seat.*	
Aerobatics and deliberate spinning prohibited.		

* This must match the most recent W&CG report for the aircraft.

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

A placard showing the limitations for all 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)

FUEL	
Capacity __ Litres	
(50:1 2 Stroke oil / do not add oil)	
Cockpit Weight (kg)	Max. Fuel Load (litres)
180	
170	
....	
.... Or below	Full fuel
Unleaded to BS (EN) 228	

d) Switches

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