CIVIL AVIATION AUTHORITY – SAFETY REGULATION GROUP

MICROLIGHT TYPE APPROVAL DATA SHEET (TADS)

NO: BM - 37 ISSUE: 3

TYPE: Chaser S 447

(1) MANUFACTURER: Cosmik Aviation Ltd

(2) UK IMPORTER: N/A

(3) CERTIFICATION: BCAR Section S, Advance Issue, March 1983

(4) DEFINITION OF BASIC STANDARD: CH-001 to CH-830: CH-03-CA Mod 09
CH-831 on: CH-447 – GA Issue 1

(5) COMPLIANCE WITH THE MICROLIGHT DEFINITION

(a)	MTOW	220 kg
(b)	No. Seats	1
(c)	Maximum Wing Loading	22 kg/m²
(d)	Vso	34 mph IAS
(e)	Permitted range of pilot weight	55 – 90 kg
(f)	Typical Empty Weight (ZFW)	100 kg
(g)	ZFW + 172 kg crew + 1 hr fuel (litres / kg)	N/A
(h)	ZFW + 86 kg pilot + full fuel (23 litres / 17 kg)	203 kg
(i)	Max ZFW at initial permit issue	117 kg

(6) POWER PLANTS

Designation	*Chaser S 447*	*Chaser S 447*		
Engine Type	*Rotax 447*	*Rotax 447*		
Reduction Gear	*2.58:1*	*2.58:1*		
Exhaust System	*Rotax with after muffler*	*Rotax with after muffler*		
Intake System	*K & N Rotax muffler*	*K & N Rotax muffler*		
Propeller Type	*Cyclone semi-scimitar*	*GSC Tech II, 2 blade ground adjustable*		
Propeller Dia x Pitch	*62" x 32"*	*60" x 42"*		
Noise Type Cert No.	*120M Issue 2*	*120M Issue 3*		
AAN approving configuration	*21772*	*22978*		

(7) MANDATORY LIMITATIONS:

(A) Max Take-Off Weight		220 kg
(B) CG Limits		N/A
(C) CG datum		N/A
(D) Cockpit Loadings	Min	55 kg
	Max	100 kg (including baggage)
(E) Never Exceed Speed		108 mph (90 mph with Cosmik Aviation Ltd Modification 004)
(F) Manoeuvring Speed		66 mph
(G) Permitted Manoeuvres		Non Aerobatic Normal acceleration limits, +4 / -2g
(H) Fuel Contents (Max Useable)		23 litres

(I) Power Plant See Table

Engine	Rotax 447			
Max RPM	6800			
MAX CHT	480ºF			
MAX EGT	1200ºF			
Fuel Spec	4-star or unleaded MOGAS fuel, petrol/oil mix			
Engine Oil Spec	N/A			
Gearbox Oil Spec	EP90			
Fuel/Oil Mix	50:1			
Coolant Temperature	N/A			
Oil Pressure	N/A			
Oil Temperature	N/A			
Fuel Pressure	0.2 – 0.5 bar			

(8) INSTRUMENTS REQUIRED:

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

* A wrist altimeter may be used provided that:

(a) A cockpit placard states that “Wrist Altimeter Mandatory”, and
(b) A wrist altimeter is part of the aircraft equipment.

(9) CONTROL DEFLECTIONS: N/A

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

10.1 Manuals approved for use with this aircraft**.**

(a) Aerial Arts Ltd. Chaser S Owner's Manual. Ref. /WP/Report/CHAS.DOC Issue 1, 6th October 1989

(b) Cyclone Airsports Ltd Chaser Owner's Manual ref. CHAS447.doc – Issue 2

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 (23 litres), fuel type(s) and fuel:oil ratio. See Annex D.

(d) Switches
See Annex D.

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

See Annex A.

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:	1200 fpm at 45 mph IAS.
Stall or Minimum Flying Speed:	34 mph IAS at MTOW / idle.

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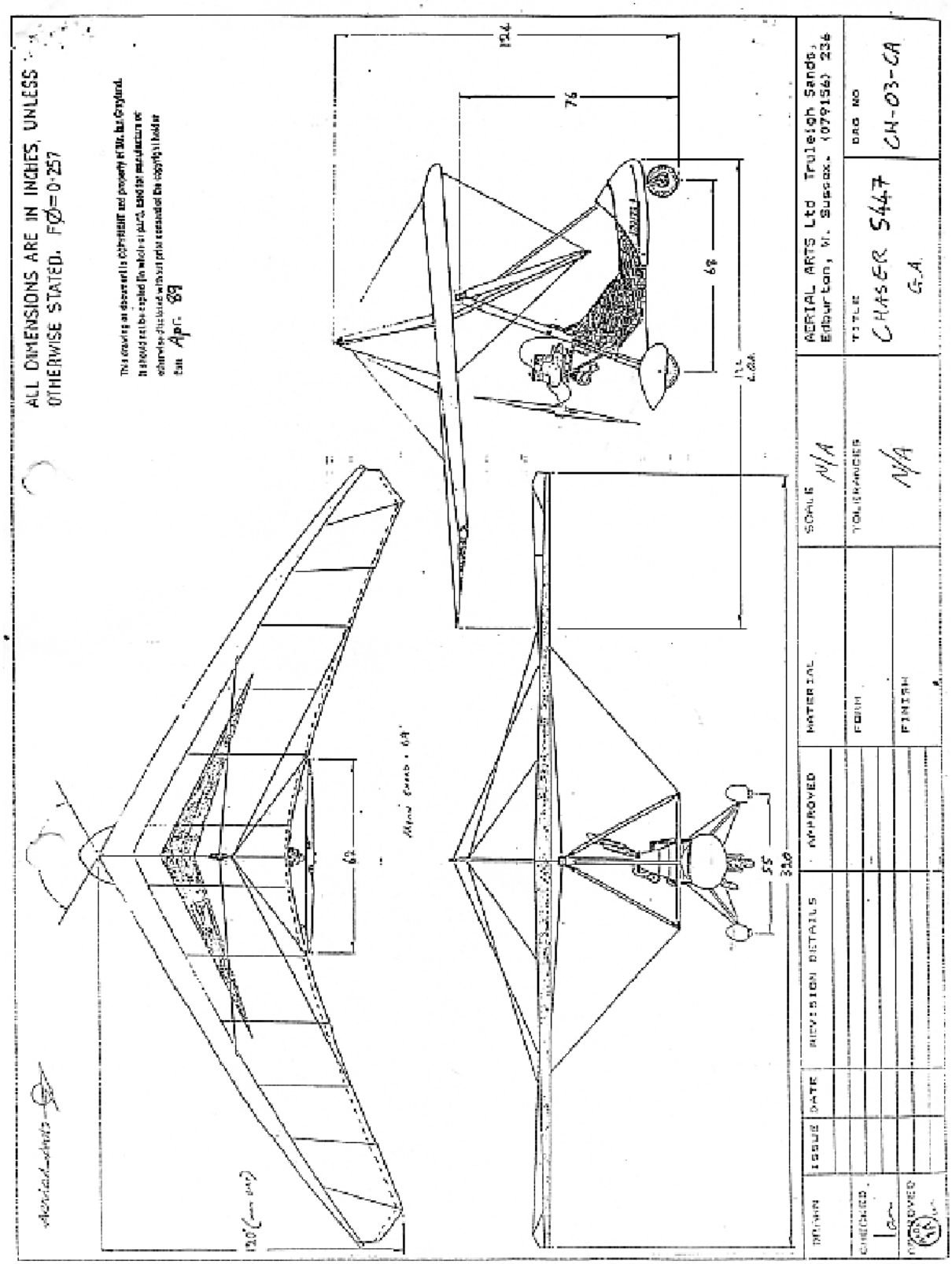
Issue History

	Issue No.	Reason and signatory
1	25/10/89	Initial Issue. T R Woods
2	29/01/92	Alternative propeller added. A Carter
3	04/11/04	TADS updated to revised format and optional modifications added to Annex B. N J Davis

Illustration of Aircraft - 3 View



ANNEX A – MANDATORY MODIFICATIONS / SERVICE BULLETINS / AIRWORTHINESS DIRECTIVES ETC:

1. Service Bulletin CH006 Issue 3, Hangpoint Inspection and Replacement (MPD 1995-011)
2. Service Bulletin CH 012, Replacement of Luff Lines (MPD 2000-001)

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.

1. Cosmik Aviation Ltd Modification 004, Reduction of V_{NE} to 90 mph
2. Cosmik Aviation Ltd Modification 006, Maximum Zero Fuel Weight and Baggage Allowance Clarification

ANNEX C

WEIGHING INFORMATION

Crew weights: Minimum 55 kg / maximum 90 kg

ANNEX D

EXAMPLE PLACARDS

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

Chaser S Rotax 447 G-_____	
Never Exceed Speed:	90 or 108 mph IAS (depending on mod state)
Manoeuvring Speed :	66 mph IAS
Empty Weight:	____ kg *
Max Take-Off Weight:	220 kg
Minimum Cockpit Load:	55 kg
Maximum Cockpit Load:	100 kg (including baggage)
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.

Max CHT 480ºF
Max. EGT 1200ºF
Max. RPM 6800

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

Fuel 23 litres
2 Stroke 50:1
4 star or unleaded

(d) Switches

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

(e) Additional Placards

Adjacent to the fuel cock: ON FUEL OFF

When a fuel flow computer is used, the following placard must be fitted adjacent to the fuel flow display: NOT FOR PRIMARY FUEL MANAGEMENT

In line battery fuseholder to be labelled: 3 AMP FUSE

Adjacent to the hand throttle: OPEN THROTTLE CLOSE

Adjacent to the Ignition Switch in RED: ON IGNITION OFF

On the carburettor adjacent to the fuel cock in RED: ON FUEL OFF

On the undercarriage drag link tubes: NO STEP

On the base tube adjacent to the baggage compartment:

BAGGAGE Max Weight ___ kg

(Placard figure to be 117 kg minus actual aircraft zero fuel weight or 10 kg if zero fuel weight is less than 107 kg.)