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TYPE: **PULSR**

- (1) MANUFACTURER: P&M Aviation Ltd, Unit B, Crawford St, Rochdale, Lancs
OL16 5NU
- (2) UK IMPORTER: N/A
- (3) CERTIFICATION: BCAR section S issue 6
- (4) DEFINITION OF BASIC STANDARD: Airworthiness Submission PULSR, GA drawing YCT-000
issue A

(5) COMPLIANCE WITH THE MICROLIGHT DEFINITION

(a) MTOW	450 kg (472.5kg with approved parachute fit)
(b) No. Seats	2
(c) Maximum Wing Loading	36.3kg/m ² (at 472.5kg)
(d) V _{so}	39mph CAS
(e) Permitted range of pilot weights	55-110 kg front seat 0-110 kg rear seat
Total Maximum crew weight	220kg
(f) Typical Empty Weight (ZFW)	250Kg
(g) ZFW + 172 kg crew + 1 hr fuel (18litres /13 kg)	435Kg
(h) ZFW + 86 kg pilot + full fuel (78litres /56 kg)	392Kg
(i) Max ZFW at initial permit issue	265Kg (287.5kg with approved parachute fit)

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(6) POWER PLANTS

Designation	<i>Rotax 912 ULS</i>		
Engine Type	<i>4 cylinder 4 stroke</i>		
Reduction Gear	<i>2.43:1 gearbox</i>		
Exhaust System	<i>CKT Single Muffler</i>		
Intake System	<i>K&N intake filter Optional carb body heater</i>		
Propeller Type	<i>Warp Drive</i>		
Propeller Dia x Pitch	<i>68" 16° at tip</i>		
Noise Type Cert No.	<i>197M issue 1</i>		
Max Static RPM	<i>4900</i>		
AAN approving configuration	<i>AAN BMAA-1067Issue 2</i>		

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(7) MANDATORY LIMITATIONS:

(A) Max Take-Off Weight	450kg (472.5kg with approved parachute fit)		
(B) CG Limits	N/A flexwing with predefined hang point on keel. Use rear position for PulsR trike.		
(C) CG datum	Nosewheel axle.		
(D) Cockpit Loadings (solo front seat only)	Front	Rear	Total
	Min 55kg	0	55kg
	Max 110kg	110kg	220kg
(E) Never Exceed Speed	120mph IAS		
(F) Manoeuvring Speed	90mph IAS		
(G) Permitted Manoeuvres	45° Nose up / 45° nose down Non Aerobatic, max bank 60° Normal acceleration limits, +4 / -0g		
(H) Fuel Contents (Max Useable)	78L		

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(I) Power Plant see Table

Engine	Rotax 912 UL-S			
Max RPM	5800max 5min. 5500 contin.			
MAX CHT	135°C			
MAX EGT	880°C			
Fuel Spec	87 MON or 95 RON minimum unleaded to EN 228 Super or UL91 or AVGAS 100LL.*			
Engine Oil Spec	Refer to Rotax Service Instruction SI-912-016			
Gearbox oil spec	Common supply with engine			
Fuel/Oil Mix	N/A			
Coolant Temperature **	120°C			
Oil Pressure	2-5 bar above 3500 rpm			
Oil Temperature	50-130°C			
Fuel Pressure	0.5-0.15 bar			

*Unleaded preferred. See flight manual for limitations on AVGAS.

** A 50% Water/ethylene glycol mix required, coolant temperature must be monitored.

(8) INSTRUMENTS REQUIRED:

ASI	Altimeter	RPM	CHT EGT	Coolant temp	Oil Temp	Oil Pres
(0-150mph.)	0-20,000 ft	0-6000	0-150°C 0-900°C	0-150°C	0-150°C	0-8 bar

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(9) CONTROL DEFLECTIONS:

N/A weight shift control limits defined by structure geometry.

Control bar move right	=	roll left
Control bar push out	=	pitch up
Trim switch up	=	slow trim
Push left pedal	=	taxi steering right
Push left toe	=	brakes on
Push right toe	=	throttle open
Hand throttle forward	=	throttle open
Ignition switches up	=	switch on
Choke forward	=	choke on
Tap aligned with body	=	fuel on

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

10.1 Manuals approved for use with this aircraft.

- (a) PulsR GTR Operator's manual issue 1
- (b) Rotax 912S Operator's manual.
- (c) Rotax 912S Maintenance Manual.

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)
N/A limitations are programmed into electronic instruments or marked as red lines on the instrument faces
- (c) Fuel Limitations Placard (to be located near to filler cap)
See Annex D.
- (d) Switches
See Annex D.

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

None.

Annual Bettsometer test with a 1.2mm diameter needle, with wing sails fitted and tensioned to flight is to be carried out to:

Upper & lower surface: 1000 grammes.

Stitches: 1360 grammes using a minimum 1mm diameter hook, pull upwards.

Technora reinforcement bands: 8kgf, sail to be slack for this test only.

Note – The GTR wing must be equipped with PulsR specific batten profiles.

- (12) MINIMUM ISA PERFORMANCE AT MAX TAKE-OFF WEIGHT

Rate of Climb: 1000fpm at 60mph IAS (912-S engine)

Stall or Minimum Flying Speed: 39mph IAS at MTOW / idle.

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Issue History

<u>Issue No.</u>	<u>Reason and signatory</u>
01	Initial Issue
02	To correct propeller pitch

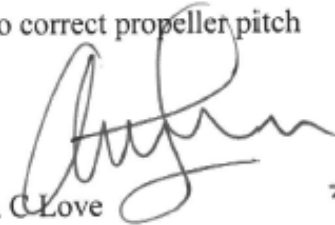
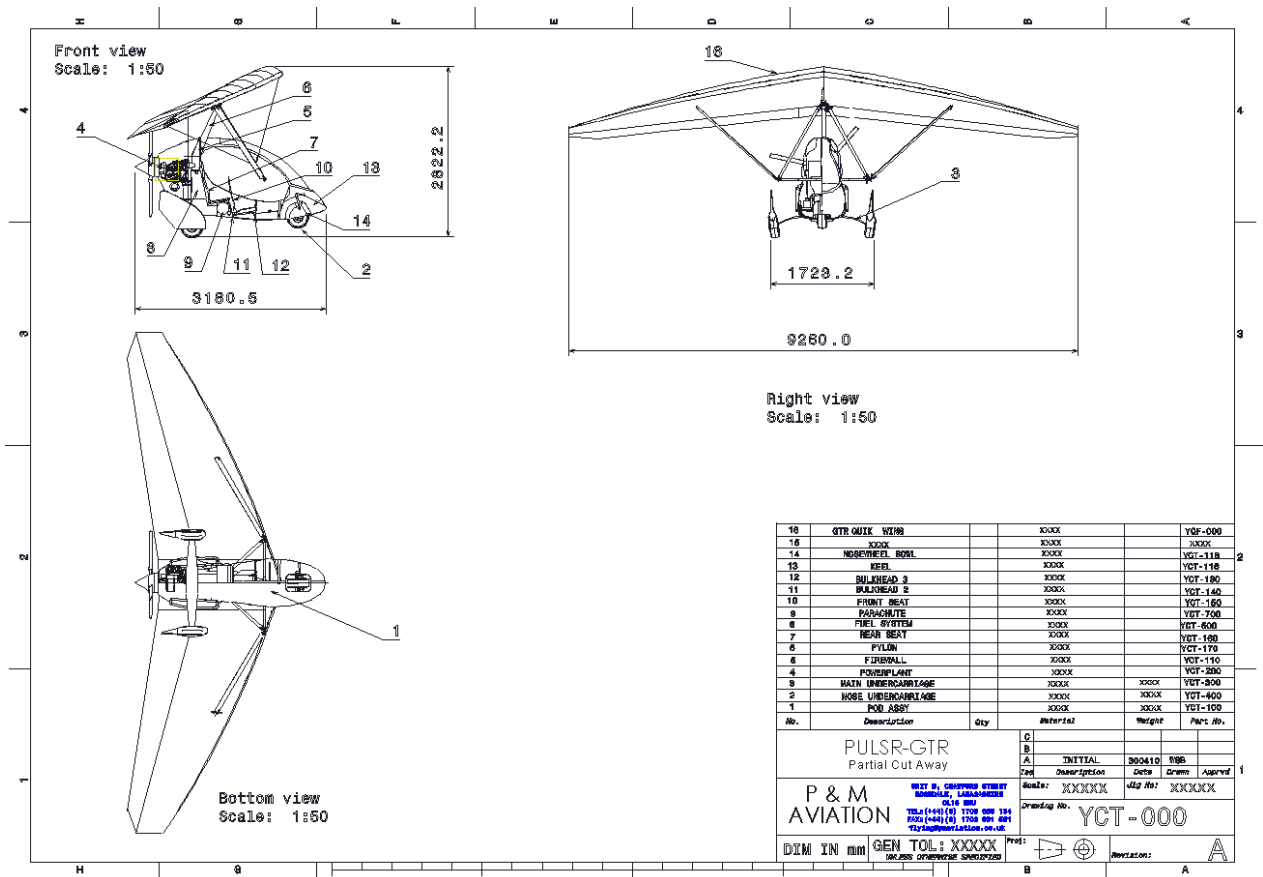

 A C Love 20 JANUARY 2014

Illustration of Aircraft - 3 View



CIVIL AVIATION AUTHORITY – SAFETY REGULATION GROUP

MICROLIGHT TYPE APPROVAL DATA SHEET (TADS)



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ANNEX A

MANDATORY MODIFICATIONS/SERVICE BULLETINS

Service Bulletins:

SB 132 & 133 Latest Edition.

CAA Mandatory modifications:

Nil

P&M compulsory modifications:

Nil

ANNEX B

APPROVED OPTIONAL MODIFICATIONS

Mod Ref	Description
PG-371	Instructor training bars

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.

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ANNEX C
WEIGHING INFORMATION

The table below is a guide only. Empty weights include unusable fuel, full oil, electrolyte and prepared ready for flight.

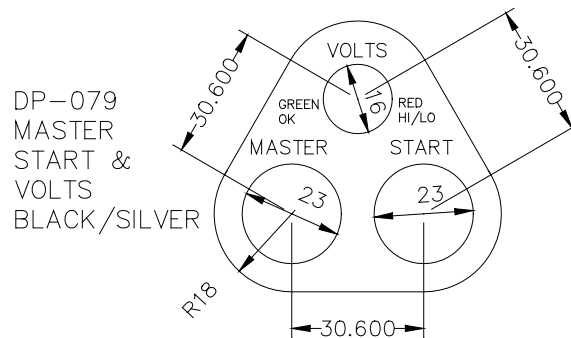
ITEM WEIGHT kg	
PULS -912s Trike	190
GTR wing only	59
OPTIONAL ITEMS	
MAP BOX-FABRIC	0.76
LYNX ANTENNA	0.19
LYNX FILTER, POWER INT, PTT	0.81
INSTRUCTOR BARS	2.4
ICOM HAND HELD RADIO	0.3

MICROLIGHT TYPE APPROVAL DATA SHEET (TADS)

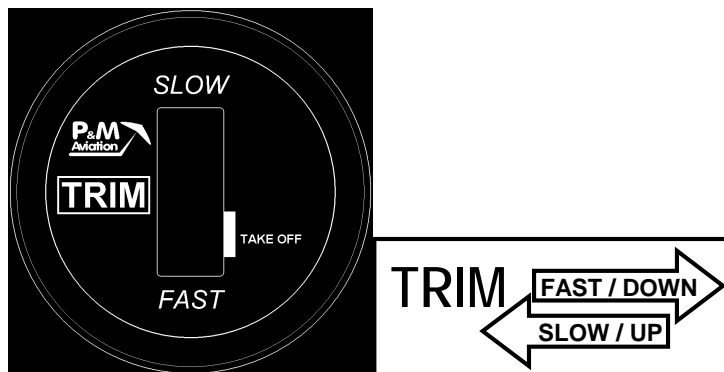
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ANNEXE D
EXAMPLE PLACARDS

Title	Location
Flight Limitations:	On LH wing upright
Engine Limitations:	On panel
Aircraft Weights:	On panel
Baggage Limitations:	On baggage container
Fuel Type, Capacity :	Next To Filler
Fuel Cock On/Off Positions:	Next to Tap
Ignition Switch On/Off Positions:	On ignition switch bracket
Hand Throttle:	On throttle unit
Trimmer Setting:	On trim switch (electric trim) On trim display (electric trim)
Tip Turn Adjusters:	On leading edge tube tips
Latch Locking:	Next to latch
Oil Type and Quantity:	On oil cap
Fuel Load Limitations:	In the cockpit



TRIM INDICATOR AND TRIM SWITCH PLACARDS



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MAIN PLACARD

**P&M AVIATION
PULSR**

FLIGHT LIMITATIONS

MANOEUVRING SPD	90MPH
NEVER EXCEED V _{ne}	120MPH
MAX CROSS WIND	12MPH

ENGINE LIMITATIONS

MAX OIL PRESSURE	7 BAR
MIN OIL PRESSURE	1.5 BAR
MAX OIL TEMP (912S)	130 DegC
MIN OIL TEMP	50 DegC
MAX CHT (912S)	135 DegC
MAX COOLANT TEMP	120 DegC
MAX CONT RPM	5500
MAX RPM	5800

PAYLOAD LIMITATIONS

MAX. TAKE OFF WEIGHT	450KG
WITH PARACHUTE	472.5KG
MAX. COCKPIT LOAD	220KG
MAX. P1 LOAD	110KG
MAX PASSENGER LOAD	110KG
MIN P1 LOAD	55KG

DO NOT EXCEED MAX. LOAD

WARNING

**DO NOT EXCEED 60 DEGREES
ANGLE OF BANK
DO NOT EXCEED 45 DEGREES
IN PITCH
THIS AIRCRAFT IS NON-
AEROBATIC
NO WHIPSTALLS, WINGOVERS,
TAILSLIDES, LOOPS, ROLLS OR
SPINS
NO NEGATIVE G
MAINTAIN POITIVE 'G' LOADING
AT ALL TIMES
FLY SOLO FROM FRONT SEAT
ONLY**

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**MISCELLANEOUS EXAMPLE PLACARDS. IGNITION SWITCH PLACARD IS SPLIT AND USED FOR BOTH MAG SWITCHES.
(Note not all placards shown are fitted)**

