

CIVIL AVIATION AUTHORITY – SAFETY REGULATION GROUP

MICROLIGHT TYPE APPROVAL DATA SHEET (TADS)

NO:BM 70 ISSUE: 1

TYPE: **QUIK GT 450**

- (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 3
- (4) DEFINITION OF BASIC STANDARD: Airworthiness Submission QUIK GT450, GA drawing YQD-000 issue A
- (5) COMPLIANCE WITH THE MICROLIGHT DEFINITION

| | |
|---|---|
| (a) MTOW | 450 kg |
| (b) No. Seats | 2 |
| (c) Maximum Wing Loading | 34.6kg/m ² |
| (d) V _{so} | 38mph CAS |
| (e) Permitted range of pilot weights | 55-110 kg frontseat. 0-110 kg rear seat. |
| Total Maximum crew weight | 220kg |
| (f) Typical Empty Weight (ZFW) | 217Kg |
| (g) ZFW + 172 kg crew + 1 hr fuel (18litres /13 kg) | 402Kg |
| (h) ZFW + 86 kg pilot + full fuel (65litres /47 kg) | 350Kg |
| (i) Max ZFW at initial permit issue | 265Kg |

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(6) POWER PLANTS

| | | | | |
|--------------------------------|--|--|--|--|
| Designation | <i>Rotax 912 UL-S</i> | <i>Rotax 912 UL</i> | | |
| Engine Type | <i>4 cylinder 4 stroke</i> | <i>4 cylinder 4 stroke</i> | | |
| Reduction Gear | <i>2.43:1 gearbox</i> | <i>2.27:1 gearbox</i> | | |
| Exhaust System | <i>Rotax side mounted</i> | <i>Rotax side mounted</i> | | |
| Intake System | <i>K&N intake filter With Cyclone hot coil intake heater or Skydrive carb body heater</i> | <i>K&N intake filter With Cyclone hot coil intake heater or Skydrive carb body heater</i> | | |
| Propeller Type | <i>Warp Drive</i> | <i>Warp Drive</i> | | |
| Propeller Dia x Pitch | <i>172cm, 16° at tip</i> | <i>172cm, 11° at tip</i> | | |
| Noise Type Cert No. | <i>187M issue 1</i> | <i>187M issue 1</i> | | |
| AAN approving configuration | <i>BMAA AAN 1014</i> | <i>BMAA AAN 1014</i> | | |

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(7) MANDATORY LIMITATIONS:

| (A) Max Take-Off Weight | 450kg | | | | | | | | | | | | |
|--|--|-------|-------|------|-------|-----|------|---|------|-----|-------|-------|-------|
| (B) CG Limits | <i>N/A not critical. Flexwing with defined hang point position on keel.</i> | | | | | | | | | | | | |
| (C) CG datum | Nosewheel axle. | | | | | | | | | | | | |
| (D) Cockpit Loadings (solo front seat only) | <table><thead><tr><th></th><th>Front</th><th>Rear</th><th>Total</th></tr></thead><tbody><tr><td>Min</td><td>55kg</td><td>0</td><td>55kg</td></tr><tr><td>Max</td><td>110kg</td><td>110kg</td><td>220kg</td></tr></tbody></table> | | Front | Rear | Total | Min | 55kg | 0 | 55kg | Max | 110kg | 110kg | 220kg |
| | Front | Rear | Total | | | | | | | | | | |
| Min | 55kg | 0 | 55kg | | | | | | | | | | |
| Max | 110kg | 110kg | 220kg | | | | | | | | | | |
| (E) Never Exceed Speed | 110mph IAS | | | | | | | | | | | | |
| (F) Manoeuvring Speed | 80mph 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) | 65L | | | | | | | | | | | | |

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(I) Power Plant See Table

| | | | | |
|---------------------|---|---|--|--|
| Engine | Rotax 912 UL-S | Rotax 912 UL | | |
| Max RPM | 5800max 5min. 5500 contin. | 5800max 5min. 5500 contin. | | |
| MAX CHT | 150°C | 150°C | | |
| MAX EGT | 880°C | 880°C | | |
| Fuel Spec | 83 MON or 90 RON minimum unleaded to BS(EN)228 or 97+ octane 4-star /MOGAS leaded fuel to BS 4040, or AVGAS 100LL.* | | | |
| Engine Oil Spec | API SF or SG semi synthetic 4 stroke motorcycle engine oil. | API SF or SG semi synthetic 4 stroke motorcycle engine oil. | | |
| Gearbox oil spec | Common supply with engine | Common supply with engine | | |
| Fuel/Oil Mix | N/A | N/A | | |
| Coolant Temperature | 135°C | 150°C | | |
| Oil Pressure | 2-5 bar above 3500 rpm | 2-5 bar above 3500 rpm | | |
| Oil Temperature | 50-130°C | 50-140°C | | |
| Fuel Pressure | 0.4-0.15 bar | 0.4-0.15 bar | | |

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

(8) INSTRUMENTS REQUIRED:

| ASI | Altimeter | RPM | CHT EGT Optional | Compass | Coolant temp | Oil Temp | Oil Pres | Fuel Pressure | VSI |
|----------------------|----------------------|--------|------------------------|----------|------------------------|------------|----------|---------------|----------|
| Required (0-150mph.) | Required 0-20,000 ft | 0-6000 | 0-200°C 0-1000°C | Optional | Measured by CHT sensor | 0-150 degC | 0-8 bar | Optional | Optional |

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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) GT 450 Operator's manual issue 1
- (b) Rotax 912 and 912-S Operator's manual
- (c) Rotax 912 and 912-S Maintenance Manual.

10.2 The following placards are to be fitted:-

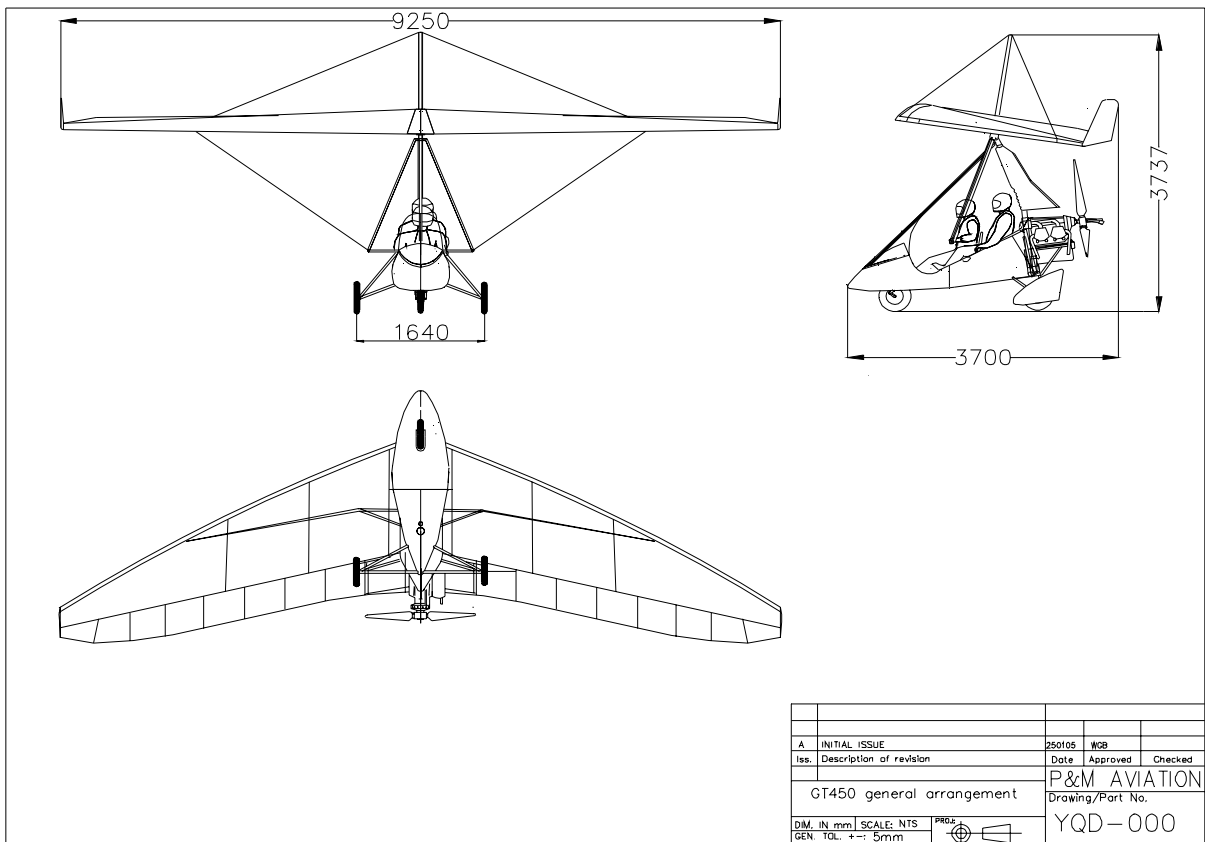
- (a) Flight Limitations Placard (to be visible to pilot)
See Annex D.
- (b) Engine Limitations Placard (to be located near to engine instruments)
N/A limitations are programmed into electronic Rotax FLYDAT instrument or marked as red lines on the instrument faces
- (c) Fuel Limitations Placard (to be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

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Illustration of Aircraft - 3 View



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ANNEX A – MANDATORY MODIFICATIONS/SERVICE BULLETINS

Service Bulletins:

Nil

CAA Mandatory modifications:

Nil

Mainair Sports compulsory modifications:

Nil

ANNEX B - APPROVED OPTIONAL MODIFICATIONS

PG-371 Quik/Multi Instructor training bars

M137 Low drag panniers

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 | |
|----------------------------------|------|
| Quik -912 Trike | 167 |
| GT 450 wing only | 49 |
| OPTIONAL ITEMS | |
| MAP BOX-FABRIC | 0.76 |
| DELUXE SEAT (1.150), ADD | 0.46 |
| 50mm FRONT SEAT BOOSTER PAD | 0.27 |
| 50mm FRONT S/BACK BOOSTER PAD ET | 0.25 |
| 50mm REAR BOOSTER PAD | 0.27 |
| 100mm REAR BOOSTER PAD | 0.42 |
| CONTROL BAR PROTECTION (2) | 0.05 |
| FRONT STRUT PROTECTION | 0.04 |
| LYNX ANTENNA | 0.19 |
| LYNX FILTER, POWER INT, PTT | 0.81 |
| INSTRUCTOR BARS | 2.4 |
| AEROTOW SYSTEM | 1.5 |
| ICOM HAND HELD RADIO | 0.3 |

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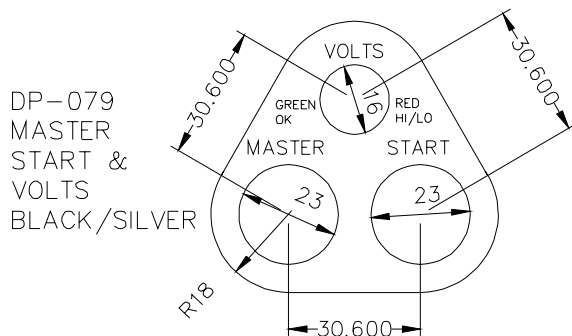
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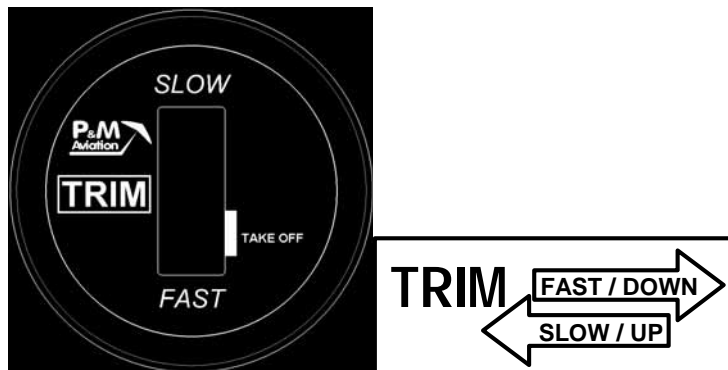
ANNEXE D

EXAMPLE PLACARDS

| Title | Location |
|------------------------------------|---|
| Flight Limitations: | On LH wing upright |
| Engine Limitations: | On panel |
| Aircraft Weights: | On basetube |
| Baggage Limitations: | On baggage container |
| Fuel Type, Capacity and Mix Ratio: | On rear suspension leg |
| Fuel Cock On/Off Positions: | On seat |
| Ignition Switch On/Off Positions: | On ignition switch bracket |
| Propeller Pitch Setting: | On airbox or radiator |
| Hand Throttle: | On throttle unit |
| Wiring Loom Disconnection Warning: | On airbox or carb covers |
| Trimmer Setting: | On trim switch (electric trim) On trim display (electric trim) |
| Tip Turn Adjusters: | On leading edge tube tips |
| Latch Locking: | On seat next to latch |
| Oil Type and Quantity: | On oil cap |
| Propeller Pitch: | On oil cooler |
| Fuel Load Limitations: | In the cockpit |



TRIM INDICATOR AND TRIM SWITCH PLACARDS



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MAIN PLACARD

P&M AVIATION

QUIK GT450

FLIGHT LIMITATIONS

MANOEUVRING SPD 80MPH
NEVER EXCEED V_{ne} 110MPH
MAX CROSS WIND 12MPH

ENGINE LIMITATIONS

MAX OIL PRESSURE 7 BAR
MIN OIL PRESSURE 1.5 BAR
MAX OIL TEMP (912) 140 DegC
(912S) 130 DegC
MIN OIL TEMP 50 DegC
MAX CHT (912) 150 DegC
(912S) 135 DegC
MAX CONT RPM 5500
MAX RPM 5800

PAYLOAD LIMITATIONS

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

DO NOT EXCEED MAX. LOAD

WARNING

**MINIMUM FULL POWER CLIMB
SPEED 40 MPH
DO NOT EXCEED 60 DEGREES
ANGLE OF BANK
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**

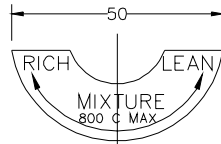
www.pmaviation.co.uk

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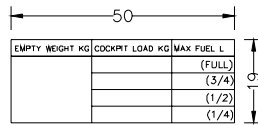
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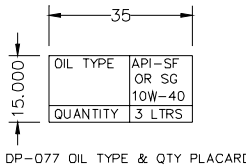
MISCELLANEOUS PLACARDS. IGNITION SWITCH PLACARD IS SPLIT AND USED FOR BOTH MAG SWITCHES.



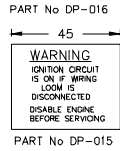
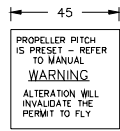
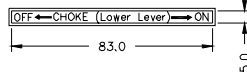
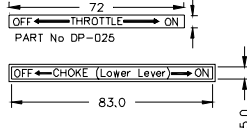
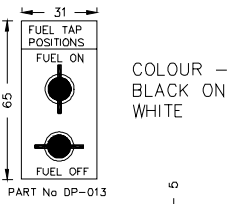
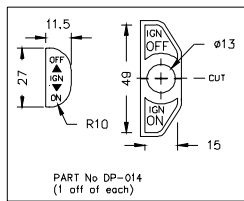
DP-076 MIXTURE CONTROL



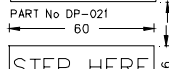
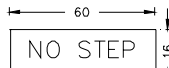
DP-075 FUEL LOAD PLACARD (ALL)



DP-077 OIL TYPE & QTY PLACARD



COLOUR RED ON WHITE



COLOUR BLACK ON YELLOW FABRIC

