CIVIL AVIATION AUTHORITY

GYROPLANE TYPE APPROVAL DATA SHEET (TADS)

BG08 Issue: 04

	Aircraft type	RSUK MTOsport 2017 gyroplane
(1)	**Manufacturer**	Autogyro Certification Ltd Poplar Farm Prolley Moor, Wentnor Bishops Castle, SY9 5EJ
(2)	**UK Importer**	N/A
(3)	**Certification**	CAP 643 BCAR Section T Issue 5
(4)	**Definition of Basic Standard**	RSUK Product Definition Document PDD-008

(5) **Compliance with the Gyroplane Definition**

(a)	Maximum Take-Off Mass (MTOM)	500 kg	560 kg
(b)	Number of seats	2	2
(c)	Permitted range of pilot mass		
	Front seat	60 kg – 110 kg	60 kg – 110 kg
	Rear seat	110 kg max	110 kg max
	Permitted total occupant mass:	220 kg max (subject to fuel loading)	220 kg max (subject to fuel loading)
(d)	Maximum empty mass (ZFM)	309 kg	371 kg
(e)	Permitted engine	Rotax 912ULS or 914UL	Rotax 914UL or 915iS or 916iS

(6) Power Plants

Designation	MTOsport 2017 (500 kg MTOM)	MTOsport 2017 (500 kg or 560 kg MTOM)	MTOsport 2017 (560 kg MTOM)	MTOsport 2017 (560 kg MTOM)
Engine Type	BRP Rotax 912 ULS	BRP Rotax 914 UL	BRP Rotax 915iS	BRP Rotax 916iS
Reduction Gear	2.43:1	2.43:1	2.54:1	2.54:1
Exhaust System	Rotax stainless steel with after muffler	Rotax stainless steel with after muffler	Rotax stainless steel	Rotax stainless steel
Intake System	Dual intake filter & Skydrive carb heat system	Single intake filter, balance box	Single intake filter, fuel injected	Single intake filter, fuel injected
Propeller type	HTC 3 blade ground adjustable, composite or Ivoprop DL3-68 in-flight pitch adjustable	HTC 3 blade ground adjustable, composite or Ivoprop DL3-68 in-flight pitch adjustable	HTC 4 blade ground adjustable, composite or Woodcomp KW30 hydraulic in-flight pitch adjustable	HTC 4 blade ground adjustable, composite or Woodcomp KW30 hydraulic in-flight pitch adjustable
Propeller Diameter and pitch	HTC: 1.72 m x 19.5 deg at 12” inwards from end of blade, with inclinometer against rear tail of aerofoil	HTC: 1.72 m x 20.5 deg at 12” inwards from end of blade, with inclinometer against rear tail of aerofoil	HTC: 1.73 m x 20 deg at 12” inwards from end of blade, with inclinometer against rear tail of aerofoil	1.73m x in-flight pitch adjustable
Noise Type Certificate	Not required	Not required	Not required	Not required
AAN approving configuration	AAN 29471 (Type Approval)	AAN 29471 (Type Approval)	AAN 29471 Addendum 1	AAN 29471 Issue 2 Addendum 2

CIVIL AVIATION AUTHORITY

GYROPLANE TYPE APPROVAL DATA SHEET (TADS)

BG08 Issue: 04

(7) Rotor System

(a)	Permitted Rotor systems (500 kg /560 kg MTOM)	Rotorsystem II hub assy Standard rotor blades 8.4 m (red end caps)	Rotorsystem II hub assy TOPP rotor blades 8.4 m (blue end caps)	Rotorsystem II hub assy TOPP rotor blades 8.6 m (grey end caps)
(b)	Rotor blade life limit	2500 hours	2500 hours	2500 hours
(c)	AAN approving rotor system	AAN29471	AAN29471	AAN29471

(8) Mandatory Limitations

(a)	Max empty weight	309 kg (500 kg MTOM), 371 kg (560 kg MTOM)
(b)	Centre of Gravity (CG) limits	
	Longitudinal CG	
	Permitted range forward of the mainwheel datum (empty aircraft)	240 to 310 mm (912 ULS and 914 UL engine) 190 to 310 mm (915iS and 916iS engine)
	Permitted range forward of the mainwheel datum (loaded aircraft)	390 to 605 mm (915iS and 916iS engine)
	Lateral CG	Not defined
	Vertical CG	Not defined
(c)	CG datum	CG zero datum for longitudinal, lateral and vertical CG measurements is the mainwheel axle. Aircraft longitudinal datum is the airframe top surface between the front and rear seats. This surface is set 5degrees nose down. See AMM.
(d)	Cockpit Loadings	
	Front seat:	60 kg – 110 kg
	Rear seat:	110 kg
	Nose locker:	10 kg
	Either side, front footwell:	3 kg each side
	Either side, rear footwell:	5 kg each side
	Total:	220 kg (subject to fuel loading)
(e)	Never Exceed Speed, Vne	120 mph (104 KIAS / 195 km/h)
(f)	Minimum speed	0 mph (0 KIAS / 0 km/h)
(g)	Prohibited Manoeuvres	Aerobatic manoeuvres are prohibited. Manoeuvres involving a deliberate reduction in normal 'g' shall be avoided. Flight in icing conditions is prohibited (not placarded). Flight in strong gusty winds or wind velocities of more than 45 mph (40 KIAS / 64 km/h) is prohibited. (not placarded)
(h)	Other limitations	Day or night VFR only Night VFR is permitted provided the optional night flight pack is fitted.
(i)	Fuel contents	94 litres single tank; 1.27 litres unusable

CIVIL AVIATION AUTHORITY

GYROPLANE TYPE APPROVAL DATA SHEET (TADS)

BG08 Issue: 04

(j) Power plant limitations

Engine	912ULS	914 UL	915iS
Max RPM	5,800	5,800	5,800
Max Continuous RPM	5,500	5,500	5,500
Max coolant temp (CT)	120 °C (248 °F)	120 °C (248 °F)	120 °C (248 °F)
MAX EGT	N/A	N/A	950 °C (1742 °F)
Max manifold pressure (if VP prop fitted) Analogue gauge or	No limits applicable	Max manifold air pressure (on take-off) 39.9 inHg. Max continuous manifold air pressure 35.4 inHg.	51 inHg (1730 hPa) Note: MAP is automatically managed by the Engine Control Unit (ECU).
Max manifold pressure (if VP prop fitted) Digital gauge	Not marked on gauge	Not marked on gauge See placards Limits as analogue	No gauge required, regardless of propeller fitted
Fuel spec	As specified by BRP Rotax service instructions or Pilots Operating Handbook	As specified by BRP Rotax service instructions or Pilots Operating Handbook	As specified by BRP Rotax service instructions or Pilots Operating Handbook
Engine oil spec	As specified by BRP Rotax service instructions	As specified by BRP Rotax service instructions	As specified by BRP Rotax service instructions or Pilots Operating Handbook
Gearbox oil spec	Integral with engine	Integral with engine	Integral with engine
Oil Pressure	Max: 7 bar Min: 0.8 bar (0-3500 rpm) 1.5 bar (above 3500 rpm) Normal range: 2-5 bar	Max: 7 bar Min: 0.8 bar (0-3500 rpm) 1.5 bar (above 3500 rpm) Normal range: 2-5 bar	Max: 7 bar Min: 0.8 bar (0-3500 rpm) 1.5 bar (above 3500 rpm) Normal range: 2-5 bar
Oil Temperature	Max: 130 °C Min: 50 ºC	Max: 130 ºC Min: 50 ºC	Max: 130 ºC Min: 50 ºC
Fuel Pressure	N/A	N/A	3.1 bar (45 psi) (at fuel rail) 3.5 bar (51 psi) (maximum 3 seconds exceedance during power setting changes)

CIVIL AVIATION AUTHORITY

GYROPLANE TYPE APPROVAL DATA SHEET (TADS)

BG08 Issue: 04

Engine	915iS 90kW	916iS
Max RPM	5,060	5,800
Max Continuous RPM	5,060	5,500
Max coolant temp (CT)	120 °C (248 °F)	120 °C (248 °F)
MAX EGT	950 °C (1742 °F)	950 °C (1742 °F)
Max manifold pressure (if VP prop fitted) Analogue gauge or	51 inHg (1730 hPa) Note: MAP is automatically managed by the Engine Control Unit (ECU).	51 inHg (1730 hPa) Note: MAP is automatically managed by the Engine Control Unit (ECU).
Max manifold pressure (if VP prop fitted) Digital gauge	No gauge required, regardless of propeller fitted	No gauge required, regardless of propeller fitted
Fuel spec	As specified by BRP Rotax service instructions or Pilots Operating Handbook	As specified by BRP Rotax service instructions or Pilots Operating Handbook
Engine oil spec	As specified by BRP Rotax service instructions or Pilots Operating Handbook	As specified by BRP Rotax service instructions or Pilots Operating Handbook
Gearbox oil spec	Integral with engine	Integral with engine
Oil Pressure	Max: 7 bar Min: 0.8 bar (0-3500 rpm) 1.5 bar (above 3500 rpm) Normal range: 2-5 bar	Max: 7 bar Min: 0.8 bar (0-3500 rpm) 1.5 bar (above 3500 rpm) Normal range: 2-5 bar
Oil Temperature	Max: 130 ºC Min: 50 ºC	Max: 120 ºC Min: 50 ºC
Fuel Pressure	3.1 bar (45 psi) (at fuel rail) 3.5 bar (51 psi) (maximum 3 seconds exceedance during power setting changes)	3.1 bar (45 psi) (at fuel rail) 3.5 bar (51 psi) (maximum 3 seconds exceedance during power setting changes)

(9) Instruments Fitted

Mandatory	Units	Optional	Units
ASI	mph or knots or km/h	VSI	ft/min or m/s
Altimeter	feet (hPa sub-scale)	Manifold pressure gauge	inHg
Rotor tachometer	rpm		
Engine tachometer	rpm		
Compass	deg		
CT gauge	Celsius (°C)		

CIVIL AVIATION AUTHORITY

GYROPLANE TYPE APPROVAL DATA SHEET (TADS)

BG08 Issue: 04

Mandatory	Units	Optional	Units
Manifold pressure gauge (mandatory if IVO prop fitted to 914UL)	inHg		
Fuel flow gauge (mandatory with 915iS engine)	litre/hour		

(10) Control Deflections

Rotor Head Roll: 16 deg total	Rotor Head Pitch: 25 deg total	Rudder deflection: 32 deg right, 27 deg left

(11) Pilot's Notes, Maintenance Manual References

11.1 Manuals approved for use with this aircraft

Refer to Owners pages at www.rotorsport.org for current manuals issues.

(a) Pilot's Operating Handbook (POH) approved for use with this aircraft is RSUK0334 or RSUK0423 for aircraft equipped with the 915iS or 916iS engine

(b) Aircraft Maintenance Manual (AMM) approved for use with this aircraft is RSUK0335 or RSUK0424 for aircraft equipped with the 915iS or 916iS engine

(c) IVO prop manual approved for use with this aircraft is RSUK0325

(d) Maintenance schedules approved for use with this aircraft are defined in the AMM

Issue levels as provided on the RotorSport website: www.rotorsport.org.

11.2. The following placards are to be fitted:

(a) Engine rpm limits (markings on instrument face)

(b) Rotor rpm (markings on instrument face)

(c) Loading conditions (placard on panel)

(d) Fuel quantity and type (placards adjacent to filler)

(e) All switches (engraved on instrument panel or placards)

(f) Occupant warning (placard on instrument panel)

(g) Limitations as per permit to fly (placard on nacelle)

(h) Engine CT limits (markings on instrument face)

(i) Compass deviation (placard adjacent to compass on instrument panel)

(j) Manifold pressure gauge (914UL engine fitted with IVO prop; on gauge or placard)

(k) Secondary control functions (engraved)

(l) Permanent fireproof plate, showing aircraft registration and serial no., attached to instrument panel.

See Appendix D for placards fitted as standard.

(12) Mandatory Modifications/Service Bulletins/Airworthiness Directives etc.

See Annex A for required modifications.

(13) Minimum Performance at Max Take-Off Mass

500 kg MTOM: 912ULS: 485 ft/min 915iS: 940 ft/min

560 kg MTOM: 914UL 600 ft/min; 916iS: 1170 ft/min

CIVIL AVIATION AUTHORITY

GYROPLANE TYPE APPROVAL DATA SHEET (TADS)

BG08 Issue: 04

Issue History

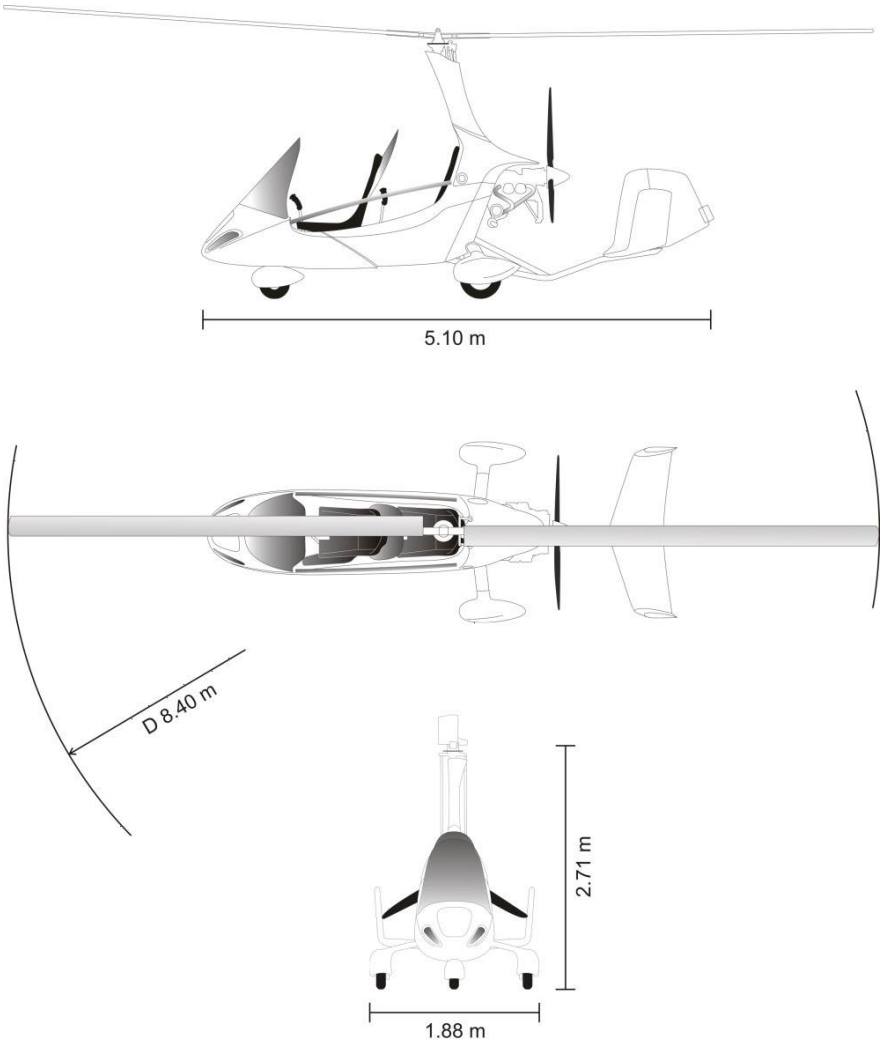
Number	Date	Reason	Signatory
01	27 Apr 2018	Initial issue	A Goudie
02	15 Aug 2019	Raised in issue to record the approval of Rotax 915iS engine and associated propellers under AAN 29471 Addendum 1.	J D'Auria
03	17 Dec 2024	Raised in issue to record the introduction of Autorgyro Certification Ltd MC-461, introduction of 915iS 90kW variant	J Hadley
04	03 Jan 2025	Raised in issue to record the approval of Rotax 916iS engine under AAN 29471 Addendum 2	J Hadley

CIVIL AVIATION AUTHORITY

GYROPLANE TYPE APPROVAL DATA SHEET (TADS)

BG08 Issue: 04

Illustration of Aircraft



Annex A – Mandatory Modifications

None at this time.

Annex B – Approved Minor Or Optional Modifications

A list of approved minor modifications is available from the RotorSport website, www.rotorsport.org, owners section, support.

Minor modifications applicable at release-to-service are listed on the aircraft Statement of Aircraft Conformity, SAC-MTO2/xxx.

Annex C – Weighing Information

N/A; Aircraft to be weighed by manufacturer.

Refer to specific aircraft weight and balance document AWC-MTO2/xxx

CIVIL AVIATION AUTHORITY

GYROPLANE TYPE APPROVAL DATA SHEET (TADS)

BG08 Issue: 04

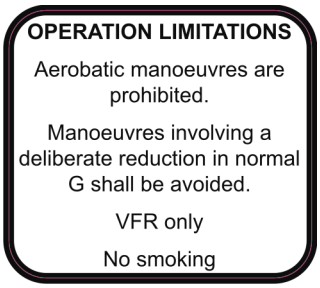
Annex D – Standard Placards

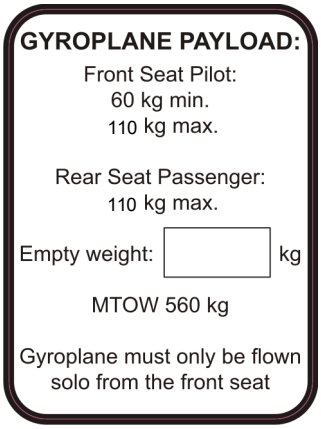
(copied from Pilots Handbook)

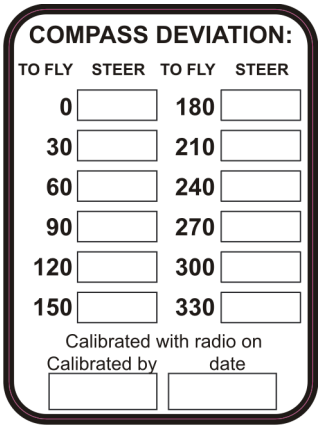
In conformity with BCAR Section T the following placards and markings are installed:

- All emergency controls are coloured red.
- All cockpit controls are clearly marked as to their function and method of operation.
- Fuel and oil filler openings are clearly marked, together with the grade or type required.
- Fuel tank capacity is clearly marked.
- Loading conditions are clearly marked
- Standard placards
- Aircraft registration markings are clearly marked on either the tail or another location in accordance with CAP 523.

In clear view of the pilot





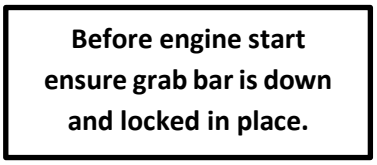


Note: (914UL/915iS MTOM shown, MTOM is 500 kg for aircraft equipped with 912ULS engine)

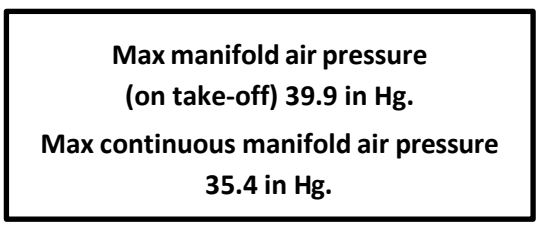
In clear view of the pilot

(if equipment installed):

Placard adjacent to grab bar (where bars installed)



Digital MAP gauge placard (where fitted, 914UL variant)

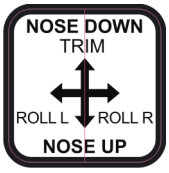


CIVIL AVIATION AUTHORITY

GYROPLANE TYPE APPROVAL DATA SHEET (TADS)

BG08 Issue: 04

Flight control stick head



Front seat

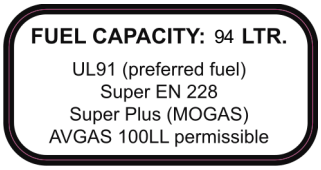
Baggage load – 3 kg front seat each side

Aft seat

Baggage load – 5 kg rear seat each side

Baggage load - nose locker

Fuel filler neck



Oil reservoir

Coolant header tank

CIVIL AVIATION AUTHORITY

GYROPLANE TYPE APPROVAL DATA SHEET (TADS)

BG08 Issue: 04

Battery charging port

Keel tube fin, both tips of fin