

## XENON 2 Checklist - (issue May 2011)

*( Does not replace the use of the complete flight manual that must be kept on board )*

### 1. Aircraft full inspection IN&OUT, clean and sound (see manual)

### 2. Position of aircraft suitable for starting (obstacles and wind)

### 3. Cabin check

- Seats correctly adjusted
- Doors closed / secured
- Harnesses attached and adjusted
- Nothing blocking controls except joystick strap
- Luggage closed and secured
- Weight and balance checked and correct (use of ballast ?)
- Trim (s) released
- Aircraft refilled with correct quality and quantity of fuel
- Main brakes on parking position

### 4. Engine starting procedure

- Turn the red master switch ( battery) ON
- Turn the auxiliary fuel pump ON 912S (and for initial test on RST ONLY)
- Switch OFF the auxiliary fuel pump
- Instruments (analog panel or glass cockpit) ON
- Place the throttle (black lever) in the idle position + 10 mm (for hot start)
- Ensure that all other switches and VHF & TX are OFF
- Check outside to ensure that the propeller and rotor areas are clear
- Ensure one more time that the parking brakes are ON
- Press the START button a fraction second as a warning
- Pull the choke (for cold start and regarding engine and outside temperature)
- Turn both magneto switches ON
- Press the START button until the engine starts (maximum 10 seconds)
- Check immediately Oil Pressure from 1,5 to 5 bar
- After starting the aircraft, all accessories and systems can be turned ON
- Switch OFF the choke progressively
- If any parameters are not conforming, switch the ignition OFF and investigate

### 5. After start check

- Fuel level read on instrument plus visual check behind seats
- Strokes and navigation lights ON (if available)
- Landing light ON (according to conditions)
- Radio ON (if available) and appropriate frequency set
- Transponder ON (if available) and code set
- Instruments are set – barometer, horizon, timers, GPS....
- Temperatures are normally rising (EGT / Water / Oil / Airbox)
- Warm the engine at approx 2000rpm up to 25C on oil, then at 2500rpm until the oil temperature reaches 50 C

- Magneto check for drop at 3000rpm by turning off each ignition switches. Max allowed drop of 200rpm
- Alternator delivers power / regulator operative (yellow lamp OFF, red master switch check at 3000 rpm) – max voltage 15V
- Variable pitch propeller check, pitch set min / max / min, at 3000 rpm (if available)

### 6. Taxi

- Radio call if requested
- Max ground speed : 20 km/h
- Brake test
- Directional driving test

### 7. Before Take-Off final checks

- Sufficient fuel quantity
- Seats still correctly positioned and seat belts adjusted & fastened
- Doors still closed and secured
- Choke controlled OFF
- EGT / Water / Oil pressure & temperature / MAP ....all inside limits
- Auxiliary Fuel pump ON (912S version ONLY)
- Trim (s) released, but functional
- Wind direction – aircraft into wind
- Runway condition and sufficient length
- Radio call for T-O clearance if requested

## ENGINES LIMITATIONS

	Rotax 912 S			Rotax 914			"Rotax" CA912 ULT		
	MIN	CAUTION	MAX	MIN	CAUTION	MAX	MIN	CAUTION	MAX
Engine RPM	1400	X	5800	1400	5500	5800	1400	5500	5800
Oil temp [°C]	50	110	130	50	110	130	50	110	130
Oil pressure [bar]	0,8	5	7	1,5	5	7	1,5	5	7
Water temp.[°C]	75	110	120	75	110	120	75	110	120
EGT temp.[°C]	400	850	890	400	900	950	400	900	950
Fuel pressure [bar]	0,15	X	0,45	0,15	X	0,35	0,26	X	0,35
Airbox temp.[°C]	X	X	X	X	55	72	X	55	65
Manifold pressure. RPM / [inHg]	X			4800 / 29 5000 / 31 5500 / 35 T-O 5800 / 39			4800 / 27 5000 / 31 5500 / 41 max 5 min T-O 5800 / 42 max 1 min		



CELIER Aviation

### 8. Pre-rotation & take-off

- Parking brake ON
- Release joystick strap
- Check free movement of controls
- Joystick in **vertical position**, well maintained
- Engine at 1800rpm (+/- 50 RPM)
- Engage smoothly clutch / synchronize around 1800 engine RPM = +/- 120 rotor RPM
- Above 130 RPM, move slowly joystick back for 10 cm
- Accelerate progressively to 3200 RPM max = +/- 230 rotor RPM
- 1 - Disengage clutch red lever full forward
- 2 - Joystick in full back position
- 3 - Parking brake OFF
- 4 - Accelerate accordingly to gain rotor RPM
- Proceed take-off maneuvers

### 9. Engine stop procedure

- Brakes on parking position 1
- Joystick front position and strap locked
- Let the engine cool down (run it at 2000 RPM) stabilize all the parameters
- Check oil pressure above 1,5 Bar
- Radio and Transponder OFF (quit control ?)
- Landing light & navigation lights / strobes OFF
- Magnetos 1 and 2 OFF
- Main instruments OFF
- Red master switch ( battery ) OFF
- Trim (s) – released

### PERFORMANCES AND LIMITATION REMINDER\*

VNE	210 km/h ( all models ) must never be exceeded !
Max Speed	160 km/h ( 912S ) – 170 km/h ( 914T ) – 185km/h ( 912T )
Vc SPEED	120 km/h ( 912S ) – 135 km/h ( 914T ) – 150 km/h ( 912T )
Vm	100 km/h maneuver
VAPPROACH	95 km/h approach ( 2 pax ) & 80 km/h ( 1 pax )

(\* See models relative's technical specifications for more information, and sticker in front pilot )

**WARNING !** Airspeeds at climbing and autorotation, are false due to variation of angle of attack of cabin.

Minimum weight of occupant on board <b>small rotor</b>	60 kg
Minimum weight of occupant on board <b>medium rotor</b>	80 kg
Minimum weight of occupant on board <b>big rotor</b>	90 kg
Maximum weight of an occupant	120 kg
Maximum weight of fuel	59 kg
Packing capacity	250 Lt
Maximum ( C.A. ) luggage weight	2x10 kg

XENON MODEL	R	RT	RST
Empty weight ( no options )	270 kg ( 595 lbs )	280 kg ( 617 lbs )	275 kg ( 606 lbs )
Max Payload	180 kg / 205 kg ( 396 - 451 lbs )	170 kg / 245 kg ( 375 - 539 lbs )	175 kg / 285 kg ( 386 - 627 lbs )
Max Take-off Weight ( 1 )	450 kg / 475 kg ( 992 / 1050 lbs )	450 kg / 525 kg ( 992 / 1156 lbs )	450 kg / 560 kg ( 992 / 1233 lbs )

### 2.4 TAKE OFF DISTANCE ( general info, refer to flight manual for altitude correction )

XENON MODEL	R	RT	RST
T.O. std.	150 m 490 ft	100 m 328 ft	80 m 262 ft
T.O. passing 15m obstacle	282 m 925 ft	166 m 545 ft	115 m 377 ft

### 2.5 LANDING DISTANCE

- Landing run: 0 – 10m / 0-30 ft ( all models )
- Landing distance over 15m obstacle: 45 - 55m / 150 – 180 ft ( all models )

### 2.6 CLIMB RATE

XENON MODEL	R	RT	RST
Rate of climb 1 pax	800 ft/min	900 ft/min	1200 ft/min
Rate of climb 2 pax	600 ft/min	700 ft/min	1000 ft/min

### 2.7 ROTOR RPM / LIMITATIONS

MODEL OF ROTOR / RPM	8,4m (475 kg)	8,6m (500 kg)	8,8m (560 kg)
MTOW	390	380	380
Medium TOW	380	370	370
Minimum TOW	330	320	320
Autorotation	350	340	340
Stall RPM speed	270	270	270
Min. RPM to apply full power st ST.O.	200	200	200
RPM Vne	550	520	500
Use of rotor brake	<150	<150	<150

### WARNING !

( 1 ) Load factors of less than 1G in flight will cause a decay in rotor RPM and if sustained could lead to blade flapping and rotor destruction.

**Under ISO conditions: 15 C / 1013 mb 29,9 ( inch Hg ) – 2 pax 85 kg ( 187 lbs ) + 1 hour fuel, speed in IAS**

**Acrobatic maneuvers and banking more than 60 degrees are prohibited.  
Flying behind the power curves is dangerous.  
Be a responsible pilot, in shape, in condition.**



CELIER Aviation