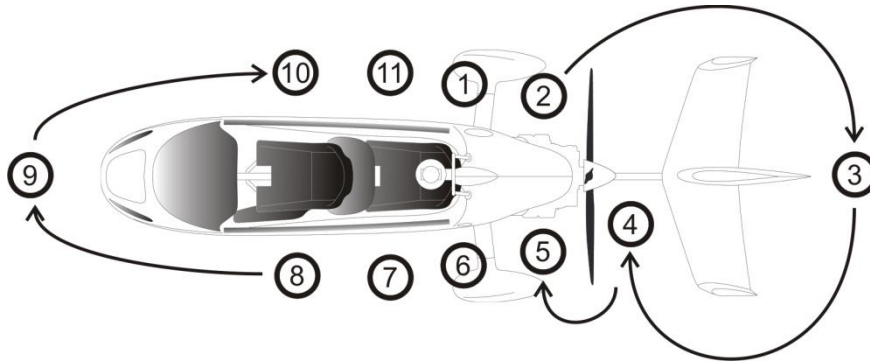


4.3 Daily or Pre-flight Checks

All daily or pre-flight check list items consist of visual checks and do not replace professional scheduled inspection and maintenance. The following check list is applicable to the standard gyroplane.

Note that depending on optional equipment installed the necessary checks may include additional items according to the flight manual supplement provided with the optional equipment. It is advisable for the owner/operator to compile his own check list to match his particular configuration.

The pre-flight check is structured into 11 stations which are organized as a clock-wise walk-around to provide a logical flow and sequential order, thus minimizing the risk of left-over or overlooked items. Start and end station are chosen in a way so that a possible replenishing of oil will not unnecessarily interrupt the flow of checks.



The following checks must be carried out before each flight. However, if the gyroplane is operated by a single pilot or within an organization where the checks are performed by or under the supervision of qualified personnel, check list items marked with a preceding 'O' may be carried out daily, before the first flight of the day.

Before exterior check

- Fuel tank drain(s) Sample and check sealed
- Snow/ ice (if any) Removed
- Documents Check complete

Exterior check

Station 1 (fuselage, RH side)

- Before turning prop: MAG switches Check OFF
- Open access door*
- Engine oil level Between marks
- Dipstick and oil cap Installed and secure
- Coolant level (sight glass) Sufficient
- Hoses Condition, fittings tight
- Fuel tank breather Clear
- Air filter LH (R912) Clean and tight
- Main frame and welded joints No cracks, no deformation

Close access door

- Main wheel Running surface, air pressure and slip mark
- Brake, disc attachment (4 bolts) and wheel attachment Condition / tight
- Wheel spat and attachment Condition / tight
- Bell crank and control rods No play, secure
- Mast joint / damper (2x bolts) Tight and secure
- Top mast and weld seams No cracks, no deformation
- Pre-rotator coupling sleeves Free to move and greased
- Trim/brake actuator and lines Condition / tight

Gimbal head and rotor head

- Upper control rod ends No play, tight and secure
- Gimbal head attachment lugs and weld seams No cracks
- Gimbal head bolts (2x) Tight, split pin installed
- Main rotor bearing Check condition and split pin installed
- Pre-rotator assembly and brake Check condition
- Teeter bolt (bolt end) Free to turn
- Teeter bolt (nut end) Split pin installed
- Teeter stops Check condition
- Rotor hub and blade clamping area No cracks, no deformation
- Blade attachment bolts (6x per blade) All tight and secure

- Inner blade caps..... Tight

Station 2 (engine, RH side)

- Main frame and welded jointsNo cracks, no deformation
- Main gear spring spar attachment No cracks, attachment tight
- Main gear spring spar, underside No cracks
- Oil cooler and hoses..... Condition, fittings tight
- Battery, relay and cabling Secure, no chafing
- Flight control base link and lower rod endsAll bolts secure
- Engine mount: 2 rubber mounting bushings.....Condition
- Exhaust system Tight, no cracks
- Engine oil and coolant hoses Condition, fittings tight
- Spark plugs (4x), connectors and cables Condition, connectors tight
- Carburettor and drip tray Condition, no cracks
- Radiator and hoses Condition, fittings tight
- Oil filter..... Dry and tight
- Generator/alternator, cabling and drive belt (if inst.)Condition

Station 3 (stabilizer)

- Stabilizer general condition..... No damage
- Stabilizer attachment No cracks, attachment tight
- Main frame aft end / tail rollerCondition
- Rudder control linkage..... Articulation rods and bulkheads tight
- Upper rudder bearing Secure, no play
- Rotor bladesCondition and cleanliness
- Blade tips Tight

Station 4 (propeller and frame)

- Propeller Condition and cleanliness
- Propeller leading edge and tips No damage
- Propeller flange bolts..... Tight
- Variable pitch propeller (if installed) Brushes and protection strip
- Rear main frame and welded jointsNo cracks, no deformation

Station 5 (engine, LH side)

- Main frame and welded jointsNo cracks, no deformation
- Main gear spring spar attachment No cracks, attachment tight
- Main gear spring spar, underside No cracks
- Oil cooler and hoses..... Condition, fittings tight
- Fuel level..... Cross-check with cockpit indication
- Flight control base link and lower rod ends All bolts secure
- Engine mount: 2 rubber mounting bushings.....Condition
- Exhaust system Tight, no cracks
- Turbocharger / waste gate (R914)Condition
- Air filter (R914) Clean and tight
- Engine oil and coolant hoses / heat shields Condition, fittings tight
- Spark plugs (4x), connectors and cables Condition, connectors tight
- Carburettor and drip tray Condition, no cracks
- Radiator and hoses Condition, fittings tight

Station 6 (fuselage, LH side)

- Main wheelRunning surface, air pressure and slip mark
- Brake, disc attachment (4 bolts) and wheel attachment Condition / tight
- Wheel spat and attachment Condition / tight
- Bell crank and control rods No play, secure
- Mast joint / damper (2x bolts) Tight and secure
- Top mast and weld seams..... No cracks, no deformation
- Pre-rotator coupling sleeves Free to move and greased
- Trim/brake actuator and lines Condition / tight
- Gimbal head and rotor head*
- Upper control rod ends No play, tight and secure
- Gimbal head attachment lugs and weld seams No cracks
- Gimbal head bolts (2x) Tight, split pin installed
- Main rotor bearing Check condition
- Pre-rotator assembly and brake..... Check condition
- Teeter bolt (bolt end) Free to turn
- Teeter bolt (nut end) Split pin installed

Station 7 (passenger station, LH side)

- Aft control stick..... Removed or secure as required
- Control linkage and support bearing Check

Station 8 (pilot station, LH side)

- Throttle lever Check function, full travel
- Brake lever and lock..... Check function and condition
- Brake fluid level Between marks
- Pedal control linkage Cables, articulation rods and bulkheads tight
- Static port..... Clean and open

Station 9 (nose)

- General appearance..... OK
- Pitot tube Clean and open
- Windshield..... Condition and cleanliness
- Storage compartment in nose section..... Closed and locked
- Nose wheel Condition and air pressure

Station 10 (pilot station, RH side)

- Static port..... Clean and open
- Control stick bolts and nuts..... Tight and secure
- Pedal control linkage Cables, articulation rods and bulkheads tight
- Main frame and welded joints No cracks, no deformation
- Loose objects Removed/secured

Station 11 (passenger station, RH side)

- Aft seat belts Fastened and tight
- Rudder control cables..... Free
- Rudder control cable tension..... Check
- Main frame and welded joints No cracks, no deformation
- Loose objects Removed/secured

CAUTION
Teeter bolt must be free to turn by hand!

4.4 Before Boarding

- Fuel level..... Cross-check with cockpit indication
- Fuel filler cap..... Installed and secure
- Pneumatic mode selector Check BRAKE position
- Rotor brake pressure..... Check/set min. 6 bar
- Rotor lash bag and pitot cover..... Removed and stowed
- Passenger station:*
- Passenger Briefed and secure (helmet, hair, gear)
- Aft seat belts Fastened and tight
- Loose objects Removed / secured
- Luggage bags Secured
- Pilot station:*
- Loose objects Removed / secured
- Document bag..... Closed
- Luggage bags Secured

4.5 Before Starting Engine

- Grab bar (if installed) Ensure bar is down, and locked in place
- Seat belts Fastened
- Helmet(s) Secure
- Flight suit(s)..... All pockets closed
- Flight controls..... Free

4.6 Starting Engine

- Parking brake Set
- Cold engine:*
- Throttle..... Idle
- Choke..... Fully engaged
- Warm engine:*
- Throttle..... Idle or slightly open

Choke..... Disengaged
 Master switch ON

All engine variants:
 Note GEN indicator light ON

ROTAX 914 engine:
 Note BOOST (red) and TCU (orange) indicating for about
 2 seconds and buzz of electrical fuel pump.

Second fuel pump P2 (if installed) ON

All engine variants: Note (increased) fuel pump buzz.

Variable pitch propeller (if installed) Cycle prop to confirm function, then FINE
 ACL / Strobe (if installed) ON
 Both MAG switches ON
 Propeller and area "Clear"
 Starter (with right hand, left hand on throttle/brake) Engage

Hold starter until engine fires, but for a maximum of 10 seconds. Generally the engine fires immediately. In case of an unsuccessful starting attempt check all preconditions. Wait at least 20 seconds to allow cooling of battery and starter motor before repeated activation.

Oil pressure min. 1.5 bar
 Second fuel pump P2 (if installed) OFF
 Airspeed indicator and altimeter ON
 Avionics/Radio/Intercom ON
 Choke Slowly disengage
 Altimeter Set

WARNING

Never attempt to start the engine until the area around the propeller is completely clear of any persons or objects. Do not start the engine while standing beside the aircraft as you will easily be struck by the propeller in case of a brake failure or an operating error.

4.7 Taxi and Run-up

During taxi do not exceed 10KIAS (15 km/h or 10mph) which is approximately jogging speed and steer with careful pedal input. Use wheel brake carefully, if needed, but not before throttle lever has been completely pulled to idle. Control stick should always be maintained in forward centre position. When taxiing on uneven ground, use particular caution and hold control stick so as to avoid the blades or control system hitting their mechanical stops.

Carry out engine run-up in an area with least risk to individuals and other airport ground traffic, preferably headed into the wind.

Warm-up RPM 2000 – 2500 RPM
 Oil temperature and other engine indications Within limits

At taxi holding position:

Magneto check (at 4000 RPM) max. 300 RPM drop
 with max. difference between magnetos 115 RPM

Switch ignition/magnetos with right hand while left hand resides on throttle/brake.

Functional check VPP (if installed) execute (see 9-1.4.3)
 Throttle Idle
 Warning and caution indications None
 Instruments / altimeter Cross check
 NAV lights As required
 Second fuel pump P2 (if installed) ON
 Approach and runway Clear, then line-up

For night flight, use nose landing lights to taxi, and under-body landing light for take-off (and landing). Anti-collision, navigation and strobe lamps should be used in accordance with night operational requirements. Instrument panel lighting must be on and dimmed to an appropriate level. Use the pitot heat either before or during flight as required to ensure the pitot remains clear of ice.