

Ac Works nr:		Calidus Periodic Service Worksheet	Ac Registration:
Service interval:	Worksheet no. (If required/used):		Date:

This worksheet lists the tasks to be completed/applied after the first 25/100 and subsequently every 100 hrs, or annually, whichever is appropriate.

All work is to be carried out in line with the latest Maintenance Manual Calidus available on the AutoGyro website.

Most of the checks and serviceability are 'on condition', meaning that the Engineer has the responsibility to decide if it is acceptable for service.

All torque figures are standard torques for the screw/bolt size if not stated in the instruction.

Task Description	25h	100h	Other	MM Chapter/Job Card Reference	Entry Nr in Work Report	Initials
Aircraft Preparation						
If necessary, carry out an acceptance check flight of the aircraft						
Clean aircraft. Remove dirt, dust, leaked fluids and loose items	X	X		12-10-00		
Identify all relevant - Airworthiness Directives (AD) - Service Bulletins (SB) for airframe (AutoGyro) and power plant (ROTAX)	X	X		http://www.auto-gyro.com		
Examine historical / Maintenance Records and Log Book. Identify: -Time Change Items (TCI) -Due dates for replacements, overhauls and special activities -Reported problems	X	X				
Note / check all - Serial Numbers - Manufacturer Life Limits (MLL/SLL) - Airworthiness Limitations (AWL) - Inspection/Overhaul Time Limits (TBO) according to Event & Configuration Log (AG-F-ECL), respectively Inspection Protocol Cover Sheet (AG-F-PCS).	X	X				
Remove and inspect all service covers/maintenance access covers/cowlings	X	X		52-00-00 4-1		
Rotor System						
Inspect teeter angle	X	X	14° +/-1°	62-11-00 6-4		
Remove rotor	X	X		62-11-00 4-1		
Inspect rotor	X	X		62-11-00 6-1		
Rotor system I (8.4m) or (8.0m). Disassemble rotor and inspect		X		62-11-00 4-2 62-11-00 6-2		
Rotor system II (8.4m & 8.8m) or (8.4m & 8.8m TOPP). Disassemble rotor and inspect			500hrs/ 3yr Recommended 1yr in corrosive environments	62-11-00 4-2 62-11-00 6-2		
Re-assemble rotor	X	X		62-11-00 4-3		
Check-torque the blade to hub bar bolts/nuts	X	X	20Nm +/-5Nm	62-11-00 4-3		
Inspect the rotor hub bolts			200hrs/ 2yr	62-11-00 6-3		
Nose Gear						
Inspect nose wheel general condition, correct pressure, condition of tread, correct seating of valve/cap, secure installation and no play in wheel bearing. Inspect wheel bearing for smooth operation	X	X	1.5 – 1.8 Bar Recommended 0.5mm min tread			
Inspect nose wheel fork general condition, secure installation, freedom of movement, no excessive play, distortion or damage	X	X				
Inspect nose wheel rubber damper general condition and correct operation	X	X		32-20-00 8-1		
Cockpit						
Inspect wiring and pitot/static lines general condition, correct attachment, absence of chafing,	X	X				

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tears cracks, hardening, kinks or sharp changes of direction						
Replace or dry compressor humidity filter as appropriate for environmental conditions		X		36-21-00 8-1		
Carry out a full functional check of the pneumatic system. Ensure pneumatic system holds pressure in accordance with the limits laid down in the maintenance manual with the selector in both brake and flight positions		X	0.5 bar/hr maximal loss	36-00-00 5-1		
Check security of instruments/switches etc. in their cockpit mountings	X	X				
Check heating control (if installed) for correct operation and freedom of movement	X	X				
Carry out a functional check of main and backup fuel pump(s) if fitted	X	X				
Carry out a functional check of strobes if fitted	X	X				
Carry out a functional check of nav lights if fitted	X	X				
Carry out a functional check of landing lights if fitted	X	X				
Carry out a functional check of Air Speed Indicator		X		34-10-00 5-2		
Ensure altimeter is calibrated to QNH/ambient pressure		X		31-20-00 5-1		
Ensure compass is correctly calibrated (Refer to manufacturer's instructions)		X				
Ensure correct function of digital altimeter and air speed indicators if fitted	X	X		31-20-00 5-2		
Ensure all glass cockpit instrument ranges compare with those in the TADS, if fitted		X				
Rudder Control Run						
Inspect the setup of rudder and pedals		X	Left 900mm +/- 10mm Right 840mm +/- 10mm	27-20-00 5-1		
Inspect pedals for freedom of movement.	X	X				
Inspect all nose wheel/rudder forward control fittings general condition, security, freedom of movement, no damage, fraying or chafing (cable sheath mounting blocks) Lubricate with AG-LUB-01	X	X				
Inspect all nose wheel/rudder rear control fittings general condition, security, freedom of movement, no damage or chafing. Inspect turnbuckle wiring present and correct	X	X				
Check rear pedal (if installed) foam dust protection present and undamaged.	X	X				
Inspect security of all rudder control run securing bolts and locknuts. Lubricate moving parts with AG-LUB-01	X	X				
Inspect tension of rudder cables with nose raised and rudder central (pedals parallel). Measure Force to operate pedals from mid position.	X	X	5-6Kg			
Inspect upper rudder attachment point bush for freedom of movement in the attachment plate	X	X				
Inspect tail plane security to airframe bolt torque	X	X	20Nm +/-5Nm			
Inspect tail plane and rudder for signs of composite damage, particularly at joints and welds. Ensure drain holes are free	X	X				
Inspect security of rudder trim tab	X	X				

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Flight Control						
Inspect push pull cables for correct and secure installation, no play, no chafing	X	X		67-00-00 6-1		
Inspect forward (and rear if installed) flight control stick(s) general condition, freedom and full range of movement, secure installation, cable routing, no damage or chafing	X	X				
Inspect radial bearings in control stick base forks of main control rod for wear or damage. Inspect play at stick	X	X		67-00-00 6-1		
Inspect main control rod general condition, freedom of movement, secure installation, damage or deformation. Inspect condition of forward bearing	X	X				
Airframe/Fuselage						
Inspect forward seat and hinges general condition, secure installation, no damage	X	X				
Inspect all seatbelt mounting points for tightness and security	X	X				
Inspect forward seatbelt for damage or frays and security of buckles		X	Manufacturers recommend'n 10yr			
Inspect rear seat general condition, secure installation, no damage	X	X				
Inspect all rear seatbelt mounting points for tightness and security	X	X				
Inspect rear seatbelt for damage or frays and security of buckles		X	Manufacturers recommend'n 10yr			
Inspect front seat backrest adjustment limit stops are fitted if rear stick is fitted (if applicable for country of registration)	X	X				
Inspect rear Instructor panel (if installed) Version 90° attachment plate: Inspect cable connections, routing, secure installation and condition of attachment plate. Instructor Mag switches (if installed): Inspect for security & presence of safe-guards	X	X				
Inspect forward and rear storage compartment flaps for correct operation, secure installation no loose articles	X	X				
Inspect canopy general condition, freedom of movement, condition of seal, no damage or cracks, no delamination from frame. Apply talcum to the seal	X	X				
Inspect canopy hinges general condition, secure installation, freedom of movement, no cracks	X	X				
Inspect canopy frame gap		X		52-10-00 6-1		
Inspect canopy latch for correct operation, secure installation, wear marks or spurs. Inspect canopy guide pins for correct function, security and general condition.	X	X		52-10-00 5-1		
Measure and record (on the Work Report) break-out-force required to open the canopy latch. Ensure within tolerances.		X		52-10-00 5-1		
Inspect canopy open warning circuit (if fitted) for correct operation	X	X				

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Inspect windows general condition, correct operation, no cracks or missing parts. Lubricate sliding window channels with silicone spray	X	X				
Ensure slip indicator is present and intact	X	X				
Inspect fuselage general condition, no cracks, damage	X	X		53-00-00 6-1		
Inspect cabin ventilation, ensure port under body is free from obstruction	X	X				
Inspect all antenna and antenna mountings for security, no damage	X	X				
Inspect keel tube general condition, secure installation, weld seams, no cracks	X	X				
Inspect keel tube protection pad condition and attachment.	X	X		55-00-00 8-1		
Inspect frame/boom to fuselage connection general condition, secure installation, weld seams, no cracks or distortion	X	X		53-00-00 6-1		
Inspect main control rod rear attachment to frame assembly for corrosion. Check drain holes are present and free in the eye-end mounting plate	X	X		67-00-00 6-2		
Inspect the engine mounting brackets general condition, no cracks or distortion		X				
Inspect the engine mounting bushes for secure installation and condition of rubber		X	5yr			
Inspect upper mast to fuselage angled securing lugs general condition, secure installation, weld seams, no cracks		X				
Check torque upper to lower mast securing bolts		X	70Nm			
Inspect rubber mounting bush movement. Record movement on Work Report		X	Max 6mm in each direction	62-51-00 6-1		
Inspect all placards/stickers readable and in line with operating limitations		X	Pilots Handbook or TADS			
Pitot-Static/Pneumatic System						
Inspect pitot general condition, secure installation	X	X				
Inspect static ports general condition, secure installation, no obstructions, no leaks. Clean and dry static lines as required	X	X		34-10-00 7-1 34-10-00 5-1		
Inspect all pneumatic lines and connectors in the fuselage, no chafing, sharp bends or kinks	X	X				
Inspect pneumatic box and compressor for security, no chafing or damage	X	X				
Main Gear and Brakes						
Remove the main spar to fuselage attachment bolts individually and check for corrosion. Replace if required			Initially at 2yr, then annually (15Nm)			
Inspect landing gear spar and attachments to airframe for damage or fatigue (cracks & deformation)	X	X				
Inspect main wheels general condition, correct pressure, condition of tread, correct seating of valve and cap, secure installation and no play in wheel bearing. Inspect wheel bearing for smooth operation. Ensure slip mark is present and aligned	X	X				
Inspect wheel spats (if fitted) for secure installation and general condition, no cracking	X	X				

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Inspect brake lines for secure installation, no leaks, no chafing	X	X				
Inspect wheel callipers for secure installation and freedom of operation, no leaks	X	X		32-40-00 2-1		
Inspect brake pads for wear (wear mark/groove must be visible) and condition		X		32-40-00 8-2		
Inspect brake disc condition. Check-torque 4 x attachment screws		X				
Inspect the throttle/brake unit for correct operation, secure installation, condition of ratchet teeth, brake fluid level, no leaks.		X		76-10-00 8-1		
Pre-rotator						
Check the pneumatic clutch for correct operation, secure installation, pneumatic connections, no wear or chafing. Adjust if necessary		X		63-11-10 5-1 63-11-10 6-1		
Check front dog gear (clutch side) and rear dog gear (engine side) general condition, no cracks		X		63-11-10 6-1		
Connect a manometer to the clutch pneumatic pressure regulator and check time to pressurise. In the event of discrepancies contact AutoGyro Technical Support	X	X	0-5 bar in 10 sec	63-11-10 4-2		
Inspect pre-rotator drive shafts with sliding shaft coupling for general condition, secure installation, no cracks (especially at the welded flanges) and free to slide. Lubricate sliding shaft coupling*. Inspect upper bearing adhesive. If necessary re-apply Loctite 638	X	X	*Liquid Moly LM 47 MoS2 (45506)			
Inspect angle gearbox general condition, secure installation, no cracks, smooth running, no leaks	X	X				
Inspect pre-rotator upper engagement. Inspect backlash. Grease with AG-GRS-01 (WHS 2002)		X		63-11-30 6-1		
Protect steel parts with chain wax, cavity spray or equivalent		X				
Rotor Head						
Inspect upper mast assembly for security, no deformation, no cracks (especially at welds).		X				
Inspect brake/trim cylinder for correct attachment, security, no damage		X				
Inspect roll trim cylinder for correct attachment, security, no damage		X				
Inspect all pneumatic hoses at the head general condition, security, no chafing, brittleness, sharp bends or kinks	X	X				
Inspect rotor head damper (when fitted) secure installation, no wear or jamming	X	X				
Renew teeter tower/bearing assembly			1500hr			
Inspect rotor head bridge. Carry out a torque check of the main bolt. Refit split pin		X	Minimum 120Nm	62-31-00 6-1		
Inspect rotor head gimbal for correct operation and secure installation of all attached parts. Record controlled angles on Work Report. Lube AG-GRS-01 (WHS2002)		X	Fwd: -4° Rear: 20° Right: 7° Left: 9°	62-32-00 6-1		
Only Gimbal II (with conical washers) & Gimbal III (rotor head III): Measure breakout force at forward control stick grip. Adjust as required. Lube			200hr Absolute maximum 15Nm	62-32-00 5-1		

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Inspect three split pins present and secure	X	X				
Inspect rotor brake pad(s) for function & wear (including fwd brake, rotor head III)		X				
Protect steel parts with chain wax, cavity spray or equivalent		X				
Fuel System						
Inspect fuel tanks security and correct installation.		X				
Inspect fuel tanks general condition, no leaks, chafing, cracks or distortion. Inspect fuel level indication (if fitted) and compare with fuel gauge		X				
Inspect tank interior for foreign debris. Remove if found	X	X				
Inspect functionality of low level warning light if fitted		X		28-20-00 5-1		
Inspect fuel venting lines condition and routing	X	X				
Inspect fuel water contamination drains have no leaks		X				
Inspect fuel tank cap for seal deterioration & security of fit		X				
Inspect all pipes & hoses for secure installation, presence of fire protective sleeve (if fitted), no cracks, chafing, kinks or sharp direction changes, deterioration or hardening. Ensure all rubber hoses comply with the 5 year renewal recommendation		X				
Replace nylon & KL45 fuel filter if contaminated. Replace as pair			Recommended 500hr/3Yr or on condition	28-20-00 6-1 28-20-00 8-1		
Inspect and clean electric fuel pump internal filter(s) if fitted		X		28-20-00 6-1		
Inspect the fuel shut-off valve correct operation, secure installation, presence and condition of safe-guard		X				
Oil System						
Inspect oil cooler general condition, secure installation, cleanliness, no leaks, chafing, damage or deformed fins, condition of rubber mountings		X				
Inspect all hoses and pipes of the oil system for secure installation, no leaks, chafing, tears/cracks, hardening, kinks or sharp direction changes. Inspect firm seating of hoses on the fittings.		X				
Inspect thermostat assembly for secure attachment, no cracks, leaks or porous hoses		X				
Coolant System						
Inspect all hoses and pipes of the coolant system for secure installation, no leaks, chafing, tears/cracks, hardening, kinks or sharp direction changes. Inspect firm seating of hoses on the fittings.		X				
Inspect radiator general condition, secure installation, cleanliness, no leaks, chafing, damage or deformed fins		X				
Inspect the radiator fan for correct operation, no damage of fan cage and blades	X	X				
Inspect presence/condition of heat protection on coolant hose from cylinder 2		X				
Inspect coolant overflow tank for correct coolant level, secure installation, no chafing	X	X				

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Inspect for secure attachment of thermostat, presence of earth cable, no leaks, damage or chafing		X				
Propeller						
Inspect propeller blades for cracks, delamination or impact damage	X	X				
Inspect spinner (if fitted) with spinner mounting plate general condition, secure installation, no cracks. Remove one spinner attachment screw and confirm secured with Loctite 243. Refit using Loctite 243		X		61-10-00 4-1		
Inspect propeller to frame clearance	X	X	5cm minimum			
HTC: Perform a visual inspection of the hub. Ensure safety paint on head of bolt to hub is not broken (if applied). Check torque flange bolts and re-apply paint if required	X	X	15Nm			
HTC: Inspect leading edge protective tape (if fitted) for air bubbles, lifted edges or deterioration	X	X				
HTC: Ensure all blades have the same pitch		X	AG propeller pitch gauge	61-10-00 5-1		
IVO: Inspect blades for loose pitch lever (tap test), condition of contact plate brushes and tension strips between blades if fitted. Check torque flange bolts	X	X	40Nm			
IVO: Inspect leading edge protection for lifted edges or deterioration	X	X				
IVO: Inspect cable routing, ensure secure		X				
Engine and Accessories						
NOTE: All engine checks to be carried out in accordance with manufacturer's instructions. Include supplementary procedures below.						
Inspect starter battery for security, deformation, cracks, chafing leaks, oxidization, pole cover, Charge state/condition.		X				
Inspect the engine mounting ring frame for secure installation, no chafing, distortion, cracks or missing paint. Check torque 4 ring mount to engine securing bolts		X	40Nm			
Inspect exhaust system general condition, secure installation, no leaks, cracks (tap test) or loose rivets. Inspect presence and condition of retaining springs and safety cable. Ensure the sliding joint is free to move at exhaust manifold from cylinder 1. Lube with anti-seize or copper paste		X				
Inspect the silencer for secure installation of clamps, rivets and lock wire. Ensure lock wire passes through clamp screw housing and slot in screw head		X				
Ensure wire locking is present on: Oil tank drain plug Oil sump drain plug Carb air filters Oil pump Magnetic plug (after the first 100hr service)	X	X				
Ensure choke and throttle levers move freely from stop to stop, and that turbo detent can be positively felt. Ensure cables are mechanically synchronised. Lube lever joints	X	X				

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Inspect clearance between airbox (if fitted) and engine mounting frame	X	X		71-20-00 6-1		
Supplementary procedure: Oil change: On draining all oil, ensure it is run through a 190 micron filter paper, attach photo of findings to this protocol		X				
Supplementary procedure: Inspection of magnetic plug: Attach a photo of the magnetic plug before cleaning to this protocol		X				
Supplementary procedure: Inspection of oil filter: Attach a photo of the paper mesh from the cut open filter to this protocol		X				
Supplementary procedure: Refilling of oil: Record type of oil used to refill in the Work Report		X				
Finalization Work						
Assemble the rotor system on the aircraft and lube teeter assembly through grease nipple	X	X		62-11-00 4-4		
Carry out a tool and loose article check	X	X				
Ensure all service covers and cowlings are re-installed	X	X		52-40-00 0-1 52-00-00 4-1		
Securely tie down the aircraft and carry out a ground run	X	X		MM 05-60-00 AG-F-PGR-CD		
Carry out a test flight if required	X	X				
Ensure all log book entries are completed appropriately, and service record updated	X	X				
Carry out any other documentation requirements by the countries Airworthiness Administration	X	X				

Tasks completed by (Name): Signature: _____ Initials: _____ Date: _____	Engine hours logged: Airframe hours logged: _____
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<i>The technical content of this document should be approved with the national Airworthiness Authority as required.</i>	
<p>Maintenance Release: The work recorded above (all pages) has been completed to my satisfaction and in that respect the aircraft is considered fit for flight.</p> Signature: _____ Initials: _____ Date: _____ Inspector or licence number (if required): _____ Dated: _____	Comments: