

Ac Works nr:		MTO 2017 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 MTO 2017 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.

Ser	Task Description	25h	100/ 1 Yr	Other	AMM Chapter/Job Card/SB/SIL Reference	Entry Nr in Work Report	Initials
Aircraft Preparation							
1	If necessary, carry out an acceptance check flight of the aircraft						
2	Clean aircraft. Remove dirt, dust, leaked fluids and loose items	X	X				
3	Identify all relevant - Airworthiness Directives (AD) - Service Bulletins (SB) for airframe (AutoGyro) and power plant (ROTAX) and approved items such as radio and transponder	X	X				
4	Examine historical / Maintenance Records and Logbook. Identify: -Life Limited Items (LLI) -Due dates for replacements, overhauls and special activities -Reported problems	X	X				
5	Note / check all - Serial Numbers against logbooks and records - Manufacturer Life Limits (MLL/SLL) - Inspection/Overhaul Time Limits (TBO) according to Life Limited Parts and Maintenance Log (AG-F-ECL-MT), respectively Inspection Protocol Cover Sheet (AG-F-PCS).	X	X				
6	Remove and inspect all service covers/maintenance access covers	X	X		52-40-00 2-1		
7	Remove and inspect body cowlings	X	X		52-00-00 4-1		
8	Measure dimension D1. Record in Work Report and ECL (AG-F-ECL) . Compare with previous readings if available	X	X		08-20-00 2-1	1	
Rotor System							
9	Check teeter angle	X	X	14° +/-1°			
10	Remove rotor	X	X		62-11-00 4-1		
11	Inspect rotor	X	X		62-11-00 6-1 SIL-2019-03-B		
12	Rotor system II (8.4m & 8.8m) or (8.4m & 8.6m TOPP). Disassemble rotor and inspect			500hrs/ 2yr. After 1500hrs in service, the inspection interval is reduced to 100hrs or 2 years. Recommended 1yr in corrosive environments	62-11-00 4-2 62-11-00 6-2 SB-2021-05-A		
13	Re-assemble rotor (if disassembled in serials 12)	X	X		62-11-00 4-3		
14	Check torque the blade to hub bar bolts/nuts	X	X	20Nm +/-5Nm	62-11-00 4-3		
15	Inspect the 8 rotor hub bolts			200hrs/ 2yr	62-11-00 6-3		
Nose Gear							
16	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				

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17	Inspect nose wheel fork general condition, secure installation, freedom of movement, no excessive play, distortion or damage	X	X		SIL-2020-02		
18	Inspect nose wheel rubber damper general condition and correct operation	X	X				
Cockpit							
19	Inspect wiring and pitot/static lines general condition, correct attachment, absence of chafing, tears cracks, hardening, kinks or sharp changes of direction	X	X				
20	Replace or dry compressor humidity filter as appropriate for environmental conditions		X		36-21-00 8-1		
21	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			
22	Check security of instruments/switches etc. in their cockpit mountings	X	X				
23	Carry out a functional check of backup fuel pump if fitted	X	X				
24	Carry out a functional check of strobes if fitted	X	X				
25	Carry out a functional check of nav lights if fitted	X	X				
26	Carry out a functional check of landing lights if fitted	X	X				
27	Carry out a functional check of Air Speed Indicator		X				
28	Ensure altimeter is calibrated to QNH/ambient pressure		X				
29	Ensure compass is correctly calibrated (Refer to manufacturer's instructions)		X				
30	Ensure correct function of digital altimeter and air speed indicators if fitted, iaw Operating Manual. Ensure the instrument backup battery operates for a minimum of 30 mins Recharge the internal battery	X	X				
31	Ensure all glass cockpit instrument ranges compare with those in the TADS, if fitted		X				
Nose gear/rudder control run							
32	Inspect the setup of rudder and pedals		X	27° +/-2° (L) 32° +/-2° (R)	27-20-00 5-1		
33	Inspect pedals for freedom of movement.	X	X				
34	Inspect pedal position adjustment slider for free movement. Lubricate with AG-LUB-01 (Ballistol) or equivalent as required. Ensure the pedal adjuster cable is secure in the knob.	X	X				
35	Inspect push-pull cables (PPCs) for secure installation, no play, no chafing.	X	X				
36	Inspect all cable pulleys for free rotation, security and wear	X	X				
37	Inspect security of all rudder control run securing bolts and locknuts	X	X				
38	Inspect upper rudder attachment point bush for freedom of movement in the attachment plate	X	X	0.2mm			
39	Inspect tail plane security to airframe bolt torque	X	X				
40	Inspect tail and rudder for signs of composite damage, particularly at joints and welds	X	X				

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41	Inspect security of rudder trim tab	X	X				
Flight Control							
42	Inspect play in the rotor head control system	X	X	5mm	67-00-00 6-1		
43	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				
44	Inspect radial bearings in control stick base fork for wear or damage	X	X				
45	Inspect main control rod and ball joints general condition, freedom of movement, secure installation, damage or deformation	X	X		67-00-00 6-1		
46	Inspect bolts of flight control base link. Replace if required			200hr			
47	Inspect for freedom of movement of base link	X	X		67-00-00 6-2		
48	Inspect radial bearings in base link for wear or damage		X		67-00-00 6-2		
49	Inspect condition of push rods and eye ends for damage distortion, corrosion, freedom of movement, cracks, wear		X				
Airframe/Fuselage							
50	Inspect forward seat general condition, secure installation, no damage and freedom of movement of the hinges	X	X				
51	Inspect forward seat adjustment mechanism general condition, secure, damage and correct locking in every position	X	X				
52	Inspect all forward seatbelt mounting points for tightness and security	X	X				
53	Inspect forward seatbelt for damage or frays and security of buckles		X				
54	Inspect rear seat general condition, secure installation, damage and freedom of movement of the hinges	X	X				
55	Inspect rear seat adjustment mechanism general condition, secure, no damage and correct locking in every position	X	X				
56	Inspect all rear seatbelt mounting points for tightness and security	X	X				
57	Inspect rear seatbelt for damage or frays and security of buckles		X				
58	Inspect Instructor mag switches (if installed) for security & presence of safe-guards	X	X				
59	Inspect front windshield general condition, cleanliness, no cracks. Confirm presence of slip indicator	X	X				
60	Inspect rear windshield general condition, cleanliness, no cracks	X	X				
61	Inspect airframe for damage, malalignment or deformation		X		53-00-00 6-1		
62	Using a suitable magnifying glass and strong light source, inspect the airframe for cracks (especially at welded joints at the mast root). Use dye-penetrant crack detection techniques as required if cracks are suspected but not clearly visible.		X		SIL-2019-02		

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63	Inspect upper mast assembly (if applicable) for security, no cracks, distortion		X				
64	Inspect correct torque of frame to upper mast attachment bolts (if applicable)		X	70Nm			
65	Inspect all frame to fuselage assembly points for security	X	X				
66	Inspect all fuselage panels general condition, no cracks, deformation of missing components	X	X		52-00-00 4-1		
67	Inspect nose storage access cover correct operation, no cracks, damage or deformation	X	X				
68	Inspect keel tube general condition, secure installation, weld seams, no cracks		X		SIL-2019-02		
69	Inspect the engine mounting brackets general condition, no cracks or distortion		X		SIL-2019-02		
70	Inspect the engine mounting bushes for secure installation and condition of rubber		X		SIL-2018-02-C		
Pitot-Static System							
71	Inspect pitot/ram air tube general condition, secure installation	X	X				
72	Inspect static lines (if fitted) general condition, secure installation, no obstructions, no leaks. Clean and dry static lines as required	X	X		34-10-00 7-1		
Main Gear and Brakes							
73	Inspect main undercarriage spar and attachments to airframe for damage or fatigue, no cracks or deformation	X	X				
74	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	2.0 – 2.2 Bar Recommended 0.5mm min tread			
75	Inspect wheel spats for secure installation and general condition, no cracking (if fitted)	X	X				
76	Inspect brake lines for secure installation, no leaks, no chafing	X	X				
77	Inspect wheel callipers for secure installation and freedom of operation, no leaks	X	X				
78	Inspect brake pads for wear (wear mark/groove must be visible) and condition		X		32-40-00 8-2		
79	Inspect brake disc condition and security of 4 x attachment screws. Check torque		X				
80	Inspect the throttle/brake unit for correct operation, secure installation, condition of ratchet teeth, brake fluid level, no leaks. Replenish fluid (DOT4) as required		X		76-10-00 8-1		
Pre-rotator							
81	Inspect the pneumatic clutch correct operation, secure installation, pneumatic connections, no wear or chafing		X	63-11-10 6-1 'Procedures' item 2: 0.5-1.0mm for pn clutch III & IV	63-11-10 6-1 SIL-2021-02		
82	Inspect front dog gear (clutch side) and rear dog gear (engine side) general condition, no cracks		X		63-11-10 6-1		
83	Connect a manometer to the clutch pressure line using a T-connector and note time to pressurize		X	0 to 8 bar within 5-10 sec.			

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84	Inspect the pre-rotator drive shaft with sliding shaft coupling general condition, secure installation, smooth operation, no cracks (especially at the flanges), distortion or play in bearing. Lubricate sliding shaft coupling using very low friction splined shaft lubricant*. Protect steel parts (shafts and cardan joints) with AG-CPS-01 chain wax, cavity spray or equivalent	X	X	*Liquid Moly LM 47 MoS2 (45506)			
85	Inspect angle gearbox and mounting brackets general condition, secure installation, no cracks, smooth running, no leaks		X				
86	Inspect pre-rotator upper engagement. Inspect backlash. Lubricate Bendix shaft helix with AG-LUB-01 (Ballistol) or equivalent. Grease crown gear teeth lightly with AG-GRS-01 (WHS 2002) or equivalent		X		63-11-30 6-1		
Rotor Head							
87	Inspect brake/trim cylinder secure installation, no damage		X				
88	Inspect roll trim cylinder secure installation, correct function, no damage (if fitted)		X				
89	Inspect all pneumatic hoses at the rotor head for absence of leaks, correct attachment, security, no chafing, hardening, kinks or sharp bends		X				
90	Renew teeter tower/bearing assembly			1500hr	62-20-00 8-1 SIL-2018-02-C		
91	Inspect rotor head bridge for damage, cracking or deformation. Inspect side plates & roll attachment bracket for deformation, damage and cracks. Carry out a torque check of the main bolt. Refit split pin		X	Minimum 120Nm Maximum 160Nm	62-31-00 6-1		
92	Individually remove the two rotor head bridge to gimbal side plate assembly bolts and inspect for corrosion. Replace if required. Apply grease AG-GRS-01 (WHS2002) to the bolt shanks during re-assembly		X	28Nm Every 2 years or 200 hrs, whichever is first			
93	Inspect rotor head gimbal for correct operation and secure installation of all attached parts. Record controlled angles on Additional Work Report. Lube AG-GRS-01 (WHS2002)		X	Fwd: -5° Rear: 20° Right: 7° Left: 9°	62-32-00 6-1		
94	Measure roll and pitch breakout force at forward control stick grip. Adjust as required.	X	X	200hr 15N max. No stick-slip permitted	62-32-00 5-1		
95	Inspect teeter bolt & bushes for damage, wear, corrosion. Service/lube	X	X				
96	Inspect three split pins present and secure	X	X				
97	Inspect forward and rear rotor brake pads for function & wear		X				
98	Protect steel parts with AG-CPS-01 chain wax, cavity spray or equivalent		X				

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Fuel System							
99	Inspect fuel tanks for security and correct installation.		X				
100	Inspect fuel tanks general condition, no leaks, chafing, cracks or distortion. Inspect presence/condition of tank level markings. Inspect correct operation and display of fuel gauge to tank contents (if fitted)		X				
101	Inspect tank interior for foreign debris. Remove if found	X	X				
102	Inspect functionality of low-level warning light if fitted		X				
103	Inspect fuel venting lines condition and routing	X	X				
104	Inspect fuel water contamination drains absence of leaks		X				
105	Inspect fuel tank cap for seal deterioration & security of fit		X				
106	Inspect all pipes & hoses of the fuel system for secure installation, presence of fire protective sleeve (if fitted), no cracks, chafing, kinks or sharp direction changes, deterioration or hardening.		X		SIL-2021-03		
107	Replace nylon & F5273 fuel filter if contaminated. Replace as pair			Recommended 500hr/3Yr or on condition	28-20-00 6-1 28-20-00 8-1 SIL-2018-02-C SIL-2021-01		
108	Inspect and clean electric fuel pump internal filter(s) if fitted		X		28-20-00 6-1		
Oil System							
109	Inspect oil cooler general condition, secure installation, cleanliness, no leaks, chafing, damage or deformed fins		X				
110	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		SIL-2021-03		
111	Inspect the oil thermostat assembly for secure attachment, no cracks, leaks or porous hoses		X				
Coolant System							
112	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		SIL-2021-03		
113	Inspect radiator general condition, secure installation, cleanliness, no leaks, chafing, damage or deformed fins		X				
114	Inspect presence/condition of heat protection on coolant hose from cylinder 2		X				
115	Inspect water thermostat for secure attachment, presence of earth cable, no leaks, damage or chafing		X				
Propeller							
116	Inspect propeller blades for cracks, delamination or impact damage	X	X				
117	Remove and inspect spinner (if fitted), inspect spinner mounting plate general condition, secure installation, no cracks.	X	X		61-10-00 4-1		
118	Inspect propeller to frame clearance	X	X	5cm minimum			

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119	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 safety paint if required	X	X	15Nm			
120	HTC: Inspect leading edge protective tape (if fitted) for air bubbles, lifted edges or deterioration	X	X				
121	HTC: Ensure all blades have the same pitch		X	AG propeller pitch gauge (30492)	61-10-00 5-1		
122	IVO: Inspect blades for loose pitch torsion rod (tap test), condition of contact plate brushes and tension strips between blades if fitted. Check torque flange bolts	X	X	40Nm	RSUK0325 RotorSport IVO-prop manual. SIL-2018-04-B		
123	IVO: Inspect leading edge protection for lifted edges or deterioration	X	X				
124	IVO: Inspect cable routing at arm, ensure secure		X				
125	Refit spinner (if applicable) using AG-BAS-02 Loctite 243 on the spinner fasteners	X	X				
Engine and Accessories							
NOTE: All engine checks to be carried out in accordance with manufacturer's instructions. Include supplementary procedures below.							
126	Inspect starter battery for security, deformation, cracks, chafing leaks, oxidization, pole cover, Charge state/condition.		X				
127	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			
128	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. Replace as required. Ensure the sliding joint is free to move at exhaust manifold from cylinder 1. Lube with AG-LUB-02 anti-seize or copper paste		X		SIL-2018-05-C		
129	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				
130	Ensure wire locking is present on: Oil tank drain plug Oil sump drain plug Carb air filters Oil pump Magnetic plug	X	X				
131	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				
132	Inspect clearance between airbox (if fitted) and engine mounting frame	X	X				
133	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				

