

Ac Works nr:		<b>MT Series Periodic Service Worksheet</b>	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 Sport 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	100h/ 1 Yr	Other	AMM Chapter/Job Card/SB/SIL Reference	Entry Number in Work Report	Initials
<b>Aircraft Preparation</b>							
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) power plant (ROTAX) and approved items such as radio and transponder	X	X				
4	Examine historical / Maintenance Records and Log Book. 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 and Service Life Limits (MLL/SLL) - Inspection/Overhaul Time Limits (TBO) according to), requirements respectively Inspection Protocol Cover Sheet (AG-F-PCS).	X	X				
6	Measure dimension D1. <b>Record in Inspection protocol record, and logbook as required</b> Compare with previous readings if available	X	X	A change indicates possible airframe deformation	08-20-00 2-1	<b>1</b>	
7	Remove and inspect all service covers/maintenance access covers/cowlings	X	X		52-40-00 2-1		
<b>Rotor System</b>							
8	Check teeter angle	X	X	14° +/-1°			
9	Remove rotor	X	X		62-11-00 4-1		
10	Inspect rotor	X	X		62-11-00 6-1 SIL-2019 -03-B		
11	Rotor system I (8.4m) or (8.0m). Disassemble rotor and inspect	X	X	100 hrs/12 months. After 700hrs in service, the inspection interval is reduced to 25 hrs or 12 months where permitted	62-11-00 4-2 62-11-00 6-2 SB-2021-05-A		
12	Rotor system II (8.4m & 8.8m) or (8.4m & 8.6m TOPP). Disassemble rotor and inspect		X	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		

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13	Re-assemble rotor (if disassembled in serials 11 or 12)				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		
<b>Nose Gear</b>							
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				
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 springs for security & signs of fretting/potential breakage. <b>MT03 only</b>	X	X				
<b>Cockpit</b>							
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 front (and rear if fitted) 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				
32	Inspect security of landing light shield (if fitted )		X				
<b>Nose gear/rudder control run</b>							
33	Inspect the setup of rudder and pedals		X	MTO Sport 860mm +/- 10mm MT03 920mm +/- 10mm	27-20-00 5-1		
34	Inspect pedals for freedom of movement.	X	X				

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35	Ensure turnbuckle wire-locking or heat-shrink tubing is present and undamaged. Apply if not fitted	X	X				
36	Inspect rudder cables for fraying, corrosion, wear or chafing along complete length	X	X				
37	Inspect all cable pulleys for free rotation, security and wear	X	X				
38	Inspect rudder control cable tension		X	35lbs +/-5lbs	27-20-00 5-2		
39	Inspect security of all rudder control run securing bolts and locknuts	X	X				
40	Inspect upper rudder attachment point bush for freedom of movement in the attachment plate	X	X	0.2mm			
41	Inspect tail plane security to airframe bolt torque	X	X				
42	Inspect tail and rudder for signs of composite damage, particularly at joints and welds	X	X				
43	Inspect security of rudder trim tab	X	X				
<b>Flight Control</b>							
44	Inspect play in the control system	X	X	5mm	67-00-00 6-1		
45	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				
46	Inspect radial bearings in control stick base fork for wear or damage	X	X				
47	Inspect main control rod and ball joints general condition, freedom of movement, secure installation, damage or deformation	X	X		67-00-00 6-1		
48	Inspect bolts of flight control base link. Replace if required			200hr			
49	Inspect for freedom of movement of base link	X	X		67-00-00 6-2		
50	Inspect radial bearings in base link for wear or damage		X		67-00-00 6-2		
51	Inspect condition of push rods and eye ends for damage distortion, corrosion, freedom of movement, cracks, wear		X				
<b>Airframe/Fuselage</b>							
52	Inspect forward seat general condition, secure installation, damage	X	X				
53	Inspect all forward seatbelt mounting points for tightness and security	X	X				
54	Inspect forward seatbelt for damage or frays and security of buckles		X				
55	Inspect rear seat and hinges general condition, secure installation, damage	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 the airframe for damage, malalignment or deformation.		X				

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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		
63	Inspect security of fuselage to frame at all attachment points	X	X				
64	Inspect fuselage general condition, no cracks, damage	X	X				
65	Ensure nose luggage access cover fitted/camlocs secure & operate correctly	X	X				
66	Inspect keel tube general condition, secure installation, weld seams, no cracks		X		SIL-2019-02		
67	Inspect the engine mounting brackets general condition, no cracks or distortion		X		SIL-2019-02		
68	Inspect the engine mounting bushes for secure installation and condition of rubber		X		SIL-2018-02-C		
<b>Pitot-Static System</b>							
69	Inspect pitot/ram air tube general condition, secure installation	X	X				
70	Inspect static ports (if fitted) 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		
<b>Main Gear and Brakes</b>							
71	Remove the main spar to fuselage attachment bolts individually and check for corrosion. Replace if required (450Kg undercarriage boom only)			Initially at 2yr, then annually (15Nm)			
72	Inspect landing gear spar and attachments to airframe for damage or fatigue (cracks & deformation)	X	X				
73	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				
74	Inspect wheel spats for secure installation and general condition, no cracking (if fitted)	X	X				
75	Inspect brake lines for secure installation, no leaks, no chafing	X	X				
76	Inspect wheel callipers for secure installation and freedom of operation, no leaks	X	X		32-40-00 2-1		
77	Inspect brake pads for wear (wear mark/groove must be visible) and condition		X		32-40-00 8-2		
78	Inspect brake disc condition and security of 4 x attachment screws. Check torque		X				
79	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		
<b>Pre-rotator</b>							
80	Inspect clutch pulley alignment and condition		X		63-11-10 6-1		
81	Inspect security of pneumatic cylinder and mountings		X				
82	Inspect play of small pulley/bearing		X		63-11-10 4-2		

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83	With belt unloaded, cycle by hand through full range. Check drive shaft joints for free movement and bearings for play	X	X				
84	With belt unloaded, cycle by hand through full range. Check drive shaft for distortion or damage	X	X				
85	Inspect drive belt for damage or splits	X	X		63-11-10 8-1		
86	Inspect belt guides and pulley brake for wear		X				
87	Inspect retraction spring and support for damage or cracks		X				
88	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 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)			
89	Inspect slider gaiter (if fitted) for splits/porosity, replace if required	X	X				
90	Inspect angle gearbox and mounting brackets general condition, secure installation, no cracks, smooth running, no leaks		X				
91	Inspect clearance of brake/trim cylinder to pre-rotator drive shaft through full range of rotor head movement	X	X				
92	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)		X		63-11-30 6-1		
93	Protect steel parts with AG-CPS-01 chain wax, cavity spray or equivalent		X				
<b>Rotor Head</b>							
94	Inspect mast hang point bolt torques (x3)		X		62-51-00 6-1		
95	Inspect hang point, no deformation, no cracks (especially at welds)		X				
96	Inspect all pneumatic hoses for leaks, correct attachment, security. Inspect brake/trim cylinder for security, damage		X				
97	Renew teeter tower/bearing assembly			1500hr	62-20-00 8-1 SIL-2018-02-C		
98	Inspect rotor head bridge. Pay particular attention to the welds. Carry out a torque check of the main bolt. Refit split pin		X	<b>Minimum</b> 120Nm <b>Maximum</b> 160Nm	62-31-00 6-1		
99	Inspect rotor head gimbal for correct operation and secure installation of all attached parts. <b>Record controlled angles on Work report.</b> MTO3: 16° MTO Sport Pre GKS: 18° MTO Sport GKS: 20° Lube AG-GRS-01 (WHS2002)		X	<b>Fwd:</b> -1° <b>Rear:</b> As noted under 'Task Description' <b>Right:</b> 7° <b>Left:</b> 9°	62-32-00 6-1		
100	<b>Only gimbal head II (spring washers).</b> Measure breakout force at forward control stick grip. Adjust as required. Lube		X		62-32-00 5-1		
101	Inspect teeter bolt & bushes for damage, wear, corrosion. Service/lube		X				

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102	Inspect three split pins present and secure	X	X				
103	Inspect rotor brake pad for function & wear		X				
104	Lubricate rotor brake pivot AG-LUB-01 (Ballistol)		X				
105	Protect steel parts with AG-CPS-01 chain wax, cavity spray or equivalent		X				
<b>Fuel System</b>							
106	Inspect fuel tanks for security and correct installation. Ensure the securing straps are not over-tight - when empty the tanks are permitted to have slight movement using hand pressure		X				
107	Inspect fuel tanks general condition, fuel level indication (if fitted), no leaks, chafing, cracks or distortion		X				
108	Inspect tank interior for foreign debris. Remove if found	X	X				
109	Inspect functionality of low level warning light if fitted		X				
110	Inspect fuel venting lines condition and routing	X	X				
111	Inspect fuel water contamination drains have no leaks		X				
112	Inspect fuel tank caps for seal deterioration & security of fit		X				
113	Inspect fuel venting hose filter for blockages		X				
114	Replace fuel venting hose filter			Recommended 3Yr or on condition			
115	Inspect all fuel system pipes & hoses 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		
116	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 SIL-2018-02-C		
117	Inspect and clean electric fuel pump internal filter(s) if fitted		X		28-20-00 6-1		
<b>Oil System</b>							
118	Inspect oil cooler general condition, secure installation, cleanliness, no leaks, chafing, damage or deformed fins		X				
119	Inspect all oil system 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		
120	Inspect oil thermostat assembly for secure attachment, no cracks, leaks or porous hoses		X				
<b>Coolant System</b>							
121	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		
122	Inspect radiator(s) general condition, secure installation, cleanliness, no leaks, chafing, damage or deformed fins		X				
123	Inspect presence/condition of heat protection on coolant hose from cylinder 2		X				

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124	<b>Non water thermostat version:</b> Ensure expansion tank is mounted 'floating' to prevent fretting/chafing. Ensure rubber protection is present on underside and check condition. <b>Water thermostat version:</b> Inspect for secure attachment, presence of earth cable, no leaks, damage or chafing		X				
<b>Propeller</b>							
125	Inspect propeller blades for cracks, delamination or impact damage	X	X				
126	Remove and inspect spinner (if fitted), inspect spinner mounting plate general condition, secure installation, no cracks.	X	X		61-10-00 4-1		
127	Inspect propeller to frame clearance	X	X	5cm minimum			
128	<b>HTC:</b> Perform a visual inspection of the hub. Ensure safety paint on head of bolt to hub (or thread to flange) is not broken (if applied). Check torque flange bolts and re-apply paint if required	X	X	15Nm			
129	<b>HTC:</b> Inspect leading edge protective tape (if fitted) for air bubbles, lifted edges or deterioration	X	X				
130	<b>HTC:</b> Ensure all blades have the same pitch		X	AG propeller pitch gauge (30492)	61-10-00 5-1		
131	<b>IVO:</b> 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	RSUK0325 RotorSport IVO-prop manual. SIL-2018-04-B		
132	<b>IVO:</b> Inspect leading edge protection for lifted edges or deterioration	X	X				
133	<b>IVO:</b> Inspect cable routing at arm, ensure secure		X				
134	Refit spinner (if applicable) using AG-BAS-02 Loctite 243 on the spinner fasteners	X	X				
<b>Engine and Accessories</b>							
<b>NOTE: All engine checks to be carried out in accordance with manufacturer's instructions. Include supplementary procedures below.</b>							
135	Inspect starter battery for security, deformation, cracks, chafing leaks, oxidization, pole cover, Charge state/condition.		X				
136	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			
137	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 1 914 (912 dependant on engine mod state). Lube with AG-LUB-02 (anti-seize)		X		SIL-2018-05-C		
138	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				

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139	Ensure wire locking is present on: Oil tank drain plug Oil sump drain plug Carb air filters Oil pump Magnetic plug	X	X				
140	Ensure choke and throttle levers move freely from stop to stop, and that turbo detent can be positively felt (914 engines only). Ensure cables are mechanically synchronised. Lube lever joints AG-LUB-01 (Ballistol)	X	X				
141	Inspect clearance between airbox (if fitted) and engine mounting frame	X	X				
142	<b>Supplementary procedure: Oil change:</b> On draining all oil, ensure it is run through a 190 micron filter paper, attach photo of findings to this protocol		X				
143	<b>Supplementary procedure: Inspection of magnetic plug:</b> Attach a photo of the magnetic plug before cleaning to this protocol		X				
144	<b>Supplementary procedure: Inspection of oil filter:</b> Attach a photo of the paper mesh from the cut open filter to this protocol		X				
145	<b>Supplementary procedure: Refilling of oil:</b> Record type of oil used to refill		X				
<b>Finalization Work</b>							
146	Assemble the rotor system on the aircraft and lube teeter assembly through grease nipple	X	X		62-11-00 4-4		
147	Carry out a tool and loose article check	X	X				
148	Ensure all service covers are re-installed	X	X				
149	Securely tie down the aircraft and carry out a ground run	X	X		AGR-F-PGR- Generic		
150	Carry out a test flight if required	X	X		Flight Test Report MTO		
151	Ensure all log book entries are completed appropriately, and service record updated	X	X				
152	Carry out any other documentation requirements by the countries Airworthiness Administration	X	X				

