

Task No.	Task Description	Repetition or comments	Actions taken & comment	Cert initial
<p><b>Purpose of this worksheet: To be applied for the first 25hr service of MT-03 and MTOsport Gyroplanes with fixed pitch propellers. If prior to permit renewal, the owner is also referred to Permit renewal requirement list on the RSUK website. Refer to Maintenance Manuals RSUK0012 and RSUK0044. For aircraft fitted with the in-flight variable pitch Woodcomp SR3000/3 prop, additionally refer to Propeller Manual RSUK0076 and Propeller Service Sheet F117. Some of the checks and serviceability are 'on condition', meaning the Engineer has the responsibility to decide if it is acceptable for service. The task numbers listed in the left-most column are rationalised i.e. identical on all MT-series Service Worksheets. <b>The task numbers may not be sequential</b></b></p>				
	<b>Airframe Inspection</b>	All items – repeat inspections as shown		
1	Check - Bolt torques – mast fittings	M8 bolts to 25Nm+5/-1Nm		
2	Check - Bolt security – other			
5	Inspect nosewheel springs for security and signs of fretting/imminent breakage.	If in doubt, replace springs (MT-03 only).		
6	Inspect - landing gear spar and attachments to airframe for damage or fatigue (cracks & deformation).	<b>If any cracks or deformation found then ground aircraft and contact RSUK immediately</b>		
7	Inspect – tyres for wear or damage. Replace if needed.	No fabric to show through the tread area. Recommended 0.5mm min tread <u>No cracks in side-walls</u>		
8	Check - tyre pressures & tyre creep (mainwheels 1,5 to 2,2bar if heavily loaded, nose 1,5 to 1,8bar)		Pressures OK    Nose    Main LH    Main RH	
10	Inspect - airframe for damage, twisting, buckling or other deformation, or cracks, especially at welded joints at bottom of the mast.	<b>If found ground aircraft and call RSUK for advice. Use of crack detection fluid at base of mast is appropriate to ensure a thorough check is done.</b>		
11	Inspect - External structure of enclosure sound and firmly fixed to airframe			
<u>12</u>	<u>Inspect – security of landing light shield (if fitted)</u>	<u>Accessible through luggage hatch</u>		
	<b>Electrical/instruments</b>			
14	Inspect - panel connections for security			
15	Inspect – gel battery for leakage			
<u>16</u>	<u>Op/C Check strobe function if fitted</u>			
<u>17</u>	<u>Op/C check nav light function if fitted</u>			
<u>18</u>	<u>Op/C check backup fuel pump functions</u>			
<u>19</u>	<u>Op/C check landing light function if fitted</u>			

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	<b>Rotor head</b>			
<u>23</u>	Check, Service/lube - teeter bolt & bearings for damage & wear.	Regrease via nipple on top of rotor (where fitted). Grease with Castrol LM or equivalent . Nut must not be more than finger tight, about 1 to 2Nm, and the bolt able to turn by hand with split pin fitted.		
<u>26</u>	Check four split pins present and secure	Main bearing, teeter bolt, pitch and roll bolts		
<u>29</u>	Inspect - brake pad for function & wear.	Change pad and backplate as one unit (service item)		
<u>30</u>	Op/C - Check Trim cylinder for free function and slider damage or excess seal leakage.	Seal service kit is available from RSUK		
<u>31</u>	Protect bare metal with Motor Plus, WD40, chain wax or equivalent			
	<b>Rotor Head Controls</b>			
<u>36</u>	F/C - control rod ends for cracks & freedom of movement both free and at control extremes			
<u>37</u>	F/C- rotor head reaches pitch and roll stops			
<u>38</u>	Inspect - all tubes straight, all bearings free, all bearing retaining rivets secure		48 rivets	
<u>39</u>	Op/C - for free play in stick control eg bearings or wear			
	<b>Rudder Controls</b>			
<u>41</u>	Inspect for cable freedom of movement at tail and pedal attachment, and turnbuckle wire-locking			
<u>42</u>	Inspect - rudder cables for frays, corrosion, wear or chaffing (particularly between the fuel cross over tube and the cables), and nico sleeves for signs of movement.			

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<u>43</u>	Inspect - tail bearings for looseness and freedom of operation				
<u>44</u>	Inspect - tail for security to airframe (4 bolts, 15Nm)	Loctited – if loose, remove and refit with loctite 243. Check to 12Nm			
<u>45</u>	<u>Inspect tail and rudder for signs of composite damage.</u>	<u>Include wagging the side fin in case of internal structural damage.</u>			
<u>46</u>	<u>Inspect - all cable pulleys for free rotation, security &amp; wear</u>				
<u>47</u>	Inspect – rudder <u>to tail fastenings</u>	<u>Check to 12Nm</u>	<u>Confirm if possible rudder offset to pedals</u>		
<u>48</u>	<u>Inspect – security of rudder trim tab</u>				
<u>49</u>	<u>F/C rudder control cable tension</u>	<u>For limits and methods see manual</u>	<u>Gauge no. _____ Reading</u>		
<u>51</u>	<u>Check that all control system bolts are correct items, properly fitted and tight</u>				
	<b>Engine</b> <b><u>NOTE! All engine checks to be in accordance with manufacturers manual!</u></b>	<u>For engine servicing refer to the engine manual issued with the aircraft (Rotax 912ULS or 914UL). The full annual engine service is required only when no engine servicing has been carried out in the last 12 months. Otherwise apply ‘on condition’.</u> <u>Servicing must be carried out in line with, and recorded on, the Rotax service schedule contained within the ‘Line Maintenance’ manual for the engine fitted.</u>			
<u>56</u>	<u>Wirelocking – ensure present on oil tank drain plug, aftermuffler, Oil banjo under engine, carb air filters, oil pump</u>				
<u>57</u>	<u>Engine service fasteners</u>	<u>If the magnetic inspection plug or the crankshaft locking screw plug are disturbed then any wire-locking present must be properly reinstated</u>			
<u>59</u>	<u>Service/lube - Ensure choke and throttles move freely from stop to stop, and that turbo detent can be felt correctly. Ensure cables are synchronised.</u>				
<u>61</u>	<u>Inspect engine bearer bolts for paint stripe, and if moved, re loctite and tighten to 35Nm. Otherwise check bolt torque. Re-apply paint stripe as required.</u>	<u>See SB-10</u>			

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	<b>Fuel system</b>			
<u>73</u>	Inspect - inside tanks for debris.	Flush as required		
<u>74</u>	Inspect - all hoses for cracks and deterioration			
	<b>Pre rotator</b>			
<u>80</u>	Inspect- drive shafts for bend or damage and belt for splits or damage	Lubricate belt with silicon spray, PTFE spray or talcum powder if stick slip found. Replace belt when insufficient tension under pressure to operate pre rotator.		
<u>87</u>	Inspect - Ensure slider shafts move freely, and are greased	Check horizontal shaft by pushing pulley wheel with hand and checking for slider free movement.		
<u>88</u>	Inspect - Pull back slider gaiter and ensure shaft is well lubricated and no corrosion. Check gaiter for splits and replace if needed	If gaiter is split, it must be replaced. Jamming of the vertical slider would have catastrophic consequences in flight!		
	<b>Trim System, Rotor Brake &amp; Pneumatics</b>			
<u>91</u>	Op/C – Roll trim. Operate roll trim (where fitted) fully left. Force to hold stick central ~0.5 to 1Kg. Ensure panel indicator shows fully left. Then operate trim fully right. Ensure indicator shows fully right	Trim load may be adjusted by shortening or lengthening bungy cord under right side of pilots seat – do not adjust without consulting pilot, as the loads required are small!		

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94	Op/C - Full functional check pneumatic system – refer as required to the maintenance manual for fault finding and rectification, and a more comprehensive understanding of the test background.	With selector set to 'Brake' position, engage brake by pressing button, confirm operation, and that function is acceptable. Pressurise to maximum. Change to flight – check for 2 to 3 sec max to release air from brake system). In 'Flight' position check that trim goes on and off in same direction as button (inc rear switch if fitted). In 'Flight' position, stick forward. Start pre rotator. Ensure cylinders (2) engage, and when the stick is pulled back they disengage. Note that the head cylinder must engage prior to the engine cylinder. Stick to front, release pre rotator and confirm that pressure is applied to trim and stick comes back slightly. In 'Brake' position, put 3 bar pressure on and ensure pre rotator does not function Press the 'Interlock release button' and ensure that pre rotator functions (both cylinders, head and engine) with brake engaged.		
95	Op/C – check compressor can give full pressure of 7bar (~8bar with new compressor). If under 5.5bar, either find leak or replace.		Note pressure obtained	
	<b>HTC Propeller (for Woodcomp refer to RSUK0076)</b>			
97	Check - prop bolt torques, and that torque stripe between bolt head and propeller hub has not been broken (indicating that the bolt has slackened). If missing, apply stripe to each of the six bolts holding the prop to the engine.	15Nm, loctite centre 6 bolts. If loose, remove, inspect, and refit with loctite 243	Does NOT apply to Woodcomp propeller!	
99	Inspect blades to manufacturers recommendations for any damage, splits etc. Repair only as manufacturer's recommendations	Take care with water ingress into propeller blades. If necessary rotate slowly to drain water		

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	<b>Rotors</b>			
<u>106</u>	Inspect blades to manufacturers recommendations for any damage, splits etc.	Repair only as manufacturer's recommendations		
<u>108</u>	Check - torques on blade to hub bar bolts/nuts	If any evidence of blade to hub looseness, disassemble blades from hub bar. Check holes for wear or fretting Bolt torque 25Nm. Refer to Section 9 General Notes of the Maintenance Manual for nyloc re-usage		
	<b>Other</b>			
<u>112</u>	Inspect - Confirm all placards readable and in line with Operating Limitations	See Pilots handbooks for placards required – or TADs		
<u>114</u>	Inspect all seat belt attachment points for tightness and security			
	<b>Final ground run checks prior to release</b>			
<u>130</u>	Inspect - Power plant and coolant system for leaks			
<u>131</u>	Inspect – security of oil-thermostat insulator pad (if fitted)			
<u>132</u>	Inspect – instruments for measurements consistent with ambient conditions			
<u>133</u>	Inspect – all access covers secure			
<u>139</u>	Ensure all log book entries completed appropriately, and service record up to date			

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	<p>Confirm Service bulletins incorporated (from RSUK website, full list available with applicability) The list at the time of this document issue is stated to the right.</p>	<p>SB-001 (914Turbo only) RPM gauge green line to finish at 5,000rpm (914UL's)                      SB-002 Cable ferrule crimping (one time inspection. Completed)                      SB-003 Breather tube routing (serial 16 to 49)                      SB-004 Bendix shaft (serial 27 to 49)                      SB-006 Battery link (applies to all MT-03's)                      SB-007 Rudder cable alignment (applies to all MT-03's)                      SB-008 Fuel pickup re route (applies to all MT-03's)                      SB-009 Front seat reinforcement (applies to all MT-03's)                      SB-010 Engine bearer bolt                      SB-012 Fuel hose                      SB-013 Suspension bow change (500Kg upgrade)                      SB-014 MTOsport enclosure bracket repair                      SB-016 MT-03 enclosure bracket repair                      SB-017 Control panel blanking plugs                      SB-018 Front pedal position alteration                      SB-019 Instructor pack fitment                      SB-021 Woodcomp VP Prop and CS controller (MTOS)                      SB-022 912ULS exhaust springs  <a href="#">SB-023 Landing-light shield</a>  <a href="#">SB-024 LED landing lights</a>                      SB-027 Pre-rotator improvement kit                      SB-028 Low level fuel sensor                      SB-033 Rotax plug screw wire-locking                      SB-034 Rotor blade check (MANDATORY ALL AIRCRAFT)                      SB-036 Oil thermostat insulator                      SB-037 Relocated fuel transfer pipe (MT03)                      SB-038 Propeller protection tape  <a href="#">SB-040 MT-series new rotor system</a></p>	
			<b>Cert initial</b>

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	Confirm Mandatory Permit Directives incorporated (from CAA website, CAP747 and 661) The list at the time of this document issue is stated to the right. Up-to-date information must be checked!	MPD 1998-019 R1 Clear hose on the 914UL return fuel line (check for flexibility, ongoing requirement) MPD 2010-001 Inspection/replacement of Trelleborg Hydro K Hoses MPD 2010-005 R1 Replacement of Honeywell low fuel warning sensor (mandatory for MTOS/024-036 inc only) <a href="#">MPD 2011-006 Life limit of rotor blade assembly</a>		
	CAP 747 Document date or issue checked, plus notes:			
	CAP 661 Document date or issue checked, plus notes:			
	EASA MPD or AD check (EASA website): note date checked and any actions required			
	Confirm compliance to BG01 Type Approval Data Sheet (TADS) for the MT-03, or BG02 Type Approval Data Sheet (TADS) for the MTOsport. Note any non-compliances and actions taken.			
Tasks completed by (name):  Signature: _____ Initial: _____  check sheet) _____ (to compare to _____ Date: _____			Engine hours logged: Airframe hours logged: Aircraft hourmeter hrs logged:	
<i>The technical content of this document is approved under the authority of the UK CAA Design Organisation Approval Ref: <b>DAI/9917/06</b></i>				



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	<p><b>Permit 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.</b></p> <p>Signature: _____ Initial: _____</p> <p>Date _____ (to compare to check sheet)</p> <p>Inspector or licence no.: _____ Company Approval ref _____</p> <p>Inspector Authority: CAA letter ref 9/ _____ dated _____</p>		Comments:		
<p>Note to Engineer; remember to reference this worksheet and RSUK0012 or RSUK0044 within the logbooks, together with your CAA authorisation code. Work undertaken may be noted on this worksheet, or if required on another sheet (such as F093) also referenced in the logbook. Modifications undertaken must be noted with their MC approval no. Check the back pages to complete these too for modifications, service bulletins, MPDs, etc.</p>					