



ROTAX® SERVICE INFORMATION

3 UL 91-E
April 1991

DAILY and PRE FLIGHT CHECK — MAINTENANCE PLAN for all ROTAX UL-engines

DAILY INSPECTION			PRE FLIGHT CHECK		
1	Check ignition switched off.	→	1	Check ignition switched off.	
2	Drain water from fuel tank sump and/or water trap (if fitted).	→	2	Check fuel content.	
3	Check carburettor rubber socket or flange for cracks and secure attachment.		3		
4	Check carburettor float chamber for water and dirt.		4		
5	Check security and condition of intake silencer and air filter.		5		
6	Check security of radiator mounting. Check radiators for damage and leaks.	→	6	Visual check for coolant leaks.	
7	Check coolant overflow bottle level and security of cap.		7		
8	Check coolant hoses for security, leaks and chafing.		8		
9	Check engine for coolant leaks (Cylinder head, cylinder base and water pump).		9		
10	Check oil content for rotary valve gear lubrication and security of oil cap.		10		
11	Check oil hoses for security, leaks and chafing. (Rotary valve gear lubrication system and oil injection system.)	→	11	Check oil tank content (oil injection engines).	
12	Check ignition coils / electronic boxes for secure mounting. Check ignition leads and all electrical wiring for secure connections and chafing.	→	12	Check spark plug caps for security.	
13	Check electric starter for secure mounting, check cover for cracks.		13		
14	Check engine to airframe mounting for security and cracks.		14		
15	Check fuel pump mounting for security. Check all fuel hose connections filters, primer bulbs, & taps for security, leakage, chafing & kinks.		15		
16	Check fuel pump impulse hose for secure connections, chafing & kinks.		16		
17	Check wire locking of gearbox drain & level plugs.	→	17	Visual check of engine and gearbox for oil leaks.	
18	Check rubber coupling for damage & ageing (C type gearbox only).	→	18	Visual check of engine and gearbox for loose or missing nuts, bolts and screws. Check security of gearbox to engine mounting.	
19	Rotate engine by hand & listen for unusual noises. (Double check ignition OFF first.)		19		
20	Check propeller shaft bearing for play by rocking propeller.	→	20	Check propeller for splits and chips. If any damage, repair and/or rebalance before use.	
21			21	Check security of propeller mounting.	
22	Check throttle choke & oil pump lever cables for damage (end fittings, outer casing, and kinks).	→	22	Check throttle, oil injection pump and choke actuation for free and full movement.	
23			23	Check cooling fan turns when engine is rotated (air cooled engines).	
24			24	Check exhaust for cracks, security of mounting, springs and hooks for breakage and wear, check wire locking of springs.	
25			25	Start engine after ensuring area clear of bystanders.	
26			26	Single ignition engines - check operation of ignition switch (Flick ignition off and on again at idling).	
27			27	Dual ignition engines - check operation of both ignition circuits.	
28			28	Check operation of all engine instruments during warm up.	
29			29	If possible, visually check engine and exhaust for excessive vibration during warm up (indicates propeller out of balance).	
30			30	Check engine reaches full power rpm during take off roll.	

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MAINTENANCE - PLAN

		Checks and work	2 h	10 h	every 12,5 h	25 h	50 h	75 h	100 h	125 h	150 h	175 h	200 h	225 h	250 h	275 h	300h	
	1	Retorque cylinder head nuts (only air-cooled engines) 1)	x															
	2	Retorque exhaust manifold screws 1)	x															
	3	Check rewind starter rope			x													
	4	Check electric starter gear					x		x		x		x		x			
	5	Inspect spark plugs			x													
	6	Replace spark plugs				x	x	x	x	x	x	x	x	x	x	x		
	7	Check and clean inside spark plug caps			x													
	8	Check ignition timing (only breaker ignition)		x 2)				x						x				
	9	Check contact breaker gap		x 2)				x						x				
	10	Check ignition damping box						x			x			x				
	11	Replace contact breakers and condenser									x							
	12	Check V-belt tension		x		x	x	x	x	x	x	x	x	x	x	x		
	13	Lubricate ball joints				x	x	x	x	x	x	x	x	x	x	x		
	14	Replace exhaust muffler springs						x			x			x				
	15	Oil control cables				x	x	x	x	x	x	x	x	x	x	x		
	16	Check propeller balance and tracking 3)				x	x	x	x	x	x	x	x	x	x	x		
	17	Inspect propeller mounting bolts 4)																
	18	Clean and oil air filter				x	x	x	x	x	x	x	x	x	x	x		
	19	Check fuel filter				x	x	x		x	x	x		x	x	x		
	20	Replace fuel filter							x				x					
	21	Check carburetor(s) and re-adjust (idle speed, cable tension, ...)	x			x		x		x		x		x		x		
	22	Clean carburetor(s) and check for wear					x		x		x		x		x			
	23	Replace jet needle and needle jet									x							
	24	Clean and check fuel pump						x			x			x				
	25	Check gearbox oil level				x	x	x		x	x	x		x	x	x		



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	26	Replace gearbox oil		x					x				x				
	27	Check and adjust gearbox, preload of washers (type A + B gearboxes)							x				x				
	28	Check gearbox backplate screws (type A)							x				x				
	29	Replace rotary valve lubrication oil							x				x				
	30	Inspect cylinder head and piston crown 5)					x		x		x		x		x		
	31	Inspect piston ring grooves 6)					x		x		x		x		x		
	32	Check piston diameter 8)					x 7)		x 7)		x		x 7)		x 7)		
	33	Piston ring: check gap 8)					x 7)		x 7)		x		x 7)		x 7)		
	34	Piston ring: check axial play(rectang.ring) 8)					x 7)		x 7)		x		x 7)		x 7)		
	35	Check cylinder diameter 8)					x 7)		x 7)		x		x 7)		x 7)		
	36	Cylinder: check for roundness 8)					x 7)		x 7)		x		x 7)		x 7)		
	37	Replace cylinder head-, cylinder base- and exhaust-gasket 9)					x		x		x		x		x		
	38	Inspect piston pin and bearing									x						
	39	Inspect crankshaft and replace outer seals									x						
	40	General overhaul of engine 10)															x

- 1) and after every replacement of gasket(s)
- 2) and after every replacement of contact breakers
- 3) also after any damage
- 4) according to instructions of manufacturer
- 5) if carbon layer is more than 0,5 mm thick, decarbonize

- 6) if piston rings stick, clean and replace if necessary
- 7) if used in very dusty atmosphere
- 8) wear limit see Service Information 5 UL / 91
- 9) if cylinders get dismantled
- 10) contact authorized ROTAX distributors or service centers