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GENERAL

LEGISLATION MATTERS

**NOTIFICATION OF THE FULL PARTICULARS REGARDING AN APPROVAL GRANTED BY THE
COMMISSIONER IN TERMS OF REGULATION 43.02.5(1)- ALTERNATIVE
MAINTENANCE SCHEDULE FOR ROTAX 2-STROKE ENGINES.**

1. This serves to notify the public that in response to an application made by the Aero Club of South Africa, as contemplated in Regulation 43.02.5(1) of the Civil Aviation Regulations and with effect from 11 April 2008, the Commissioner has approved an alternative maintenance schedule ("the alternative schedule") to that contained in the manufacturer's specification for two-stroke aircraft engines manufactured by BRP Rotax GMBH and Co ("Rotax").
2. A copy of the alternative schedule, which applies to the engines commonly known as the Rotax 447, 503, 532, 582 and 618 engines, is attached to this AIC for information purposes.
3. The engine must conform to all relevant Airworthiness Directives and Mandatory Service Bulletins.
4. The following items shall form part of this approval and compliance shall be ensured, by the appropriate maintenance person or organization, releasing the aircraft to service:
 - (a) After each MPI, log book entries must be made, certifying that the aircraft complies with the proposed alternate maintenance requirements as approved. In addition a copy of this approval letter shall be affixed to the engine and airframe logbooks;
 - (b) Only those Approved Maintenance Organisations or Approved persons issued with a SACAA/Aero Club approval specifying **engine overhaul capability**, shall be allowed to perform these extensions;
 - (c) All engine-driven / mounted components and accessories must be overhauled at the manufacturers required intervals;
 - (d) All rubber components seals and hoses must be replaced at the required periods as recommended by the manufacturer;
 - (e) Emphasis is placed on standard aviation practices that should be followed with regard to carburettor set-up, propeller balancing and lubricants used.
5. Please note that this approval does not relieve owners or operators of aircraft using Rotax 447, 503, 532, 582, and 618 engines from compliance with all other requirements contained in the Rotax manufacturers specifications, the aircraft Approved Maintenance Schedule, or the Civil Aviation Regulations.
6. Please note that special consideration should be given to the environment in which the aircraft is usually operated. The alternative maintenance schedule may not be appropriate for aircraft operated in very sandy or very humid conditions.
7. The Commissioner for Civil Aviation reserves the right to review the conditions pertaining to this approval on the basis of any new safety information which may jeopardize the continued operation of the aircraft or its occupants, including safety criteria forthcoming from the State of Manufacture.
8. No owner shall operate the aircraft outside of the conditions as laid down in the approved aircraft operating instructions contained in the Flight Manual.


M COMMISSIONER FOR CIVIL AVIATION

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Alternative Maintenance Schedule for all 2-Stroke Rotax aircraft engines / Gearboxes (as applicable)

Hours	Notes	10	25	50	75	100	125	150	175	200	225	250	275	300	600	750	Chapter
1	Retorque Cylinder Head Nuts	1, 2	x														11.3
2	Retorque Exhaust Manifold Screws	2	x														11.4
3	Check Rewind Starter Rope	x		x		x		x		x		x		x			11.5
4	Check Electric Starter Gear	3	x					x						x			11.6
5	Inspect Spark Plugs	4	x	x			x		x				x				11.7
6	Replace Spark Plugs			x		x		x		x		x		x			11.8
7	Check Ignition System	x						x						x			11.9
8	Check & Clean inside of Spark Plug Caps	x						x						x			11.10
9	Check of V-Belt Tension	1	x					x						x			11.11
10	Replace V-Belt & Protection Washer	9												x			11.11
11	Lubricate Exhaust Ball Joint	10		x		x		x		x		x		x			11.12
12	Check Exhaust Springs	11	x	x						x		x					
13	Replace Exhaust Springs							x						x			11.13
14	Check & Lubricate Control Cables	5						x						x			11.14
15	Check Propeller Balancing & Tracking	5						x						x			11.15
16	Inspect Propeller Mounting Bolts	5						x						x			11.16
17	Clean & Oil Air Filters	6		x				x		x		x		x			11.17
18	Replace Air Filter													x			
19	Check Fuel Filters	5	x	x				x				x					11.18
20	Replace Fuel Filter	5				x				x				x			11.18
21	Adjust Carburetors	13	x					x						x			Repair Manual
22	Complete Service of Carburetors							x						x			Repair Manual
23	Replace Carburetor Needles & Needle Jets	12						x						x			11.20
24	Check Fuel Pump and Fuel Pressure		x					x						x			11.21
25	Check Gearbox Oil Level		x	x				x				x					11.21
26	Replace Gearbox Oil	11	x			x				x				x			11.22
27	Replace Rotary Valve Lubrication Oil	7				x				x				x			11.24
28	Inspect Piston Rings & Crown	8						x						x			11.25
29	Complete Top-End Service													x			11.26 to 11.31
30	Inspect Crankshaft Big-End Bearings													x			Repair Manual

Hours	Notes	10	25	50	75	100	125	150	175	200	225	250	275	300	600	750	Chapter
31	Inspect Crankshaft, Pistons and Cylinders:																Repair Manual
32	General Overhaul (532)	14												x			Repair Manual
33	General Overhaul (447, 503)	14														x	Repair Manual
34	General Overhaul (462, 582, 618)	14															Repair Manual
35	Check cooling fluid level		x	x						x		x					
36	Flush & Replace coolant fluid					x				x							
37	Inspect gearbox coupling rubber							x									

Important: Adherence to the preservation procedures as described in the Rotax manual is vital to reliability and extending engine life. Failure to comply with this requirement will nullify this maintenance schedule.

Alternative Maintenance Schedule for all 2-Stroke Rotax aircraft engines

1. Only for Air Cooled Engines types 447 and 503
2. Also after replacement of gaskets
3. Applicable to engines equipped with the Rotax Magneto Electrical Starter
4. Inspect for correct operation, clean and re-gap
5. Refer to Aircraft Maintenance Manual for further information
6. More frequently if operated in dusty conditions
7. Only for liquid cooled engines Type 462, 532, 582 and 618
8. Inspect through exhaust port for a) free movement of rings and b) carbon deposits on piston crown (max allowable 0.5 mm thick)
9. Use heat resistant lubricant, eg Loctite Anti-Sieze or Copperslip
10. Check for wear and/or corrosion, replace if necessary
11. Use EP or EPX grade gear oils with a viscosity of 85W140. Also refer to Rotax documents
12. Refer to latest version of Rotax documentation for correct calibrations
13. Adjust idle and synchronise cable actuation, refer to Repair Manual for further information
14. Engine types 447 and 503 - initial overhaul only required at 750 hours, thereafter every 300 hrs
 Engine types 462, 582 and 618 - initial overhaul at 600 hours, thereafter every 300 hrs
 Engine type 532 - initial overhaul at 300 hours, thereafter every 300 hrs
 Notwithstanding the requirements of Rotax documentation, crankshaft renewal shall be required only if 60% of wear limit is exceeded, or other indicators for renewal is present

***A maximum of 8 years is allowed between overhauls. All engine related rubber and plastic components to be replaced after 8 years of operation
All maintenance related work to be carried out by duly authorised personnel only***

Note: *If the engine has the crankshaft replaced at the recommended overhaul time, the next overhaul will be as if the engine is new (ie. For Rotax 582 at 600 hrs)
The Manufacturer of an aircraft may require a different maintenance schedule for his aircraft and application, this shall take precedence.*