

Maintenance schedule for RENK-MAAG Turbo Gearboxes



Description of work	Daily	Weekly	After first 1'000 oph	After 1 year or every 8'000 oph	After 2-3 years or every 20'000 oph	After 5 years or 40'000 oph	Special Service (on request)	Remarks
Gearbox								
Check drive group for leaks	X	X	X	X	X	X		
Check rotors visually			X	X	X	X		
Check load tooth bearing pattern on toothing			X	X	X	X		
Check and retighten gearbox anchoring			X	X	X	X		
Check all important bolt connections			X	X	X	X		
Check tooth contact pattern (blue ink test)			X		X	X		in uncoupled condition
Check alignment of gearbox - driving machine			X		X	X		in uncoupled condition
Check alignment of gearbox - driven machine			X		X	X		in uncoupled condition
Dismantling and inspection of all gearbox parts						X		
Lubrication and monitoring system								
Record operating data	X	X	X	X	X	X		in operating condition
Check operating data	X	X	X	X	X	X		
Check oil level	X	X	X	X	X	X		
Check Δp of lub oil filter and clean/replace	X	X	X	X	X	X		
Check lube oil for water content/contamination			X	X	X	X		
Check lubrication unit for leaks	X	X	X	X	X	X		in operating condition
Analyse lube oil			X	X	X	X		by customer / supplier
Check all important bolt connections		X	X	X	X	X		
Check of instruments and interlocks			X		X	X		according to supplier
Record and check setting points			X		X	X		
Check and clean lube oil cooler			X		X	X		according to supplier
Air filter check, clean or replace if required							X	according to supplier
Lube oil change (according to analysis)							X	according to supplier
Maintenance of components							X	according to supplier
HET-System								
Check vacuum system (function)			X	X	X	X		
Check instruments and valves (function)			X	X	X	X		
Toothed couplings								
Check couplings for leaks	X	X	X	X	X	X		
Check all important bolt connections			X	X	X	X		
Check (replace) lubricants on couplings				X	X	X		only by filled couplings
Dismantling, clean and check					X	X		

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Other couplings (if applicable)								
Check all important bolt connections			X	X	X	X		
Maintenance according to manufacturer							X	according to supplier
Gear driven pump								
Check for noise and leaks	X	X	X	X	X	X		
Dismantling, clean and check						X		
Maintenance according to manufacturer							X	according to supplier
Turning gear								
Check turning gear for leaks		X	X	X	X	X		
Check oil level		X	X	X	X	X		
Check all important bolt connections			X	X	X	X		
Check alignment of auxiliary drive			X		X	X		according to supplier
Lubricate turning gear - motor							X	according to supplier
Change lubricant							X	according to supplier
Maintenance according to manufacturer							X	according to supplier
Synchronous clutch								
Check for noise and leaks	X	X	X	X	X	X		
Dismantling, clean, check					X	X		
Change all roller bearings							X	after ~80'000h or 12 years
Maintenance according to manufacturer							X	according to supplier
Miscellaneous								
Check of the whole drive group	X	X	X	X	X	X		
Inspection of special tools for gearbox					X	X		
Inspection of special tools for anchoring					X	X		
Inspection of spare parts / spare gearbox					X	X		
Inspection of parts from sub suppliers							X	according to supplier

Important:

This "Maintenance Schedule" is not plant specific; it serves logically the instruction manual but does not replace any plant specific information. The work to be carried out shall be either considered according to the actual operating hours of the gearbox as well as any abnormalities noticed during operation. We recommend having such work performed by one of our experienced specialists.



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A summary of the RENK-MAAG GmbH service range including work expended:

	Installation	Check of installation/ Commissioning	1'000 oph check	8'000 oph check	20'000 oph check	40'000 oph check
Working days	10	1-3	1	2	3-4	6-7
Operating years since last inspection	-	-	-	1	2-3	5+

Gearbox Spare Parts (Stock items highly recommended)

RENK-MAAG GmbH recommends to have following core parts available at plant site in order that they can be replaced if necessary. Having spare parts on stock will avoid loss of production.

- 1 set of rotors
- 1 set of oil seal baffles
- 1 set of bearings
- 1 set of instrumentation



Inquiries for service at customer's site:

Please address all inquiries and purchase orders for service work as follows:

RENK-MAAG GmbH	
Service	Telephone : +41 (0) 52 262 87 62
Sulzer-Allee 46	Fax : +41 (0) 52 262 89 89
CH-8404 Winterthur	E-mail : service@renk-maag.ch
Switzerland	

The following information is required:

- Identification of gearbox (serial number, incl. index; see rating plate)

Inquiries for spare parts:

Please address all inquiries and purchase orders for spare parts as follows:

RENK-MAAG GmbH	
Spare Parts	Telephone : +41 (0) 52 262 87 90
Sulzer-Allee 46	Fax : +41 (0) 52 262 89 89
CH-8404 Winterthur	E-mail : parts@renk-maag.ch
Switzerland	

The following information is required:

- Identification of gearbox (serial number, incl. index; see rating plate)
- Clear identification of needed parts (including quantity)

Inquiries for repairs at RENK-MAAG facilities:

Please address all inquiries and purchase orders for repairs as follows:

RENK-MAAG GmbH	
Repair	Telephone : +41 (0) 52 262 89 40
Sulzer-Allee 46	Fax : +41 (0) 52 262 89 89
CH-8404 Winterthur	E-mail : repair@renk-maag.ch
Switzerland	

The following information is required:

- Identification of gearbox (serial number, incl. index; see rating plate)
- Clear identification of parts to be repaired