Instr 1502

Routine Maintenance Schedule

B35:40 GAS Land Based Operation

Main service every 15k

S = Spot check
C = Check all
W = Clean / adjust
O = Overhaul
R = Replace

ID	Instr	Draw no 1012_10						1 = 1000 hrs (1k)
1		**CYLINDER HEADS**	**COMMENTS**	**C**	**S**	**W**	**O**	**R**
101	2404	Cylinder head bolts	Retighten approx. 50-100 hrs after refitting of cyl.head	15				
102	2408	Cylinder head: max. firing pressure	1st check 1k after main overhaul	5				
104	4301	Inlet, exhaust and gas admission valve clearance	Check also 50-100 hrs after refitting of cyl.head	5				
105	2401	Inlet and exhaust valve rotators (rotocaps)		5				15
106	2401	Valve gear system for inlet and exhaust valves					15	
107	2401	Inlet and exhaust valves / valve seats: overhaul / replace according to wear					15	
108	2401	Inlet and exhaust valve guides: overhaul / replace according to wear		15				
109	2408	Indicator valves					15	
111	7230	Prechamber nozzle						15
112	7220	Gas control valves		5			15	
113	7225	Gas admission valves		5			15	
114	7240	Spark plugs and silicone seals: replace every 2k and after refitting of cyl.head.	First "W" after 1k, then "R" at 2k, and then alternating "W"/"R" every other 1k			1		2
115	7230	Prechamber check valve assembly (ball valve assembly)				2		6
116	7232	Orifice prechamber gas supply	First "W" after 2k			5		
117	7240	High voltage cables and connectors: resistor check		5				15
118	-	Cylinder pressure sensors (optional)		10				
3		**CYLINDER LINERS**		**C**	**S**	**W**	**O**	**R**
301	2301	Honing: overhaul / replace according to wear			15		30	
302	2301	Remove liner / check water jacket / replace sealing						30
303	2301	Carbon cutting ring			15	30		60
4		**PISTON / CONNECTING RODS**		**C**	**S**	**W**	**O**	**R**
401	3201	Gudgeon pin bushing	Replace when off limit	30	15			60
402	3201	Gudgeon pin		30	15			
403	3201	Piston including piston ring grooves (gap / clearance)		30	15			60
404	3201	Piston rings			15			30
405	3202	Big end bearing shells 3-piece connecting rod						15
406	3202	Big end bearing shells oblique split connecting rod						7.5
407	3201	Big end bearing assembly (ovality control and surface check)		30	15			
408	3201	Connecting rod bolts and shims between the big end bearing housing and the shank (3-piece connecting rod)						30
409	3201	Big end bearing bolts (3-piece connecting rod)						15
410	3201	Shim, nut, upper and lower studs (oblique split connecting rod)						15
5		**CRANKSHAFT**		**C**	**S**	**W**	**O**	**R**
501	2201	Main bearings and thrust washers (including surface check of journal)			15			30
502	3102	Crankshaft deflection	Check before and after every main service / docking	15				
503	b)	Flexible couplings (not applicable to generators directly bolted to the flywheel)		5				
504	3302	Flywheel ring gir teeth and starting motor pinion (insert Molycote paste before use)		5				
506	3101	Torsional vibration damper spring type					30	
507	3101	Torsional vibration damper fluid type	Subsequent fluid samples to be taken according to supplier's indications	15				
508	3105	Flexible gear wheel, pump drive (pump end):	Overhaul when replacing torsional vibration damper					
509	3102	Crank pin (surface check)		15				
6		**CAMSHAFT**		**C**	**S**	**W**	**O**	**R**
601	4101	Camshaft bearings and thrust washers			15			30
603	4101	Inlet and exhaust cams			15			
604	4102	Camshaft drive with gear wheels			15			
605	5202	Governor drive			5		30	
7		**LUBRICATING OIL**		**C**	**S**	**W**	**O**	**R**
701	8201	Clean lubr.oil tank / sump				60		
702	1503	Lubr.oil analysis	500 hrs after piston replacement	1				
703	8204	Main lubricating oil pump					30	
704	8206	Lub.oil filters with paper elements	Replace at least every 6 months or at diff. pressure					
705	8206	Lub.oil filters with fibre glass elements	First replacement at 2k, then at diff.pressure					
707	8207	Centrifugal separation filter lubr.oil: paper insert to be changed when required				1		
708	8203	Lubricating oil priming pump (electrical)			5			
709	b)	Lubr.oil cooler: see section 9 cooling water quality / parameters	Clean when necessary					
8		**CHARGE AIR AND EXHAUST SYSTEM**		**C**	**S**	**W**	**O**	**R**
801	b)	Turbocharger bearings: see sign on turbocharger housing	See separate instructions					
802	b)	Turbocharger rotor: see sign on turbocharger housing	See separate instructions					
803	b)	Turbocharger air filters: clean when dirty	See separate instructions					
804	7106	Turbocharger - water washing of compressor: every 50 hrs	See separate instructions					
805	b)	Charge air cooler: clean when necessary	See separate instructions					
806	7301	Exhaust manifold bellows		5				
807	7301	Exhaust manifold insulation		5				
808	b)	Turbocharger VTG (Variable Turbine Geometry) / Wastegate	See separate instructions					
9		**COOLING WATER**		**C**	**S**	**W**	**O**	**R**
901	8501	Cooling water quality and flow	Check monthly					
902	8503	Cooling water pumps with drive (high and low temperature)	Mechanical seal must be replaced after min. 5 years				15	
903	b)	Jacket water cooler (optional)	Clean when necessary					
904	b)	External cooling water system	Check monthly					
905	b)	Cooling tower raw water quality	Check weekly					
10		**ALARM / CONTROL SYSTEM - FUNCTION TEST INTERVALS**		**C**	**S**	**W**	**O**	**R**
1002	1501	Auto stops		5				
1003	1501	Overspeed protection	Replace pneumatic solenoid valve every 5 years					
1005	1501	Interlocks		5				
1006	1501	Emergency start	Check monthly					
1007	1501	Alarm system communication	Every year					
1009	1501	Oil mist detector	See separate instructions					
1010	1501	Temperature PID controller	Every 3 months					
1011	1501	Lubrication of fuel pumps	Check weekly or at every start					
1013	1501	Control shaft linkages and fuel rack calibration	Check weekly / lubricate					
1014	1501	Speed pick-up clearance and cleaning	Check monthly	5				
1015	1501	Tightening of connectors and screw terminals	Check once every 6 months					
1017	1501	Pressure transmitters and temperature sensors		15				
1018	1501	Cleaning and visual checking of all electrical equipment	Every 3 months					
1019	1501	Auxiliary equipment	Every year					
1020	1501	Earth fault	Check weekly					
1021	-	NOx sensor (optional)	Replace according to condition					5
11		**MISCELLANEOUS**		**C**	**S**	**W**	**O**	**R**
1105	-	Resilient mounting of engine (optional): check for cracks / damages / loose bolts	Every 6 months					
1106	-	All flexible connections: hoses, bellows etc.	Check every 2 months					
1107	b)	Governor / actuator	Change oil every 3 months	15				30
1108	-	Governor control shaft with bearings, linkages and couplings	Check / lubricate weekly, overhaul/replace according to wear					
1109	b)	Start air motor: clean strainer each year, drain air filter (when fitted) daily	See separate instructions (Gali table for long cranking cycle > 5 sec)					
1111	7301	Exhaust pipe insulation		15				
1114	b)	Gas Regulating Unit: yearly inspection including filter replacement	See separate instructions					
1117	7226	Flexible fuel gas connections to each cylinder head (main and prechamber)	Spray leakage test min. every 6 months	2				
1118	7227	Flexible fuel gas connections to engine: front end (main and prechamber gas)	Spray leakage test min. every 6 months	2				
1119	7227	Flexible fuel gas connections: replace O-rings and gaskets						15

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The intervals indicated in the RMS matrix are to be interpreted as repeating cycles, as running hours are accumulating.

If a cell shows a replacement interval range ("x-y"), the component is inspection dependable from the first interval.
The intervals are reflecting what can be achieved under operation within specification by adequate maintenance and proactive attendance to any symptoms/negative trends by rectifying its origin prior to consequential defects and/or when operational disturbance occur.
The RMS is only valid for normal operating conditions as defined in the contracts, service agreements or other relevant technical documentation from Rolls-Royce.
The intervals are for guidance only and are subject to local ambient conditions. The schedule is applicable to engines with more than 2000 annual operating hrs.
The RMS may only be changed by a service letter from Rolls-Royce.
We strongly recommend never to exceed service intervals on function critical parts and systems. In general we recommend not to exceed any indicated service interval.

S = Dismantle / inspect 1 item and check condition (leakage, abnormal wear, cracks, contamination etc.)
C = Check all - all specified components must be checked.
W = Clean / adjust - fine-tune the components to ensure optimal operation.
O = Overhaul - complete renovation in order to restore the components to original specifications.
R = Replace - replace the complete units with genuine parts.

b) = See separate instructions

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