

G16 CM 34 (GCM 34) Gas Engine Sr.No: 58002, Unit-2- Periodic Maintenance Schedule History

TMI Periodical Schedule-Hours	Activity Carried Date	Present Engine Service Meter Units/Hour Meter Reading	Description / Scheduled Works Done	Remarks
Every 24, 150, and 300	Regular		Described and maintained regular as O& M Activity as part of Periodic Scheduled Intervals during engine operation / standby condition. Records and dates available at site	Every 24, 150, and 300 Hrs Periodic Maintenance Schedule has been carried as on going activity of O&M during engine operation / standby as per the TMI checks.
N/A	24/09/2007	738	Main Gas filter replaced with new	As condition based / preventive maintenance
N/A	31/08/2007	1371	1. All Cylinder SOGAVs and Connecters replaced with new upgraded version	All necessary Spares have been supplied / procured by CATERPILLAR under PSP (Product Support Programme)
N/A	5th Oct 2007	931	1. All Cylinder SOGAVs (except B1) and Connecters replaced with new upgraded version	All necessary Spares have been supplied / procured by CATERPILLAR under PSP (Product Support Programme)
1500	01/11/2007	1482	1.Measured and recorded Ignition transformers primary, secondary voltages 2.Measured and recorded Sparkplug extender resistance values 3.All cylinder sparkplugs replaced with new 4.Checked and Adjusted Valve rocker bridge clearances 5.Checked and Adjusted inlet & exhaust Valve clearances 6.Checked measured and recorded rotator projection 7.B-1SOGAV Connector replaced with new as PSP	"
	11/02/2007	1483	1. OMD Unit replaced with new	As part of trouble shooting
3000 (1,500)	03/01/2008	2827	1.A8,B7,A7,B5,A5,B3,A3,A1 and B1 Cylinders Bridge clearance valve clearance Inspected and checked as required	
	15/01/2008	2949	1.Balance cylinders Cylinders Bridge clearance valve clearance Inspected and checked as required	As part balance of 3000 hrs maint
3000	17/01/2008	3121	1.Measured and recorded Ignition transformers primary, secondary voltages 2.Measured and recorded Sparkplug extender resistance values 3.All cylinder sparkplugs replaced with new 4.Removed all check valves cleaned tubing parts and surfaces 5.Cleaned all new check valves with cleaning solvent, inspected and replaced 6.Checked and Adjusted Valve rocker bridge clearances 7.Checked and Adjusted inlet & exhaust Valve clearances 8.checked measured and recorded rotator projection	" "
4500 (1,500)	20/03/2008	4446	1.Measured and recorded Ignition transformers primary, secondary voltages 2. Measured and recorded Sparkplug extender resistance values 3.Measured and recorded new sparkplug resistance values 4.All cylinder sparkplugs replaced with new 5.Checked and Adjusted Valve rocker bridge clearances 6.Checked and Adjusted inlet & exhaust Valve clearances 7.checked measured and recorded rotator projection 8.General Inspection carried for Turning device 9.Checked and cleaned IR Starting Air Motors 10.Inpcted Timing gear train as visual and found normal 11.Inpcted running gear and timing / Pick-up GP as visual and found normal 12. All cylinders Crankcase Explosion Relief valve inspected, cleaned and fixed back 13. Removed all cylinder's combustion sensor and replaced with new after inspection of extenders, connecters and harness 14. Visual inspection done for con-rods, liners, bearings, and camshaft assemblies 15. A7 ignition transformer replaced with new due to erratic primary / secondary voltages 16. Replaced LS Alternator DE bearing Oil replaced with new 17. Main Gas Filter cleaned and Inspected	As preventive action / maintenance Mobile Rarus - SHC 1026 as 4000 hrs secheduled As condition based / preventive maintenance
	30/04/2008	5367	1.Oil bath Filtering Unit, Type K55-6V Pocket Filters replaced with new as part of 5000 hrs / Diff Filter alarms / Performance of CAC	As condition based / scheduled maintenance
	01/05/2008	5367	1. LS Alternator, DE & NDE side bearing Oil removed, flushed and cleaned the sump. Replaced with new Oil as required level	Mobile Rarus - SHC 1026 as conditioned based

6000 (1500, 3000)	17/06/2008	6254	1.Measured and recorded Ignition transformers primary, secondary voltages	
			2.Measured and recorded Sparkplug extender resistance values	
			3.Measured and recorded new sparkplug resistance values	
			4.All cylinder sparkplugs replaced with new	
			5.Checked and Adjusted Valve rocker bridge clearances	
			6.Checked and Adjusted inlet & exhaust Valve clearances	
			7.checked measured and recorded rotator projection	
			8.A2 cylinder ignition transformer replaced with new due to erratic Resistance values	As preventive action / maintenance
			9.LT PHE Pressure Plates cleaned and fixed back	As condition based maintenance
	22/06/2008	6258	1.HT PHE Pressure Plates cleaned and fixed back	As condition based maintenance
	25/06/2008	6258	1.Lube Oil replaced with new Mobil Pegasus- 905 after thorough cleaning of Oil sump	LO Changed as 7,500 hrs / condition based initial change
			2. Cleaned and inspected LO protective filter	
			3. Removed duplex filter cartridges and cleaned and fixed back	
	08/10/2008	7224	1 .Cleaned all new check valves with cleaning solvent, inspected and replaced	Balance of 6000 hrs
7,500	04/09/2008	7620	1.Measured and recorded Ignition transformers primary, secondary voltages	
			2.Measured and recorded Sparkplug extender resistance values	
			3.Measured and recorded new sparkplug resistance values	
			4.All cylinder sparkplugs replaced with new	
			5.Checked and Adjusted Valve rocker bridge clearances	
			6.Checked and Adjusted inlet & exhaust Valve clearances	
			7.Checked measured and recorded rotator projection	
			8.Main Gas filter inspected and Replaced with new	As condition based maintenance
			9.'B' Bank M.C Gas line end plate flange 'O' ring changed, hence leak has been observed during leak test	As preventive action / maintenance
			10.LS alternator Rotating Diodes checked	As preventive action / maintenance
			11.Cleaned all new check valves with cleaning solvent, inspected and replaced	
7500	16/11/2008	8417	1.HT & LT circuit water drained and replaced with new water and added Nalcool-2000	Job commence under Product Improvement Program (PIP)
			2. Removed All Cylinder heads and exchanged all inlet, Exh valve cones, guides and seats with new	All necessary Spares have been supplied / procured by CATERPILLAR under PSP (Product Support Program)
			3. All Cylder Pistons removed and replaced with new pistons including piston pins and circlips	"
			4.Prechamber and cylder head Inspection and testing done	
			5.Exhaust Gas manifold inspection	
			6.Checked and cleaned IR Starting Air Motors	
			7.Waste gate reconditioned	
			8. LS Alternator DE Side Bearing Oil Replaced with New	Mobile Rarus - SHC 1026 as 4000 hrs Scheduled
	30/12/2008	8439	1. LS Alternator, DE & NDE side bearing Oil removed, flushed and cleaned the sump. Replaced with new Oil as required level	During Alternator winding Inspection and trouble shooting
9000 (1500, 3000, 4500)	08/02/2009	9280	1.Measured and recorded Ignition transformers primary, secondary voltages	
			2.Measured and recorded Sparkplug extender resistance values	
			3.Measured and recorded new sparkplug resistance values	
			4.All cylinder sparkplugs replaced with new	
			5.Checked and Adjusted Valve rocker bridge clearances	
			6.Checked and Adjusted inlet & exhaust valve clearances	
			7.checked measured and recorded rotator projection	
			8.Removed all cylinder's combustion sensor and replaced with new after inspection of extenders, connectors and harness	
			9 .Cleaned all new check valves with cleaning solvent, inspected and replaced	
	25/02/2009	9666	1. Hydraulic Oil removed cleaned reservoir and replaced with new Oil	As 7,500 hrs Scheduled
			2. Hudralic Filter replaced with new	As 7,500 hrs Scheduled
	07/03/2009	9888	1.Checked and Adjusted Valve rocker bridge clearances	
			2.Checked and Adjusted inlet & exhaust Valve clearances	
			3.checked measured and recorded rotator projection	
			4.B-Bank T/C Thermo well and Thermo couple replaced with new due to erratic signals	As preventive action / maintenance
			5. LT PHE Pressure Plates cleaned and fixed back	As condition based monitoring maintenance

10500	16/05/2009	11395	1. All Cylinder SOGAVs replaced with new upgraded version	All necessary Spares have been supplied / procured by CATERPILLAR under product support programe (PSP)
			2.Measured and recorded Ignition transformers primary, secondary voltages	
			3.Measured and recorded Sparkplug extender resistance values	
			4.Measured and recorded new sparkplug resistance values	
			5.All cylinder sparkplugs replaced with new	
			6.Checked and Adjusted Valve rocker bridge clearances	
			7.Checked and Adjusted inlet & exhaust Valve clearances	
			8.Checked, measured and recorded all cylinders valve rotators projection	
12000 (1500, 3000)	05/08/2009	13253	1.Measured and recorded Ignition transformers primary, secondary voltages	
			2.Measured and recorded Sparkplug extender resistance values	
			3.Measured and recorded new sparkplug resistance values	
			4.All cylinder sparkplugs replaced with new	
			5.Cleaned all new check valves with cleaning solvent, inspected and replaced	
	06/08/2009	13255	1.Checked and Adjusted Valve rocker bridge clearances	12000 hrs balance jobs
			2.Checked and Adjusted inlet & exhaust Valve clearances	
			3.Checked measured and recorded rotator projection	
	11/09/2009	15211	1.Measured and recorded Ignition transformers primary, secondary voltages	12000 hrs balance jobs
			2.Measured and recorded Sparkplug extender resistance values	
			3.Measured and recorded new sparkplug resistance values	
			4.All cylinder sparkplugs replaced with new	
13500 (4,500, 1,500)	22/10/2009	14889	1.Checked and Adjusted Valve rocker bridge clearances	
			2.Checked and Adjusted inlet & exhaust Valve clearances	
			3.checked measured and recorded rotator projection	
			4.Oilbath Filtering Unit A & B Banks cleaned the sump and replaced with new Oil	As condition based monitoring mainteanace
8,000 - 12,000	05/11/2009 - 14/11/2009	15211	1.A & B Bank Turbochargers Casing and Cartridges replaced with new	1.Both Turbochargers removed for inspection under supervision of ABB-Vadodara as per O& planning , and found casing, turbine wheel, and compressor wheels damaged due to heavy rubbing. Replaced with new cartridges and casings as per ABB recommendations
15000 (7500, 1500, 3000)	05/11/2009	15211	1.CAC Opened and Cleaned and fixed back	
			2.A1, A3 & B8 Cylinder Heads removed and inspected replaced inlet, exhaust seat cones replaced with new	
			3. A5 Cylinder Piston, Big-Eng Bearing, and Main Bearings removed Inspected and Fixed back	
			4.Cylinder A5 Main Bearing Inspected and Fixed back	
			5.Cranckcase Oil ventilation / Oil recovery Unit Filters removed, cleaned and Inspected	
			6.LT PHE pressure plates cleaned	
			7.Oilbath Filtering Unit cleaned and added required Oil	
			8.Lube Oil replaced with new Mobil Pegasus-1005 thorough cleaning of Oil sump	LO Changed as 7,500 hrs / condition based intial change
			9.Cleaned and inspected LO protective filter	
			10. Removed duplex filter cartridges and cleaned and fixed back	
			11.Wastegate reconditioning carried out	
			12.Hydraulic oil & filter replaced with new	
			13.Measured and recorded Ignition transformers primary, secondary voltages	
			14.Measured and recorded Sparkplug extender resistance values	
			15.Checked measured and recorded rotator projection	
			16.Removed all sparkplugs and cleaned the seat with seat cleaning tool	

			17.Measured and recorded new sparkplug resistance values	
			18. All cylinder sparkplugs replaced with new	
			19.Removed all check valves and cleaned the tubing and surfaces	
			20.Cleaned all new check valves with cleaning solvent, inspected and replaced	
			21.Checked and Adjusted Valve rocker bridge clearances	
			22 Checked and Adjusted inlet & exhaust Valve clearances	
			23.Removed all cylinder's combustion sensor and replaced with new after inspection of extenders, connecters and harness	
			24.Oil bath Filtering Unit, Type K55-6V Pocket Filters replaced with new as part of every 5000 hrs / Diff Filter alarms / Performance of CAC	
	15/01/2010	16248	1. LS Alternator, DE side bearing Oil removed, flushed and cleaned the sump. Replaced with new Oil as required level	
16500 (1500)	06/02/2010	16502	1.Measured and recorded Ignition transformers primary, secondary voltages 2.Measured and recorded Sparkplug extender resistance values 3.Checked measured and recorded rotor projection 4.Removed all sparkplugs and cleaned the seat with seat cleaning tool 5.Measured and recorded new sparkplug resistance values 6. All cylinder sparkplugs replaced with new 7.Checked and Adjusted inlet & exhaust Valve clearances 8.Oil bath filter sludge removed 9.Main Gas filter and PILOT filters cleaned	
	19/02/2010	16797	1. A-Bank ICSM replaced with new	As part of trouble shooting
18000 (1500, 3000)	22/04/2010	18265	1.Checked and Adjusted Valve rocker bridge clearances 2.Checked and Adjusted inlet & exhaust Valve clearances 3.Measured and recorded Ignition transformers primary, secondary voltages 4.Measured and recorded Sparkplug extender resistance values 5.Removed all sparkplugs and cleaned the seat with seat cleaning tool 6.Measured and recorded new sparkplug resistance values 7. All cylinder sparkplugs replaced with new 8. Removed all cylinder's combustion sensor and replaced with new after inspection of extenders, connecters and harness 9.New Rupture disk installed	
	11/05/2010	18717	1.Checked measured and recorded rotor projection	
	29/06/2010	19843	1.HT PHE Pressure Plates cleaned and fixed back	
	1-Jul-10	19843	1. LS Alternator, DE & NDE side bearing Oil removed, flushed and cleaned the sump. Replaced with new Oil as required level	
		19843	2. A8 Cylinder - Inlet Valve Springs replaced with new as existing (MF side) got broken	CBM / Preventive Maintenance
19500 (1500)	30/07/2010	20392		
	28/08/2010	20774	1.Oil bath Filtering Unit, Type K55-6V Pocket Filters replaced with new as part of every 5000 hrs / Diff Filter alarms / Performance of CAC	As condition based monitoring maintenance
21000	06/05/11	23273	1.Checked and Adjusted Valve rocker bridge clearances 2.Checked and Adjusted inlet & exhaust Valve clearances 3.Measured and recorded Ignition transformers primary, secondary voltages 4.Measured and recorded Sparkplug extender resistance values 5.Removed all sparkplugs and cleaned the seat with seat cleaning tool 6.Measured and recorded new sparkplug resistance values 7. All cylinder sparkplugs replaced with new 8. Hydraulic Oil removed cleaned reservoir and replaced with new Oil 9. Hudralic Filter replaced with new	As 7,500 hrs Scheduled As 7,500 hrs Scheduled
	17/05/2011	23398	1. Cleaned and inspected LO protective filter 2. Removed duplex filter cartridges and cleaned and fixed back	LO Changed : Oil grade changed from Mobil Pegasus 905 to 1005
22,500 (1500)			1.Checked and Adjusted Valve rocker bridge clearances 2.Checked and Adjusted inlet & exhaust Valve clearances 3.Measured and recorded Ignition transformers primary, secondary voltages	

			4.Measured and recorded Sparkplug extender resistance values	
			5.Removed all sparkplugs and cleaned the seat with seat cleaning tool	
			6.Measured and recorded new sparkplug resistance values	
			7. All cylinder sparkplugs replaced with new	
			8.Checked measured and recorded rotator projection	
			9. Cyl A7-Extender Replaced with new as conductor spring found damaged	As preventive action / maintenance
18/06/2011	24037		1.LT PHE Pressure Plates cleaned and fixed back	
22/06/2011	24048		1. Removed all cylinder's combustion sensor and replaced with new after inspection of extenders, connectors and harness	
			2.Cleaned all new check valves with cleaning solvent, inspected and replaced	
13/7/2011	24508		1. LS Alternator, DE & NDE side bearing Oil removed, flushed and cleaned the sump. Replaced with new Oil as required level	As 4000 Hrs Scheduled Maintenance
24,000	09/09/2011	24992	1.Checked and Adjusted Valve rocker bridge clearances	
(3000, 1500)			2.Checked and Adjusted inlet & exhaust Valve clearances	
			3.Measured and recorded Ignition transformers primary, secondary voltages	
			4.Measured and recorded Sparkplug extender resistance values	
			5.Removed all sparkplugs and cleaned the seat with seat cleaning tool	
			6.Measured and recorded new sparkplug resistance values	
			7. All cylinder sparkplugs replaced with new	
			8.Checked measured and recorded rotator projection	
26/10/2011	25993		1.LT PHE Pressure Plates cleaned and fixed back	As condition based monitoring maintenance
30/10/2011	25993		1.HT PHE Pressure Plates cleaned and fixed back	As condition based monitoring maintenance
04/10/2012	25993		1.LO PHE opened, cleaned pressure plates and replaced with 10nos of gaskets and fixed back as found leak from water side	As condition based monitoring maintenance