

C Code : 14027  
 U Name :  
 T  
 O  
 M Address : TAMBON NONGHUARAET, AMPHUR NONGBUNMAK,  
 E NAKORN RATCHASIMA 30410  
 R Site : BRANCH 3  
 Location :  
 Test code : GE826

Unit ID : **GAS ENGINE No 2**  
 Unit Type : Engine Bio Gas  
 Unit Make : GUASCOR  
 Unit Model : SFGLD 560 SN 330404G2  
 Oil type / Viscosity : GUASCOR 2040 SAE 40  
 Oil System Capacity : 250 Liters



**Notes (Finding, Evaluation, Interpretation, Suggestion and Recommendation)**

All wear conditions and wear tests appear in normal working range.  
 All oil conditions and oil tests appear in normal working range.  
 All contaminant conditions and contaminant levels appear in normal ranges.  
 Continue routine sampling interval.

Somchai J.

			Current Sample			Previous Sample			Baseline and Alarm Limit							
Condition History			Wear	Oil	Cont.	Wear	Oil	Cont.	Wear	Oil	Cont.	Alarm Limit				
			N	N	N	N	C	N	N	N	N	Alarm Limit Matrix -Set Name (Equipment type / oil type)				
			238783			237781			235832			Engine Biogas GUASCOR 2040 SAE40 (Energy)				
Lab ID			08-Dec-13			28-Nov-13			11-Nov-13							
Bottle ID			1010241			1010247			1010252							
Date Sampled			500			350			500							
Oil Hours (Kms)			20811			20655			20305							
Unit Hours (Kms)			50			25			50							
Oil Change			500			350			500							
Oil Added (Liters)																
Filters Hours (Kms)																
Wear Condition												Reference Oil (RO)	Fine wear		Coarse wear	
Wear Element			Fine(small Wear)	Coarse(large) Wear	Fine(small Wear)	Coarse(large) Wear	Fine(small Wear)	Coarse(large) Wear	Fine(small Wear)	Coarse(large) Wear	Reference Oil (RO)	U-Caution	U-Warning	U-Caution	U-Warning	
Iron	D-6595	PPM	1.9	0.6	6.3	1.2	15.3	11.9	0	0	0	>60	>70	>60	>70	
Chromium	D-6595	PPM	0.0	0.0	0.3	0.0	0.7	0.2	0	0	0	>20	>25	>20	>25	
Lead	D-6595	PPM	0.0	0.0	0.0	0.3	0.0	0.0	0	0	0	>23	>30	>23	>30	
Copper	D-6595	PPM	0.0	0.0	2.1	0.3	4.5	1.0	0	0	0	>23	>30	>23	>30	
Tin	D-6595	PPM	0.0	0.0	0.0	0.2	0.0	0.0	0	0	0	>10	>15	>10	>15	
Aluminum	D-6595	PPM	1.6	0.0	2.9	0.8	6.2	4.3	0	0	0	>10	>15	>10	>15	
Nickel	D-6595	PPM	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0					
Silver	D-6595	PPM	0.0	0.0	0.0	0.0	0.0	0.1	0	0	0					
Molybdenum	D-6595	PPM	2.5	0.0	2.6	0.3	4.1	1.4	0	0	0					
Titanium	D-6595	PPM	0.0	0.0	0.0	0.5	0.0	0.1	0	0	0					
Oil Condition												RO	L-Warning	L-Caution	U-Caution	U-Warning
Viscosity @ 40°C	D-445	cSt									13.6	<12	<12.8	>15.8	>18	
Viscosity @ 100°C	D-445	cSt	14.3		14.5		14.4				8.2		>14.4	>16.4		
Oxidation	FTIR	Abs	6.6		8.6		11.2				6.5		>13	>14.6		
Nitration	FTIR	Abs	5.7		7.3		8.8									
Sulfation	FTIR	Abs	19.04		23.17		24.32									
TAN	D-974	mg KOH/g	1.26		2.72 C		2.17			0.74			>2.5	>3		
TBN	D-4739	mg KOH/g	8.0		4.9		4.7			7.1		<2	<3.6			
i-pH	GE		7.1		5.4		5.2					<4	<4.5			
Contamination												RO	L-Warning	L-Caution	U-Caution	U-Warning
Water	FTIR	% (Wt.)	0.045		0.082		0.082				0.050			>0.15	>0.2	
Fuel	SAW	% (Wt.)	0.00		0.00		0.00									
Glycol	FTIR	Abs	0		0		0									
Soot	FTIR	% (Wt.)	0.36		0.46		0.46									
Vanadium	D-6595	PPM	0		0		0			0						
Sodium	D-6595	PPM	3		3		3			2		>25	>50			
Silicon	D-6595	PPM	9.9	0.0	6.4	0.0	7.9	0.0		5		>15	>20	>15	>20	
Additive Element												RO	L-Warning	L-Caution	U-Caution	U-Warning
Boron	D-6595	PPM	0		1		1			0		>25	>50			
Magnesium	D-6595	PPM	16		12		14			13						
Calcium	D-6595	PPM	2580		2678		2902			2637						
Barium	D-6595	PPM	28		24		33			6						
Phosphorus	D-6595	PPM	268		288		252			247						
Zinc	D-6595	PPM	294	17	296	20	308	63		300						
Additional Test												RO	L-Warning	L-Caution	U-Caution	U-Warning
Flash Point	D-3828	°C														
Viscosity Index	D-2270															

Note: Alarm Limits are variable and dependent upon dataset size and to be used as general guideline.  
 No Sign or **N** : NORMAL , C or **C** : CAUTION (first level warning limit) , W or **W** : Warning (second level warning limit)  
 U-Caution : Upper CAUTION Level L-Caution : Lower CAUTION Level First Level Alarm Alert Limit in Upper Level and/or Lower Level  
 U-Warning : Upper WARNING Level L-Warning : Lower WARNING required Level Second Level Alarm Alert Limit in Upper Level and/or Lower Level  
 Baseline will be data of either "The new oil" or "Reference oil" or "Oil specification". TNO = The new oil, RO = Reference oil, OS = Oil Specification  
 Accuracy of interpretation and recommendation are based on representatives sample and information supplied. No warranty is expressed or implied for this report.

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U	Name	:	O		
S			U		
T			I		
O	Address	:	P	Unit Type	: Engine Bio Gas
M			M	Unit Make	: GUASCOR
E			E	Unit Model	: SFGLD 560 SN 330404G2
R			N		
	Site	: BRANCH 3	T		
	Location	: TAMBON NONGHUAET, AMPHUR NONGBUNMAK, NAKORN RATCHASIMA 30410		Oil type /	: GUASCOR 2040 SAE 40
	Test code	: GE826		Viscosity	
			L		
				Oil System Capacity	: 250 Liters

Lab ID : 238783    Date sampled : 08-Dec-13    Hours on Oil : 500    Hours on Unit : 20811    Bottle ID : 1010241

**ส่วนที่ 1 : หน้าหลัก**[Section 1 : Main Page](#)

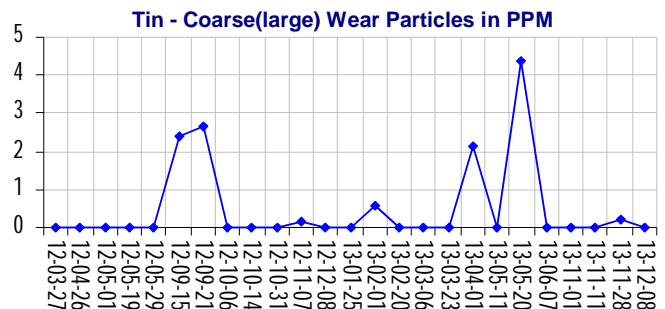
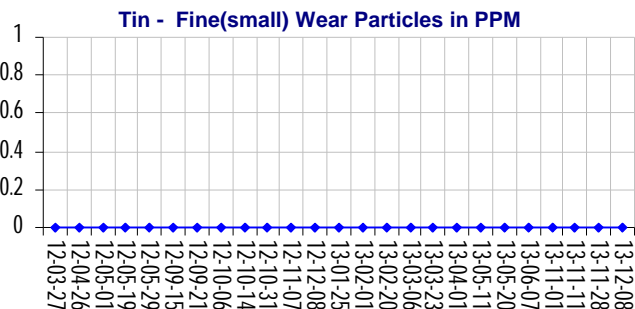
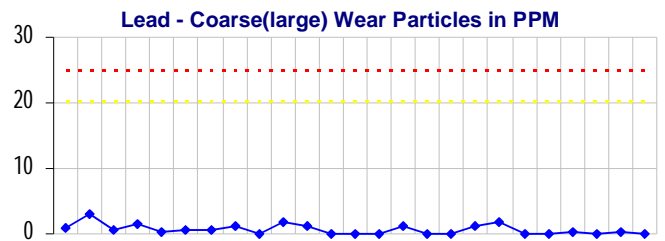
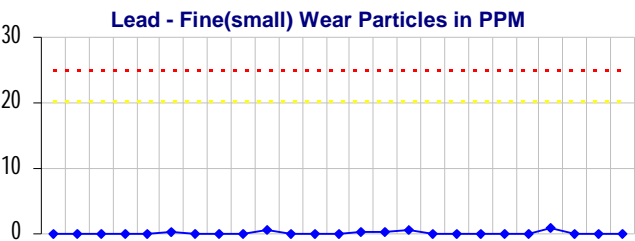
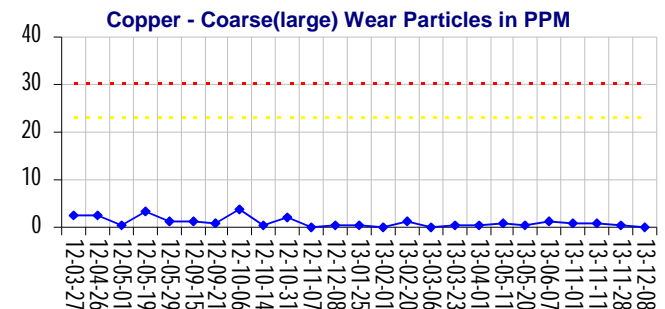
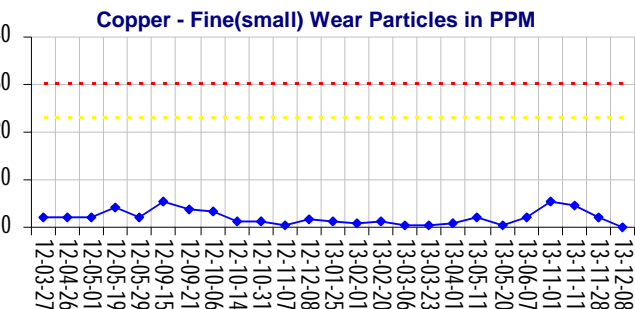
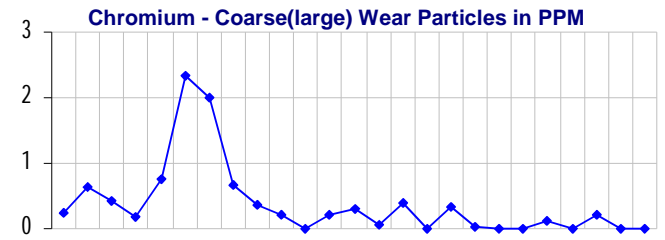
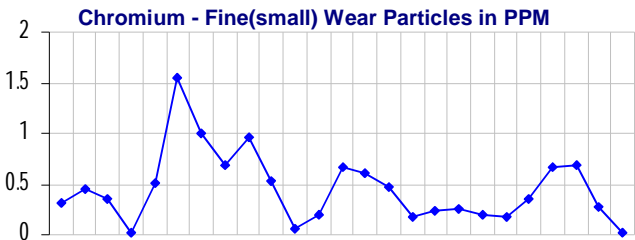
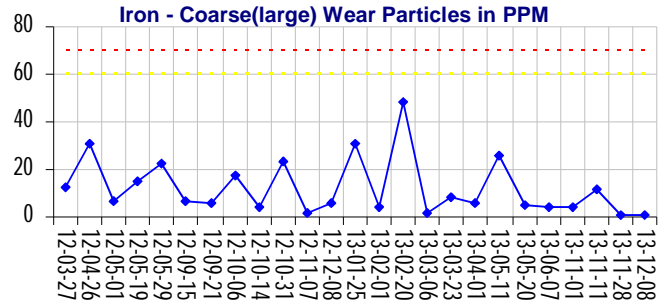
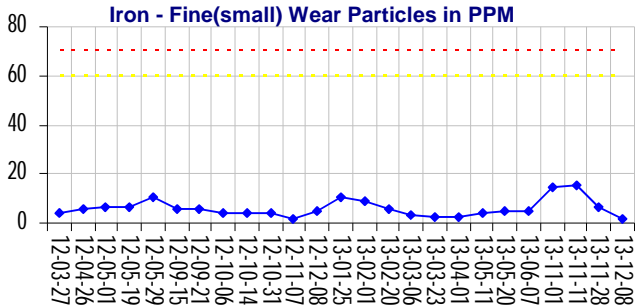
สภาพการสึกหรอและผลทดสอบการสึกหรอทั้งหมด พบว่าอยู่ในช่วงปกติ  
คุณสมบัติของน้ำมันและผลทดสอบน้ำมันทั้งหมด พบว่าอยู่ในช่วงปกติ  
สภาพการปนเปื้อนและระดับการปนเปื้อนสิ่งสกปรก พบว่าอยู่ในช่วงปกติ  
ยังคงเก็บตัวอย่างตามความถี่ปกติอย่างต่อเนื่องไป

**ส่วนที่ 2 : หน้าของ Particle Count**[Section 2 : Particle Count](#)**ส่วนที่ 3 : หน้าของ Ferrographic Analysis**[Section 3 : Ferrographic Analysis](#)**ส่วนที่ 4 : หน้าของ Varnish and Sludge Potential**[Section 4 : Varnish and Sludge Potential](#)**ส่วนที่ 5 : หน้าของ Gravimetric Analysis**[Section 5 : Gravimetric Analysis](#)

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 Location :  
 Test code : GE826

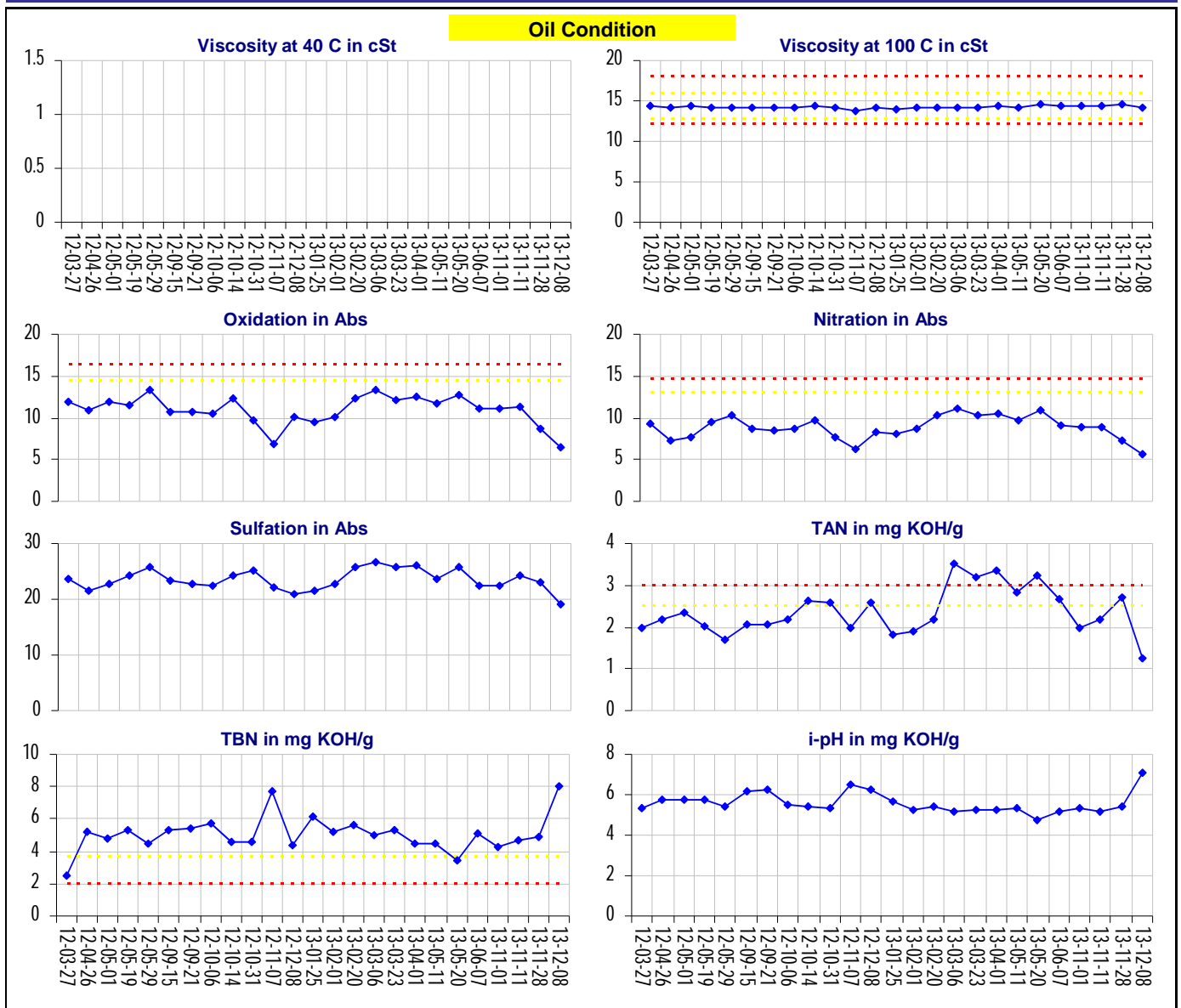
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 Oil System Capacity : 250 Liters

**Wear Condition**



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