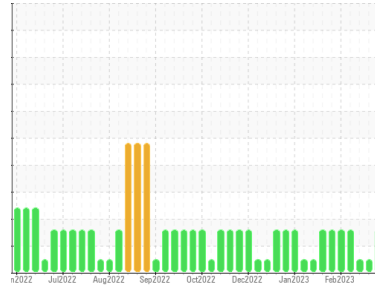




# OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id  
**GZJ00403**  
Component  
**Biogas Engine**  
Fluid  
**PETRO CANADA SENTRON CG 40 (--- GAL)**

## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. ( Customer Sample Comment: Total oil added 48 gal )

### Wear

All component wear rates are normal.

### Contamination

Fuel content negligible. Elemental level of silicon (Si) above normal.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2	
Sample Number	Client Info	<b>WC0699020</b>	WC0699019	WC0699025	
Sample Date	Client Info	<b>20 Mar 2023</b>	13 Mar 2023	07 Mar 2023	
Machine Age	hrs	Client Info	<b>113046</b>	112879	112735
Oil Age	hrs	Client Info	<b>428</b>	261	117
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A	
Sample Status		<b>ABNORMAL</b>	NORMAL	NORMAL	

## CONTAMINATION

method	limit/base	current	history1	history2	
Water	WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2		
Iron	ppm	ASTM D5185m	>45	<b>5</b>	3	2
Chromium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>5	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>10	<b>2</b>	2	<1
Lead	ppm	ASTM D5185m	>5	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>14	<b>1</b>	<1	<1
Tin	ppm	ASTM D5185m	>13	<b>1</b>	2	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2		
Boron	ppm	ASTM D5185m	0	<b>0</b>	1	<1
Barium	ppm	ASTM D5185m	1	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	2	<b>1</b>	1	<1
Manganese	ppm	ASTM D5185m	1	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	9	<b>13</b>	14	14
Calcium	ppm	ASTM D5185m	2712	<b>2685</b>	2734	2571
Phosphorus	ppm	ASTM D5185m	292	<b>249</b>	263	251
Zinc	ppm	ASTM D5185m	342	<b>317</b>	322	305
Sulfur	ppm	ASTM D5185m	2575	<b>3588</b>	3772	3153

## CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>200	<b>▲ 205</b>	148	83
Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	<1	0
Fuel	%	ASTM D3524	>4.0	<b>0.3</b>	0.3	0.4

## INFRA-RED

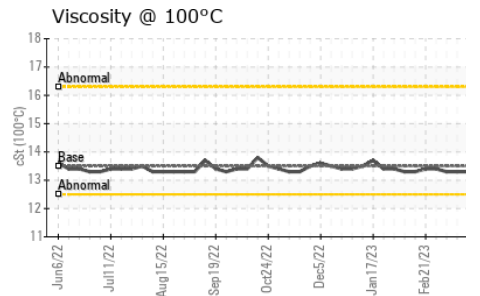
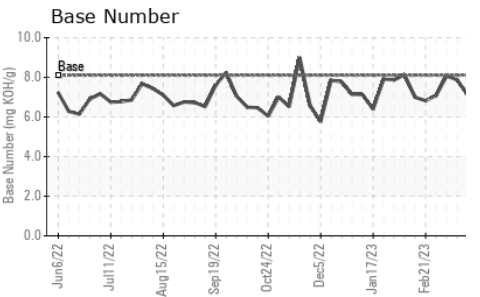
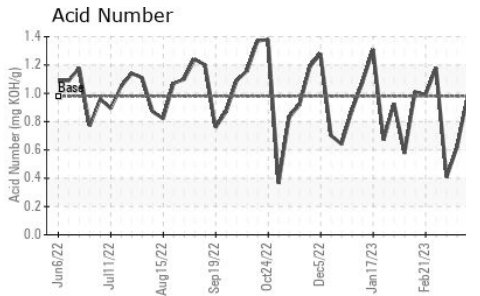
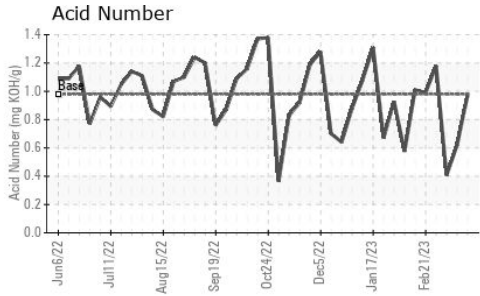
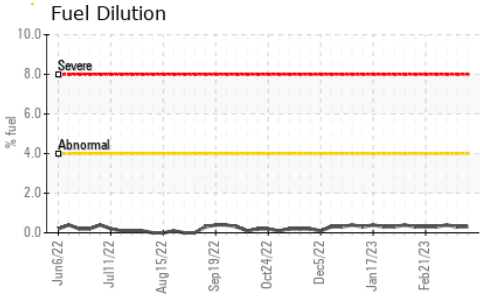
method	limit/base	current	history1	history2		
Soot %	%	*ASTM D7844		<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>5.0</b>	4.6	5.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.4</b>	16.8	19.1

## FLUID DEGRADATION

method	limit/base	current	history1	history2		
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>9.8</b>	8.9	12.2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.98	<b>0.97</b>	0.62	0.406
Base Number (BN)	mg KOH/g	ASTM D2896	8.1	<b>7.12</b>	7.87	8.07



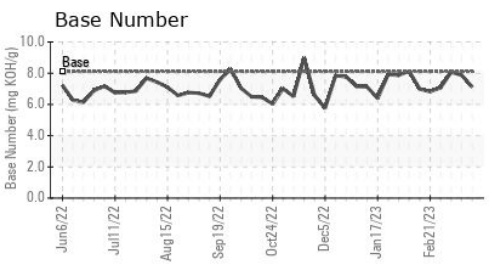
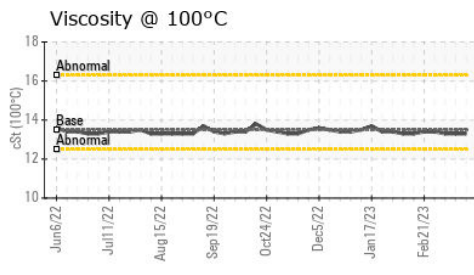
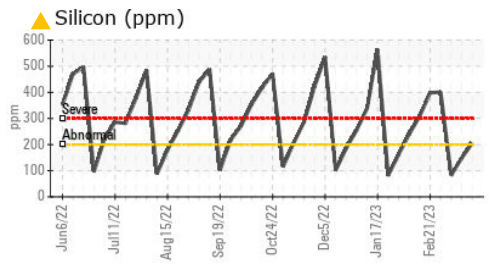
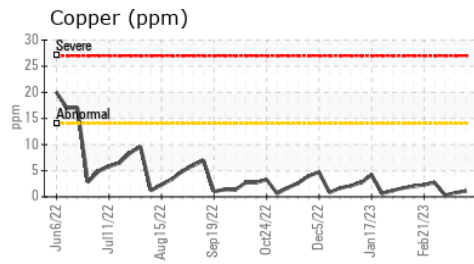
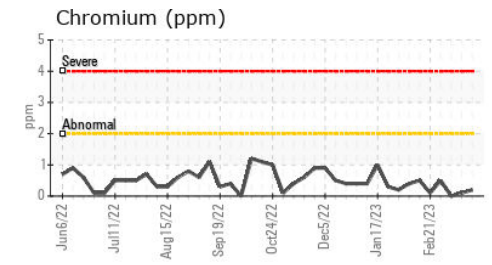
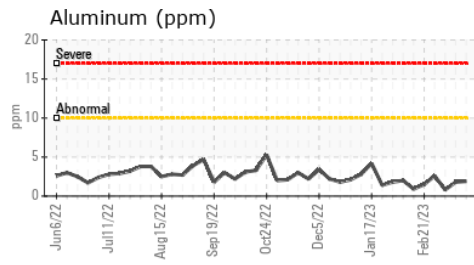
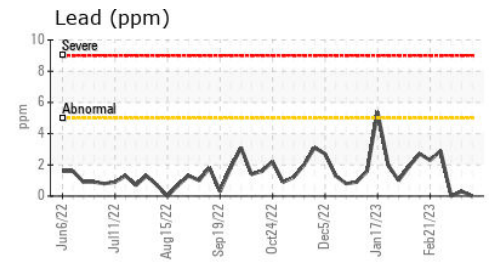
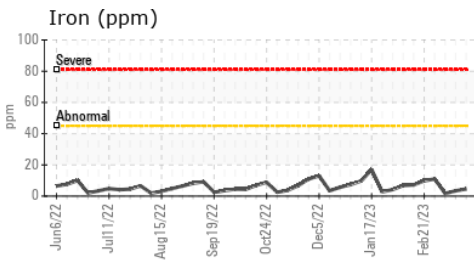
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	13.5	<b>13.3</b>	13.3

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0699020 **Received** : 23 Mar 2023  
**Lab Number** : 05799893 **Tested** : 27 Mar 2023  
**Unique Number** : 10389577 **Diagnosed** : 28 Mar 2023 - Don Baldrige  
**Test Package** : MOB 2 ( Additional Tests: FuelDilution, PercentFuel )

**FINLEY BIOENERGY**  
 74265 Bombing Range Road  
 Boardman, OR  
 US 97818  
 Contact: Blain Middleton  
 bmiddleton@archaea.energy  
 T: (541)481-3232  
 F:

Certificate L2367  
 To discuss this sample report, contact Customer Service at 1-800-237-1369.  
 \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.  
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)