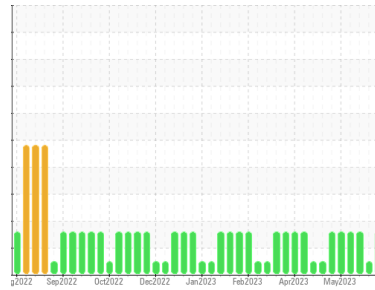




# OIL ANALYSIS REPORT

## Sample Rating Trend



**DIRT**



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 28 gallons )

#### Wear

All component wear rates are normal.

#### ▲ Contamination

Elemental level of silicon (Si) above normal indicating ingress of seal material. Tests indicate that there is no fuel present in the oil.

#### 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>WC0799218</b>	WC0799177	WC0799180
Sample Date	Client Info		<b>05 Jun 2023</b>	30 May 2023	22 May 2023
Machine Age	hrs	Client Info	<b>114885</b>	114741	114550
Oil Age	hrs	Client Info	<b>310</b>	166	954
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>ABNORMAL</b>	NORMAL	ABNORMAL

### 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>4</b>	4	10
Chromium	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m >2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m >5	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >10	<b>&lt;1</b>	<1	2
Lead	ppm	ASTM D5185m >5	<b>1</b>	0	2
Copper	ppm	ASTM D5185m >14	<b>1</b>	<1	1
Tin	ppm	ASTM D5185m >13	<b>2</b>	2	7
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

### ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>0</b>	0	0
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>	12	12
Calcium	ppm	ASTM D5185m 2712	<b>2909</b>	2760	3073
Phosphorus	ppm	ASTM D5185m 292	<b>294</b>	282	297
Zinc	ppm	ASTM D5185m 342	<b>363</b>	327	367
Sulfur	ppm	ASTM D5185m 2575	<b>4141</b>	3826	4188

### CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >200	<b>▲ 206</b>	135	<b>▲ 446</b>
Sodium	ppm	ASTM D5185m	<b>&lt;1</b>	1	1
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	0
Fuel	%	ASTM D3524 >4.0	<b>0.3</b>	0.3	0.3

### INFRA-RED

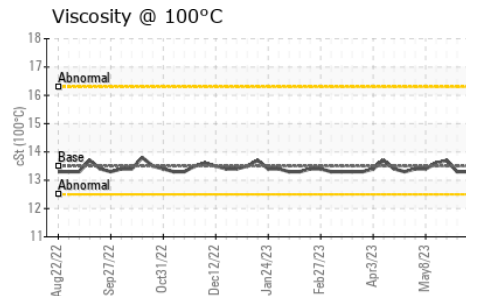
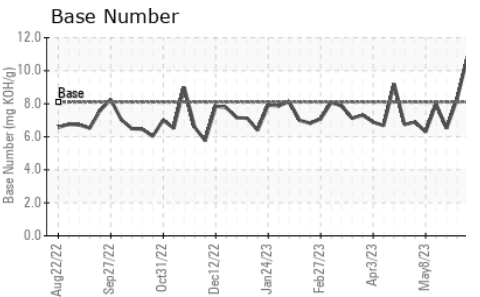
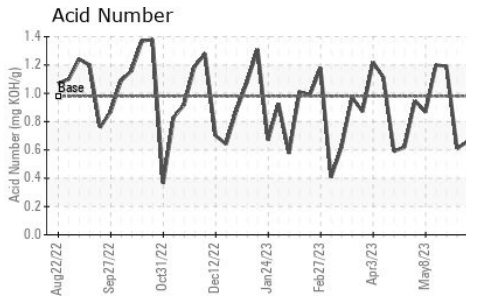
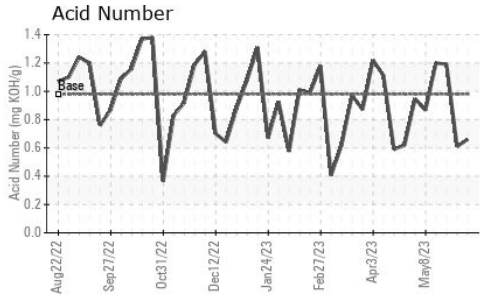
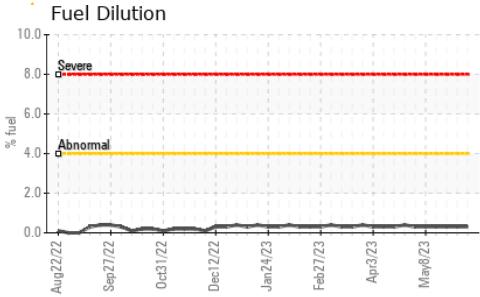
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	<b>0</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	<b>5.8</b>	4.5	6.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>17.7</b>	16.4	23.1

### FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>9.6</b>	8.7	14.0
Acid Number (AN)	mg KOH/g	ASTM D8045 0.98	<b>0.66</b>	0.61	1.19
Base Number (BN)	mg KOH/g	ASTM D2896 8.1	<b>10.85</b>	8.30	6.51



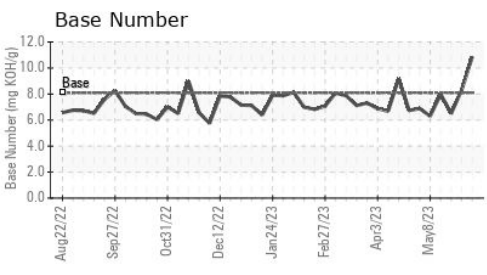
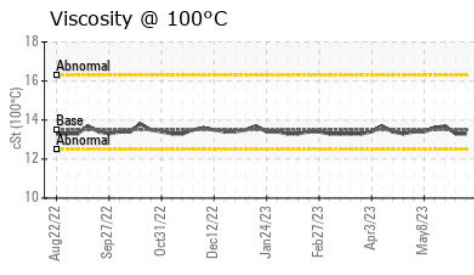
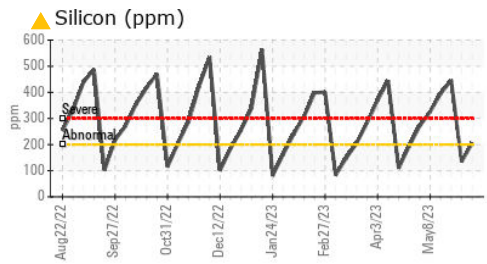
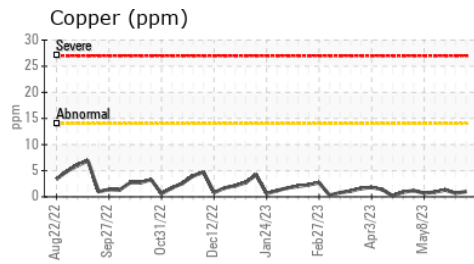
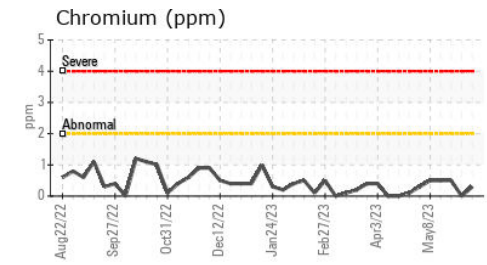
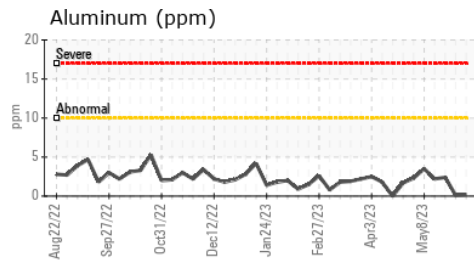
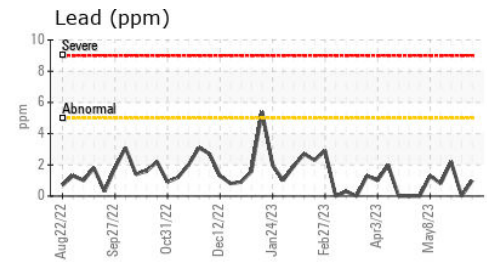
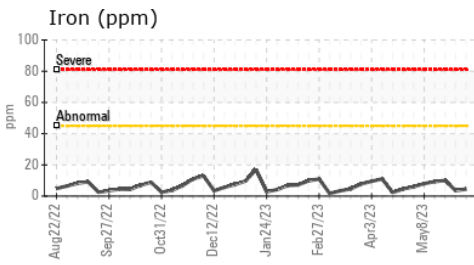
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	LIGHT
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.** : WC0799218 **Received** : 07 Jun 2023  
**Lab Number** : **05867410** **Tested** : 08 Jun 2023  
**Unique Number** : 10507194 **Diagnosed** : 09 Jun 2023 - Sean Felton  
**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:

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)