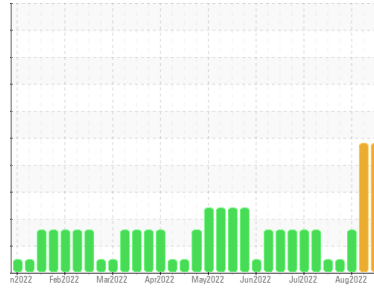




# OIL ANALYSIS REPORT

Sample Rating Trend



**DIRT**



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

## DIAGNOSIS

### ▲ Recommendation

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. ( Customer Sample Comment: Total oil added 43 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.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0697919</b>	WC0697931	WC0697934
Sample Date	Client Info		<b>06 Sep 2022</b>	29 Aug 2022	22 Aug 2022
Machine Age	hrs	Client Info	<b>108428</b>	108237	108071
Oil Age	hrs	Client Info	<b>802</b>	611	445
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>SEVERE</b>	SEVERE	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>8</b>	6	5
Chromium	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >2	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m >10	<b>4</b>	3	3
Lead	ppm	ASTM D5185m >5	<b>1</b>	1	<1
Copper	ppm	ASTM D5185m >14	<b>6</b>	5	3
Tin	ppm	ASTM D5185m >13	<b>7</b>	6	4
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	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>	1	1
Barium	ppm	ASTM D5185m 1	<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185m 2	<b>2</b>	2	1
Manganese	ppm	ASTM D5185m 1	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m 9	<b>11</b>	14	12
Calcium	ppm	ASTM D5185m 2712	<b>2861</b>	2789	2821
Phosphorus	ppm	ASTM D5185m 292	<b>277</b>	273	276
Zinc	ppm	ASTM D5185m 342	<b>329</b>	339	328
Sulfur	ppm	ASTM D5185m 2575	<b>3256</b>	3109	3395

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >200	<b>▲ 439</b>	▲ 332	▲ 253
Sodium	ppm	ASTM D5185m	<b>1</b>	<1	1
Potassium	ppm	ASTM D5185m >20	<b>0</b>	0	0
Fuel	%	ASTM D3524 >4.0	<b>0.0</b>	0.0	0.1

## INFRA-RED

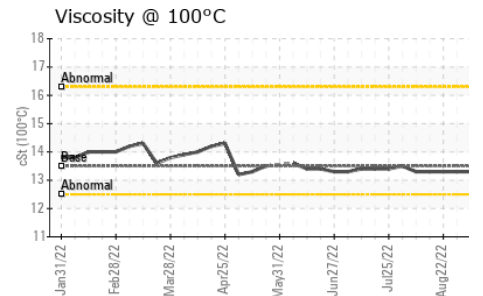
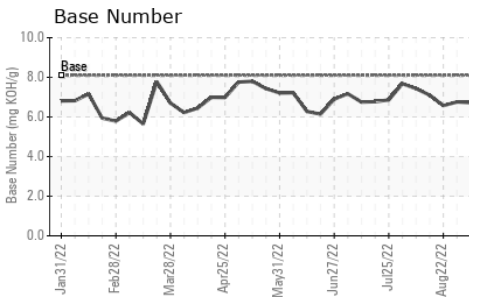
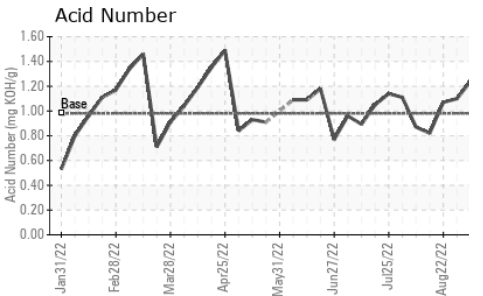
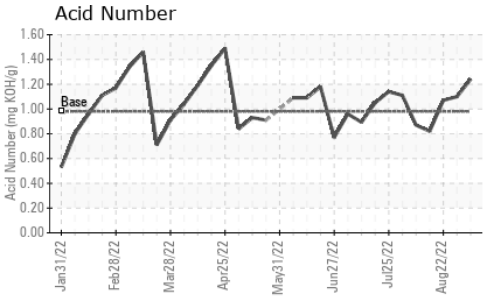
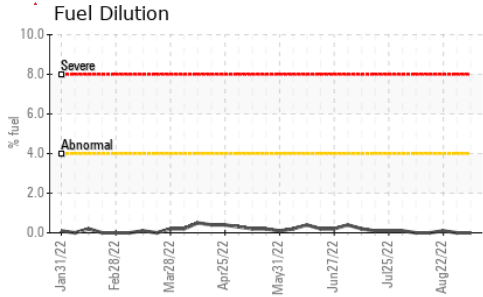
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	<b>4.9</b>	4.8	4.6
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>20.5</b>	19.2	18.3

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>9.1</b>	8.6	8.5
Acid Number (AN)	mg KOH/g	ASTM D8045 0.98	<b>1.24</b>	1.10	1.07
Base Number (BN)	mg KOH/g	ASTM D2896 8.1	<b>6.72</b>	6.76	6.57



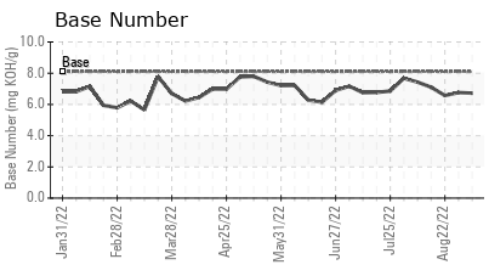
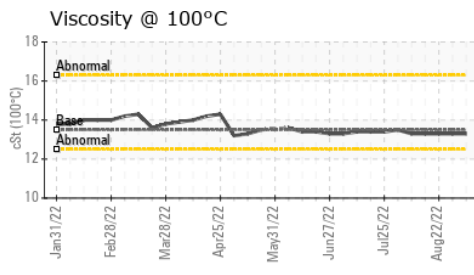
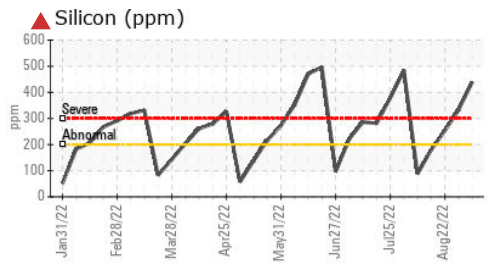
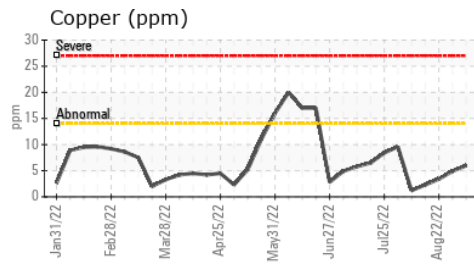
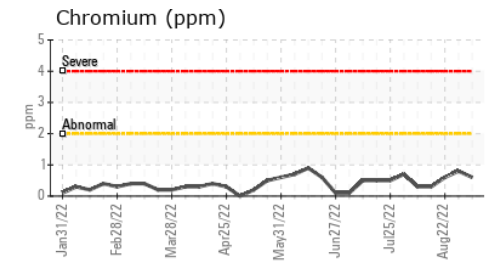
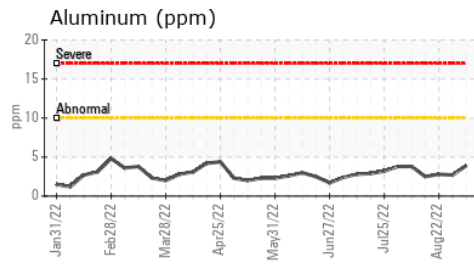
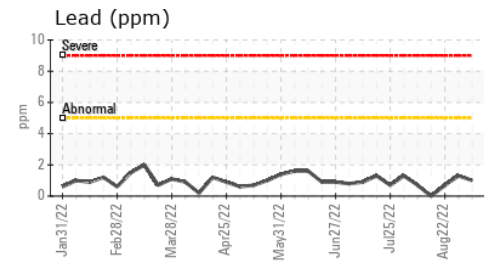
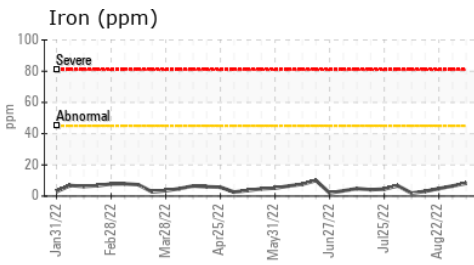
# OIL ANALYSIS REPORT



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	LIGHT	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	13.3	13.3

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0697919 **Received** : 08 Sep 2022  
**Lab Number** : 05637196 **Tested** : 12 Sep 2022  
**Unique Number** : 10126726 **Diagnosed** : 12 Sep 2022 - Jonathan Hester  
**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)