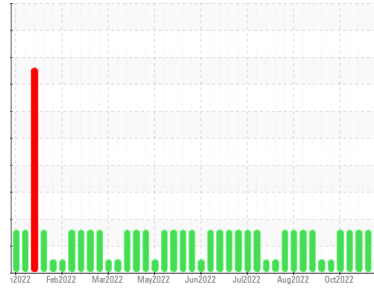




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
GZJ00314
Component
Biogas Engine
Fluid
PETRO CANADA SENTRON CG 40 (145 GAL)

DIAGNOSIS

Recommendation

(Customer Sample Comment: Total oil added 16 gal)

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0699065	WC0699058	WC0699052
Sample Date	Client Info		31 Oct 2022	24 Oct 2022	17 Oct 2022
Machine Age	hrs	Client Info	118357	118190	118022
Oil Age	hrs	Client Info	96	924	756
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			NORMAL	ABNORMAL	ABNORMAL

CONTAMINATION

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

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>45	2	7	7
Chromium	ppm	ASTM D5185m	>2	0	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	2	5	4
Lead	ppm	ASTM D5185m	>5	<1	2	1
Copper	ppm	ASTM D5185m	>14	<1	3	3
Tin	ppm	ASTM D5185m	>13	1	7	6
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	0	0	0	<1
Barium	ppm	ASTM D5185m	1	<1	0	0
Molybdenum	ppm	ASTM D5185m	2	<1	2	1
Manganese	ppm	ASTM D5185m	1	<1	<1	<1
Magnesium	ppm	ASTM D5185m	9	13	20	14
Calcium	ppm	ASTM D5185m	2712	2829	3309	3210
Phosphorus	ppm	ASTM D5185m	292	266	307	298
Zinc	ppm	ASTM D5185m	342	326	379	396
Sulfur	ppm	ASTM D5185m	2575	3685	4184	4694

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>200	79	▲ 390	▲ 356
Sodium	ppm	ASTM D5185m		0	0	0
Potassium	ppm	ASTM D5185m	>20	0	0	2
Fuel	%	ASTM D3524	>4.0	0.1	0.3	0.3

INFRA-RED

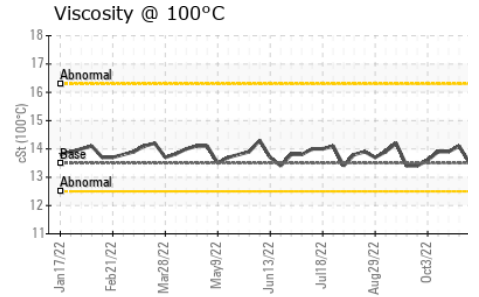
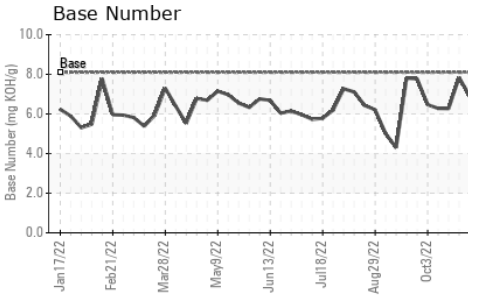
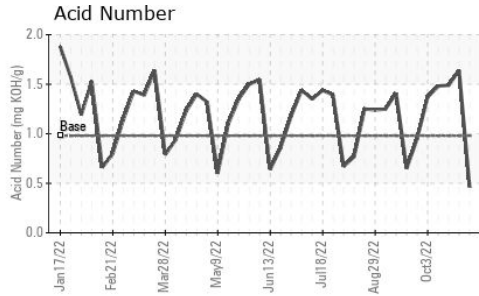
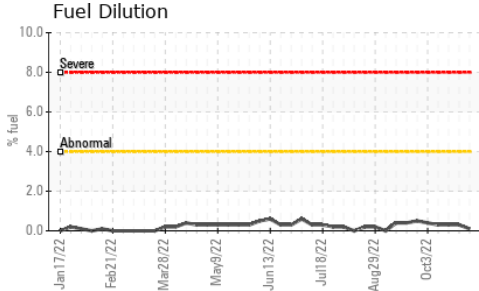
	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844		0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	5.0	7.5	7.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.1	26.1	24.8

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	9.4	18.1	16.5
Acid Number (AN)	mg KOH/g	ASTM D8045	0.98	0.46	1.64	1.49
Base Number (BN)	mg KOH/g	ASTM D2896	8.1	6.91	7.84	6.27



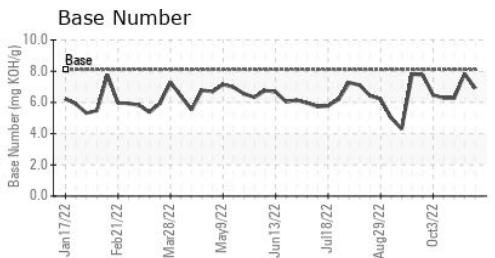
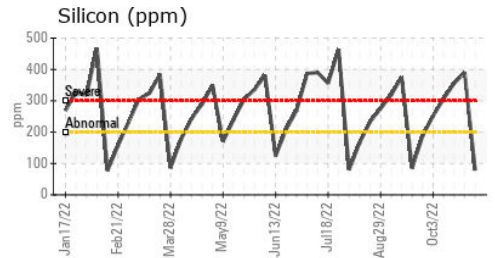
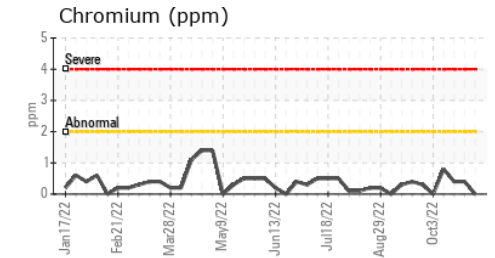
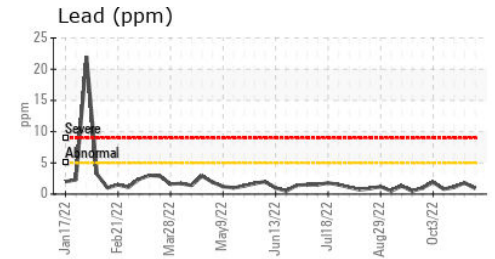
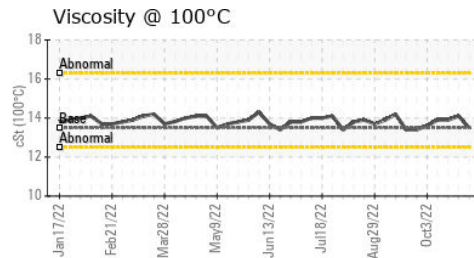
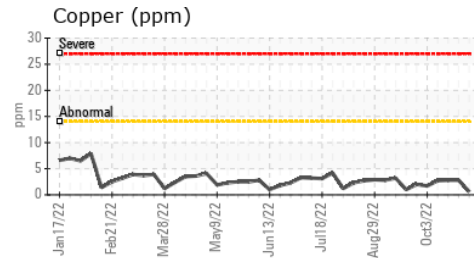
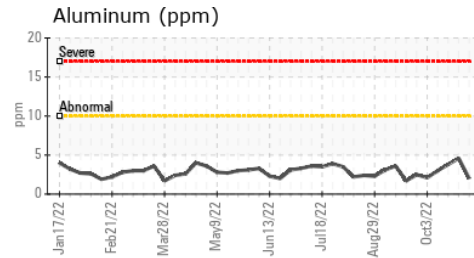
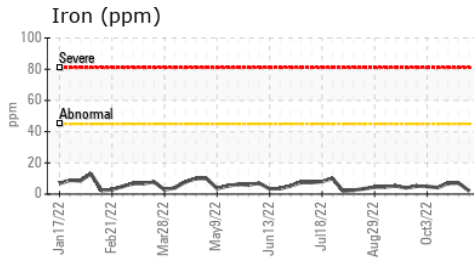
OIL ANALYSIS REPORT



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	14.1	13.9

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0699065 **Received** : 02 Nov 2022
Lab Number : 05683339 **Tested** : 04 Nov 2022
Unique Number : 10202911 **Diagnosed** : 07 Nov 2022 - Angela Borella
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)