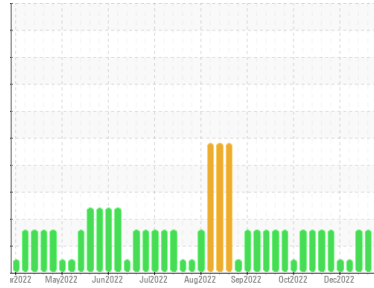




OIL ANALYSIS REPORT

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.

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		WC0698996	WC0699012	WC0699009
Sample Date	Client Info		17 Jan 2023	03 Jan 2023	26 Dec 2022
Machine Age	hrs	Client Info	111605	111268	111077
Oil Age	hrs	Client Info	998	661	470
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			ABNORMAL	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	17	10	7
Chromium	ppm	ASTM D5185m >2	1	<1	<1
Nickel	ppm	ASTM D5185m >2	<1	0	0
Titanium	ppm	ASTM D5185m	<1	<1	<1
Silver	ppm	ASTM D5185m >5	0	0	0
Aluminum	ppm	ASTM D5185m >10	4	3	2
Lead	ppm	ASTM D5185m >5	5	2	<1
Copper	ppm	ASTM D5185m >14	4	3	2
Tin	ppm	ASTM D5185m >13	11	5	4
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	0
Barium	ppm	ASTM D5185m 1	0	0	0
Molybdenum	ppm	ASTM D5185m 2	2	2	1
Manganese	ppm	ASTM D5185m 1	<1	<1	<1
Magnesium	ppm	ASTM D5185m 9	19	12	13
Calcium	ppm	ASTM D5185m 2712	3745	3078	2966
Phosphorus	ppm	ASTM D5185m 292	377	288	292
Zinc	ppm	ASTM D5185m 342	461	338	330
Sulfur	ppm	ASTM D5185m 2575	5245	3737	3778

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >200	▲ 564	▲ 339	▲ 255
Sodium	ppm	ASTM D5185m	2	<1	1
Potassium	ppm	ASTM D5185m >20	<1	0	0
Fuel	%	ASTM D3524 >4.0	0.4	0.3	0.4

INFRA-RED

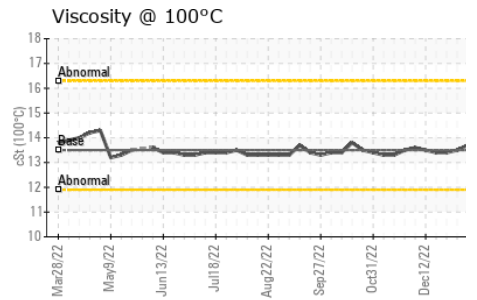
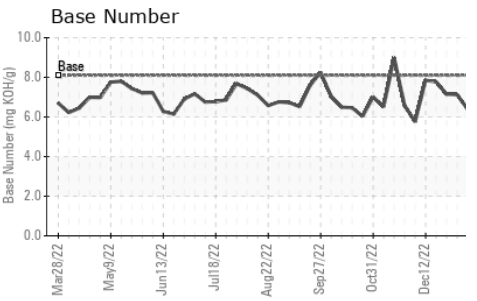
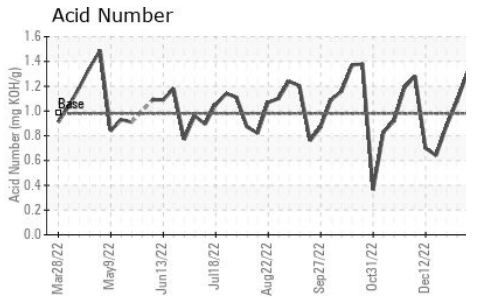
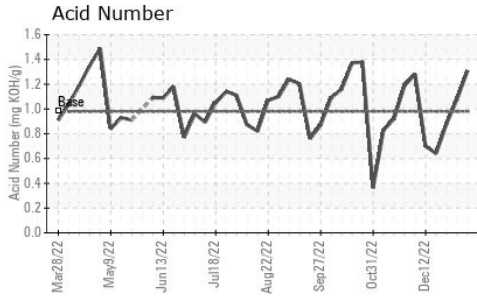
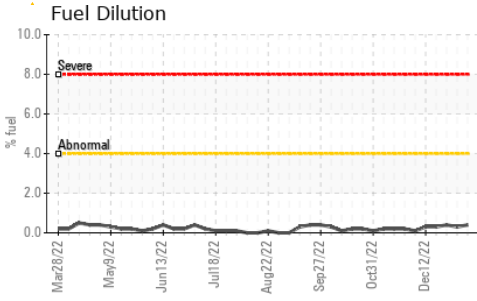
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	5.7	5.2	5.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	21.5	19.4	18.6

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	12.4	10.5	9.8
Acid Number (AN)	mg KOH/g	ASTM D8045 0.98	1.31	1.08	0.88
Base Number (BN)	mg KOH/g	ASTM D2896 8.1	6.39	7.12	7.15



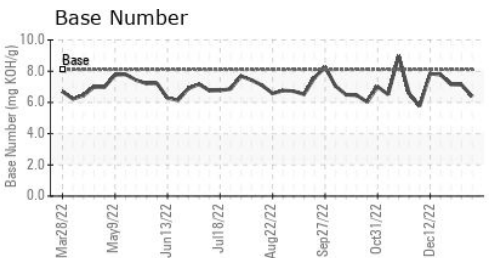
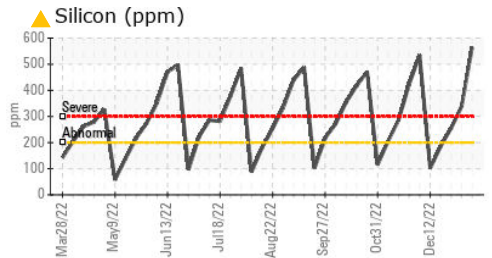
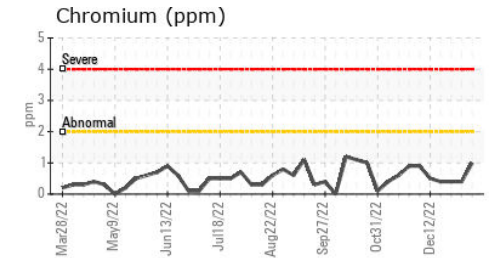
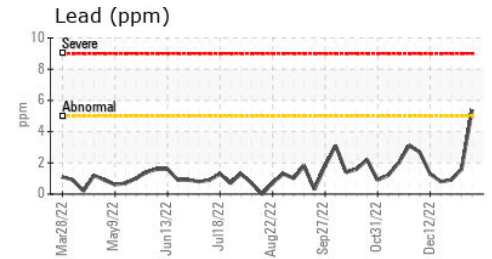
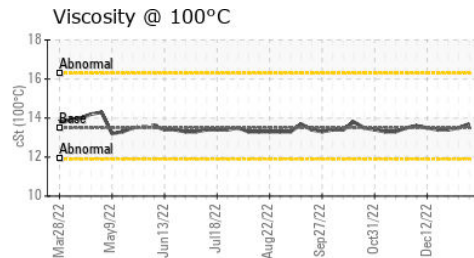
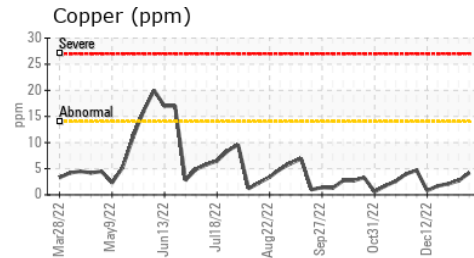
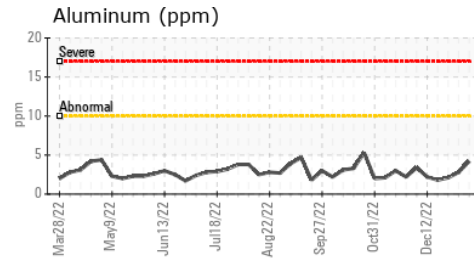
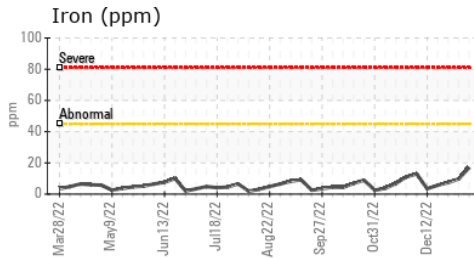
OIL ANALYSIS REPORT



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	13.7	13.5

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0698996 **Received** : 20 Jan 2023
Lab Number : 05745366 **Tested** : 23 Jan 2023
Unique Number : 10299965 **Diagnosed** : 24 Jan 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:

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)