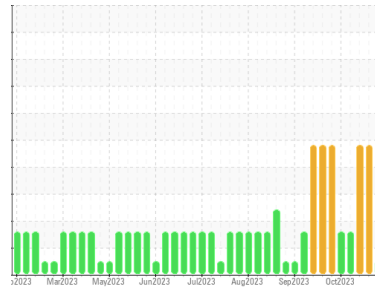




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



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

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: Total oil added 44gallons)

Wear

All component wear rates are normal.

Contamination

Fuel content negligible. There is no indication of any contamination 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	WC0836465	WC0836476	WC0836473	
Sample Date	Client Info	05 Dec 2023	21 Nov 2023	14 Nov 2023	
Machine Age	hrs	Client Info	127487	127331	127163
Oil Age	hrs	Client Info	44	815	626
Oil Changed	Client Info	N/A	N/A	N/A	
Sample Status		NORMAL	SEVERE	SEVERE	

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	3	12	6
Chromium	ppm	ASTM D5185m	>2	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>10	2	2	3
Lead	ppm	ASTM D5185m	>5	3	2	<1
Copper	ppm	ASTM D5185m	>14	2	2	1
Tin	ppm	ASTM D5185m	>13	0	6	6
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	<1	0

ADDITIVES

method	limit/base	current	history1	history2		
Boron	ppm	ASTM D5185m	0	0	0	0
Barium	ppm	ASTM D5185m	1	0	<1	0
Molybdenum	ppm	ASTM D5185m	2	1	2	0
Manganese	ppm	ASTM D5185m	1	<1	<1	<1
Magnesium	ppm	ASTM D5185m	9	0	16	18
Calcium	ppm	ASTM D5185m	2712	2683	3231	3098
Phosphorus	ppm	ASTM D5185m	292	248	319	330
Zinc	ppm	ASTM D5185m	342	356	394	409
Sulfur	ppm	ASTM D5185m	2575	3424	4012	3671

CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>200	39	384	303
Sodium	ppm	ASTM D5185m		0	0	1
Potassium	ppm	ASTM D5185m	>20	2	2	<1
Fuel	%	ASTM D3524	>4.0	0.0	0.3	0.4

INFRA-RED

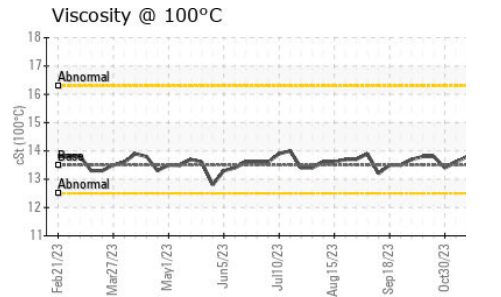
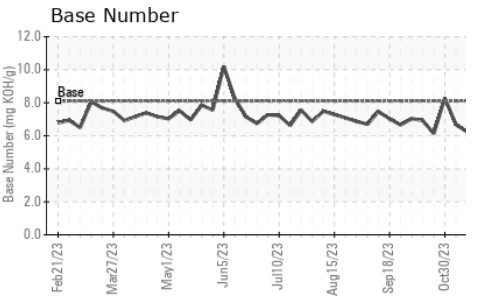
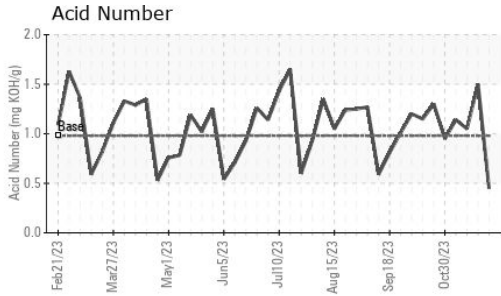
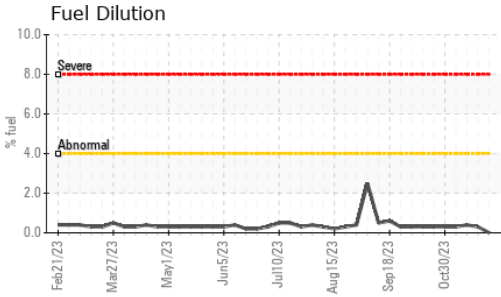
method	limit/base	current	history1	history2		
Soot %	%	*ASTM D7844		0	0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	3.3	6.6	6.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	13.8	23.5	22.9

FLUID DEGRADATION

method	limit/base	current	history1	history2		
Oxidation	Abs/.1mm	*ASTM D7414	>25	7.4	15.9	15.2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.98	0.45	1.50	1.05
Base Number (BN)	mg KOH/g	ASTM D2896	8.1	8.01	6.11	6.24



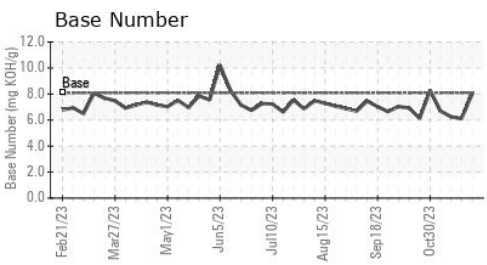
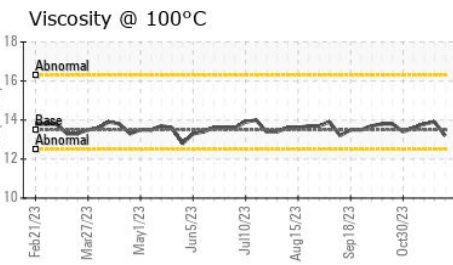
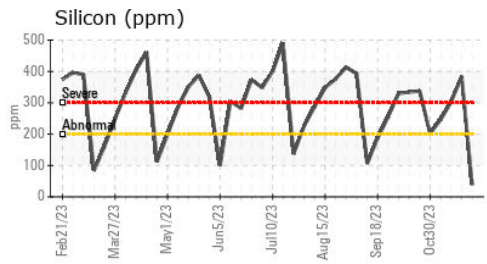
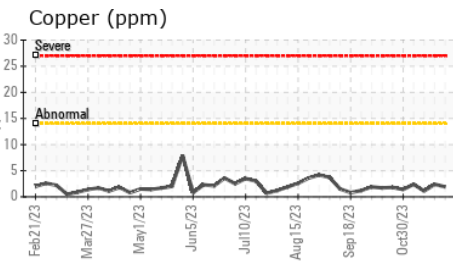
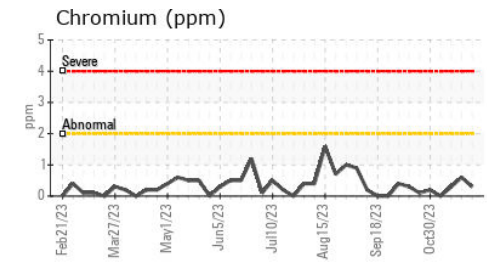
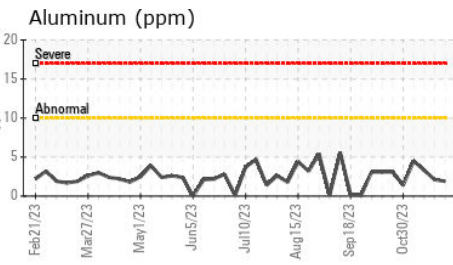
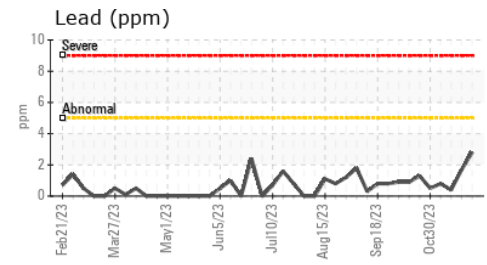
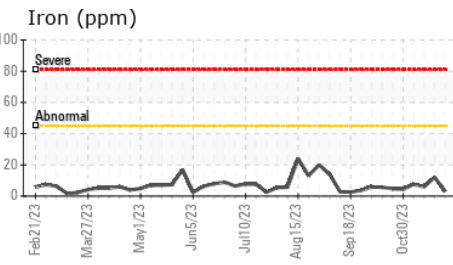
OIL ANALYSIS REPORT



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	13.2	13.9	13.8

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0836465 **Received** : 08 Dec 2023
Lab Number : 06030040 **Diagnosed** : 18 Dec 2023
Unique Number : 10779831 **Diagnostician** : 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:

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)