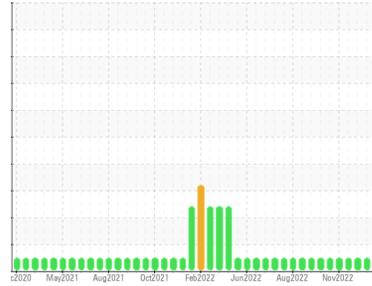




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
CHP2-M0115 (S/N 2209855)

Component
Biogas Engine

Fluid
MOBIL PEGASUS 1005 (120 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

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	history 1	history 2
Sample Number	Client Info			WC0748023	WC0748021	WC0748008
Sample Date	Client Info			29 Mar 2023	28 Feb 2023	22 Dec 2022
Machine Age	hrs	Client Info		48384	48322	48309
Oil Age	hrs	Client Info		3096	3034	3021
Oil Changed	Client Info			Not Chngd	Not Chngd	Not Chngd
Sample Status				NORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history 1	history 2
Fuel	WC Method		>4.0	<1.0	<1.0	<1.0
Glycol	WC Method			NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>15	8	8	7
Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>10	5	5	4
Lead	ppm	ASTM D5185m	>10	0	0	0
Copper	ppm	ASTM D5185m	>10	1	1	<1
Tin	ppm	ASTM D5185m	>5	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m		95	97	94
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		3	3	2
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m		13	10	8
Calcium	ppm	ASTM D5185m		1797	1678	1761
Phosphorus	ppm	ASTM D5185m		321	291	273
Zinc	ppm	ASTM D5185m		395	367	337
Sulfur	ppm	ASTM D5185m		3012	2720	2410

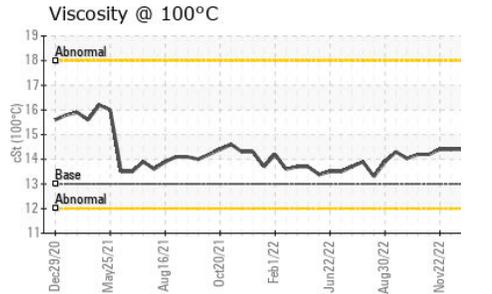
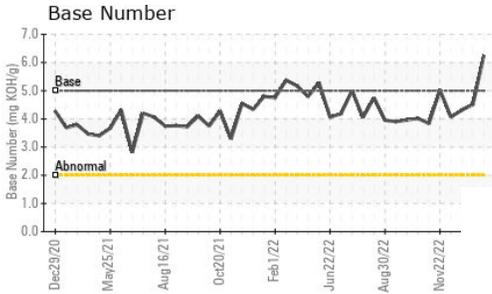
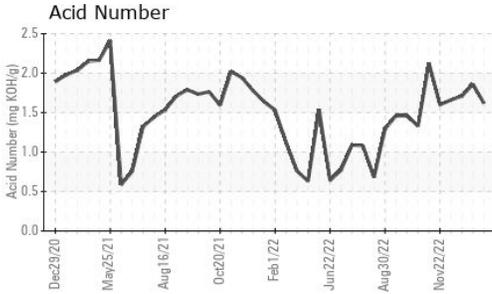
CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m	>300	2	4	2
Sodium	ppm	ASTM D5185m		22	22	28
Potassium	ppm	ASTM D5185m	>20	2	2	<1

INFRA-RED		method	limit/base	current	history 1	history 2
Soot %	%	*ASTM D7844		0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	9.1	9.1	9.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.2	22.2	22.4

FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	*ASTM D7414	>25	24.0	23.4	24.1
Acid Number (AN)	mg KOH/g	ASTM D8045		1.62	1.86	1.71
Base Number (BN)	mg KOH/g	ASTM D2896	5.0	6.25	4.51	4.31



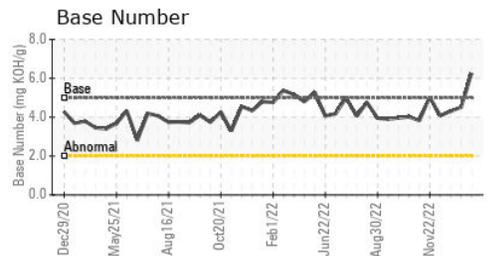
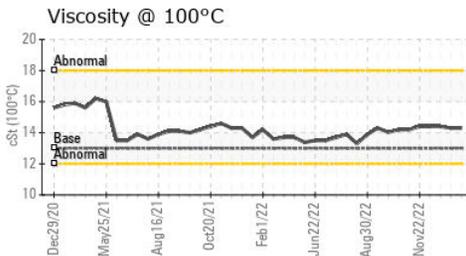
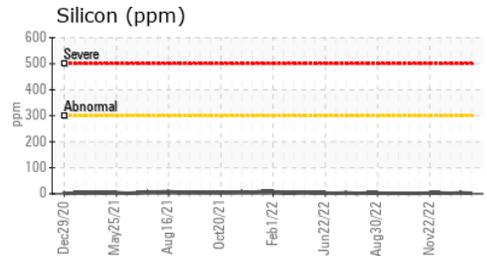
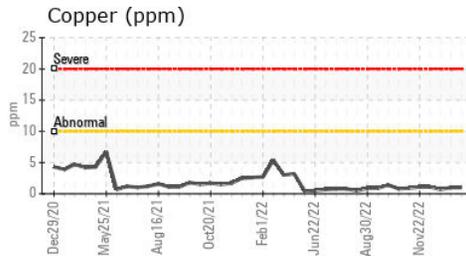
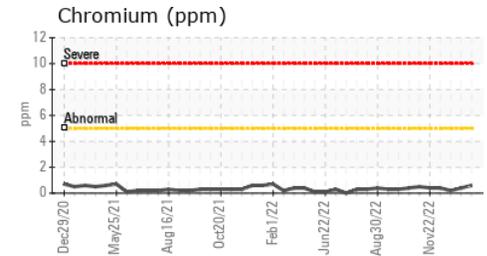
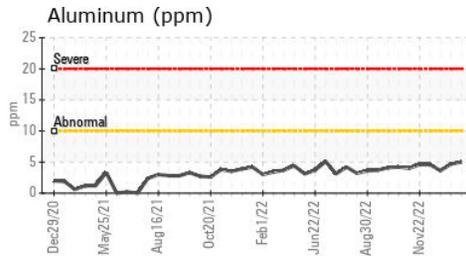
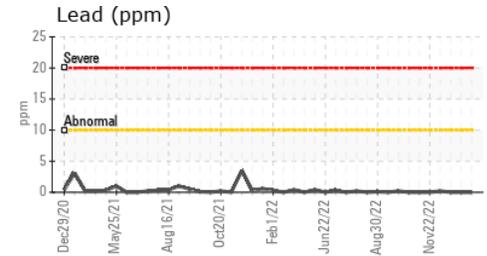
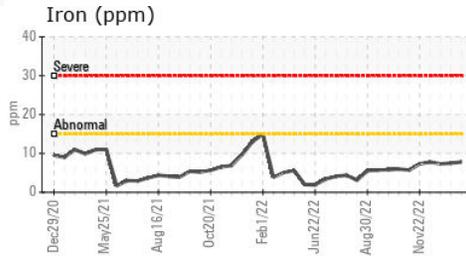
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history 1	history 2
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	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D445 13	14.3	14.3	14.4

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0748023 **Received** : 13 Apr 2023
Lab Number : 05818986 **Diagnosed** : 16 Apr 2023
Unique Number : 10427069 **Diagnostician** : Don Baldrige
Test Package : MOB 2

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 Contact: ERIC FOX
 ericf@kbbioenergy.com;jwatson@wcheckusa.com
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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)