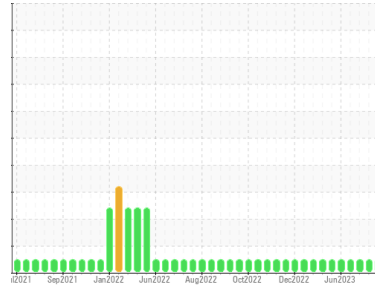




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
CHP2 (S/N 2209855)

Component
Biogas Engine

Fluid
MOBIL PEGASUS 1005 (220 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 acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0747961	WC0747974	WC0747980
Sample Date	Client Info		15 Aug 2023	02 Aug 2023	01 Aug 2023
Machine Age	hrs	Client Info	51008	50704	0
Oil Age	hrs	Client Info	5719	5415	0
Oil Changed	Client Info		Not Chngd	Not Chngd	N/A
Sample Status			NORMAL	NORMAL	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >45	12	11	10
Chromium	ppm	ASTM D5185m >2	<1	<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	5	4	5
Lead	ppm	ASTM D5185m >5	0	<1	0
Copper	ppm	ASTM D5185m >14	1	<1	1
Tin	ppm	ASTM D5185m >13	0	0	0
Vanadium	ppm	ASTM D5185m	0	<1	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	90	86	101
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	2	2	2
Manganese	ppm	ASTM D5185m	<1	<1	<1
Magnesium	ppm	ASTM D5185m	9	9	11
Calcium	ppm	ASTM D5185m	1931	1847	2068
Phosphorus	ppm	ASTM D5185m	320	310	353
Zinc	ppm	ASTM D5185m	421	408	445
Sulfur	ppm	ASTM D5185m	2831	2350	3179

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >200	6	3	3
Sodium	ppm	ASTM D5185m	8	13	17
Potassium	ppm	ASTM D5185m >20	2	2	2

INFRA-RED

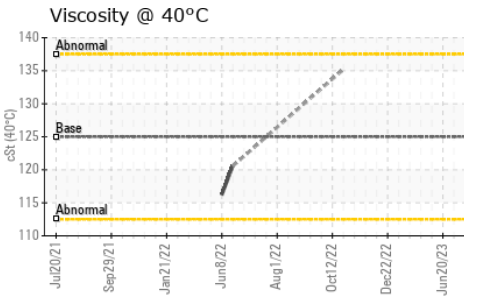
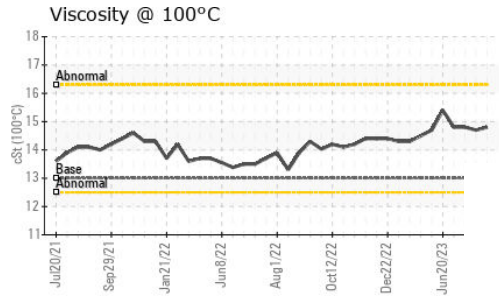
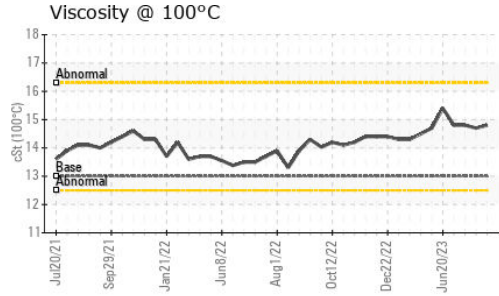
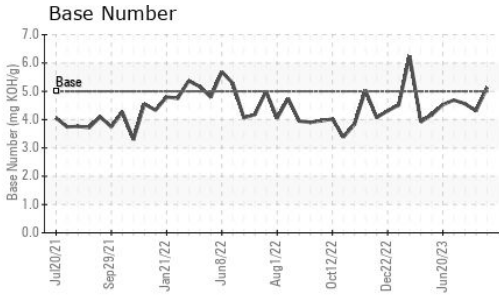
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	10.2	9.9	10.3
Sulfation	Abs/.1mm	*ASTM D7415	23.8	23.6	24.2

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	26.0	25.5	26.5
Acid Number (AN)	mg KOH/g	ASTM D8045	2.29	2.15	2.28
Base Number (BN)	mg KOH/g	ASTM D2896 5.0	5.13	4.31	4.56



OIL ANALYSIS REPORT



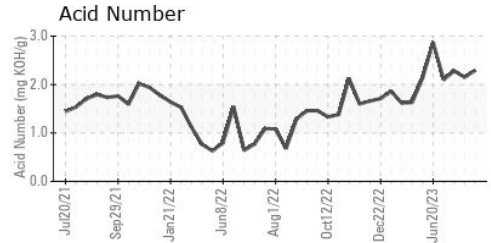
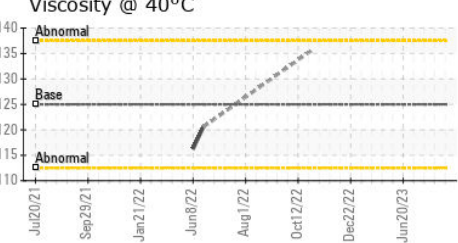
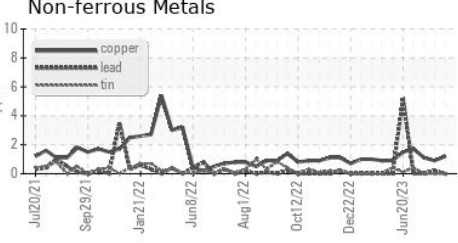
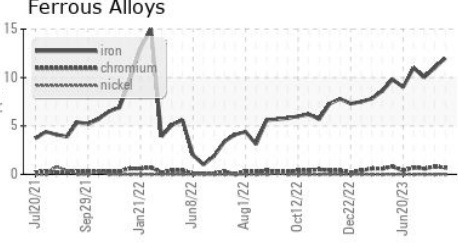
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	NEG	NEG	NEG
Free Water	scalar	*Visual	NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445 13	14.8	14.7	14.8

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color	no image	no image	no image
Bottom	no image	no image	no image

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0747961 **Received** : 25 Aug 2023
Lab Number : 05934946 **Diagnosed** : 28 Aug 2023
Unique Number : 10620217 **Diagnostician** : Sean Felton
Test Package : MOB 2 (Additional Tests: FT-IR, ICP-NewOil, KV100, PrtCount, TBN, VI)

KB BIOENERGY INC
 2677 RIVERVIEW RD
 AKRON, OH
 US 44313
 Contact: JASON SHICK
 jasons@kbbioenergy.com
 T:

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)

F: (330)864-7023