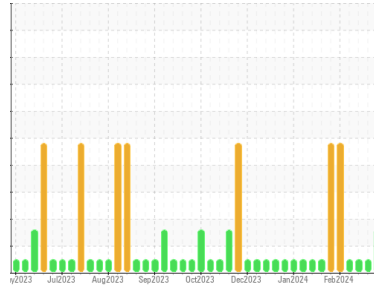




OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id
HBKM01BE
Component
Biogas Engine
Fluid
SHELL MYSELLA S5 S (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. (Customer Sample Comment: Top Up Amount: 30 GAL)

Wear

All component wear rates are normal.

Contamination

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		WC0775498	WC0775495	WC0775482
Sample Date	Client Info		26 Mar 2024	15 Mar 2024	04 Mar 2024
Machine Age	hrs	Client Info	109078	108815	108573
Oil Age	hrs	Client Info	628	389	147
Oil Changed	Client Info		Oil Added	Oil Added	Oil Added
Sample Status			ABNORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>4.0	<1.0	<1.0	<1.0
Water	WC Method	>0.11	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >15	4	4	3
Chromium	ppm	ASTM D5185m >4	<1	<1	<1
Nickel	ppm	ASTM D5185m	<1	0	<1
Titanium	ppm	ASTM D5185m	0	<1	<1
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >6	3	3	3
Lead	ppm	ASTM D5185m >9	0	<1	<1
Copper	ppm	ASTM D5185m >6	2	2	1
Tin	ppm	ASTM D5185m >4	3	4	2
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	5	6	6
Barium	ppm	ASTM D5185m	0	1	0
Molybdenum	ppm	ASTM D5185m	4	4	4
Manganese	ppm	ASTM D5185m	0	0	0
Magnesium	ppm	ASTM D5185m	15	16	15
Calcium	ppm	ASTM D5185m	1481	1570	1388
Phosphorus	ppm	ASTM D5185m 300	302	328	312
Zinc	ppm	ASTM D5185m	397	438	410
Sulfur	ppm	ASTM D5185m	3315	3503	3012

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >181	▲ 199	158	83
Sodium	ppm	ASTM D5185m >21	6	3	5
Potassium	ppm	ASTM D5185m >20	0	2	2

INFRA-RED

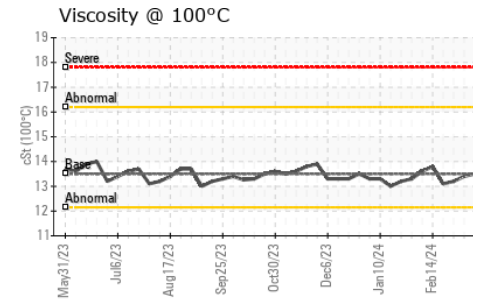
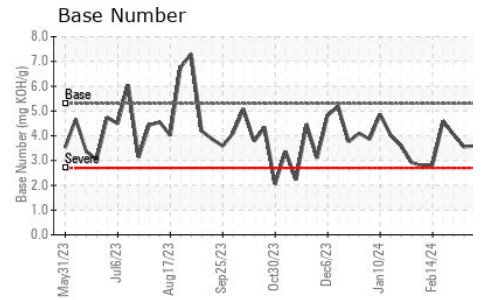
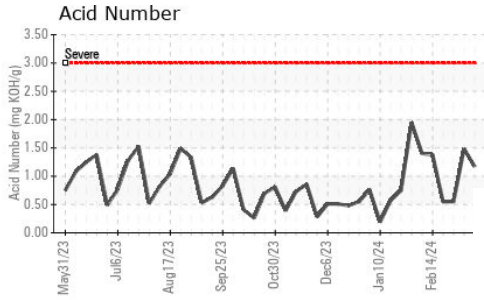
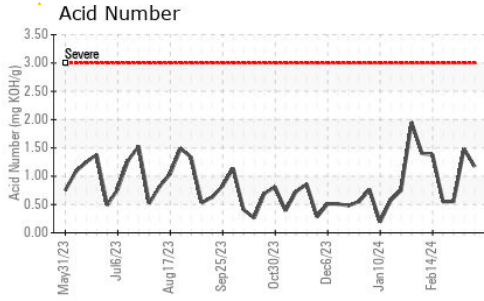
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0	0	0
Nitration	Abs/cm	*ASTM D7624	4.8	4.4	3.9
Sulfation	Abs/.1mm	*ASTM D7415	21.0	19.7	17.7

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	14.1	12.6	11.2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.17	1.483	0.55
Base Number (BN)	mg KOH/g	ASTM D2896 5.3	3.59	3.55	4.05



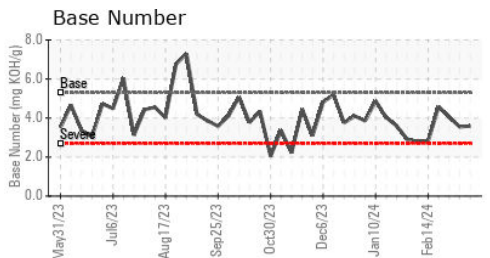
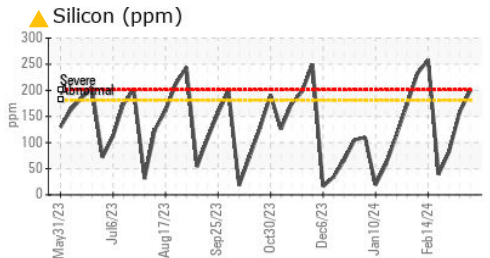
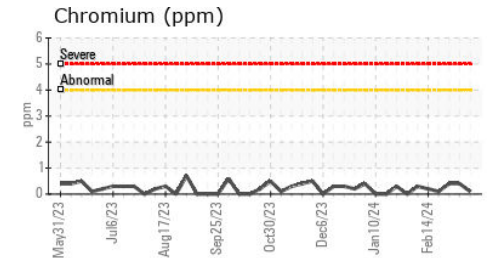
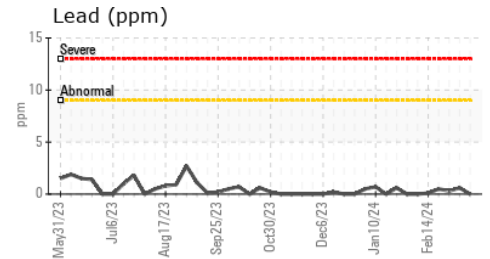
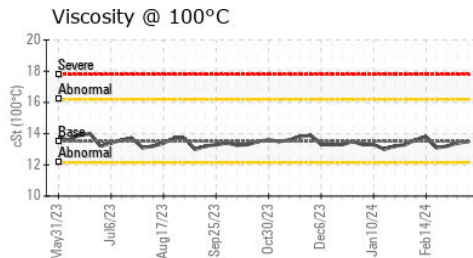
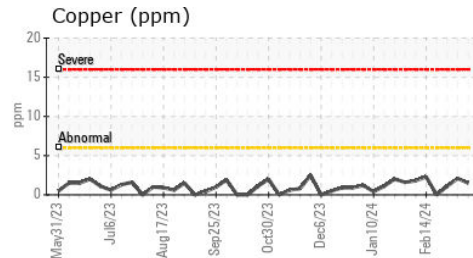
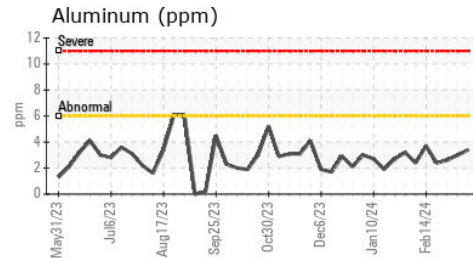
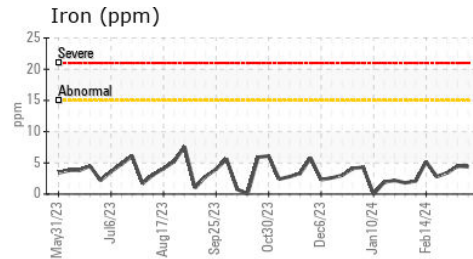
OIL ANALYSIS REPORT



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	>0.11	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	13.5	13.4	13.2

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : WC0775498
 Lab Number : 06132224
 Unique Number : 10951689
 Test Package : MOB 2

Received : 28 Mar 2024
 Tested : 29 Mar 2024
 Diagnosed : 02 Apr 2024 - Sean Felton

EDL NA Recips-Honeybrook
 Honey Brook Powerstation, 481 S. Churchtown Road
 Narvon, PA
 US 17555-9574
 Contact: Christian Adames
 Christian.Adames@edlenergy.com

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)

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