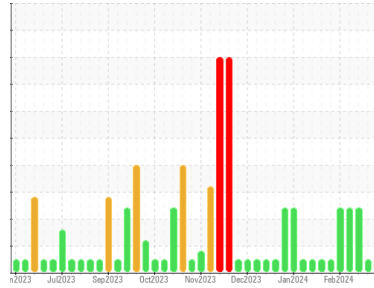




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
WVTM02BE
Component
Biogas Engine
Fluid
CHEVRON HDAX 6500 LFG GAS ENGINE OIL (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: Oil sample only)

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	history1	history2
Sample Number	Client Info		WC0785396	WC0785401	WC0785403
Sample Date	Client Info		21 Feb 2024	16 Feb 2024	13 Feb 2024
Machine Age	hrs	Client Info	43778	43659	43588
Oil Age	hrs	Client Info	190	71	660
Oil Changed	Client Info		Not Chngd	Not Chngd	Changed
Sample Status			NORMAL	NORMAL	ABNORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>4.0	<1.0	<1.0	<1.0
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	>15	<1	<1	4
Chromium	ppm	ASTM D5185m	>4	0	0	0
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>6	2	1	2
Lead	ppm	ASTM D5185m	>9	<1	0	4
Copper	ppm	ASTM D5185m	>6	<1	0	1
Tin	ppm	ASTM D5185m	>4	2	0	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		<1	2	1
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	<1	0
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		9	6	7
Calcium	ppm	ASTM D5185m		1713	1758	1734
Phosphorus	ppm	ASTM D5185m		257	269	244
Zinc	ppm	ASTM D5185m		309	317	316
Sulfur	ppm	ASTM D5185m		2915	2348	3328

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>181	59	30	142
Sodium	ppm	ASTM D5185m		<1	<1	<1
Potassium	ppm	ASTM D5185m	>20	1	0	<1

INFRA-RED

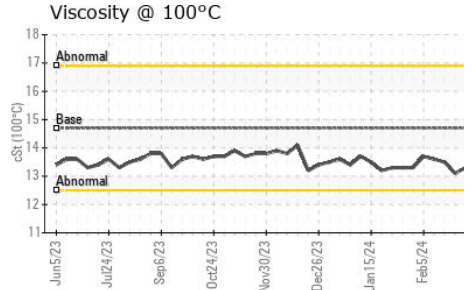
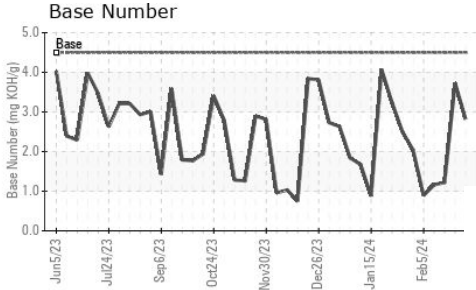
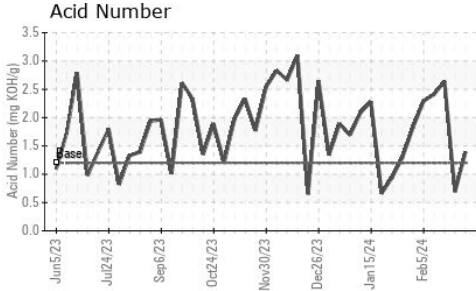
	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844		0.1	0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	5.2	5.1	5.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.2	17.6	28.3

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	11.1	8.8	15.9
Acid Number (AN)	mg KOH/g	ASTM D8045	1.2	1.39	0.69	▲ 2.64
Base Number (BN)	mg KOH/g	ASTM D2896	4.5	2.82	3.73	▲ 1.22



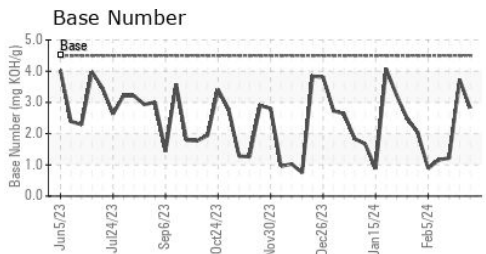
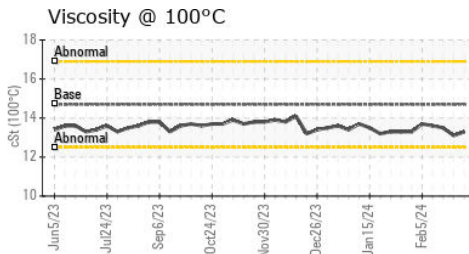
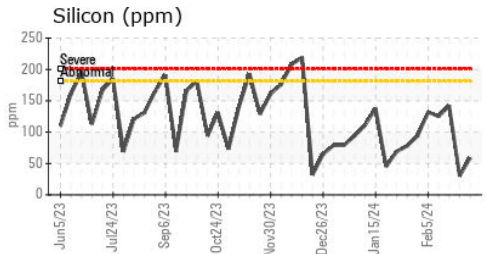
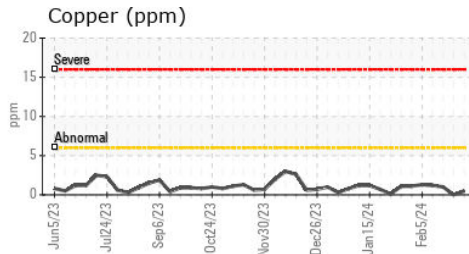
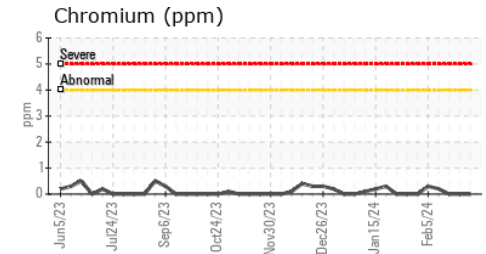
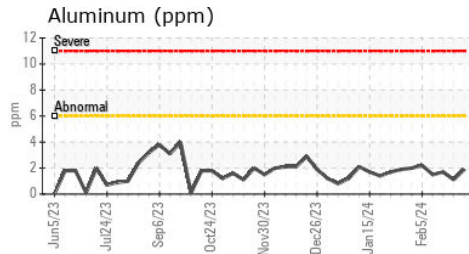
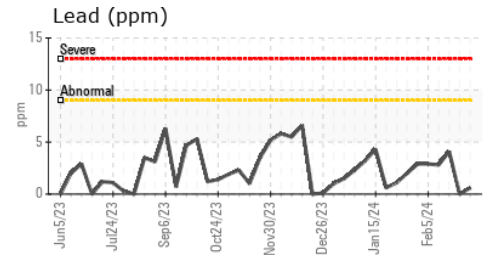
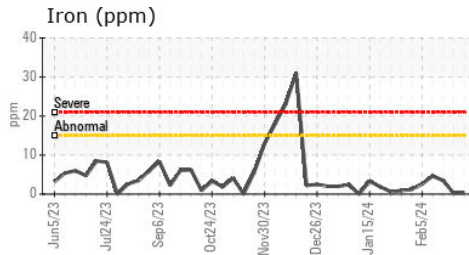
OIL ANALYSIS REPORT



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	14.7	13.3	13.1	13.5

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0785396
Lab Number : **06098616**
Unique Number : 10896846
Test Package : MOB 2

Received : 23 Feb 2024
Tested : 26 Feb 2024
Diagnosed : 26 Feb 2024 - Sean Felton

EDL NA Recips-Watervliet
 Watervliet Powerstation, 3563 Hennessey Road
 Watervliet, MI
 US 49098
 Contact: Scott Eastman
 scott.eastman@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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F: