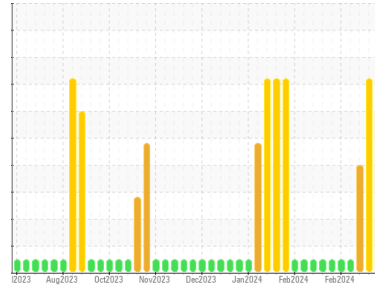




OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id
WVTM01BE
Component
Biogas Engine
Fluid
MOBIL Pegasus™ 605 Ultra 40 (--- GAL)

DIAGNOSIS

▲ Recommendation
Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. (Customer Sample Comment: Oil and filters changed)

Wear
All component wear rates are normal.

▲ Contamination
Elemental level of silicon (Si) above normal.

▲ Fluid Condition
The BN level is low. The AN level is acceptable for this fluid.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0895527	WC0895551	WC0895546
Sample Date	Client Info		18 Mar 2024	11 Mar 2024	05 Mar 2024
Machine Age	hrs	Client Info	114832	114684	114540
Oil Age	hrs	Client Info	969	821	677
Oil Changed	Client Info		Changed	Not Changd	Not Changd
Sample Status			SEVERE	SEVERE	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	11	9	7
Chromium	ppm	ASTM D5185m >4	0	<1	0
Nickel	ppm	ASTM D5185m >2	0	<1	0
Titanium	ppm	ASTM D5185m	0	<1	0
Silver	ppm	ASTM D5185m >5	0	0	0
Aluminum	ppm	ASTM D5185m >6	2	2	2
Lead	ppm	ASTM D5185m >9	2	3	2
Copper	ppm	ASTM D5185m >6	1	2	1
Tin	ppm	ASTM D5185m >4	4	5	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	48	44	44
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	2	4	3
Manganese	ppm	ASTM D5185m	0	0	0
Magnesium	ppm	ASTM D5185m	17	19	16
Calcium	ppm	ASTM D5185m	1857	1680	1745
Phosphorus	ppm	ASTM D5185m	424	389	384
Zinc	ppm	ASTM D5185m	643	617	582
Sulfur	ppm	ASTM D5185m	6141	5255	5089

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >181	▲ 225	▲ 240	▲ 196
Sodium	ppm	ASTM D5185m	11	13	16
Potassium	ppm	ASTM D5185m >20	0	1	0

INFRA-RED

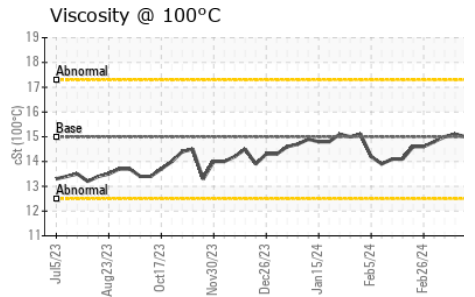
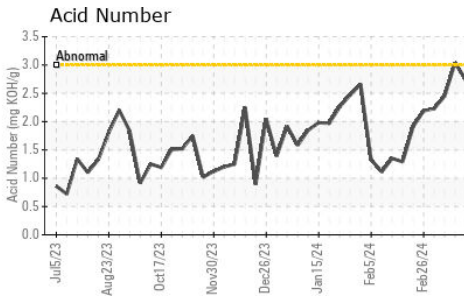
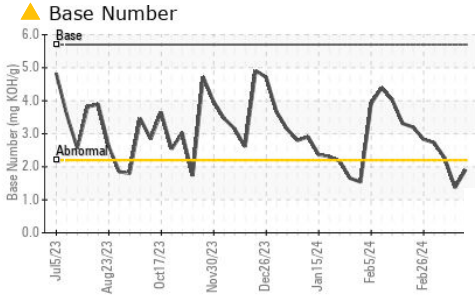
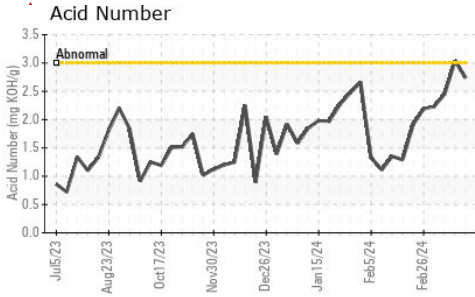
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0.1	0.1	0
Nitration	Abs/cm	*ASTM D7624 >20	4.0	4.1	3.7
Sulfation	Abs/.1mm	*ASTM D7415 >30	27.5	28.5	26.0

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	13.8	14.7	13.0
Acid Number (AN)	mg KOH/g	ASTM D8045	2.74	▲ 3.04	▲ 2.45
Base Number (BN)	mg KOH/g	ASTM D2896 5.7	▲ 1.91	▲ 1.37	▲ 2.27



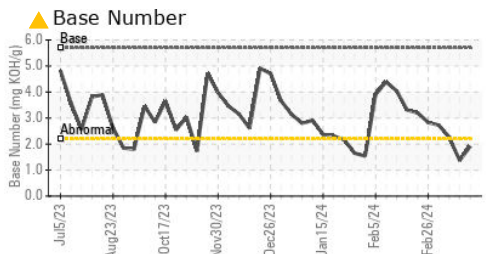
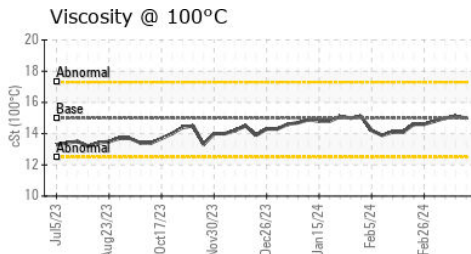
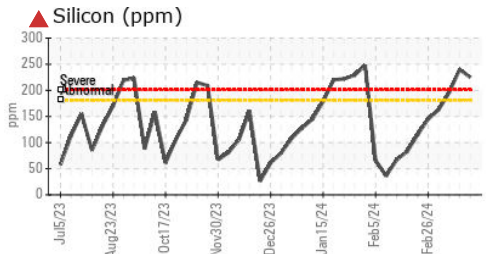
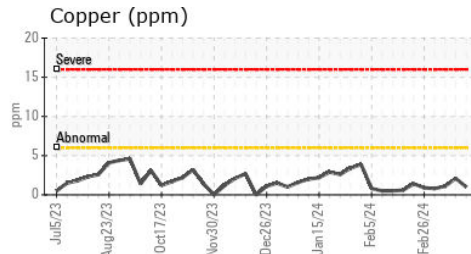
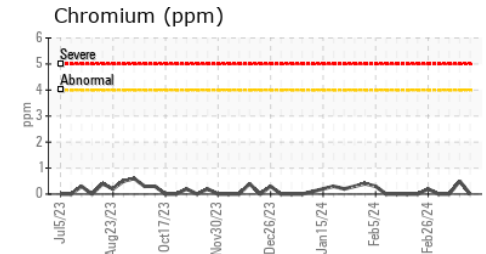
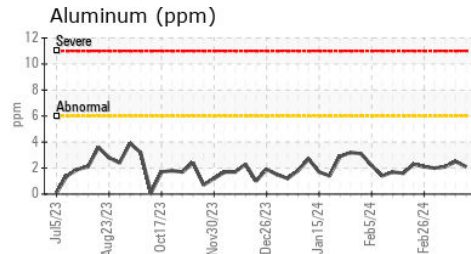
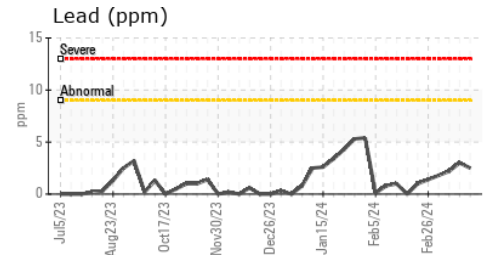
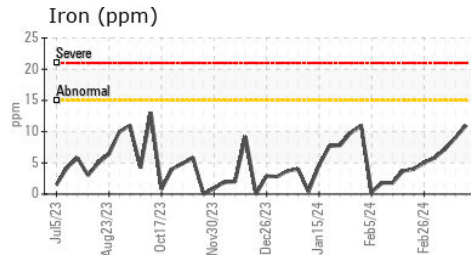
OIL ANALYSIS REPORT



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	15	15.0	15.1

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0895527
Lab Number : 06123879
Unique Number : 10938030
Test Package : MOB 2

Received : 20 Mar 2024
Tested : 21 Mar 2024
Diagnosed : 22 Mar 2024 - Don Baldrige

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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