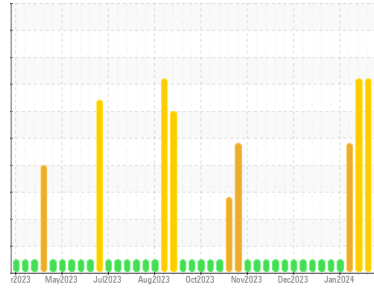




OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id
WVTM01BE
Component
Biogas Engine
Fluid
MOBIL PEGASUS 605 (--- 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: Changed oil and filter)

Wear

All component wear rates are normal.

Contamination

Elemental level of silicon (Si) above normal.

Fluid Condition

The AN level is above the recommended limit. The BN level is low.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0785352	WC0785354	WC0785362
Sample Date	Client Info		29 Jan 2024	26 Jan 2024	24 Jan 2024
Machine Age	hrs	Client Info	113698	115625	113583
Oil Age	hrs	Client Info	956	886	841
Oil Changed	Client Info		Changed	N/A	Not Changd
Sample Status			SEVERE	SEVERE	SEVERE

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	10	8
Chromium	ppm	ASTM D5185m >4	<1	<1	<1
Nickel	ppm	ASTM D5185m >2	<1	<1	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m >5	0	0	0
Aluminum	ppm	ASTM D5185m >6	3	3	3
Lead	ppm	ASTM D5185m >9	5	5	4
Copper	ppm	ASTM D5185m >6	4	3	3
Tin	ppm	ASTM D5185m >4	6	6	6
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	38	41	58
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	2	2	1
Manganese	ppm	ASTM D5185m	<1	<1	<1
Magnesium	ppm	ASTM D5185m	25	21	23
Calcium	ppm	ASTM D5185m	1611	1601	1758
Phosphorus	ppm	ASTM D5185m	384	394	418
Zinc	ppm	ASTM D5185m	609	604	626
Sulfur	ppm	ASTM D5185m	5092	5072	5211

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >181	248	229	222
Sodium	ppm	ASTM D5185m	2	1	1
Potassium	ppm	ASTM D5185m >20	2	2	2

INFRA-RED

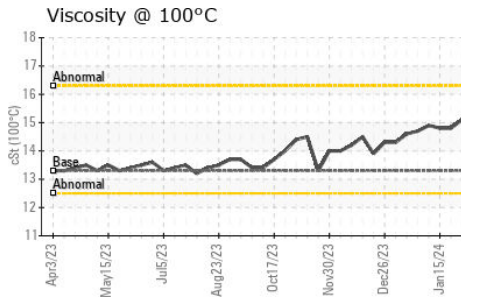
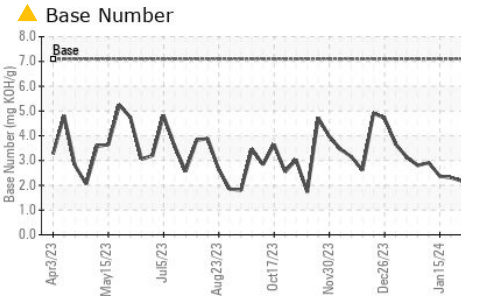
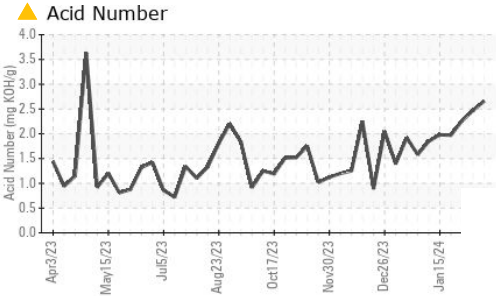
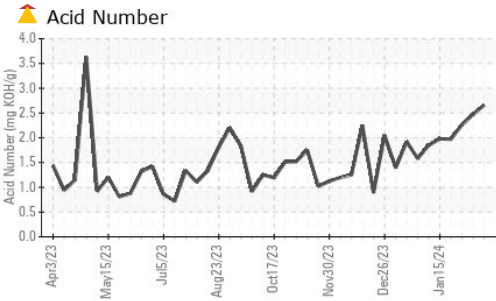
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0	0	0
Nitration	Abs/cm	*ASTM D7624 >20	4.0	4.0	4.0
Sulfation	Abs/.1mm	*ASTM D7415 >30	27.8	26.8	26.1

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	14.9	14.3	14.1
Acid Number (AN)	mg KOH/g	ASTM D8045	2.66	2.47	2.26
Base Number (BN)	mg KOH/g	ASTM D2896 7.1	1.54	1.65	2.17



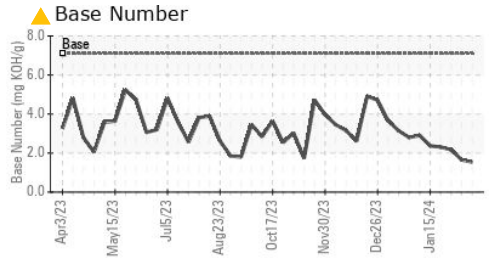
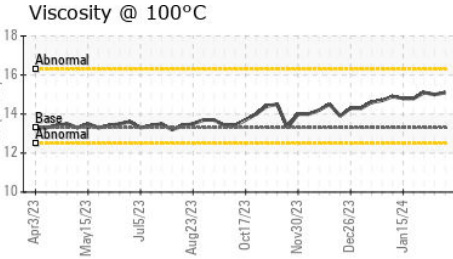
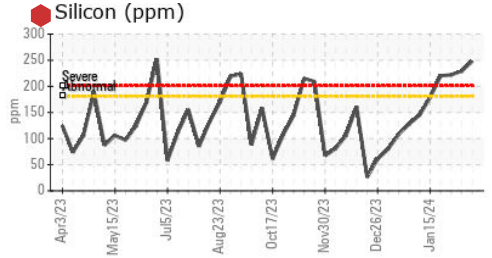
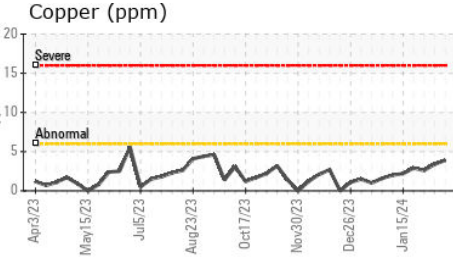
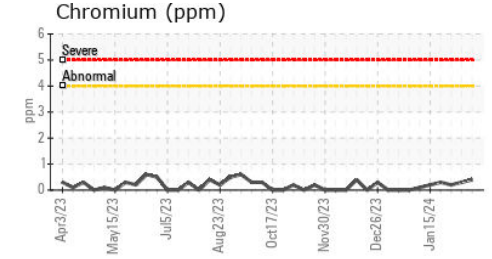
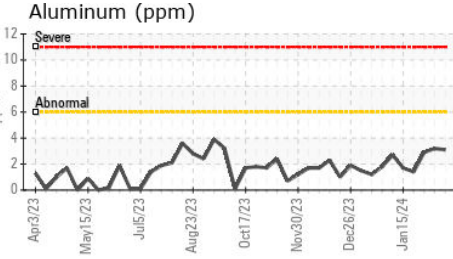
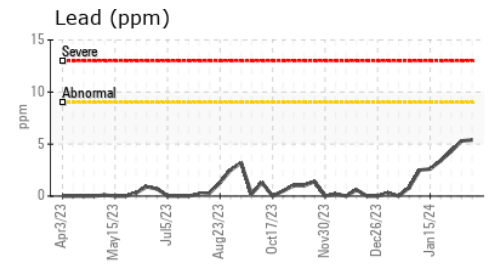
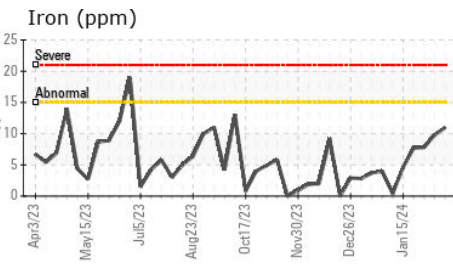
OIL ANALYSIS REPORT



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	13.3	15.1	15.0

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0785352 **Received** : 31 Jan 2024
Lab Number : 06076010 **Diagnosed** : 02 Feb 2024
Unique Number : 10858101 **Diagnostician** : Don Baldrige
Test Package : MOB 2

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

Certificate L2367
 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)