



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL



Machine Id
WVTM01BE
Component
Biogas Engine
Fluid
MOBIL PEGASUS 605 (--- GAL)

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)

Test	UOM	Method	Limit/Abn	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
Filter Age	hrs	Client Info		956	886	841
Oil Changed		Client Info		Changed	N/A	Not Changd
Filter Changed		Client Info		Changed	N/A	Not Changd
Sample Status				SEVERE	SEVERE	SEVERE

WEAR

All component wear rates are normal.

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
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

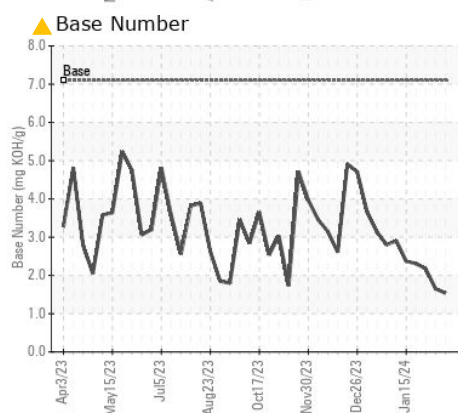
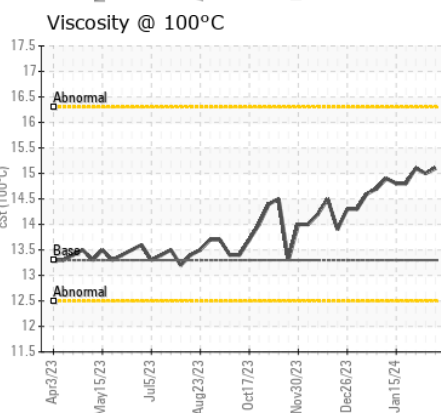
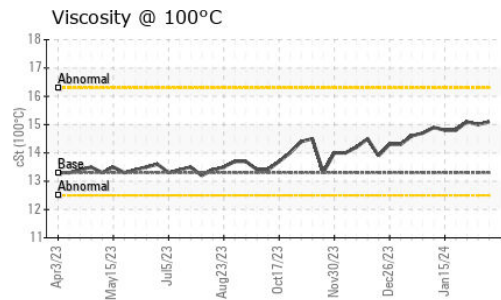
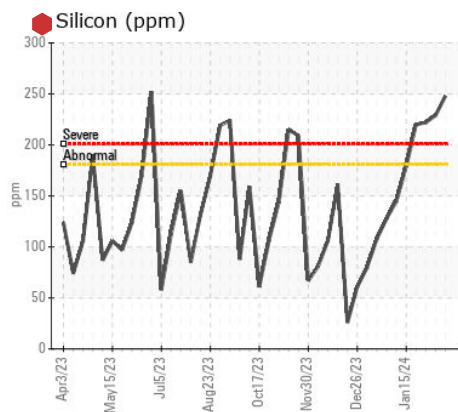
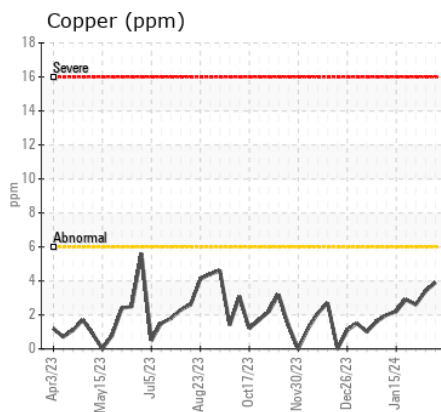
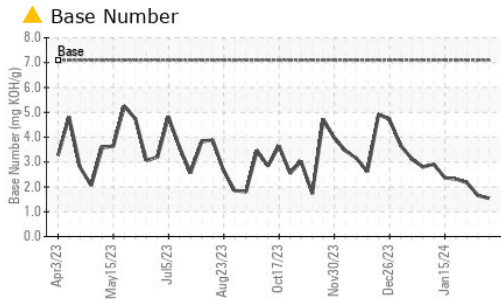
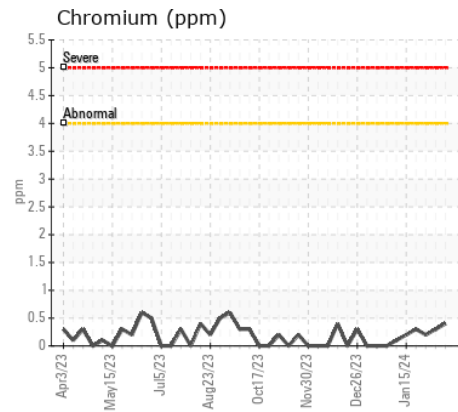
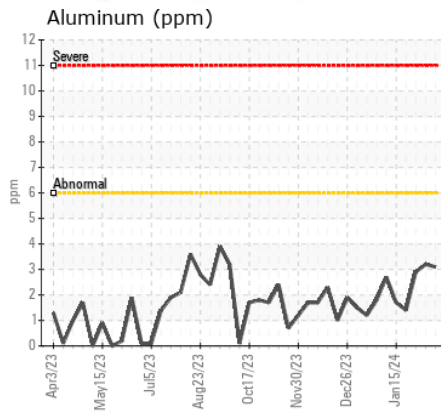
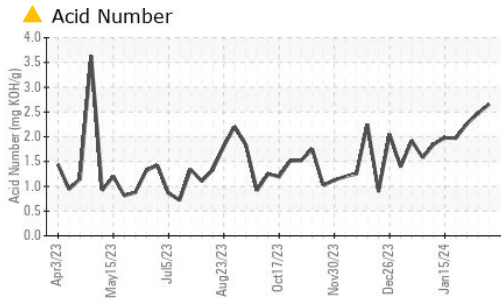
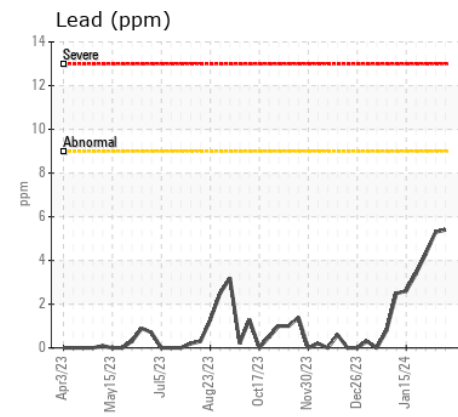
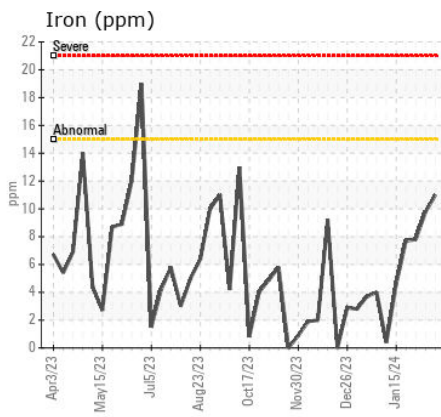
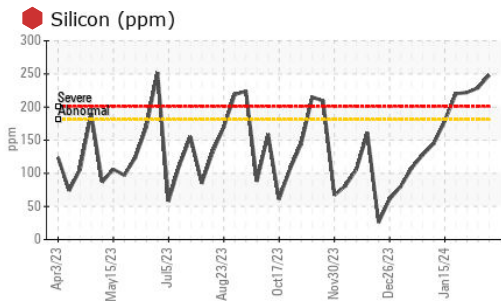
Elemental level of silicon (Si) above normal.

Silicon	ppm	ASTM D5185m	>181	248	229	222
Potassium	ppm	ASTM D5185m	>20	2	2	2
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
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
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG

FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		2	1	1
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
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
Visc @ 100°C	cSt	ASTM D445	13.3	15.1	15.0	15.1



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)