



# OIL ANALYSIS REPORT

WEAR	<b>SEVERE</b>
CONTAMINATION	<b>SEVERE</b>
FLUID CONDITION	<b>SEVERE</b>



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

## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. ( Customer Sample Comment: Oil and filters changed )

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0895542</b>	WC0895541	WC0895537
Sample Date		Client Info		<b>22 Apr 2024</b>	19 Apr 2024	15 Apr 2024
Machine Age	hrs	Client Info		<b>115668</b>	115595	115499
Oil Age	hrs	Client Info		<b>836</b>	763	667
Filter Age	hrs	Client Info		<b>836</b>	763	667
Oil Changed		Client Info		<b>Changed</b>	Not Changd	Not Changd
Filter Changed		Client Info		<b>Changed</b>	Not Changd	Not Changd
Sample Status				<b>SEVERE</b>	SEVERE	SEVERE

## WEAR

The tin level is severe.

Iron	ppm	ASTM D5185m	>14	<b>8</b>	6	6
Chromium	ppm	ASTM D5185m	>3	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>5	<b>4</b>	3	3
Lead	ppm	ASTM D5185m	>8	<b>3</b>	1	2
Copper	ppm	ASTM D5185m	>5	<b>2</b>	0	2
Tin	ppm	ASTM D5185m	>3	<b>▲ 6</b>	▲ 5	▲ 4
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>LIGHT</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

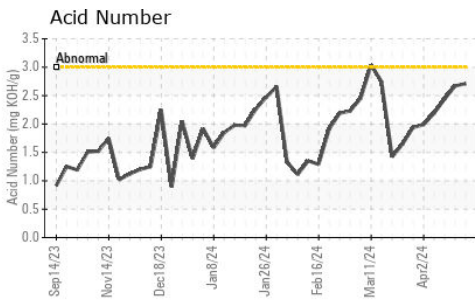
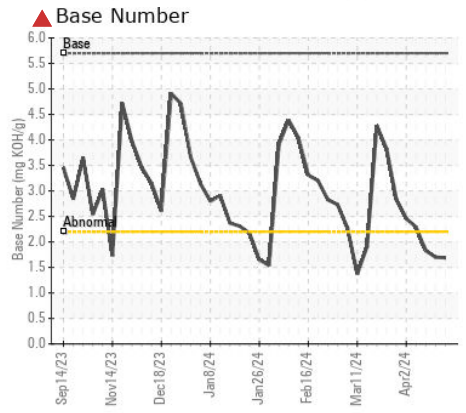
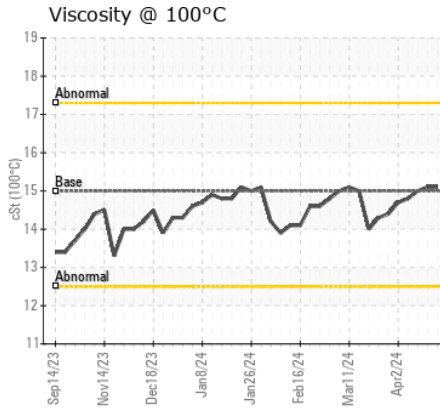
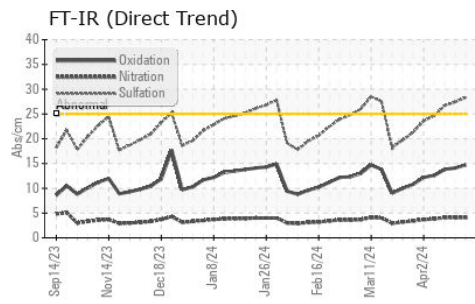
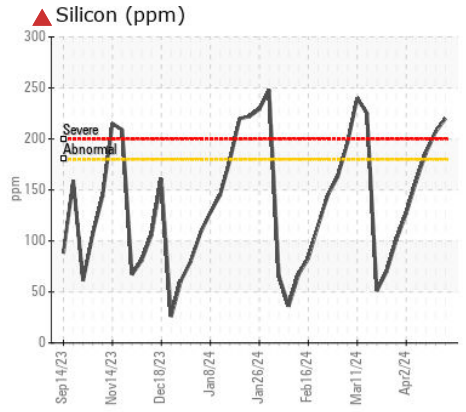
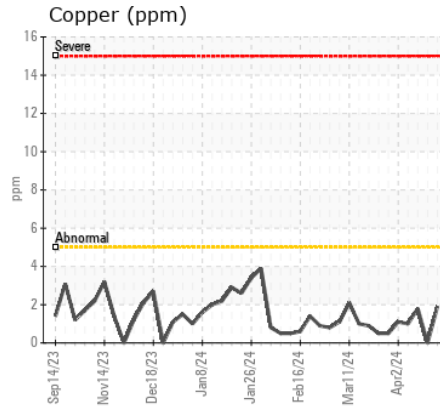
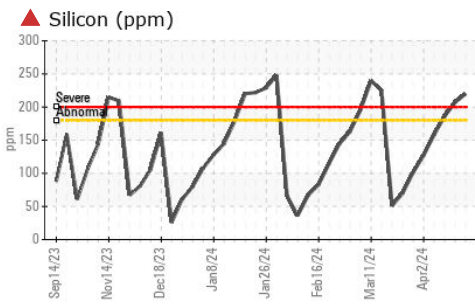
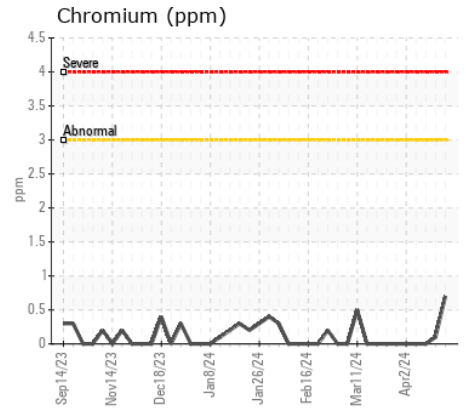
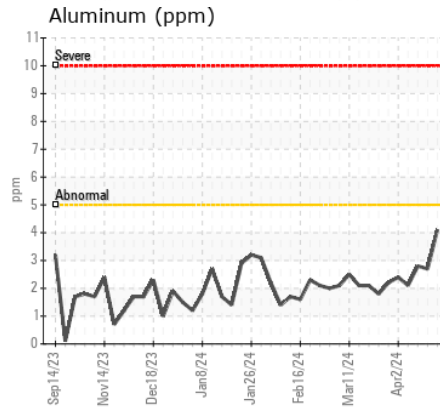
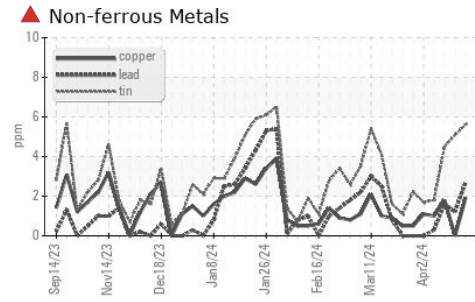
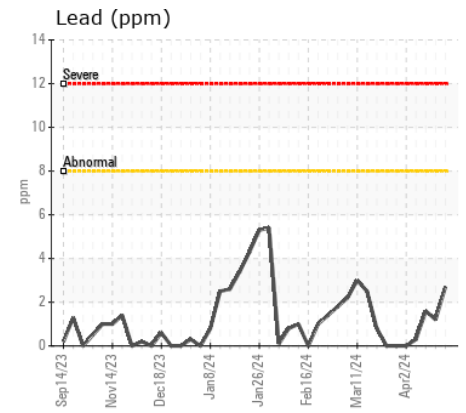
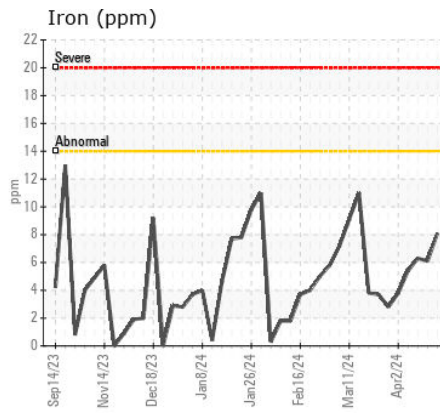
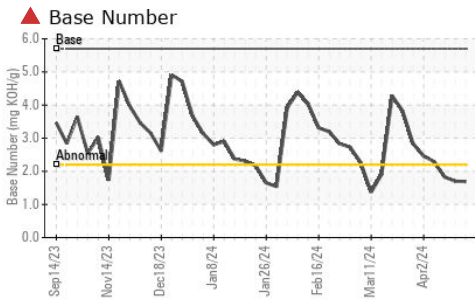
Elemental level of silicon (Si) above normal.

Silicon	ppm	ASTM D5185m	>180	<b>▲ 220</b>	▲ 207	▲ 186
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	2
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method		<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0</b>	0	0
Nitration	Abs/cm	*ASTM D7624		<b>4.1</b>	4.1	4.1
Sulfation	Abs/.1mm	*ASTM D7415		<b>28.3</b>	27.4	26.7
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual		<b>NEG</b>	NEG	NEG

## FLUID CONDITION

The BN level is low. The AN level is acceptable for this fluid. The oil is no longer serviceable.

Sodium	ppm	ASTM D5185m	>20	<b>2</b>	1	2
Boron	ppm	ASTM D5185m		<b>44</b>	40	45
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>4</b>	1	1
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>31</b>	21	20
Calcium	ppm	ASTM D5185m		<b>1733</b>	1738	1697
Phosphorus	ppm	ASTM D5185m		<b>431</b>	414	424
Zinc	ppm	ASTM D5185m		<b>658</b>	608	606
Sulfur	ppm	ASTM D5185m		<b>5601</b>	5900	6062
Oxidation	Abs/.1mm	*ASTM D7414		<b>14.7</b>	14.1	13.8
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>2.71</b>	2.67	2.44
Base Number (BN)	mg KOH/g	ASTM D2896	5.7	<b>▲ 1.69</b>	▲ 1.70	▲ 1.83
Visc @ 100°C	cSt	ASTM D445	15	<b>15.1</b>	15.1	15.0



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0895542  
**Lab Number** : 06159301  
**Unique Number** : 10994724  
**Test Package** : MOB 2

**Received** : 24 Apr 2024  
**Tested** : 25 Apr 2024  
**Diagnosed** : 26 Apr 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)

T:  
F: