



# OIL ANALYSIS REPORT

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



Machine Id  
**WVTM03BE**  
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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0839354</b>	WC0839334	WC0839327
Sample Date		Client Info		<b>10 Jul 2024</b>	02 Jul 2024	06 May 2024
Machine Age	hrs	Client Info		<b>36821</b>	36639	35285
Oil Age	hrs	Client Info		<b>642</b>	460	256
Filter Age	hrs	Client Info		<b>642</b>	460	256
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 abnormal. The iron level is severe.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
Iron	ppm	ASTM D5185m	>15	<b>▲ 39</b>	▲ 35	▲ 22
Chromium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	1	<1
Nickel	ppm	ASTM D5185m		<b>&lt;1</b>	1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m		<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>6	<b>4</b>	3	3
Lead	ppm	ASTM D5185m	>9	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m	>6	<b>4</b>	4	2
Tin	ppm	ASTM D5185m	>4	<b>▲ 4</b>	▲ 4	3
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

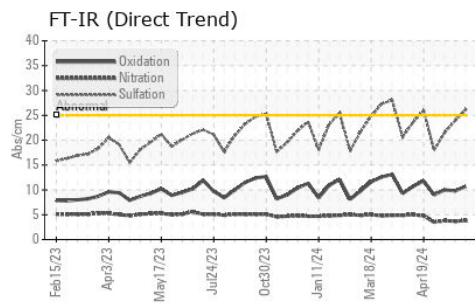
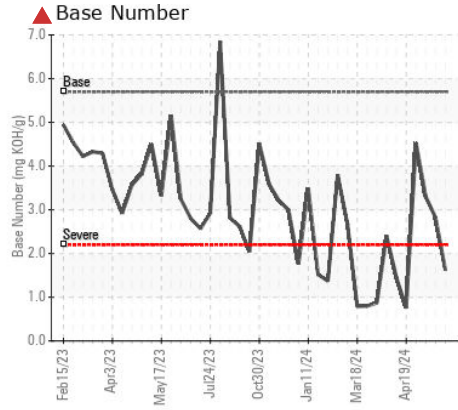
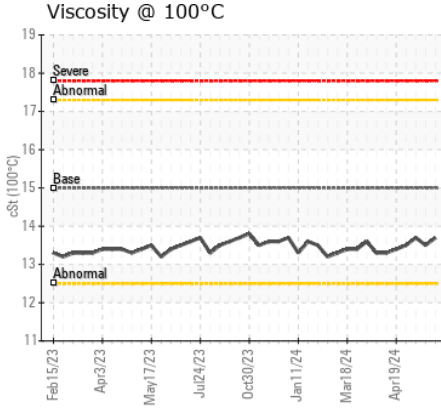
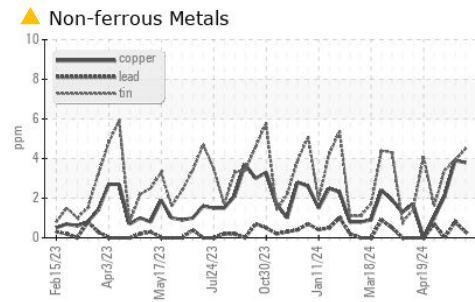
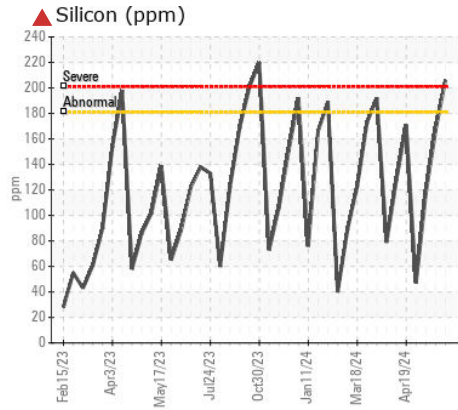
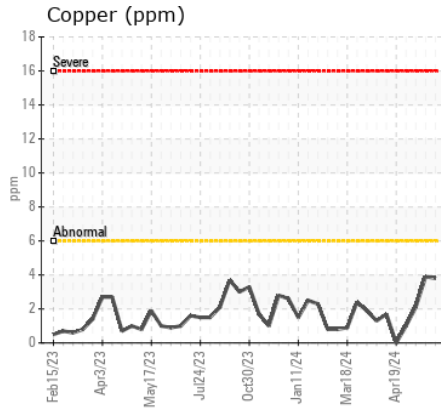
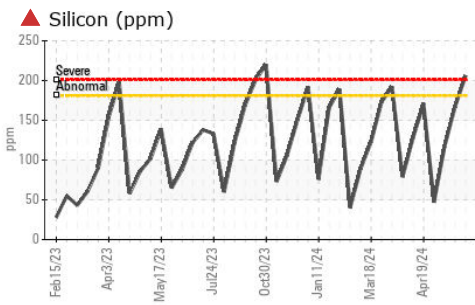
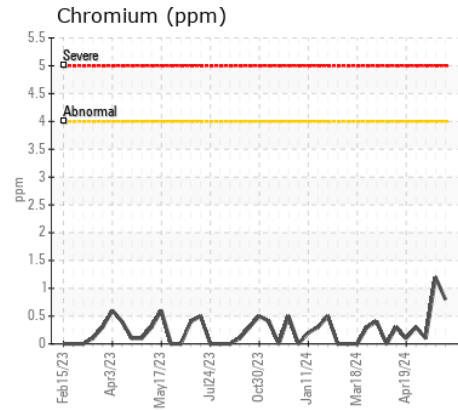
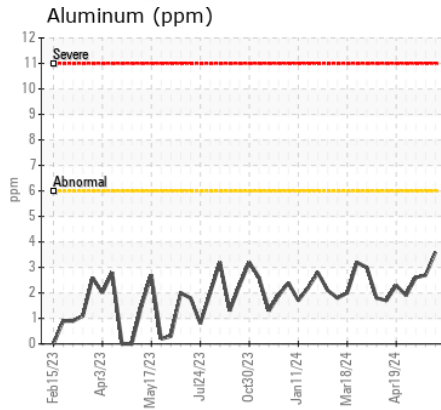
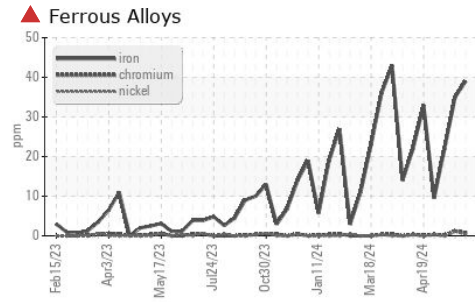
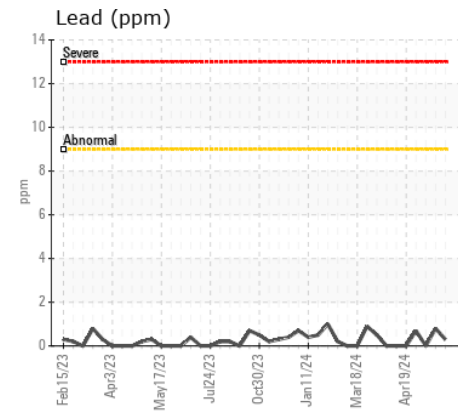
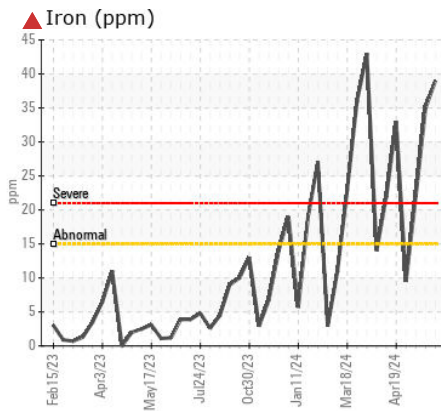
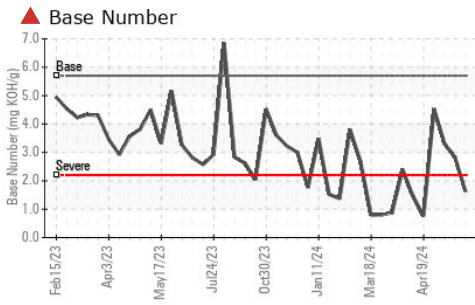
Elemental level of silicon (Si) above normal.

Silicon	ppm	ASTM D5185m	>181	<b>▲ 206</b>	167	117
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	2	0
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>.11	<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>3.8</b>	3.7	3.8
Sulfation	Abs/.1mm	*ASTM D7415		<b>26.1</b>	23.9	21.5
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	>.11	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

The BN level is low. The AN level is acceptable for this fluid.

Sodium	ppm	ASTM D5185m	>21	<b>2</b>	0	<1
Boron	ppm	ASTM D5185m		<b>16</b>	24	51
Barium	ppm	ASTM D5185m		<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185m		<b>8</b>	9	5
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>53</b>	57	33
Calcium	ppm	ASTM D5185m		<b>1538</b>	1504	1519
Phosphorus	ppm	ASTM D5185m		<b>408</b>	397	379
Zinc	ppm	ASTM D5185m		<b>542</b>	556	475
Sulfur	ppm	ASTM D5185m		<b>6748</b>	5218	5742
Oxidation	Abs/.1mm	*ASTM D7414		<b>10.7</b>	9.8	10.0
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>2.09</b>	1.25	1.22
Base Number (BN)	mg KOH/g	ASTM D2896	5.7	<b>▲ 1.62</b>	2.82	3.30
Visc @ 100°C	cSt	ASTM D445	15	<b>13.7</b>	13.5	13.7



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0839354 **Received** : 12 Jul 2024  
**Lab Number** : 06235117 **Tested** : 15 Jul 2024  
**Unique Number** : 11123951 **Diagnosed** : 15 Jul 2024 - Sean Felton  
**Test Package** : MOB 2 ( Additional Tests: PQ )

**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)