

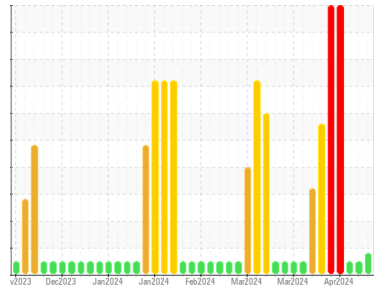


# OIL ANALYSIS REPORT



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

Sample Rating Trend



## DIAGNOSIS

### ▲ 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.

### ▲ Wear

The tin level is severe.

### ▲ 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		<b>WC0839352</b>	WC0839332	WC0839329
Sample Date	Client Info		<b>10 Jul 2024</b>	02 Jul 2024	06 May 2024
Machine Age	hrs	Client Info	<b>117483</b>	117297	115972
Oil Age	hrs	Client Info	<b>690</b>	591	302
Oil Changed	Client Info		<b>Changed</b>	Not Changd	Not Changd
Sample Status			<b>SEVERE</b>	ABNORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
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

## WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184		<b>18</b>	14	---
Iron	ppm	ASTM D5185m >14	<b>12</b>	11	6
Chromium	ppm	ASTM D5185m >3	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	<b>0</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 >5	<b>4</b>	3	2
Lead	ppm	ASTM D5185m >8	<b>2</b>	2	<1
Copper	ppm	ASTM D5185m >5	<b>2</b>	3	3
Tin	ppm	ASTM D5185m >3	<b>▲ 6</b>	▲ 5	4
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	<1	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>28</b>	39	51
Barium	ppm	ASTM D5185m	<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185m	<b>8</b>	9	4
Manganese	ppm	ASTM D5185m	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	<b>58</b>	60	32
Calcium	ppm	ASTM D5185m	<b>1746</b>	1674	1612
Phosphorus	ppm	ASTM D5185m	<b>421</b>	407	383
Zinc	ppm	ASTM D5185m	<b>651</b>	635	552
Sulfur	ppm	ASTM D5185m	<b>6231</b>	4850	5301

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >180	<b>▲ 216</b>	179	118
Sodium	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	0
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	2	0

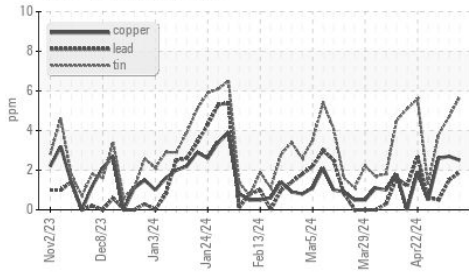
## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	<b>0.1</b>	0.1	0
Nitration	Abs/cm	*ASTM D7624	<b>4.2</b>	4.0	3.5
Sulfation	Abs/.1mm	*ASTM D7415	<b>26.8</b>	24.5	22.1

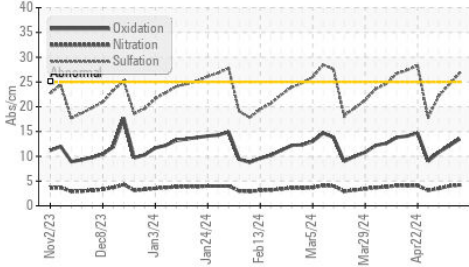


# OIL ANALYSIS REPORT

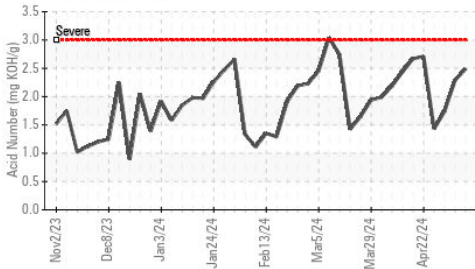
## ▲ Non-ferrous Metals



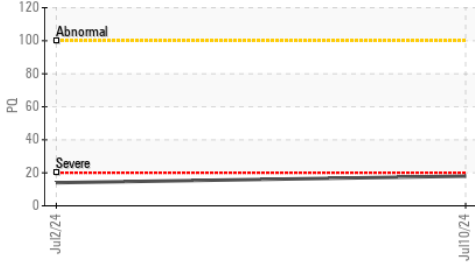
## FT-IR (Direct Trend)



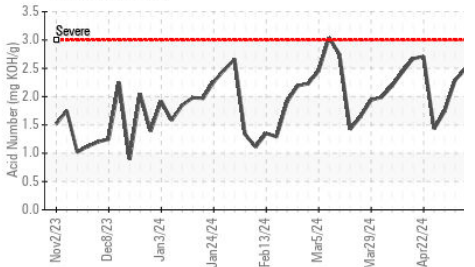
## Acid Number



## PQ



## Acid Number



## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs./1mm	*ASTM D7414	<b>13.5</b>	12.1	10.8
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>2.49</b>	2.29	1.74
Base Number (BN)	mg KOH/g	ASTM D2896	5.7 <b>▲ 2.03</b>	2.83	2.53

## VISUAL

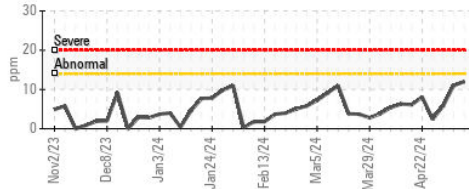
	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	NEG	NEG	NEG
Free Water	scalar	*Visual	NEG	NEG	NEG

## FLUID PROPERTIES

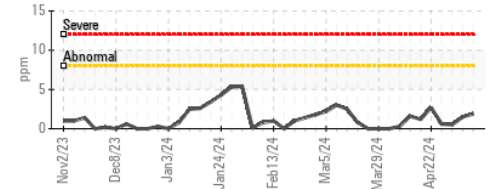
	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15 <b>14.5</b>	14.2	14.3

## GRAPHS

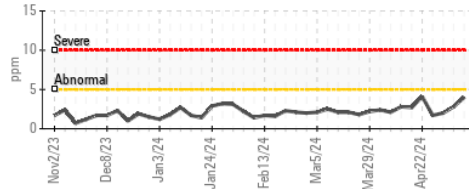
### Iron (ppm)



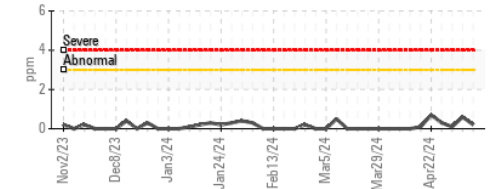
### Lead (ppm)



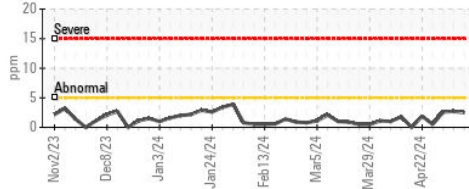
### Aluminum (ppm)



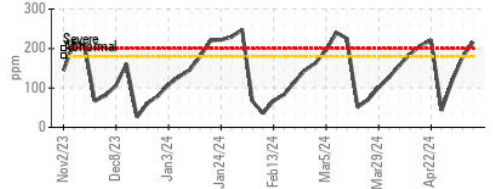
### Chromium (ppm)



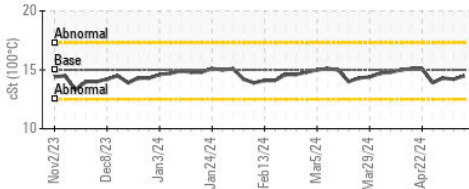
### Copper (ppm)



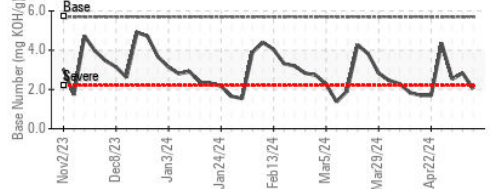
### ▲ Silicon (ppm)



### Viscosity @ 100°C



### ▲ Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : WC0839352

Lab Number : 06235118

Unique Number : 11123952

Test Package : MOB 2 ( Additional Tests: PQ )

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)

Received : 12 Jul 2024

Tested : 15 Jul 2024

Diagnosed : 15 Jul 2024 - Sean Felton

EDL NA Recips-Watervliet

Watervliet Powerstation, 3563 Hennessey Road

Watervliet, MI

US 49098

Contact: Scott Eastman

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T:

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