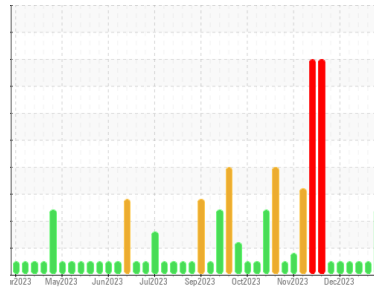




# OIL ANALYSIS REPORT

Sample Rating Trend



DEGRADATION



Machine Id  
**WVTM02BE**  
Component  
**Biogas Engine**  
Fluid  
**CHEVRON HDAX 6500 LFG GAS ENGINE OIL (--- GAL)**

## DIAGNOSIS

### Recommendation

We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition. ( Customer Sample Comment: Oil sample only )

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

The BN level is low. The AN level is at the top-end of the recommended limit.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0785358</b>	WC0785356	WC0629430
Sample Date	Client Info		<b>09 Jan 2024</b>	08 Jan 2024	03 Jan 2024
Machine Age	hrs	Client Info	<b>42764</b>	42675	42602
Oil Age	hrs	Client Info	<b>595</b>	506	433
Oil Changed	Client Info		<b>Not Chngd</b>	Not Chngd	Not Chngd
Sample Status			<b>ABNORMAL</b>	NORMAL	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	>0.1	<b>NEG</b>	NEG	NEG
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>15	<b>0</b>	2	2
Chromium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m	>2	<b>1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>6	<b>2</b>	1	<1
Lead	ppm	ASTM D5185m	>9	<b>3</b>	2	2
Copper	ppm	ASTM D5185m	>6	<b>1</b>	<1	<1
Tin	ppm	ASTM D5185m	>4	<b>2</b>	2	2
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		<b>0</b>	<1	0
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>0</b>	<1	0
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m		<b>9</b>	7	6
Calcium	ppm	ASTM D5185m		<b>1782</b>	1772	1783
Phosphorus	ppm	ASTM D5185m		<b>267</b>	280	258
Zinc	ppm	ASTM D5185m		<b>341</b>	324	324
Sulfur	ppm	ASTM D5185m		<b>3858</b>	3271	3053

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>181	<b>111</b>	94	79
Sodium	ppm	ASTM D5185m		<b>0</b>	<1	0
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	<1	0

## INFRA-RED

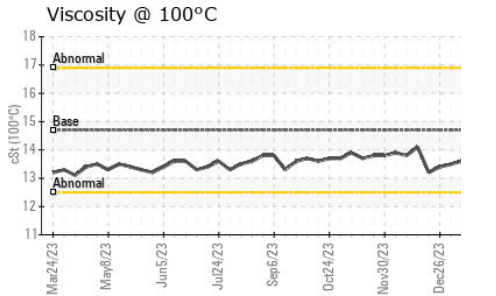
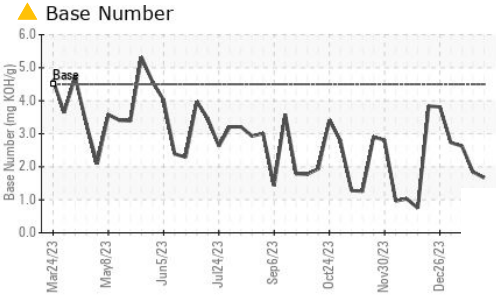
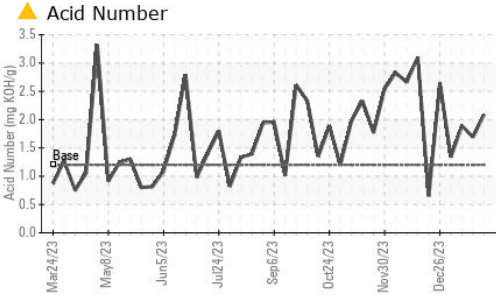
	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844		<b>0</b>	0	0
Nitration	Abs/cm	*ASTM D7624	>20	<b>4.9</b>	5.0	5.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>26.0</b>	24.0	21.5

## FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.7</b>	13.3	11.4
Acid Number (AN)	mg KOH/g	ASTM D8045	1.2	<b>▲ 2.09</b>	1.69	1.89
Base Number (BN)	mg KOH/g	ASTM D2896	4.5	<b>▲ 1.67</b>	1.84	2.63



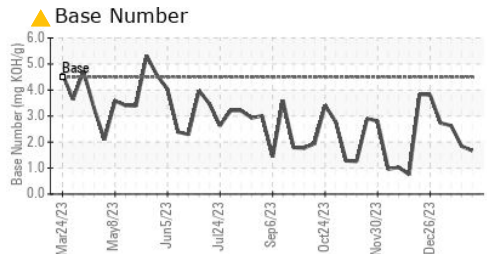
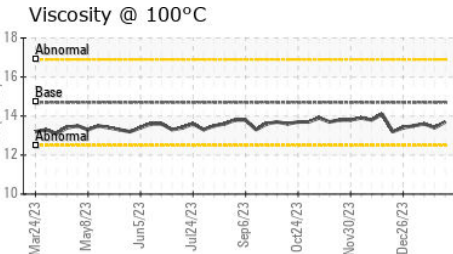
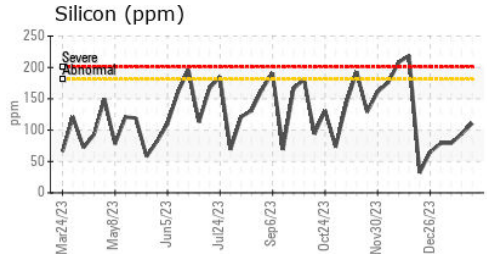
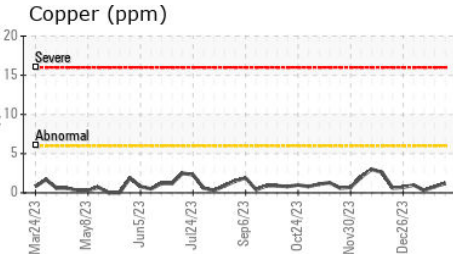
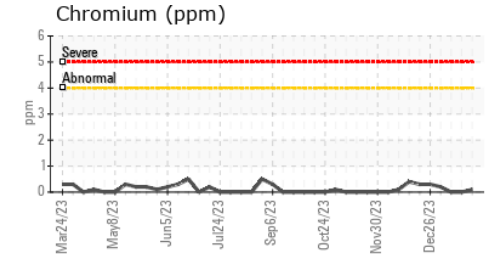
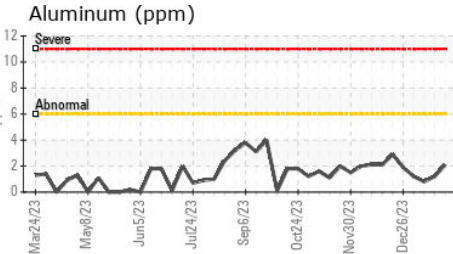
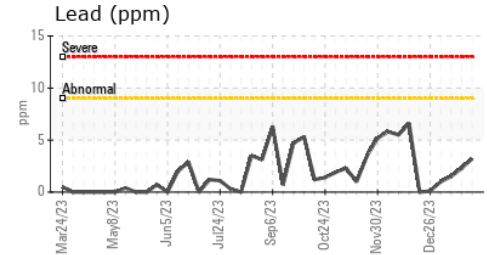
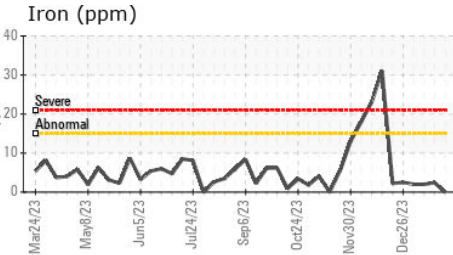
# OIL ANALYSIS REPORT



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	14.7	13.7	13.4

### GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0785358 **Received** : 12 Jan 2024  
**Lab Number** : 06059418 **Diagnosed** : 15 Jan 2024  
**Unique Number** : 10830800 **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

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)