



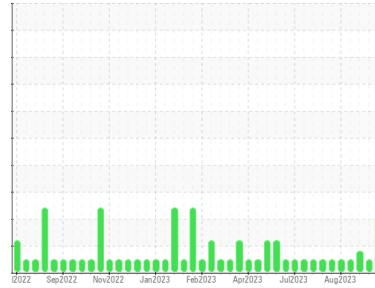
# OIL ANALYSIS REPORT

Sample Rating Trend

DEGRADATION



Machine Id  
**Grand Blanc CAT 3 GBLM03BE**  
 Component  
**Biogas Engine**  
 Fluid  
**CHEVRON HDAX 6500 LFG GAS ENGINE OIL (--- GAL)**



## DIAGNOSIS

### ▲ 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: 200hr oil sample )

### ▲ Wear

The aluminum level is abnormal.

### Contamination

There is no indication of any contamination in the oil.

### ▲ 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>WC0824972</b>	WC0825030	WC0825038
Sample Date	Client Info		<b>22 Sep 2023</b>	13 Sep 2023	06 Sep 2023
Machine Age	hrs	Client Info	<b>79223</b>	78997	78833
Oil Age	hrs	Client Info	<b>207</b>	1000	830
Oil Changed	Client Info		<b>Changed</b>	Not Changd	Not Changd
Sample Status			<b>ABNORMAL</b>	NORMAL	ABNORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >15	<b>2</b>	4	▲ 19
Chromium	ppm	ASTM D5185m >4	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m >2	<b>0</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>6</b>	<1	3
Lead	ppm	ASTM D5185m >9	<b>0</b>	2	<1
Copper	ppm	ASTM D5185m >14	<b>3</b>	6	6
Tin	ppm	ASTM D5185m >4	<b>&lt;1</b>	2	3
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>15</b>	0	2
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>4</b>	2	2
Manganese	ppm	ASTM D5185m	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	<b>24</b>	9	14
Calcium	ppm	ASTM D5185m	<b>1824</b>	2111	2330
Phosphorus	ppm	ASTM D5185m	<b>319</b>	300	328
Zinc	ppm	ASTM D5185m	<b>377</b>	375	434
Sulfur	ppm	ASTM D5185m	<b>3393</b>	4437	4888

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >181	<b>73</b>	130	134
Sodium	ppm	ASTM D5185m	<b>2</b>	3	2
Potassium	ppm	ASTM D5185m >20	<b>0</b>	2	2

## INFRA-RED

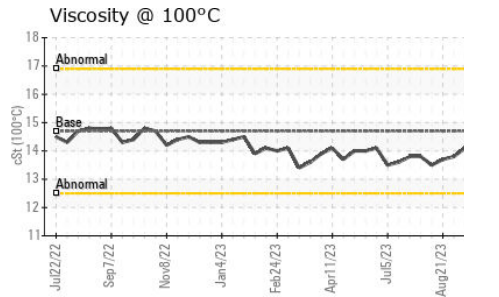
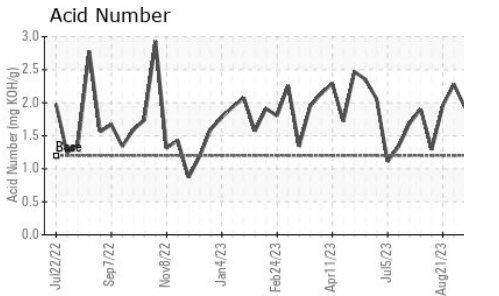
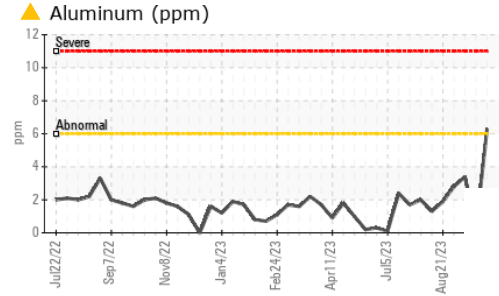
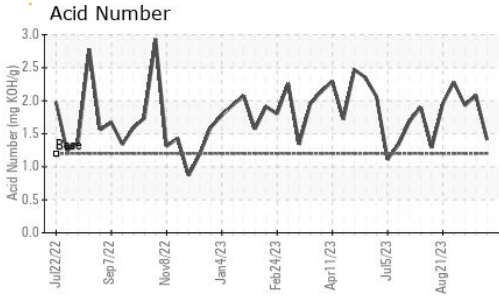
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	<b>5.7</b>	6.8	6.7
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>21.1</b>	26.3	25.6

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>12.8</b>	17.5	17.0
Acid Number (AN)	mg KOH/g	ASTM D8045 1.2	<b>1.41</b>	2.08	1.93
Base Number (BN)	mg KOH/g	ASTM D2896 4.5	▲ <b>1.03</b>	2.50	2.76



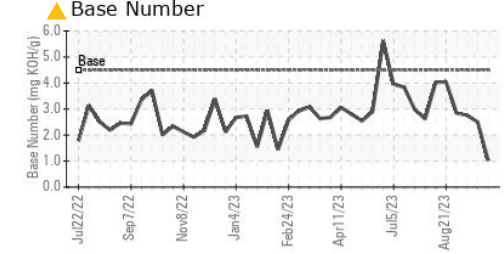
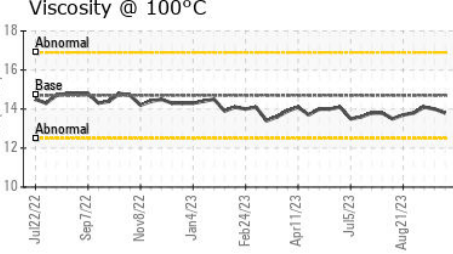
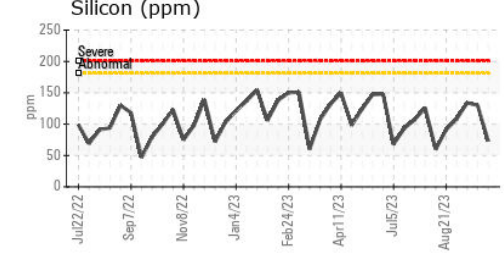
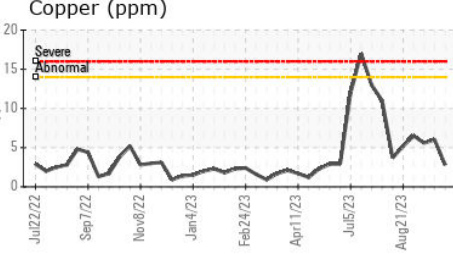
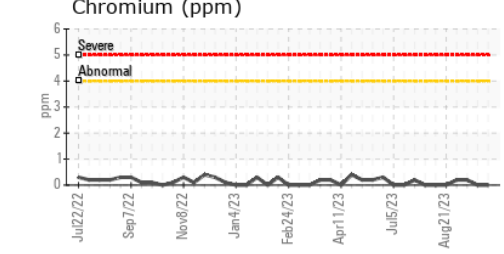
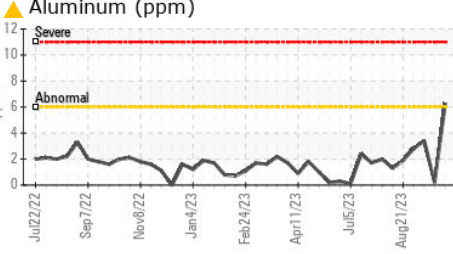
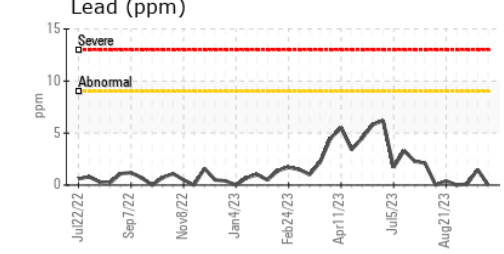
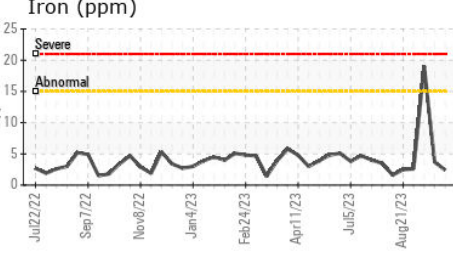
# OIL ANALYSIS REPORT



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	13.8	14.0

### GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0824972 **Received** : 29 Sep 2023  
**Lab Number** : 05965523 **Diagnosed** : 02 Oct 2023  
**Unique Number** : 10672074 **Diagnostician** : Don Baldrige  
**Test Package** : MOB 2

**EDL NA Recips-Grand Blanc**  
 Grand Blanc Powerstation, 2361 West Grand Blanc Road  
 Grand Blanc, MI  
 US 48439  
 Contact: Tony Saint Marie  
 tony.saintmarie@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)

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F: