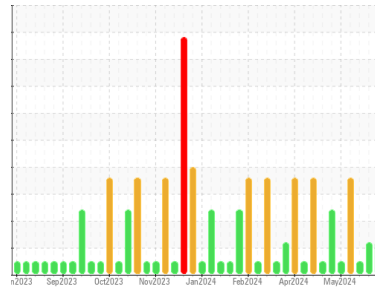




# OIL ANALYSIS REPORT

Machine Id  
**LIDM05BE (S/N GZJ00188A)**  
 Component  
**Biogas Engine**  
 Fluid  
**CHEVRON HDAX 9500 GAS ENGINE OIL 40 (540 LTR)**

Sample Rating Trend



**WEAR**



## DIAGNOSIS

### ▲ Recommendation

Nous vous recommandons d'échantillonner de nouveau dès que possible afin de contrôler la situation.

### ▲ Wear

Le taux d'étain est marginal. Le taux d'antimoine est marginal. Les taux d'usure de tous les autres composants sont normaux.

### Contamination

Il n'y a aucun indice de contamination dans l'huile.

### Fluid Condition

Le résultat pour le BN indique que la réserve d'alcalinité est acceptable pour l'huile. Le AN est acceptable pour ce fluide. L'état de l'huile permet d'en prolonger l'utilisation.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0954712</b>	WC0904256	WC0904268
Sample Date	Client Info		<b>17 Jun 2024</b>	10 Jun 2024	03 Jun 2024
Machine Age	hrs	Client Info	<b>32190</b>	50928	31894
Oil Age	hrs	Client Info	<b>353</b>	9137	57
Oil Changed	Client Info		<b>Not Chngd</b>	Not Chngd	Not Chngd
Sample Status			<b>MARGINAL</b>	MARGINAL	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	
Iron	ppm	ASTM D5185(m)	>14	<b>5</b>	5	2
Chromium	ppm	ASTM D5185(m)	>3	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)		<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>5	<b>2</b>	2	1
Lead	ppm	ASTM D5185(m)	>8	<b>0</b>	0	0
Copper	ppm	ASTM D5185(m)	>5	<b>2</b>	1	<1
Tin	ppm	ASTM D5185(m)	>3	<b>▲ 2</b>	▲ 2	<1
Antimony	ppm	ASTM D5185(m)		<b>▲ 3</b>	▲ 2	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)		<b>5</b>	4	4
Barium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)		<b>3</b>	<1	0
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185(m)		<b>10</b>	10	10
Calcium	ppm	ASTM D5185(m)		<b>1751</b>	1726	1670
Phosphorus	ppm	ASTM D5185(m)		<b>243</b>	241	245
Zinc	ppm	ASTM D5185(m)		<b>303</b>	301	285
Sulfur	ppm	ASTM D5185(m)		<b>2484</b>	2297	1942
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>180	<b>98</b>	82	29
Sodium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	<b>2</b>	1	<1

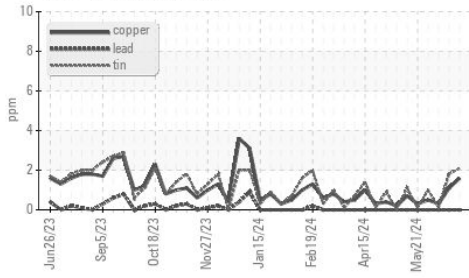
## INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*		<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*		<b>5.2</b>	4.9	4.8
Sulfation	Abs.1mm	ASTM D7415*		<b>20.6</b>	19.6	17.5

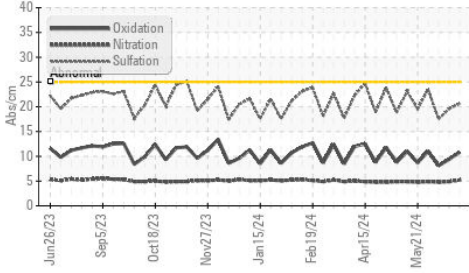


# OIL ANALYSIS REPORT

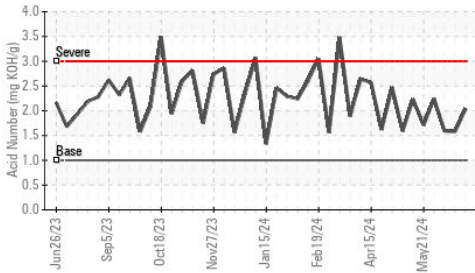
## Non-ferrous Metals



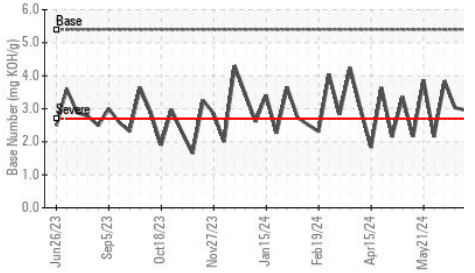
## FT-IR (Direct Trend)



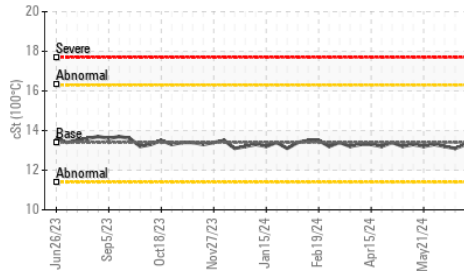
## Acid Number



## Base Number



## Viscosity @ 100°C



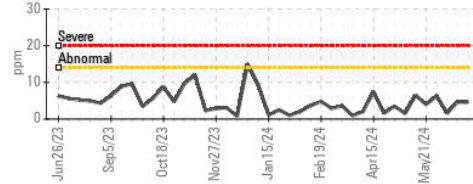
FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	<b>10.8</b>	9.4	8.1
Acid Number (AN)	mg KOH/g	ASTM D974*	<b>2.04</b>	1.58	1.59
Base Number (BN)	mg KOH/g	ASTM D2896*	<b>2.96</b>	3.03	3.84
i-pH	Scale 0-14	ASTM D7946*	<b>5.42</b>	5.15	5.20

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

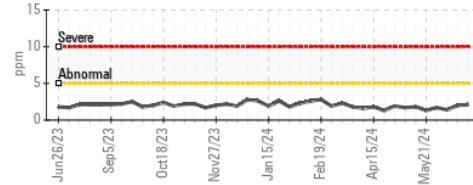
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	<b>13.3</b>	13.1	13.2

## GRAPHS

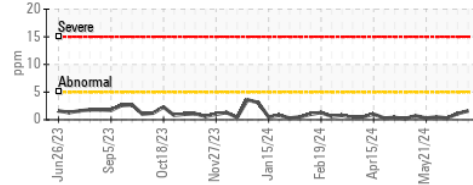
### Iron (ppm)



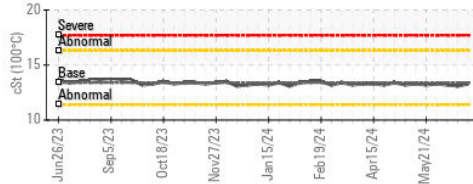
### Aluminum (ppm)



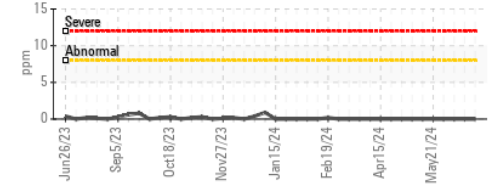
### Copper (ppm)



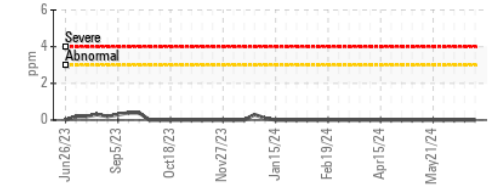
### Viscosity @ 100°C



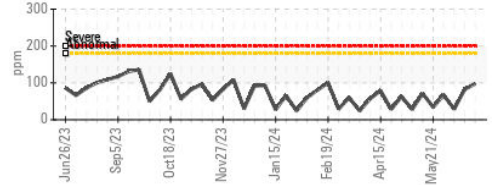
### Lead (ppm)



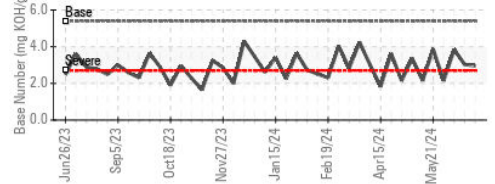
### Chromium (ppm)



### Silicon (ppm)



### Base Number



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0954712 **Received** : 18 Jun 2024  
**Lab Number** : **02642549** **Tested** : 20 Jun 2024  
**Unique Number** : 5800088 **Diagnosed** : 20 Jun 2024 - Kevin Marson  
**Test Package** : MOB 2 ( Additional Tests: i-pH, TAN Auto, TAN Man, Visual )

**EDL NA Recips-Lydia**  
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 eloi.legault@energydi.com  
 T: (450)526-4001  
 F:

To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.