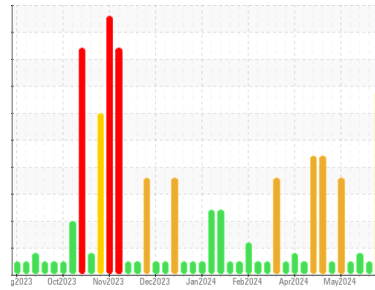




# OIL ANALYSIS REPORT

Machine Id  
**LIDM02BE (S/N GZJ00681)**  
 Component  
**Biogas Engine**  
 Fluid  
**CHEVRON HDAX 9500 GAS ENGINE OIL 40 (540 LTR)**

Sample Rating Trend



GLYCOL



## DIAGNOSIS

### Recommendation

Nous vous recommandons de vérifier la source de la fuite de fluide de refroidissement. Nous vous recommandons de vidanger l'huile de ce composant si vous ne l'avez pas déjà fait. Nous vous recommandons de rincer complètement le composant avant de le remplir l'huile. Nous vous recommandons d'échantillonner de nouveau dès que possible afin de contrôler la situation.

### Wear

Nous avons noté une forte hausse du niveau de fer. Nous avons noté une brusque hausse du taux d'étain. Usure de palier.

### Contamination

Le test de glycol est positif. Il y a une légère concentration de glycol dans le 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. l'huile ne peut plus être utilisée en raison de la présence de contaminants.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0954719</b>	WC0904322	WC0904275
Sample Date	Client Info		<b>26 Jun 2024</b>	03 Jun 2024	27 May 2024
Machine Age	hrs	Client Info	<b>20099</b>	19812	19646
Oil Age	hrs	Client Info	<b>223</b>	69	160
Oil Changed	Client Info		<b>Not Chngd</b>	Not Chngd	Not Chngd
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
Water	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>14	<b>▲ 12</b>	4	<b>▲ 16</b>
Chromium	ppm	ASTM D5185(m)	>3	<b>&lt;1</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>	1	2
Lead	ppm	ASTM D5185(m)	>8	<b>▲ 10</b>	0	0
Copper	ppm	ASTM D5185(m)	>5	<b>▲ 10</b>	<1	2
Tin	ppm	ASTM D5185(m)	>3	<b>▲ 2</b>	0	1
Antimony	ppm	ASTM D5185(m)		<b>2</b>	<1	2
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>20</b>	4	4
Barium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)		<b>18</b>	<1	<1
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)		<b>9</b>	10	11
Calcium	ppm	ASTM D5185(m)		<b>1586</b>	1647	1690
Phosphorus	ppm	ASTM D5185(m)		<b>229</b>	242	234
Zinc	ppm	ASTM D5185(m)		<b>289</b>	279	285
Sulfur	ppm	ASTM D5185(m)		<b>2035</b>	2074	2602
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>61</b>	28	61
Sodium	ppm	ASTM D5185(m)	>20	<b>● 94</b>	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	<b>4</b>	1	1
Glycol	%	ASTM D7922*		<b>▲ 0.017</b>	NEG	NEG

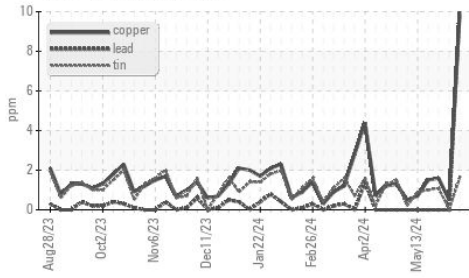
## INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*		<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*		<b>5.1</b>	4.7	4.5
Sulfation	Abs./1mm	ASTM D7415*		<b>17.8</b>	18.0	20.5

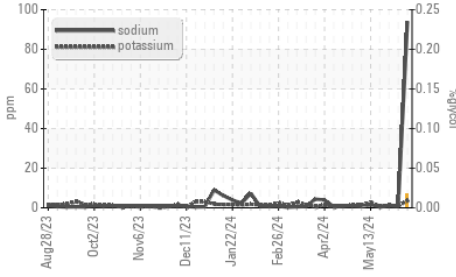


# OIL ANALYSIS REPORT

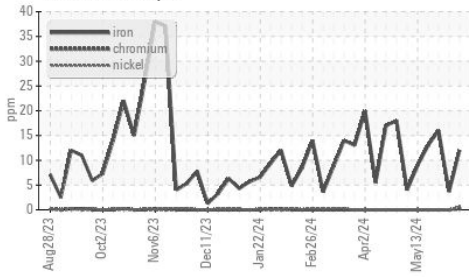
## Non-ferrous Metals



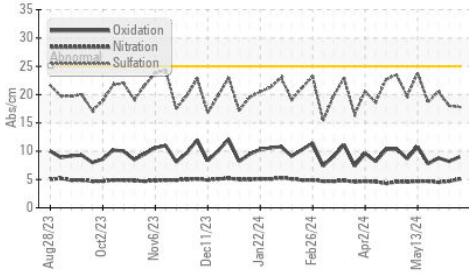
## Glycol Contamination



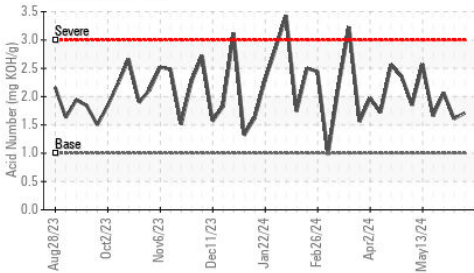
## Ferrous Alloys



## FT-IR (Direct Trend)



## Acid Number



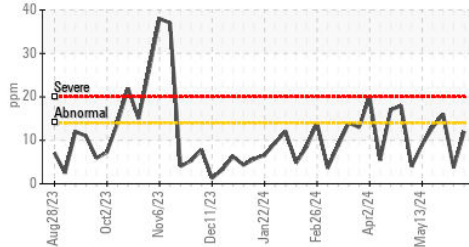
FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	<b>9.0</b>	8.2	8.8
Acid Number (AN)	mg KOH/g	ASTM D974*	<b>1.71</b>	1.61	2.07
Base Number (BN)	mg KOH/g	ASTM D2896*	<b>4.10</b>	3.63	2.51
i-pH	Scale 0-14	ASTM D7946*	<b>5.43</b>	5.00	4.56

VISUAL	method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	<b>NEG</b>	NEG	NEG
Free Water	scalar	Visual*	<b>NEG</b>	NEG	NEG

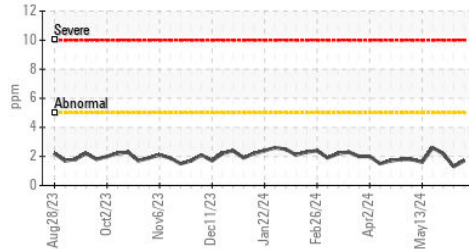
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	<b>13.2</b>	13.1	13.2

## GRAPHS

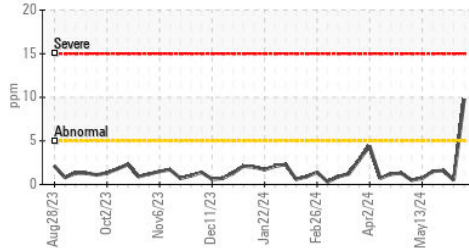
### Iron (ppm)



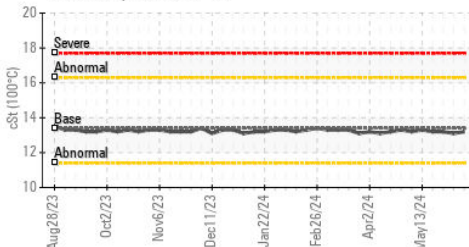
### Aluminum (ppm)



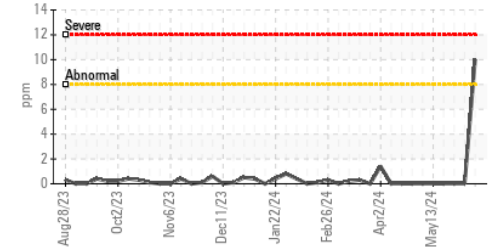
### Copper (ppm)



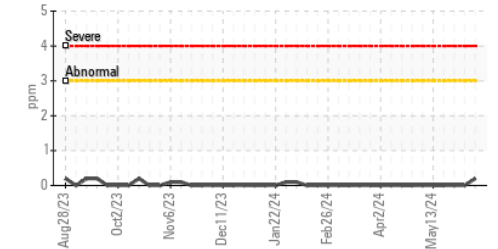
### Viscosity @ 100°C



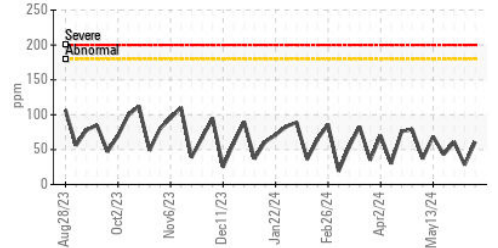
### Lead (ppm)



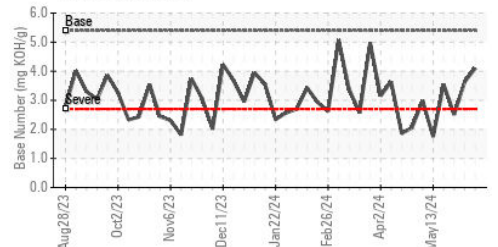
### Chromium (ppm)



### Silicon (ppm)



### Base Number



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0954719 **Received** : 27 Jun 2024  
**Lab Number** : **02644468** **Tested** : 28 Jun 2024  
**Unique Number** : 5802007 **Diagnosed** : 28 Jun 2024 - Kevin Marson  
**Test Package** : MOB 2 ( Additional Tests: GLYCOL, i-pH, TAN Auto, TAN Man )

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.

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