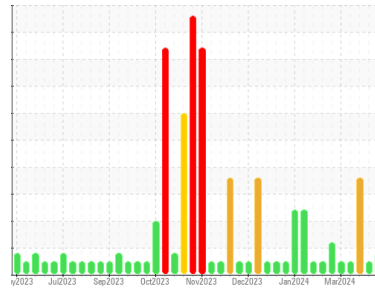




# OIL ANALYSIS REPORT

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

Sample Rating Trend



## DIAGNOSIS

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

**Wear**  
 Usure de cylindre, de vilebrequin ou d'arbre à cames.

**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>WC0904335</b>	WC0904327	WC0904347
Sample Date	Client Info		<b>02 Apr 2024</b>	25 Mar 2024	18 Mar 2024
Machine Age	hrs	Client Info	<b>9264</b>	9080	8982
Oil Age	hrs	Client Info	<b>228</b>	44	331
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
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184*		<b>0</b>	---	---
Iron	ppm	ASTM D5185(m) >14	<b>▲ 20</b>	13	14
Chromium	ppm	ASTM D5185(m) >3	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)	<b>0</b>	0	<1
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	2
Lead	ppm	ASTM D5185(m) >8	<b>1</b>	0	<1
Copper	ppm	ASTM D5185(m) >5	<b>4</b>	3	1
Tin	ppm	ASTM D5185(m) >3	<b>2</b>	<1	2
Antimony	ppm	ASTM D5185(m)	<b>2</b>	2	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>4</b>	5	4
Barium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	<b>&lt;1</b>	1	1
Manganese	ppm	ASTM D5185(m)	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)	<b>12</b>	13	13
Calcium	ppm	ASTM D5185(m)	<b>1703</b>	1633	1780
Phosphorus	ppm	ASTM D5185(m)	<b>241</b>	234	253
Zinc	ppm	ASTM D5185(m)	<b>293</b>	293	294
Sulfur	ppm	ASTM D5185(m)	<b>2619</b>	1740	3345
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>70</b>	35	83
Sodium	ppm	ASTM D5185(m) >20	<b>4</b>	4	<1
Potassium	ppm	ASTM D5185(m) >20	<b>1</b>	<1	2

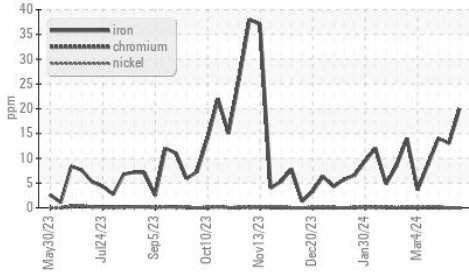
## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*	<b>4.7</b>	4.6	4.8
Sulfation	Abs.1mm	ASTM D7415*	<b>20.6</b>	16.5	22.9

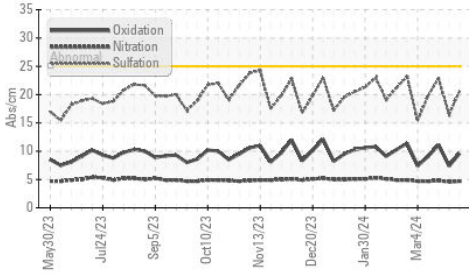


# OIL ANALYSIS REPORT

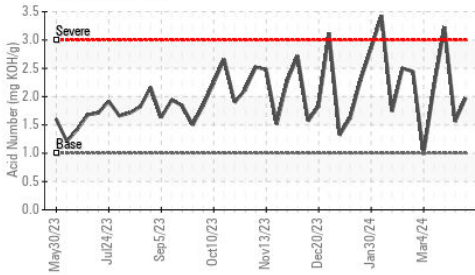
## ▲ Ferrous Alloys



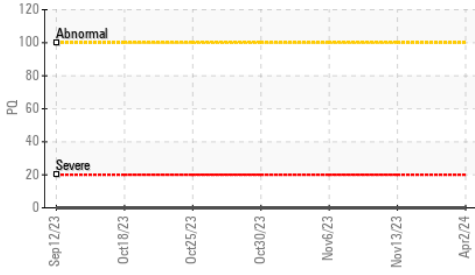
## FT-IR (Direct Trend)



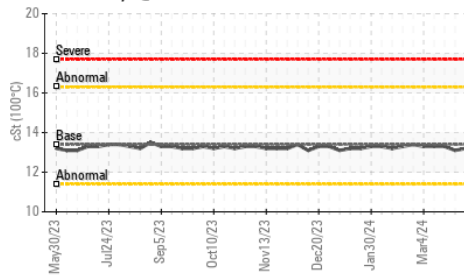
## Acid Number



## PQ



## Viscosity @ 100°C



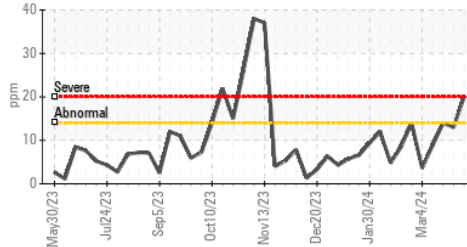
FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	<b>9.6</b>	7.4	11.1
Acid Number (AN)	mg KOH/g	ASTM D974*	<b>1.97</b>	1.56	▲ 3.23
Base Number (BN)	mg KOH/g	ASTM D2896*	<b>3.15</b>	4.98	▲ 2.57
i-pH	Scale 0-14	ASTM D7946*	<b>6.01</b>	5.43	▲ 3.92

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

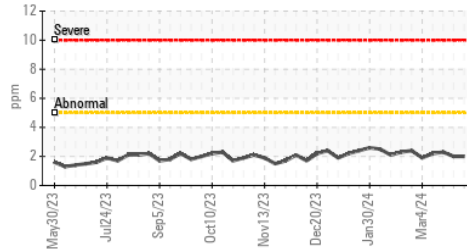
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	<b>13.2</b>	13.1	13.3

## GRAPHS

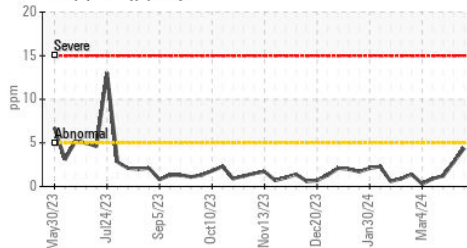
### ▲ Iron (ppm)



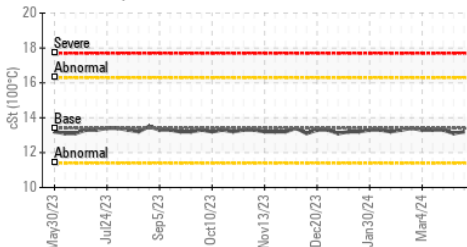
### Aluminum (ppm)



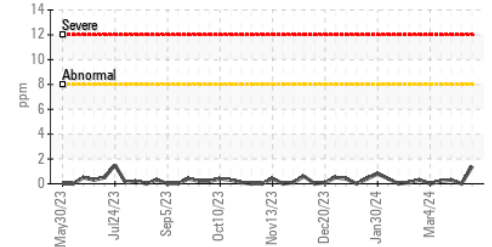
### Copper (ppm)



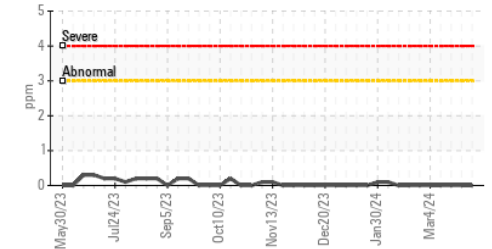
### Viscosity @ 100°C



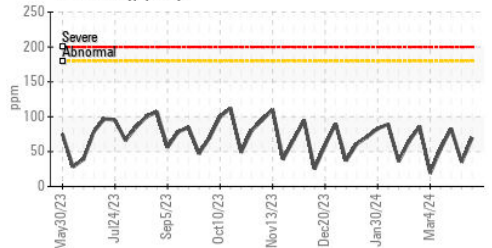
### Lead (ppm)



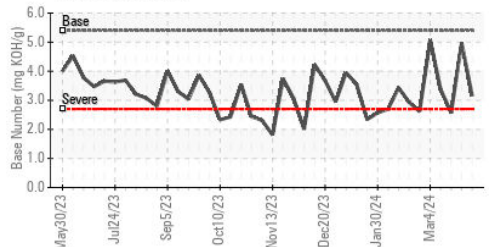
### Chromium (ppm)



### Silicon (ppm)



### Base Number



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0904335 **Received** : 04 Apr 2024  
**Lab Number** : **02626598** **Tested** : 09 Apr 2024  
**Unique Number** : 5759730 **Diagnosed** : 09 Apr 2024 - Kevin Marson  
**Test Package** : MOB 2 ( Additional Tests: i-pH, PQ, TAN Auto, TAN Man )

**EDL NA Recips-Lydia**  
 6985 CHEMIN DES SOURCES  
 LACHUTE, QC  
 CA J8H 2C5  
 Contact: Eloi Legault  
 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.