

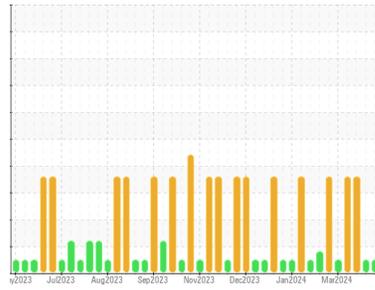


# OIL ANALYSIS REPORT



Machine Id  
**LIDM03BE (S/N GZJ-00163)**  
 Component  
**Biogas Engine**  
 Fluid  
**CHEVRON HDAX 9500 GAS ENGINE OIL 40 (540 LTR)**

Sample Rating Trend



**NORMAL**



## DIAGNOSIS

### Recommendation

Échantillonner de nouveau l'équipement au prochain intervalle de vidange afin d'en surveiller la condition.

### Wear

Les taux d'usure de tous les 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>WC0904345</b>	WC0904336	WC0904328
Sample Date	Client Info		<b>15 Apr 2024</b>	02 Apr 2024	25 Mar 2024
Machine Age	hrs	Client Info	<b>43794</b>	43515	43348
Oil Age	hrs	Client Info	<b>88</b>	166	329
Oil Changed	Client Info		<b>Not Chngd</b>	Not Chngd	Changed
Sample Status			<b>NORMAL</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
Iron	ppm	ASTM D5185(m) >14	<b>8</b>	5	8
Chromium	ppm	ASTM D5185(m) >3	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)	<b>0</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	2
Lead	ppm	ASTM D5185(m) >8	<b>0</b>	0	0
Copper	ppm	ASTM D5185(m) >5	<b>&lt;1</b>	<1	1
Tin	ppm	ASTM D5185(m) >3	<b>&lt;1</b>	<1	1
Antimony	ppm	ASTM D5185(m)	<b>1</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>4</b>	4	4
Barium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	<b>0</b>	<1	<1
Manganese	ppm	ASTM D5185(m)	<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185(m)	<b>12</b>	13	13
Calcium	ppm	ASTM D5185(m)	<b>1654</b>	1736	1774
Phosphorus	ppm	ASTM D5185(m)	<b>240</b>	245	246
Zinc	ppm	ASTM D5185(m)	<b>289</b>	293	307
Sulfur	ppm	ASTM D5185(m)	<b>2360</b>	2928	3257
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>43</b>	55	88
Sodium	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	<1
Potassium	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	1	<1

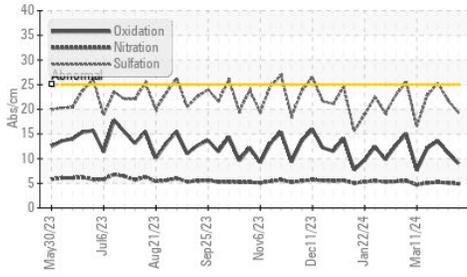
## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*	<b>4.9</b>	5.1	5.2
Sulfation	Abs./1mm	ASTM D7415*	<b>19.3</b>	21.8	25.3



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FT-IR (Direct Trend)



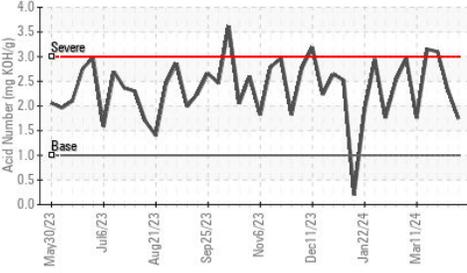
FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	<b>9.0</b>	11.2	13.6
Acid Number (AN)	mg KOH/g	ASTM D974*	<b>1.74</b>	2.31	▲ 3.10
Base Number (BN)	mg KOH/g	ASTM D2896*	<b>3.52</b>	2.64	▲ 2.06
i-pH	Scale 0-14	ASTM D7946*	<b>5.31</b>	6.12	▲ 3.66

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

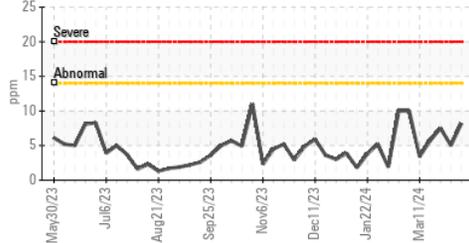
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	<b>13.2</b>	13.3	13.5

GRAPHS

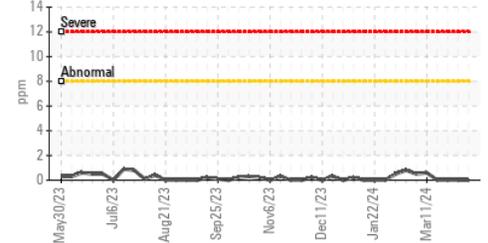
Acid Number



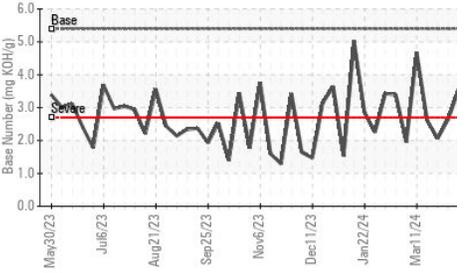
Iron (ppm)



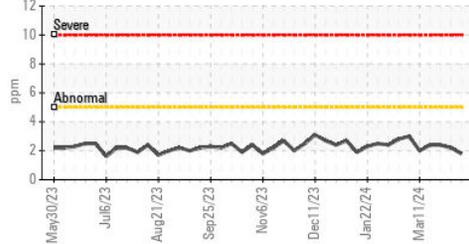
Lead (ppm)



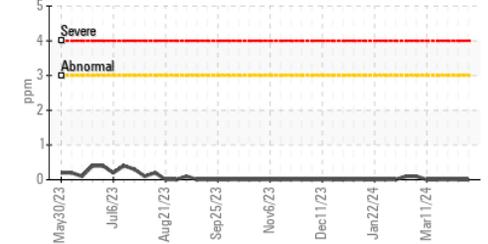
Base Number



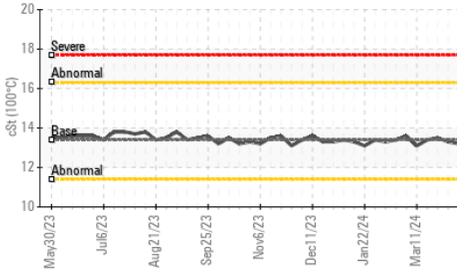
Aluminum (ppm)



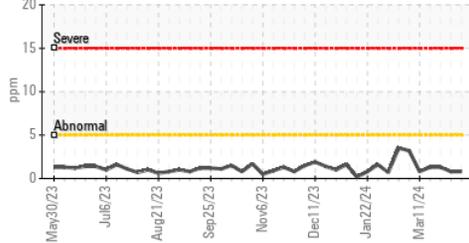
Chromium (ppm)



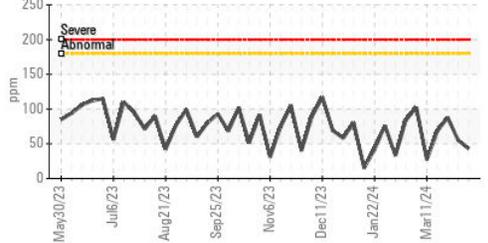
Viscosity @ 100°C



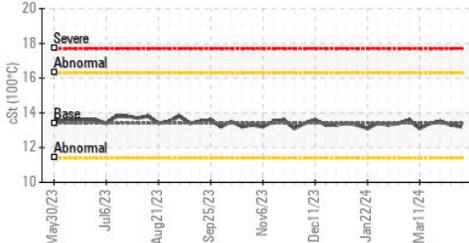
Copper (ppm)



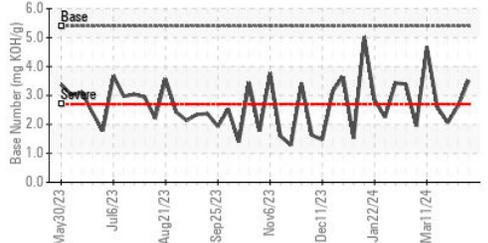
Silicon (ppm)



Viscosity @ 100°C



Base Number



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0904345 **Received** : 17 Apr 2024  
**Lab Number** : 02629586 **Tested** : 19 Apr 2024  
**Unique Number** : 5762718 **Diagnosed** : 19 Apr 2024 - Kevin Marson  
**Test Package** : MOB 2 ( Additional Tests: i-pH, TAN Auto, TAN Man )

**EDL NA Recips-Lydia**  
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 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.