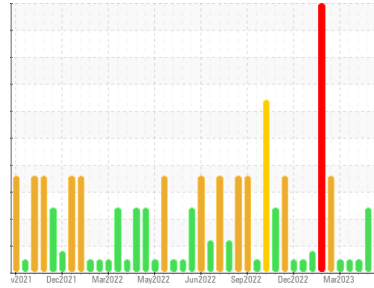




# OIL ANALYSIS REPORT

Sample Rating Trend



DEGRADATION



Machine Id  
**LIDM01BE (S/N GZJ-00169)**  
 Component  
**Biogas Engine**  
 Fluid  
**CHEVRON HDAX 6500 LFG GAS ENGINE OIL (540 LTR)**

## DIAGNOSIS

### Recommendation

Nous vous recommandons de vidanger l'huile de ce composant si vous ne l'avez pas déjà fait. 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 niveau de AN est supérieur à la limite recommandée. Le niveau de BN est inférieur à la normale. l'huile ne peut plus être utilisée.

## SAMPLE INFORMATION

|               | method      | limit/base | current            | history1    | history2    |
|---------------|-------------|------------|--------------------|-------------|-------------|
| Sample Number | Client Info |            | <b>WC0772212</b>   | WC0772190   | WC0772202   |
| Sample Date   | Client Info |            | <b>11 Apr 2023</b> | 27 Mar 2023 | 20 Mar 2023 |
| Machine Age   | Client Info |            | <b>44187</b>       | 43960       | 43927       |
| Oil Age       | Client Info |            | <b>151</b>         | 377         | 344         |
| Oil Changed   | Client Info |            | <b>Not Changed</b> | Not Changd  | Not Changed |
| Sample Status |             |            | <b>ABNORMAL</b>    | ABNORMAL    | 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 | >0.1       | <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) | >15     | <b>5</b>     | 8        | 4 |
| Chromium  | ppm    | ASTM D5185(m) | >4      | <b>0</b>     | <1       | 0 |
| Nickel    | ppm    | ASTM D5185(m) | >2      | <b>&lt;1</b> | <1       | 0 |
| Titanium  | ppm    | ASTM D5185(m) |         | <b>0</b>     | 0        | 0 |
| Silver    | ppm    | ASTM D5185(m) | >5      | <b>0</b>     | 0        | 0 |
| Aluminum  | ppm    | ASTM D5185(m) | >6      | <b>2</b>     | 2        | 2 |
| Lead      | ppm    | ASTM D5185(m) | >9      | <b>2</b>     | 2        | 1 |
| Copper    | ppm    | ASTM D5185(m) | >6      | <b>1</b>     | 2        | 2 |
| Tin       | ppm    | ASTM D5185(m) | >4      | <b>1</b>     | 2        | 2 |
| Antimony  | ppm    | ASTM D5185(m) |         | <b>1</b>     | 3        | 3 |
| 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>2</b>     | 1        | 1    |
| 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>&lt;1</b> | <1       | <1   |
| Magnesium  | ppm    | ASTM D5185(m) |         | <b>9</b>     | 8        | 7    |
| Calcium    | ppm    | ASTM D5185(m) |         | <b>1894</b>  | 1936     | 1870 |
| Phosphorus | ppm    | ASTM D5185(m) |         | <b>278</b>   | 291      | 283  |
| Zinc       | ppm    | ASTM D5185(m) |         | <b>294</b>   | 317      | 312  |
| Sulfur     | ppm    | ASTM D5185(m) |         | <b>3151</b>  | 2282     | 2201 |
| Lithium    | ppm    | ASTM D5185(m) |         | <b>&lt;1</b> | <1       | <1   |

## CONTAMINANTS

|           | method | limit/base    | current | history1     | history2 |    |
|-----------|--------|---------------|---------|--------------|----------|----|
| Silicon   | ppm    | ASTM D5185(m) | >181    | <b>58</b>    | 103      | 85 |
| Sodium    | ppm    | ASTM D5185(m) |         | <b>&lt;1</b> | <1       | <1 |
| Potassium | ppm    | ASTM D5185(m) | >20     | <b>&lt;1</b> | <1       | <1 |

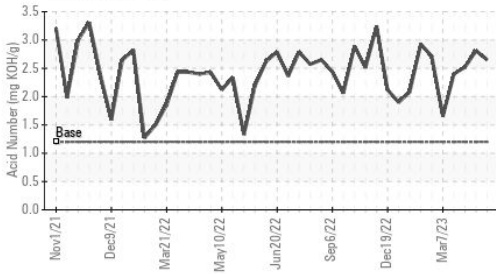
## INFRA-RED

|           | method   | limit/base  | current | history1    | history2 |      |
|-----------|----------|-------------|---------|-------------|----------|------|
| Soot %    | %        | ASTM D7844* |         | <b>0</b>    | 0        | 0    |
| Nitration | Abs/cm   | ASTM D7624* | >20     | <b>4.2</b>  | 7.2      | 4.5  |
| Sulfation | Abs./1mm | ASTM D7415* | >30     | <b>19.2</b> | 24.7     | 18.3 |

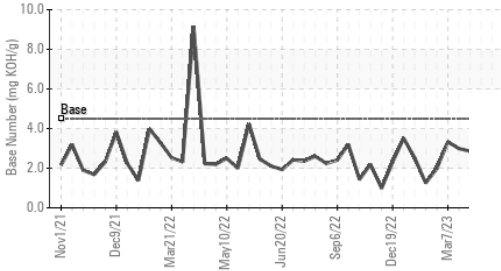


# OIL ANALYSIS REPORT

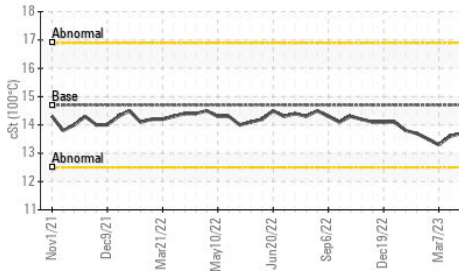
### ▲ Acid Number



### ▲ Base Number



### Viscosity @ 100°C



### FLUID DEGRADATION

|                  | method     | limit/base  | current | history1      | history2 |      |
|------------------|------------|-------------|---------|---------------|----------|------|
| Oxidation        | Abs./1mm   | ASTM D7414* | >25     | <b>8.0</b>    | 17.5     | 9.3  |
| Acid Number (AN) | mg KOH/g   | ASTM D974*  | 1.2     | ▲ <b>2.65</b> | ▲ 2.81   | 2.52 |
| Base Number (BN) | mg KOH/g   | ASTM D2896* | 4.5     | ▲ <b>2.50</b> | ▲ 2.76   | 2.86 |
| i-pH             | Scale 0-14 | ASTM D7946* | <4.5    | <b>4.88</b>   | 4.66     | 4.66 |

### VISUAL

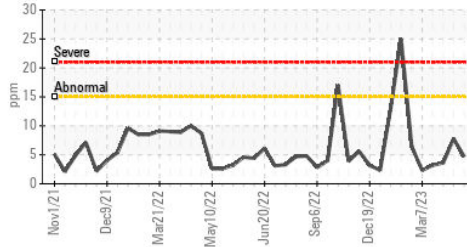
|                  | method | limit/base | current | history1   | history2 |     |
|------------------|--------|------------|---------|------------|----------|-----|
| Emulsified Water | scalar | Visual*    | >0.1    | <b>NEG</b> | NEG      | NEG |
| Free Water       | scalar | Visual*    |         | <b>NEG</b> | NEG      | NEG |

### FLUID PROPERTIES

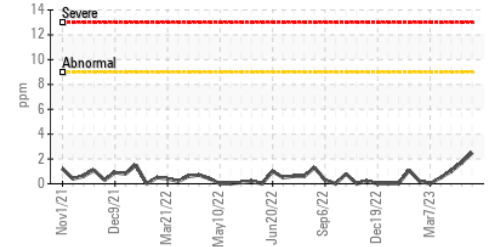
|              | method | limit/base    | current | history1    | history2 |      |
|--------------|--------|---------------|---------|-------------|----------|------|
| Visc @ 100°C | cSt    | ASTM D7279(m) | 14.7    | <b>13.3</b> | 13.8     | 13.7 |

### GRAPHS

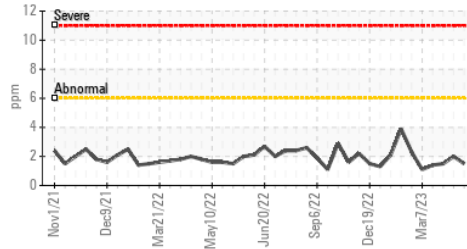
#### Iron (ppm)



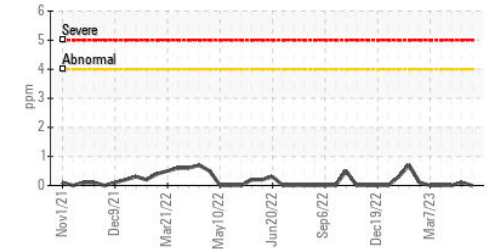
#### Lead (ppm)



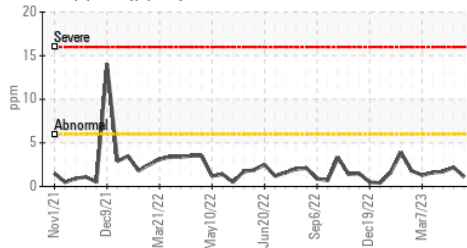
#### Aluminum (ppm)



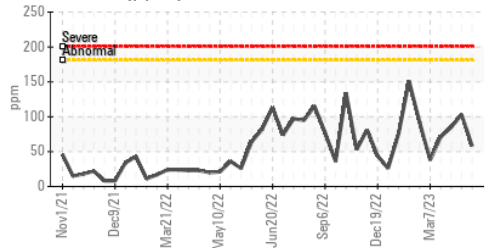
#### Chromium (ppm)



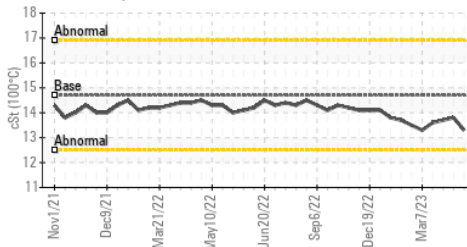
#### Copper (ppm)



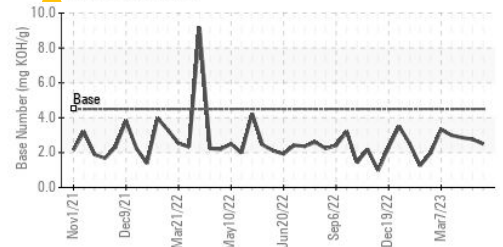
#### Silicon (ppm)



#### Viscosity @ 100°C



#### ▲ Base Number



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0772212 **Received** : 12 Apr 2023  
**Lab Number** : 02550835 **Diagnosed** : 13 Apr 2023  
**Unique Number** : 5563850 **Diagnostician** : Kevin Marson  
**Test Package** : MOB 2 ( Additional Tests: 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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