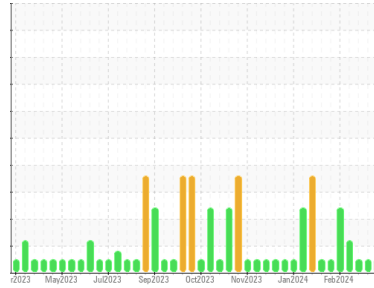




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
LIDM07BE (S/N GZJ00166)
 Component
Biogas Engine
 Fluid
CHEVRON HDAX 9500 GAS ENGINE OIL 40 (540 LTR)

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 | | WC0904339 | WC0904358 | WC0904351 |
| Sample Date | Client Info | | 18 Mar 2024 | 04 Mar 2024 | 26 Feb 2024 |
| Machine Age | hrs | Client Info | 27704 | 27440 | 27272 |
| Oil Age | hrs | Client Info | 136 | 283 | 115 |
| Oil Changed | Client Info | | Not Chngd | Not Chngd | Not Chngd |
| Sample Status | | | NORMAL | NORMAL | NORMAL |

CONTAMINATION

| | method | limit/base | current | history1 | history2 |
|--------|-----------|------------|----------------|----------|----------|
| Fuel | WC Method | >4.0 | <1.0 | <1.0 | <1.0 |
| Water | WC Method | >0.1 | NEG | NEG | NEG |
| Glycol | WC Method | | NEG | NEG | NEG |

WEAR METALS

| | method | limit/base | current | history1 | history2 | |
|-----------|--------|---------------|---------|--------------|----------|----|
| Iron | ppm | ASTM D5185(m) | >15 | 5 | 4 | 2 |
| Chromium | ppm | ASTM D5185(m) | >4 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185(m) | >2 | <1 | 0 | <1 |
| Titanium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | >5 | 0 | <1 | 0 |
| Aluminum | ppm | ASTM D5185(m) | >6 | 2 | 3 | 2 |
| Lead | ppm | ASTM D5185(m) | >9 | <1 | 0 | 0 |
| Copper | ppm | ASTM D5185(m) | >6 | <1 | <1 | <1 |
| Tin | ppm | ASTM D5185(m) | >4 | <1 | 1 | <1 |
| Antimony | ppm | ASTM D5185(m) | | <1 | 2 | <1 |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Beryllium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |

ADDITIVES

| | method | limit/base | current | history1 | history2 | |
|------------|--------|---------------|---------|--------------|----------|------|
| Boron | ppm | ASTM D5185(m) | | 4 | 4 | 4 |
| Barium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185(m) | | 1 | 1 | 1 |
| Manganese | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Magnesium | ppm | ASTM D5185(m) | | 12 | 13 | 13 |
| Calcium | ppm | ASTM D5185(m) | | 1733 | 1783 | 1733 |
| Phosphorus | ppm | ASTM D5185(m) | | 247 | 251 | 248 |
| Zinc | ppm | ASTM D5185(m) | | 287 | 297 | 290 |
| Sulfur | ppm | ASTM D5185(m) | | 2524 | 3002 | 2293 |
| Lithium | ppm | ASTM D5185(m) | | <1 | <1 | <1 |

CONTAMINANTS

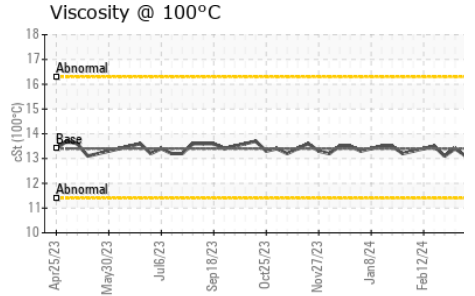
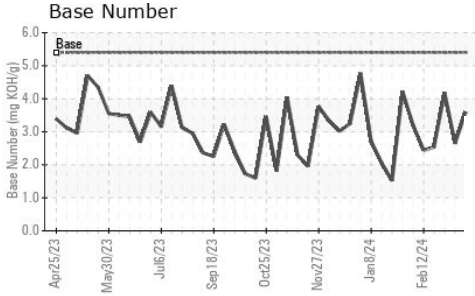
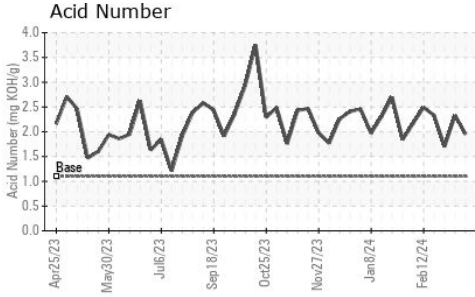
| | method | limit/base | current | history1 | history2 | |
|-----------|--------|---------------|---------|--------------|----------|----|
| Silicon | ppm | ASTM D5185(m) | >181 | 50 | 73 | 41 |
| Sodium | ppm | ASTM D5185(m) | | <1 | <1 | <1 |
| Potassium | ppm | ASTM D5185(m) | >20 | 2 | 2 | 2 |

INFRA-RED

| | method | limit/base | current | history1 | history2 | |
|-----------|----------|-------------|---------|-------------|----------|------|
| Soot % | % | ASTM D7844* | | 0 | 0 | 0 |
| Nitration | Abs/cm | ASTM D7624* | >20 | 4.6 | 5.0 | 4.9 |
| Sulfation | Abs./1mm | ASTM D7415* | >30 | 19.1 | 22.0 | 18.6 |



OIL ANALYSIS REPORT

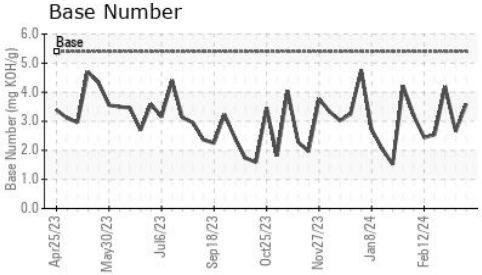
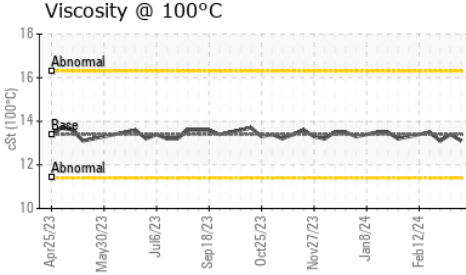
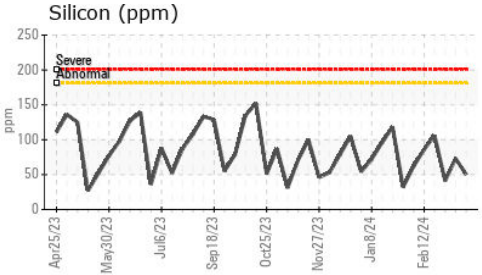
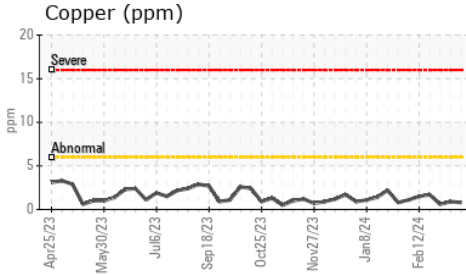
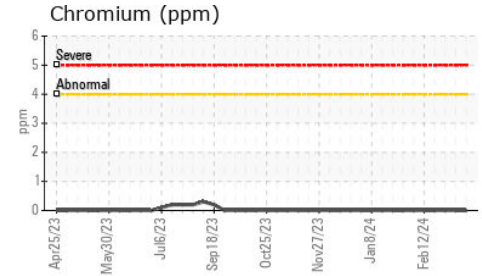
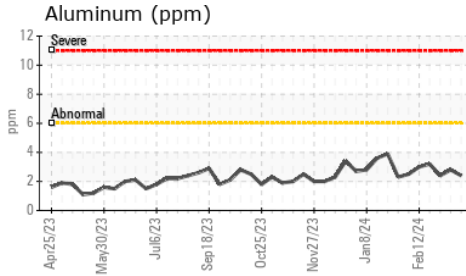
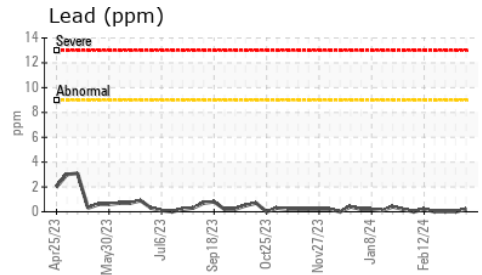
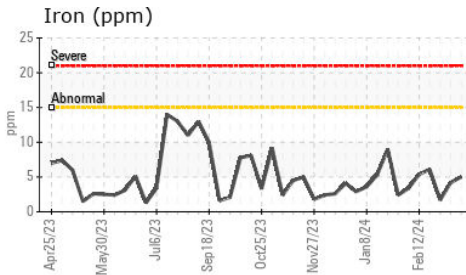


| FLUID DEGRADATION | method | limit/base | current | history1 | history2 | |
|-------------------|------------|-------------|---------|-------------|----------|------|
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 8.8 | 11.0 | 9.0 |
| Acid Number (AN) | mg KOH/g | ASTM D974* | 1.1 | 1.95 | 2.33 | 1.70 |
| Base Number (BN) | mg KOH/g | ASTM D2896* | 5.4 | 3.59 | 2.65 | 4.19 |
| i-pH | Scale 0-14 | ASTM D7946* | <4.5 | 5.21 | 4.98 | 5.75 |

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

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 | |
|------------------|--------|---------------|---------|-------------|----------|------|
| Visc @ 100°C | cSt | ASTM D7279(m) | 13.4 | 13.1 | 13.4 | 13.1 |

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0904339 **Received** : 19 Mar 2024
Lab Number : **02623034** **Tested** : 20 Mar 2024
Unique Number : 5748153 **Diagnosed** : 20 Mar 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.