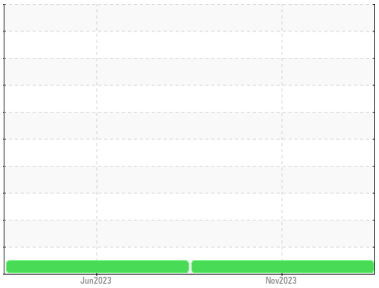
# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Machine Id
**7146**
Component
**Diesel Engine**
Fluid
**DIESEL ENGINE OIL SAE 10W30 (--- GAL)**

## DIAGNOSIS

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

**Wear**
Les taux de métaux sont typiques pour la période de rodage d'un nouveau composant.

**Contamination**
Il n`y a aucun indice de contamination dans l'huile.

**Fluid Condition**
L'état de l'huile est acceptable pour la durée de service.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **GFL0097029** | GFL0084459 | --- |
| Sample Date | | Client Info | | **17 Nov 2023** | 02 Jun 2023 | --- |
| Machine Age | kms | Client Info | | **18545** | 111189 | --- |
| Oil Age | kms | Client Info | | **0** | 0 | --- |
| Oil Changed | | Client Info | | **Changed** | Changed | --- |
| Sample Status | | | | **NORMAL** | NORMAL | --- |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Fuel | | WC Method | >5 | **<1.0** | <1.0 | --- |
| Water | | WC Method | >0.2 | **NEG** | NEG | --- |
| Glycol | | WC Method | | **NEG** | NEG | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185(m) | >100 | **17** | 9 | --- |
| Chromium | ppm | ASTM D5185(m) | >20 | **<1** | <1 | --- |
| Nickel | ppm | ASTM D5185(m) | >4 | **0** | 0 | --- |
| Titanium | ppm | ASTM D5185(m) | | **0** | <1 | --- |
| Silver | ppm | ASTM D5185(m) | >3 | **<1** | 0 | --- |
| Aluminum | ppm | ASTM D5185(m) | >20 | **7** | 5 | --- |
| Lead | ppm | ASTM D5185(m) | >40 | **0** | 0 | --- |
| Copper | ppm | ASTM D5185(m) | >330 | **5** | 2 | --- |
| Tin | ppm | ASTM D5185(m) | >15 | **<1** | 0 | --- |
| Antimony | ppm | ASTM D5185(m) | | **0** | 0 | --- |
| Vanadium | ppm | ASTM D5185(m) | | **0** | 0 | --- |
| Beryllium | ppm | ASTM D5185(m) | | **0** | 0 | --- |
| Cadmium | ppm | ASTM D5185(m) | | **0** | 0 | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185(m) | 250 | **2** | 3 | --- |
| Barium | ppm | ASTM D5185(m) | 10 | **<1** | 0 | --- |
| Molybdenum | ppm | ASTM D5185(m) | 100 | **59** | 59 | --- |
| Manganese | ppm | ASTM D5185(m) | | **0** | <1 | --- |
| Magnesium | ppm | ASTM D5185(m) | 450 | **922** | 960 | --- |
| Calcium | ppm | ASTM D5185(m) | 3000 | **1075** | 1106 | --- |
| Phosphorus | ppm | ASTM D5185(m) | 1150 | **954** | 1099 | --- |
| Zinc | ppm | ASTM D5185(m) | 1350 | **1160** | 1178 | --- |
| Sulfur | ppm | ASTM D5185(m) | 4250 | **2399** | 2641 | --- |
| Lithium | ppm | ASTM D5185(m) | | **<1** | <1 | --- |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185(m) | >25 | **5** | 4 | --- |
| Sodium | ppm | ASTM D5185(m) | | **8** | 4 | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | **5** | 2 | --- |

| INFRA-RED | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Soot % | % | ASTM D7844* | >3 | **0.4** | 0.2 | --- |
| Nitration | Abs/cm | ASTM D7624* | >20 | **6.9** | 6.1 | --- |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | **18.9** | 18.6 | --- |

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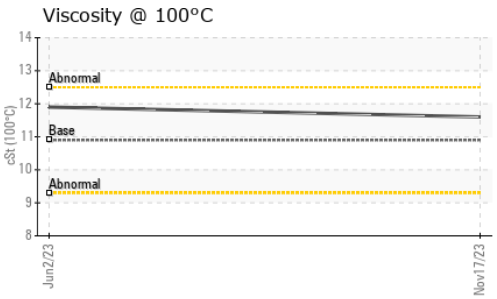
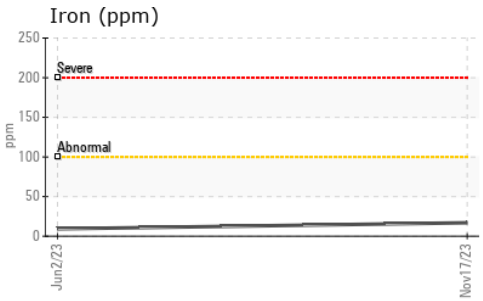


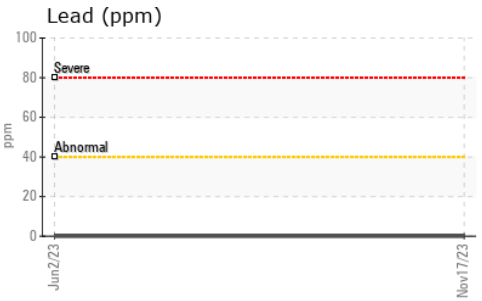

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | **13.6** | 13.7 | --- |

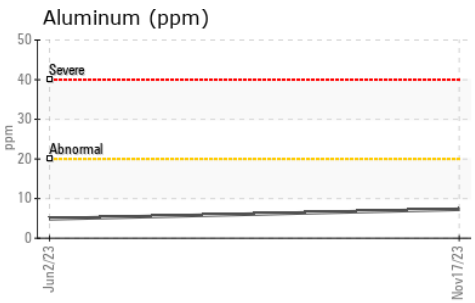
| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Emulsified Water | scalar | Visual* | >0.2 | **NEG** | NEG | --- |
| Free Water | scalar | Visual* | | **NEG** | NEG | --- |

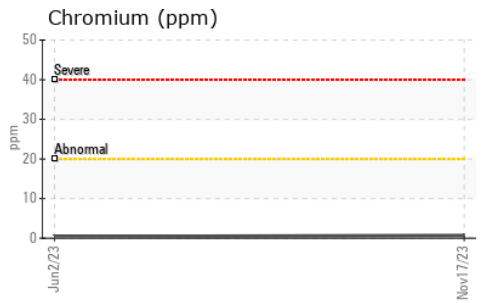
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 100°C | cSt | ASTM D7279(m) | 10.9 | **11.6** | 11.9 | --- |

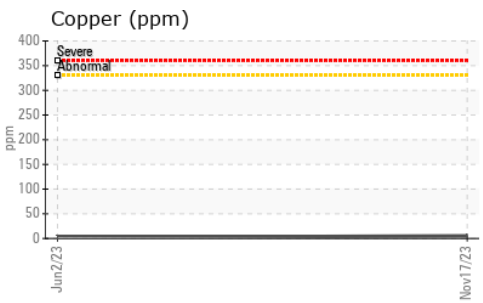
## GRAPHS

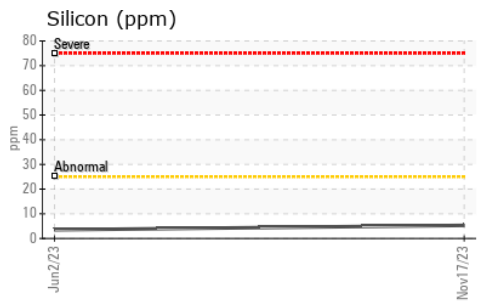


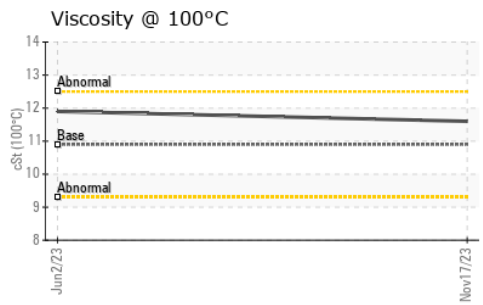



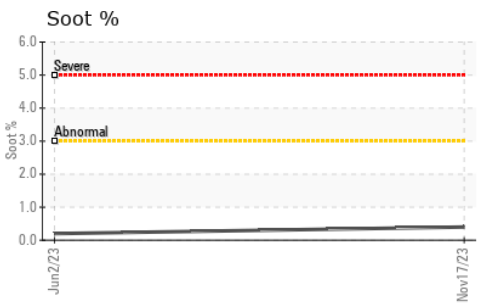




ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 780 - GMA - ICI - Solid Waste**
**Sample No.** : GFL0097029 **Received** : 24 Nov 2023
**Lab Number** : 02598673 **Diagnosed** : 24 Nov 2023
**Unique Number** : 5683753 **Diagnostician** : Wes Davis
**Test Package** : MOB 1

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*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.*