# OIL ANALYSIS REPORT

Sample Rating Trend


**DIRT**

Machine Id
## NO UNIT GFL0110724
Component
**Diesel Engine**
Fluid
**{not provided} (--- GAL)**

## DIAGNOSIS

**Recommendation**

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend that you drain the oil from the component if this has not already been done. We recommend you service the filters on this component. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

**Wear**

All component wear rates are normal.

**Contamination**

There is a moderate concentration of dirt present in the oil.

**Fluid Condition**

The oil is no longer serviceable due to the presence of contaminants.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **GFL0110724** | --- | --- |
| Sample Date | | Client Info | | **04 Mar 2024** | --- | --- |
| Machine Age | kms | Client Info | | **0** | --- | --- |
| Oil Age | kms | Client Info | | **0** | --- | --- |
| Oil Changed | | Client Info | | **N/A** | --- | --- |
| Sample Status | | | | **ABNORMAL** | --- | --- |

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

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185(m) | >100 | **36** | --- | --- |
| Chromium | ppm | ASTM D5185(m) | >20 | **1** | --- | --- |
| Nickel | ppm | ASTM D5185(m) | >4 | **<1** | --- | --- |
| Titanium | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Silver | ppm | ASTM D5185(m) | >3 | **0** | --- | --- |
| Aluminum | ppm | ASTM D5185(m) | >20 | **2** | --- | --- |
| Lead | ppm | ASTM D5185(m) | >40 | **<1** | --- | --- |
| Copper | ppm | ASTM D5185(m) | >330 | **2** | --- | --- |
| Tin | ppm | ASTM D5185(m) | >15 | **0** | --- | --- |
| Antimony | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Vanadium | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Beryllium | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Cadmium | ppm | ASTM D5185(m) | | **0** | --- | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185(m) | | **2** | --- | --- |
| Barium | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Molybdenum | ppm | ASTM D5185(m) | | **50** | --- | --- |
| Manganese | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Magnesium | ppm | ASTM D5185(m) | | **804** | --- | --- |
| Calcium | ppm | ASTM D5185(m) | | **896** | --- | --- |
| Phosphorus | ppm | ASTM D5185(m) | | **850** | --- | --- |
| Zinc | ppm | ASTM D5185(m) | | **1003** | --- | --- |
| Sulfur | ppm | ASTM D5185(m) | | **2121** | --- | --- |
| Lithium | ppm | ASTM D5185(m) | | **<1** | --- | --- |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185(m) | >25 | **31** | --- | --- |
| Sodium | ppm | ASTM D5185(m) | | **3** | --- | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | **2** | --- | --- |

| INFRA-RED | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Soot % | % | ASTM D7844* | >3 | **0.6** | --- | --- |
| Nitration | Abs/cm | ASTM D7624* | >20 | **14.8** | --- | --- |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | **26.6** | --- | --- |

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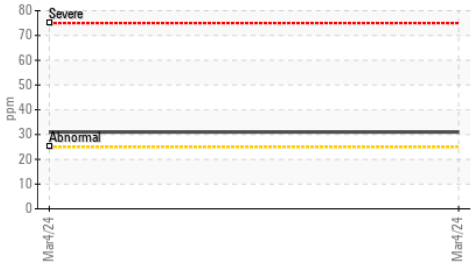
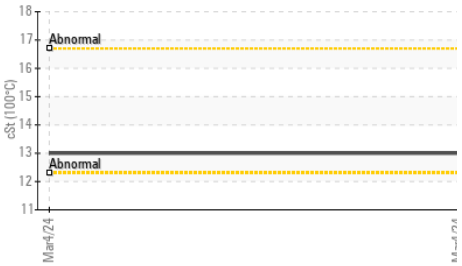
Silicon (ppm)




Viscosity @ 100°C



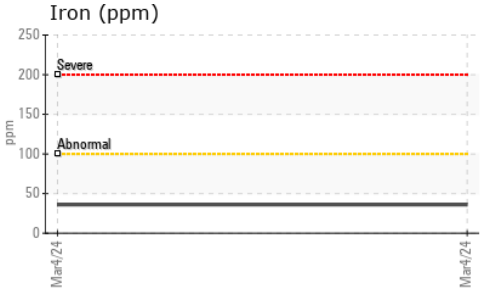

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | **30.2** | --- | --- |

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

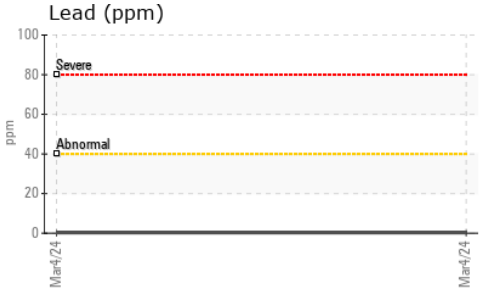
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 100°C | cSt | ASTM D7279(m) | | **13.0** | --- | --- |

## GRAPHS

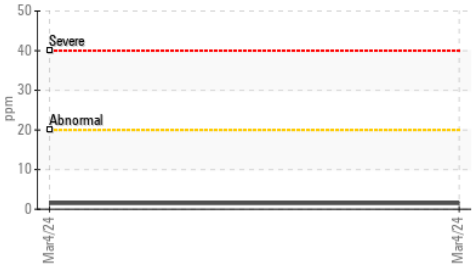
Iron (ppm)



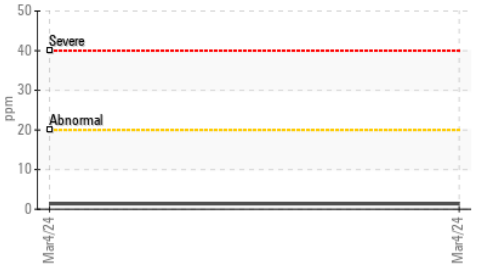

Lead (ppm)



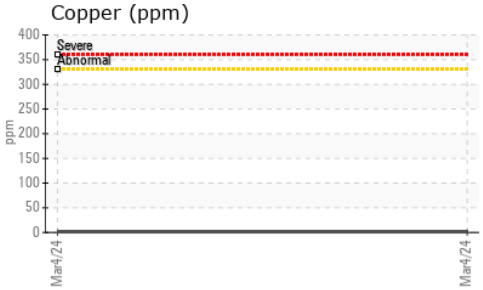

Aluminum (ppm)



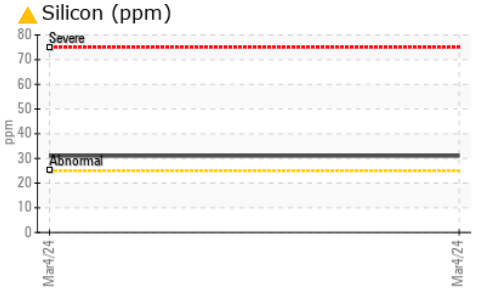

Chromium (ppm)



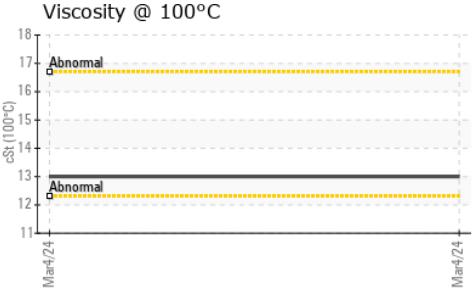

Copper (ppm)




Silicon (ppm)




Viscosity @ 100°C




Soot %


ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : GFL0110724
**Lab Number** : 02620414
**Unique Number** : 5737524
**Test Package** : MOB 1

**Received** : 07 Mar 2024
**Tested** : 07 Mar 2024
**Diagnosed** : 07 Mar 2024 - Kevin Marson

*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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