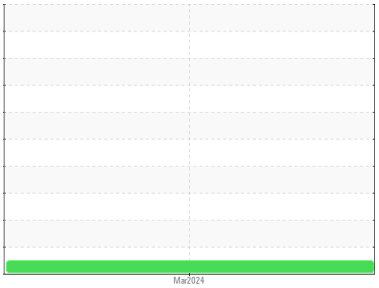
# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Machine Id
**813071**
Component
**Diesel Engine**
Fluid
**CERTIFIED SPECTRA XTREME 15W40 CK4 (--- GAL)**

## DIAGNOSIS

**Recommendation**
No corrective action is recommended at this time. Resample at the next service interval to monitor.

**Wear**
Metal levels are typical for a new component breaking in.

**Contamination**
Fuel content negligible. There is no indication of any contamination in the oil.

**Fluid Condition**
The condition of the oil is acceptable for the time in service.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **GFL0105890** | --- | --- |
| Sample Date | | Client Info | | **22 Mar 2024** | --- | --- |
| Machine Age | kms | Client Info | | **48054** | --- | --- |
| Oil Age | kms | Client Info | | **0** | --- | --- |
| Oil Changed | | Client Info | | **Changed** | --- | --- |
| Sample Status | | | | **NORMAL** | --- | --- |

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

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185(m) | >80 | **4** | --- | --- |
| Chromium | ppm | ASTM D5185(m) | >5 | **0** | --- | --- |
| Nickel | ppm | ASTM D5185(m) | >2 | **0** | --- | --- |
| Titanium | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Silver | ppm | ASTM D5185(m) | >3 | **0** | --- | --- |
| Aluminum | ppm | ASTM D5185(m) | >30 | **3** | --- | --- |
| Lead | ppm | ASTM D5185(m) | >30 | **0** | --- | --- |
| Copper | ppm | ASTM D5185(m) | >150 | **2** | --- | --- |
| Tin | ppm | ASTM D5185(m) | >5 | **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) | | **4** | --- | --- |
| Barium | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Molybdenum | ppm | ASTM D5185(m) | | **269** | --- | --- |
| Manganese | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Magnesium | ppm | ASTM D5185(m) | | **1019** | --- | --- |
| Calcium | ppm | ASTM D5185(m) | | **1099** | --- | --- |
| Phosphorus | ppm | ASTM D5185(m) | | **1146** | --- | --- |
| Zinc | ppm | ASTM D5185(m) | | **1239** | --- | --- |
| Sulfur | ppm | ASTM D5185(m) | | **2807** | --- | --- |
| Lithium | ppm | ASTM D5185(m) | | **<1** | --- | --- |

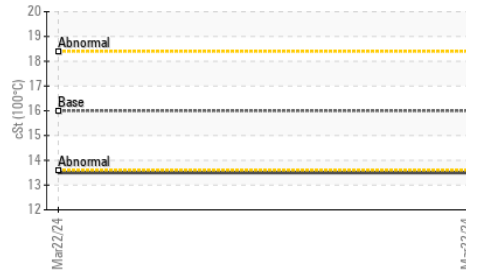
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185(m) | >20 | **4** | --- | --- |
| Sodium | ppm | ASTM D5185(m) | | **3** | --- | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | **<1** | --- | --- |
| Fuel | % | ASTM D7593* | >5 | **0.8** | --- | --- |

| INFRA-RED | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Soot % | % | ASTM D7844* | >3 | **0** | --- | --- |
| Nitration | Abs/cm | ASTM D7624* | >20 | **6.6** | --- | --- |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | **19.2** | --- | --- |

# OIL ANALYSIS REPORT

Fuel Dilution


Viscosity @ 100°C



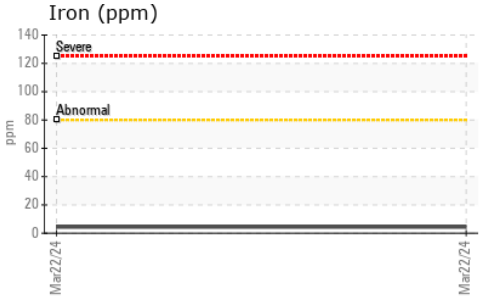

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | **14.7** | --- | --- |

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

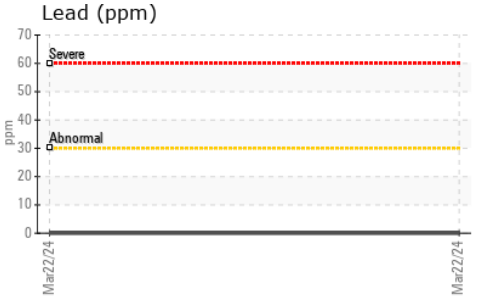
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 100°C | cSt | ASTM D7279(m) | 16 | **13.5** | --- | --- |

## GRAPHS

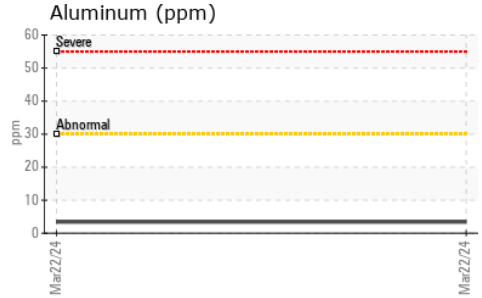
Iron (ppm)



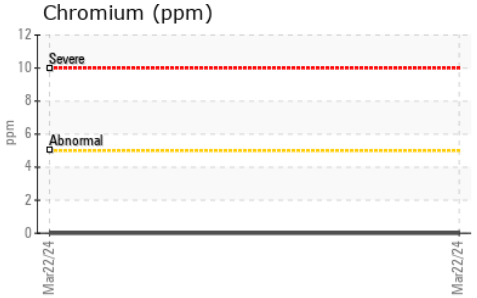

Lead (ppm)



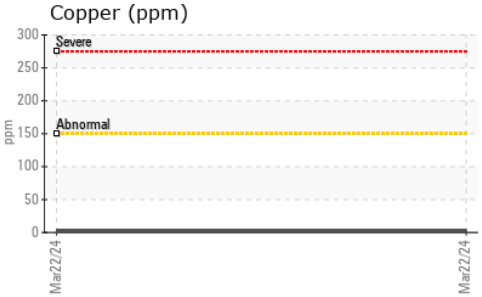

Aluminum (ppm)



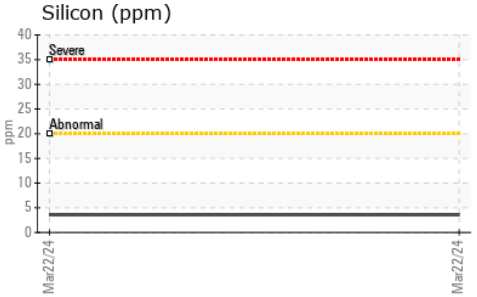

Chromium (ppm)



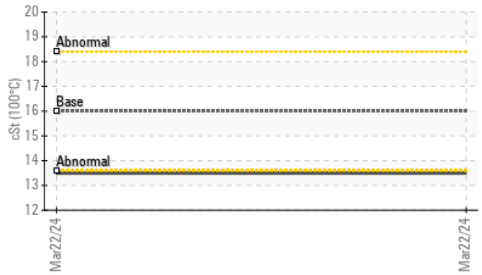

Copper (ppm)



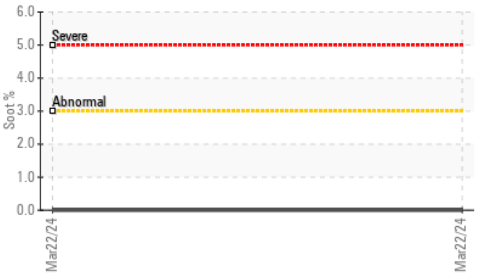

Silicon (ppm)




Viscosity @ 100°C




Soot %




ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : GFL0105890 **Received** : 02 Apr 2024
**Lab Number** : 02626016 **Tested** : 03 Apr 2024
**Unique Number** : 5759148 **Diagnosed** : 03 Apr 2024 - Kevin Marson
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, PercentFuel )

*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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