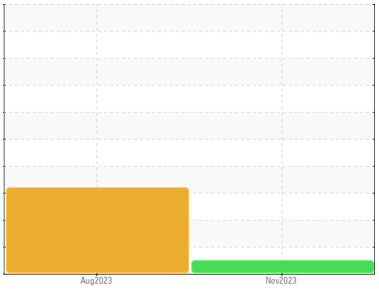
# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Machine Id
**9743**
Component
**Diesel Engine**
Fluid
**SHELL ROTELLA T 10W30 (--- GAL)**

## DIAGNOSIS

**Recommendation**
Resample at the next service interval to monitor.

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

**Contamination**
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 | | **WC0853104** | WC0853324 | --- |
| Sample Date | | Client Info | | **25 Nov 2023** | 29 Aug 2023 | --- |
| Machine Age | kms | Client Info | | **52111** | 0 | --- |
| Oil Age | kms | Client Info | | **0** | 0 | --- |
| Oil Changed | | Client Info | | **Changed** | N/A | --- |
| Sample Status | | | | **NORMAL** | ABNORMAL | --- |

| 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** | 0.0 | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185(m) | >100 | **32** | ▲ 118 | --- |
| Chromium | ppm | ASTM D5185(m) | >20 | **<1** | 3 | --- |
| Nickel | ppm | ASTM D5185(m) | >4 | **<1** | <1 | --- |
| Titanium | ppm | ASTM D5185(m) | | **0** | <1 | --- |
| Silver | ppm | ASTM D5185(m) | >3 | **0** | 0 | --- |
| Aluminum | ppm | ASTM D5185(m) | >20 | **6** | ▲ 17 | --- |
| Lead | ppm | ASTM D5185(m) | >40 | **1** | 5 | --- |
| Copper | ppm | ASTM D5185(m) | >330 | **10** | 54 | --- |
| Tin | ppm | ASTM D5185(m) | >15 | **1** | 6 | --- |
| Antimony | ppm | ASTM D5185(m) | | **0** | 0 | --- |
| Vanadium | ppm | ASTM D5185(m) | | **0** | <1 | --- |
| 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) | | **44** | 28 | --- |
| Barium | ppm | ASTM D5185(m) | | **<1** | 2 | --- |
| Molybdenum | ppm | ASTM D5185(m) | | **51** | 4 | --- |
| Manganese | ppm | ASTM D5185(m) | | **<1** | 3 | --- |
| Magnesium | ppm | ASTM D5185(m) | | **448** | 651 | --- |
| Calcium | ppm | ASTM D5185(m) | | **1763** | 1429 | --- |
| Phosphorus | ppm | ASTM D5185(m) | | **985** | 807 | --- |
| Zinc | ppm | ASTM D5185(m) | | **1143** | 933 | --- |
| Sulfur | ppm | ASTM D5185(m) | | **2815** | 2493 | --- |
| Lithium | ppm | ASTM D5185(m) | | **<1** | <1 | --- |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185(m) | >25 | **9** | ▲ 28 | --- |
| Sodium | ppm | ASTM D5185(m) | | **2** | 7 | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | **2** | 7 | --- |

| INFRA-RED | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Soot % | % | ASTM D7844* | >3 | **0.7** | 1.6 | --- |
| Nitration | Abs/cm | ASTM D7624* | >20 | **11.4** | 17.3 | --- |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | **23.2** | 34.2 | --- |

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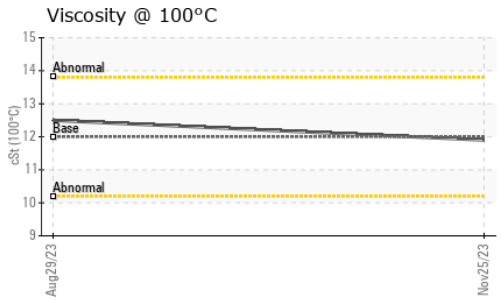
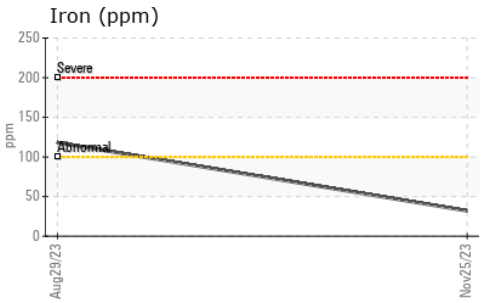


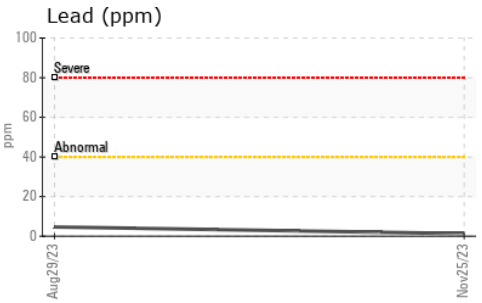

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | **21.6** | 33.4 | --- |

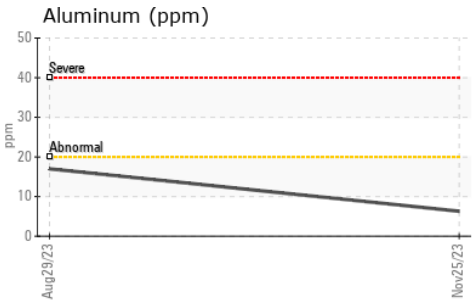
| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Emulsified Water | scalar | Visual* | >0.2 | **NEG** | NEG | --- |
| Free Water | scalar | Visual* | | **NEG** | NEG | --- |

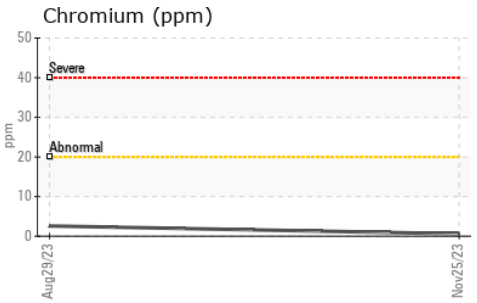
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 100°C | cSt | ASTM D7279(m) | 12. | **11.9** | 12.5 | --- |

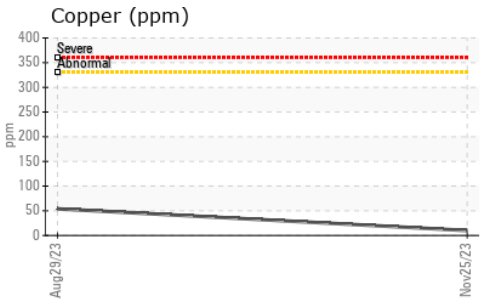
## GRAPHS

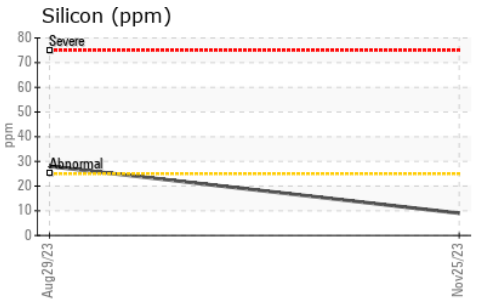


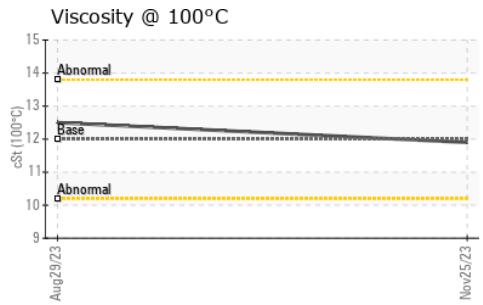



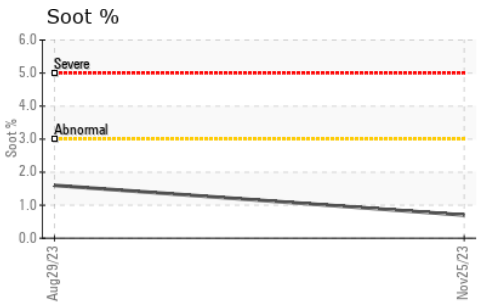




ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : WC0853104 **Recieved** : 09 Jan 2024
**Lab Number** : 02607427 **Diagnosed** : 09 Jan 2024
**Unique Number** : 5708513 **Diagnostician** : Wes Davis
**Test Package** : MOB 1

*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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