



|                 |               |
|-----------------|---------------|
| WEAR            | <b>NORMAL</b> |
| CONTAMINATION   | <b>NORMAL</b> |
| FLUID CONDITION | <b>NORMAL</b> |



Machine Id  
**FREIGHTLINER 722054 (S/N 1FVHCYFE0NHMS5808)**  
Component  
**Diesel Engine**  
Fluid  
**SHELL ROTELLA T 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|----------|
| Sample Number  |     | Client Info |           | <b>GFL0109556</b>  | GFL0109559  | ---      |
| Sample Date    |     | Client Info |           | <b>27 Mar 2024</b> | 05 Feb 2024 | ---      |
| Machine Age    | kms | Client Info |           | <b>3858</b>        | 3613        | ---      |
| Oil Age        | kms | Client Info |           | <b>600</b>         | 600         | ---      |
| Filter Age     | kms | Client Info |           | <b>600</b>         | 600         | ---      |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | Changed     | ---      |
| Filter Changed |     | Client Info |           | <b>Changed</b>     | Changed     | ---      |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | ---      |

**WEAR**

Metal levels are typical for a new component breaking in.

|          |     |               |      |              |    |     |
|----------|-----|---------------|------|--------------|----|-----|
| Iron     | ppm | ASTM D5185(m) | >80  | <b>6</b>     | 13 | --- |
| Chromium | ppm | ASTM D5185(m) | >5   | <b>0</b>     | 0  | --- |
| Nickel   | ppm | ASTM D5185(m) | >2   | <b>0</b>     | <1 | --- |
| Titanium | ppm | ASTM D5185(m) |      | <b>0</b>     | 0  | --- |
| Silver   | ppm | ASTM D5185(m) | >3   | <b>0</b>     | 0  | --- |
| Aluminum | ppm | ASTM D5185(m) | >30  | <b>&lt;1</b> | 2  | --- |
| Lead     | ppm | ASTM D5185(m) | >30  | <b>0</b>     | 0  | --- |
| Copper   | ppm | ASTM D5185(m) | >150 | <b>&lt;1</b> | <1 | --- |
| Tin      | ppm | ASTM D5185(m) | >5   | <b>0</b>     | 0  | --- |
| Vanadium | ppm | ASTM D5185(m) |      | <b>0</b>     | 0  | --- |

**CONTAMINATION**

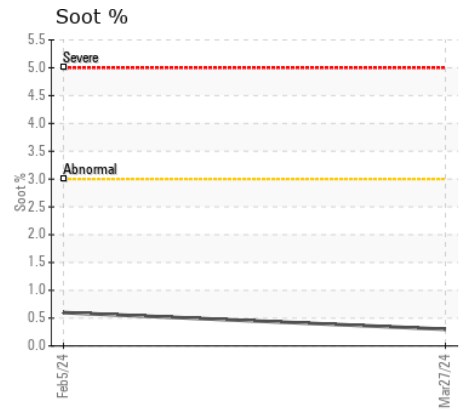
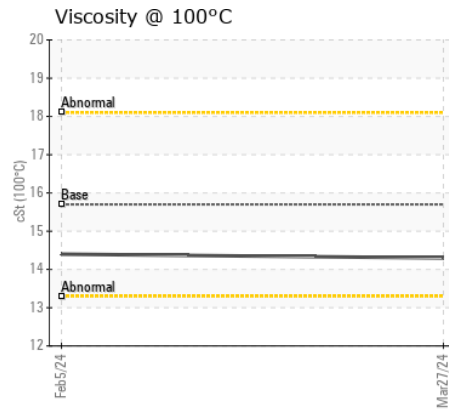
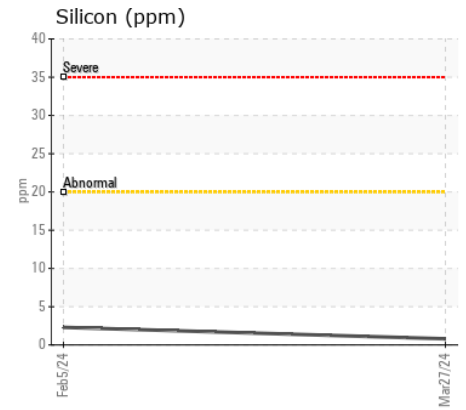
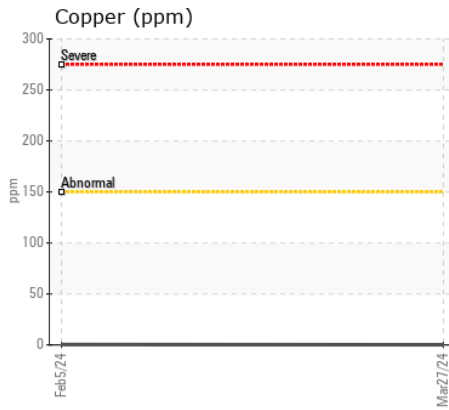
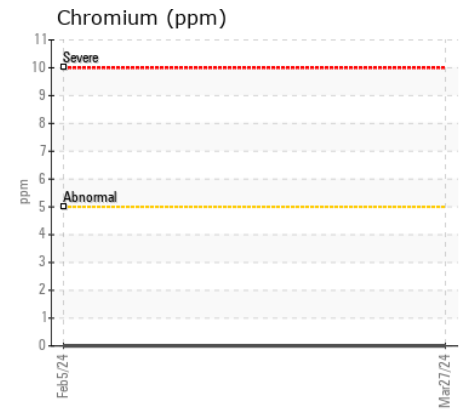
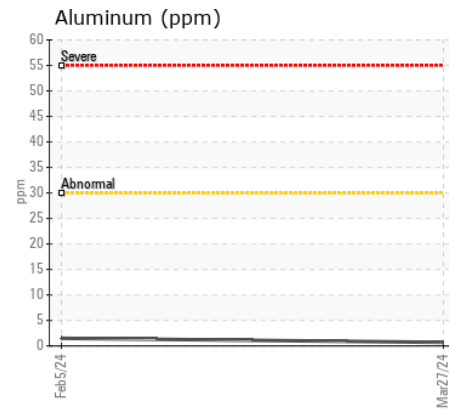
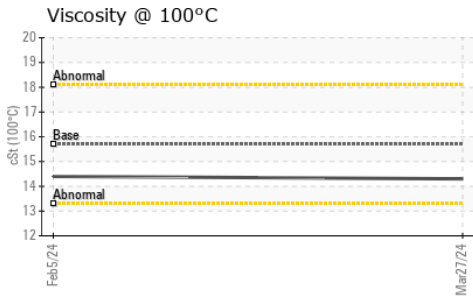
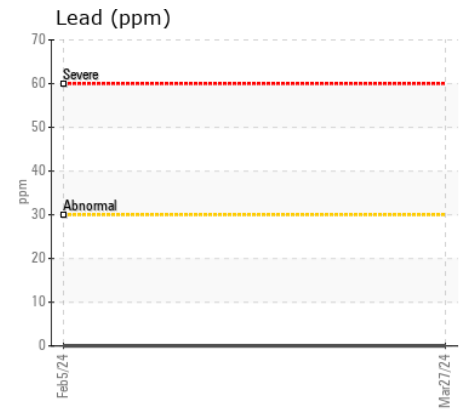
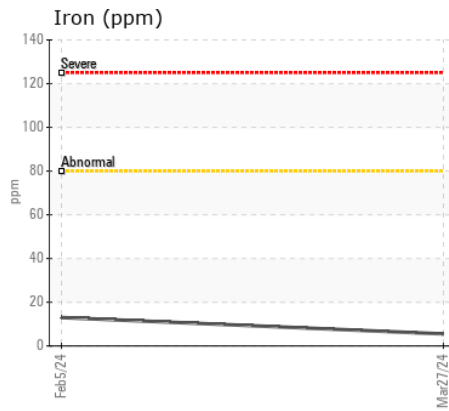
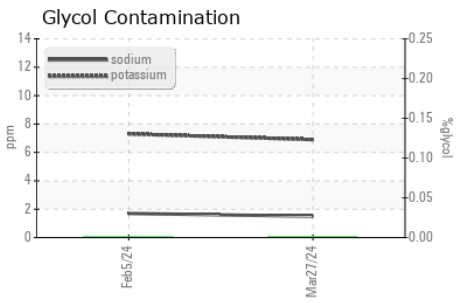
There is no indication of any contamination in the oil.

|                  |          |               |      |                |      |     |
|------------------|----------|---------------|------|----------------|------|-----|
| Silicon          | ppm      | ASTM D5185(m) | >20  | <b>&lt;1</b>   | 2    | --- |
| Potassium        | ppm      | ASTM D5185(m) | >20  | <b>7</b>       | 7    | --- |
| Fuel             |          | WC Method     | >5   | <b>&lt;1.0</b> | <1.0 | --- |
| Water            |          | WC Method     | >0.2 | <b>NEG</b>     | NEG  | --- |
| Glycol           | %        | ASTM D7922*   |      | <b>0.0</b>     | 0.0  | --- |
| Soot %           | %        | ASTM D7844*   | >3   | <b>0.3</b>     | 0.6  | --- |
| Nitration        | Abs/cm   | ASTM D7624*   | >20  | <b>7.2</b>     | 8.8  | --- |
| Sulfation        | Abs/.1mm | ASTM D7415*   | >30  | <b>21.3</b>    | 22.9 | --- |
| Emulsified Water | scalar   | Visual*       | >0.2 | <b>NEG</b>     | NEG  | --- |

**FLUID CONDITION**

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

|              |          |               |      |             |      |     |
|--------------|----------|---------------|------|-------------|------|-----|
| Sodium       | ppm      | ASTM D5185(m) |      | <b>2</b>    | 2    | --- |
| Boron        | ppm      | ASTM D5185(m) | 35   | <b>158</b>  | 134  | --- |
| Barium       | ppm      | ASTM D5185(m) | 0    | <b>0</b>    | 0    | --- |
| Molybdenum   | ppm      | ASTM D5185(m) | 0    | <b>0</b>    | 0    | --- |
| Manganese    | ppm      | ASTM D5185(m) | 0    | <b>0</b>    | 0    | --- |
| Magnesium    | ppm      | ASTM D5185(m) | 10   | <b>13</b>   | 14   | --- |
| Calcium      | ppm      | ASTM D5185(m) | 2340 | <b>2150</b> | 2200 | --- |
| Phosphorus   | ppm      | ASTM D5185(m) | 1110 | <b>935</b>  | 950  | --- |
| Zinc         | ppm      | ASTM D5185(m) | 1210 | <b>1106</b> | 1131 | --- |
| Sulfur       | ppm      | ASTM D5185(m) | 3890 | <b>2816</b> | 2983 | --- |
| Oxidation    | Abs/.1mm | ASTM D7414*   | >25  | <b>16.7</b> | 17.6 | --- |
| Visc @ 100°C | cSt      | ASTM D7279(m) | 15.7 | <b>14.3</b> | 14.4 | --- |



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0109556 **Received** : 01 Apr 2024  
**Lab Number** : 02625589 **Tested** : 01 Apr 2024  
**Unique Number** : 5750708 **Diagnosed** : 01 Apr 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: Glycol )

**GFL Environmental Inc. - 536 - Fort frances**  
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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.