



|                 |          |
|-----------------|----------|
| WEAR            | NORMAL   |
| CONTAMINATION   | MARGINAL |
| FLUID CONDITION | ABNORMAL |

Machine Id  
**41**  
 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>IL0033504</b>   | ---      | ---      |
| Sample Date    |     | Client Info |           | <b>26 Apr 2024</b> | ---      | ---      |
| Machine Age    | hrs | Client Info |           | <b>0</b>           | ---      | ---      |
| Oil Age        | hrs | Client Info |           | <b>0</b>           | ---      | ---      |
| Filter Age     | hrs | Client Info |           | <b>0</b>           | ---      | ---      |
| Oil Changed    |     | Client Info |           | <b>N/A</b>         | ---      | ---      |
| Filter Changed |     | Client Info |           | <b>N/A</b>         | ---      | ---      |
| Sample Status  |     |             |           | <b>ABNORMAL</b>    | ---      | ---      |

### WEAR

All component wear rates are normal.

|          |     |               |      |              |     |     |
|----------|-----|---------------|------|--------------|-----|-----|
| Iron     | ppm | ASTM D5185(m) | >90  | <b>34</b>    | --- | --- |
| Chromium | ppm | ASTM D5185(m) | >20  | <b>1</b>     | --- | --- |
| Nickel   | ppm | ASTM D5185(m) | >2   | <b>&lt;1</b> | --- | --- |
| Titanium | ppm | ASTM D5185(m) | >2   | <b>0</b>     | --- | --- |
| Silver   | ppm | ASTM D5185(m) | >2   | <b>0</b>     | --- | --- |
| Aluminum | ppm | ASTM D5185(m) | >20  | <b>5</b>     | --- | --- |
| Lead     | ppm | ASTM D5185(m) | >40  | <b>2</b>     | --- | --- |
| Copper   | ppm | ASTM D5185(m) | >330 | <b>&lt;1</b> | --- | --- |
| Tin      | ppm | ASTM D5185(m) | >15  | <b>&lt;1</b> | --- | --- |
| Vanadium | ppm | ASTM D5185(m) |      | <b>0</b>     | --- | --- |

### CONTAMINATION

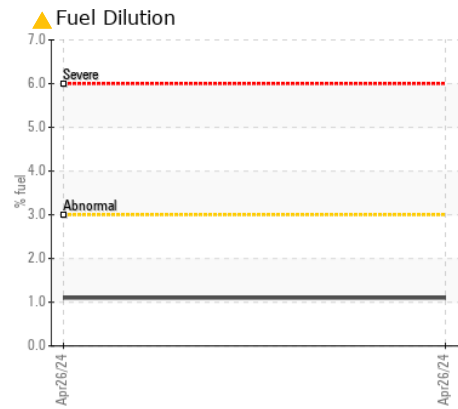
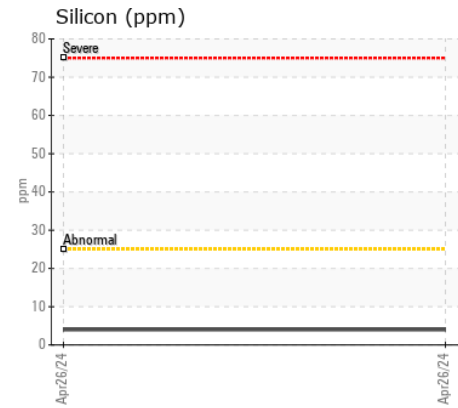
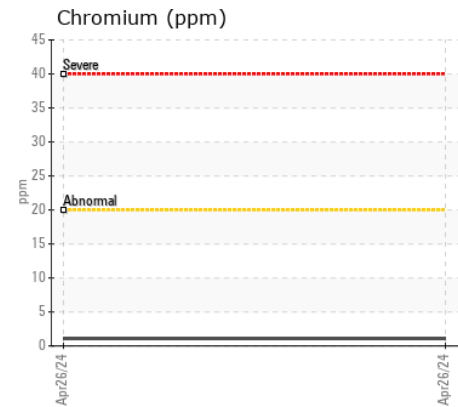
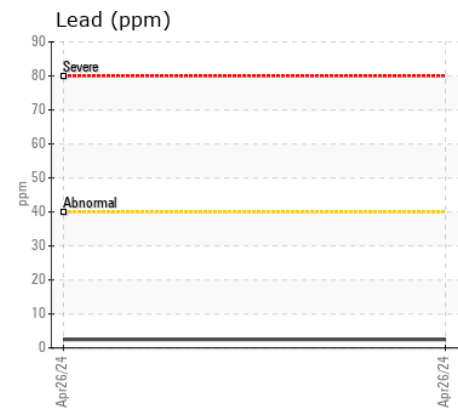
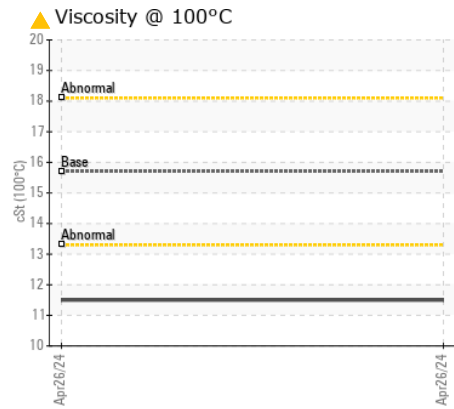
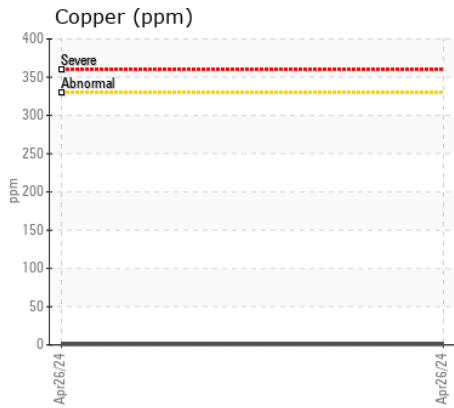
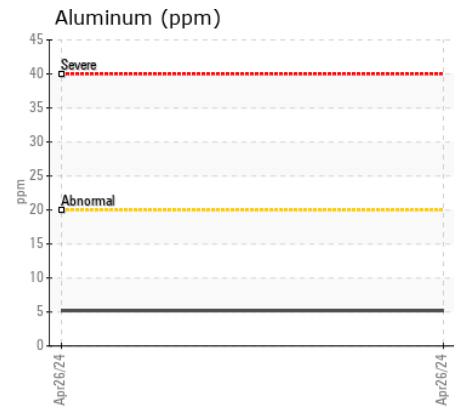
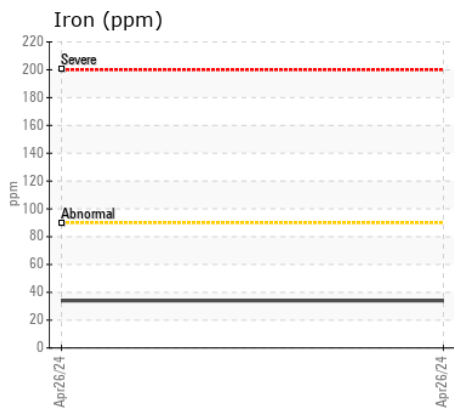
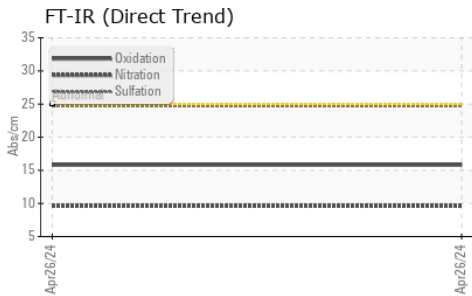
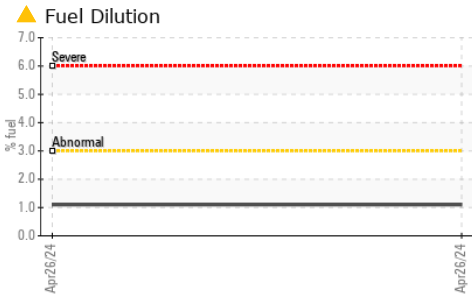
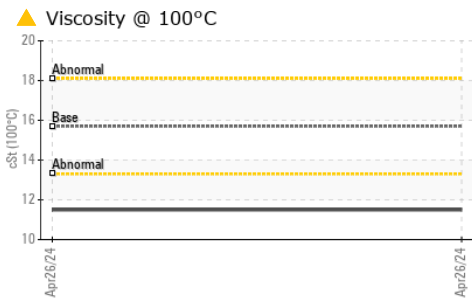
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. Light fuel dilution occurring.

|                  |          |               |      |              |     |     |
|------------------|----------|---------------|------|--------------|-----|-----|
| Silicon          | ppm      | ASTM D5185(m) | >25  | <b>4</b>     | --- | --- |
| Potassium        | ppm      | ASTM D5185(m) | >20  | <b>12</b>    | --- | --- |
| Fuel             | %        | ASTM D7593*   | >3.0 | <b>▲ 1.1</b> | --- | --- |
| Water            |          | WC Method     | >0.2 | <b>NEG</b>   | --- | --- |
| Glycol           |          | WC Method     |      | <b>NEG</b>   | --- | --- |
| Soot %           | %        | ASTM D7844*   | >6   | <b>0.7</b>   | --- | --- |
| Nitration        | Abs/cm   | ASTM D7624*   | >20  | <b>9.6</b>   | --- | --- |
| Sulfation        | Abs/.1mm | ASTM D7415*   | >30  | <b>24.7</b>  | --- | --- |
| Emulsified Water | scalar   | Visual*       | >0.2 | <b>NEG</b>   | --- | --- |

### FLUID CONDITION

Fuel is present in the oil and is lowering the viscosity. The condition of the oil is acceptable for the time in service.

|              |          |               |      |               |     |     |
|--------------|----------|---------------|------|---------------|-----|-----|
| Sodium       | ppm      | ASTM D5185(m) |      | <b>2</b>      | --- | --- |
| Boron        | ppm      | ASTM D5185(m) | 35   | <b>4</b>      | --- | --- |
| Barium       | ppm      | ASTM D5185(m) | 0    | <b>0</b>      | --- | --- |
| Molybdenum   | ppm      | ASTM D5185(m) | 0    | <b>2</b>      | --- | --- |
| Manganese    | ppm      | ASTM D5185(m) | 0    | <b>&lt;1</b>  | --- | --- |
| Magnesium    | ppm      | ASTM D5185(m) | 10   | <b>31</b>     | --- | --- |
| Calcium      | ppm      | ASTM D5185(m) | 2340 | <b>2273</b>   | --- | --- |
| Phosphorus   | ppm      | ASTM D5185(m) | 1110 | <b>823</b>    | --- | --- |
| Zinc         | ppm      | ASTM D5185(m) | 1210 | <b>993</b>    | --- | --- |
| Sulfur       | ppm      | ASTM D5185(m) | 3890 | <b>2683</b>   | --- | --- |
| Oxidation    | Abs/.1mm | ASTM D7414*   | >25  | <b>15.8</b>   | --- | --- |
| Visc @ 100°C | cSt      | ASTM D7279(m) | 15.7 | <b>▲ 11.5</b> | --- | --- |



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : IL0033504 **Received** : 30 Apr 2024  
**Lab Number** : 02632199 **Tested** : 01 May 2024  
**Unique Number** : 5773352 **Diagnosed** : 01 May 2024 - Wes Davis  
**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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