



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

Machine Id  
**2443 MACK CV713**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (48 QTS)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>GFL0117405</b>  | GFL0117478  | GFL0103253  |
| Sample Date    |     | Client Info |           | <b>13 Jun 2024</b> | 17 Apr 2024 | 03 Jan 2024 |
| Machine Age    | hrs | Client Info |           | <b>44701</b>       | 44374       | 43744       |
| Oil Age        | hrs | Client Info |           | <b>0</b>           | 0           | 0           |
| Filter Age     | hrs | Client Info |           | <b>0</b>           | 0           | 0           |
| Oil Changed    |     | Client Info |           | <b>Not Changd</b>  | Not Changd  | Not Changd  |
| Filter Changed |     | Client Info |           | <b>Not Changd</b>  | Not Changd  | Not Changd  |
| Sample Status  |     |             |           | <b>NORMAL</b>      | ABNORMAL    | ABNORMAL    |

**WEAR**

All component wear rates are normal.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >120 | <b>30</b>    | 58   | 58   |
| Chromium     | ppm    | ASTM D5185m | >20  | <b>&lt;1</b> | 2    | 2    |
| Nickel       | ppm    | ASTM D5185m | >5   | <b>&lt;1</b> | <1   | <1   |
| Titanium     | ppm    | ASTM D5185m | >2   | <b>&lt;1</b> | <1   | 0    |
| Silver       | ppm    | ASTM D5185m | >2   | <b>0</b>     | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >20  | <b>2</b>     | 3    | 2    |
| Lead         | ppm    | ASTM D5185m | >40  | <b>2</b>     | 3    | 2    |
| Copper       | ppm    | ASTM D5185m | >330 | <b>5</b>     | 14   | 7    |
| Tin          | ppm    | ASTM D5185m | >15  | <b>1</b>     | 2    | 2    |
| Vanadium     | ppm    | ASTM D5185m |      | <b>0</b>     | <1   | 0    |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |

**CONTAMINATION**

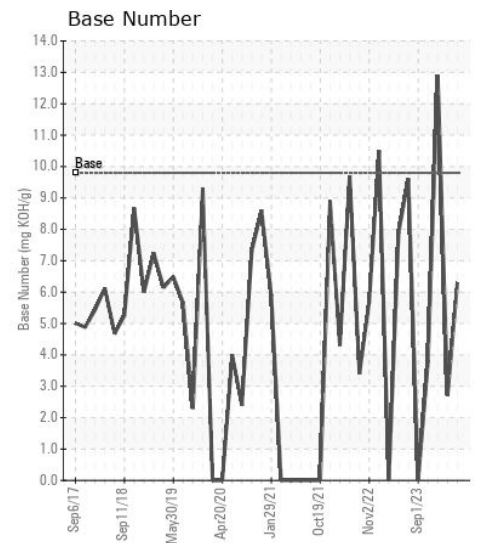
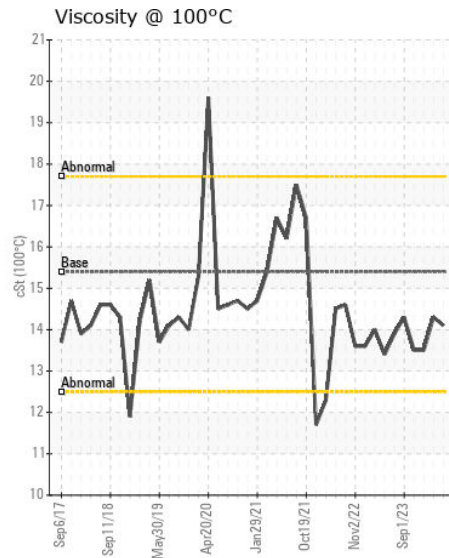
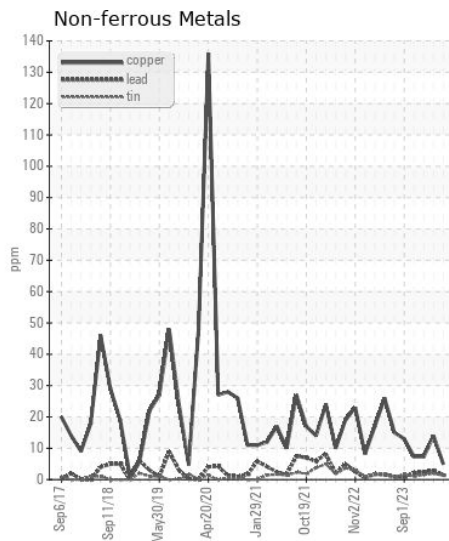
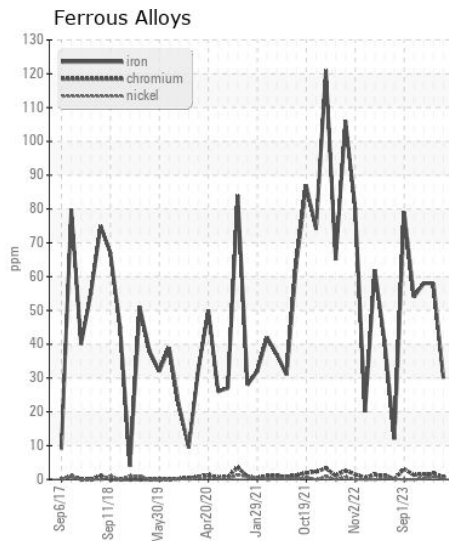
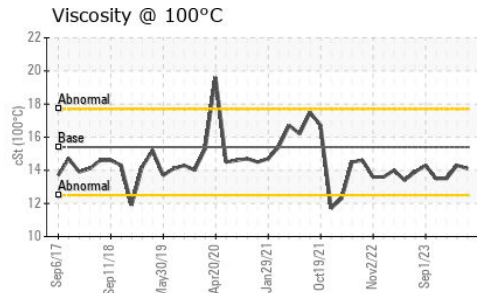
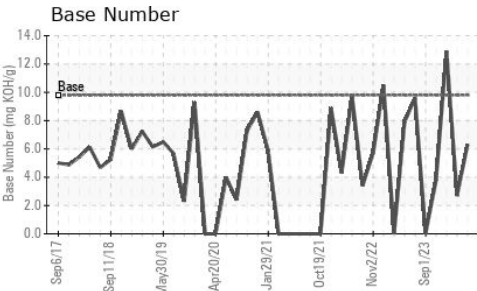
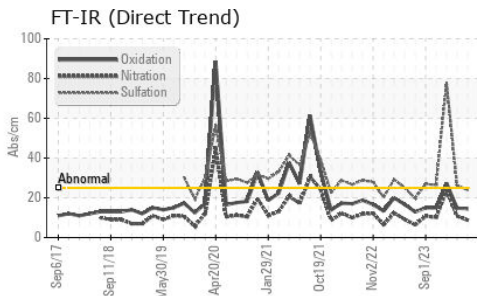
There is no indication of any contamination in the oil.

|                  |          |             |       |                |       |       |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >25   | <b>4</b>       | 7     | 6     |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>2</b>       | 2     | 1     |
| Fuel             |          | WC Method   | >3.0  | <b>&lt;1.0</b> | <1.0  | <1.0  |
| Water            |          | WC Method   | >0.2  | <b>NEG</b>     | NEG   | NEG   |
| Glycol           |          | WC Method   |       | <b>NEG</b>     | NEG   | NEG   |
| Soot %           | %        | *ASTM D7844 | >4    | <b>3.2</b>     | ▲ 4.7 | ▲ 4.6 |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>8.8</b>     | 10.8  | 23.7  |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>23.9</b>    | 26.3  | 77.9  |
| Silt             | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | NONE  |
| Debris           | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | NONE  |
| Sand/Dirt        | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | NONE  |
| Appearance       | scalar   | *Visual     | NORML | <b>NORML</b>   | NORML | NORML |
| Odor             | scalar   | *Visual     | NORML | <b>NORML</b>   | NORML | NORML |
| Emulsified Water | scalar   | *Visual     | >0.2  | <b>NEG</b>     | NEG   | NEG   |

**FLUID CONDITION**

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

|                  |          |             |      |              |       |      |
|------------------|----------|-------------|------|--------------|-------|------|
| Sodium           | ppm      | ASTM D5185m |      | <b>&lt;1</b> | 2     | 2    |
| Boron            | ppm      | ASTM D5185m | 0    | <b>4</b>     | 1     | 3    |
| Barium           | ppm      | ASTM D5185m | 0    | <b>0</b>     | 0     | 0    |
| Molybdenum       | ppm      | ASTM D5185m | 60   | <b>55</b>    | 59    | 54   |
| Manganese        | ppm      | ASTM D5185m | 0    | <b>0</b>     | <1    | <1   |
| Magnesium        | ppm      | ASTM D5185m | 1010 | <b>820</b>   | 893   | 868  |
| Calcium          | ppm      | ASTM D5185m | 1070 | <b>1068</b>  | 1063  | 964  |
| Phosphorus       | ppm      | ASTM D5185m | 1150 | <b>832</b>   | 1060  | 969  |
| Zinc             | ppm      | ASTM D5185m | 1270 | <b>1115</b>  | 1204  | 1169 |
| Sulfur           | ppm      | ASTM D5185m | 2060 | <b>2961</b>  | 3301  | 2771 |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | <b>14.5</b>  | 14.8  | 27.3 |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 9.8  | <b>6.3</b>   | ▲ 2.7 | 12.9 |
| Visc @ 100°C     | cSt      | ASTM D445   | 15.4 | <b>14.1</b>  | 14.3  | 13.5 |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0117405  
**Lab Number** : 06209841  
**Unique Number** : 11082705  
**Test Package** : FLEET

**Received** : 14 Jun 2024  
**Tested** : 15 Jun 2024  
**Diagnosed** : 15 Jun 2024 - Wes Davis

**GFL Environmental - 001 - Raleigh(CNG)**  
 3741 Conquest Drive  
 Garner, NC  
 US 27529

To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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