



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



Machine Id  
**8137**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 10W30 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>GFL0112573</b>  | GFL0102614  | GFL0093901  |
| Sample Date    |     | Client Info |           | <b>17 Apr 2024</b> | 09 Mar 2024 | 19 Sep 2023 |
| Machine Age    | hrs | Client Info |           | <b>0</b>           | 18724       | 18000       |
| Oil Age        | hrs | Client Info |           | <b>0</b>           | 0           | 81          |
| Filter Age     | hrs | Client Info |           | <b>0</b>           | 0           | 81          |
| Oil Changed    |     | Client Info |           | <b>N/A</b>         | Changed     | Not Changd  |
| Filter Changed |     | Client Info |           | <b>N/A</b>         | N/A         | N/A         |
| Sample Status  |     |             |           | <b>NORMAL</b>      | MARGINAL    | SEVERE      |

**WEAR**

All component wear rates are normal.

|          |     |               |      |              |    |    |
|----------|-----|---------------|------|--------------|----|----|
| Iron     | ppm | ASTM D5185(m) | >80  | <b>12</b>    | 53 | 14 |
| Chromium | ppm | ASTM D5185(m) | >5   | <b>&lt;1</b> | 2  | <1 |
| Nickel   | ppm | ASTM D5185(m) | >2   | <b>&lt;1</b> | <1 | <1 |
| Titanium | ppm | ASTM D5185(m) |      | <b>0</b>     | 0  | 0  |
| Silver   | ppm | ASTM D5185(m) | >3   | <b>0</b>     | 0  | <1 |
| Aluminum | ppm | ASTM D5185(m) | >30  | <b>1</b>     | 3  | 1  |
| Lead     | ppm | ASTM D5185(m) | >30  | <b>0</b>     | 1  | <1 |
| Copper   | ppm | ASTM D5185(m) | >150 | <b>&lt;1</b> | 2  | <1 |
| Tin      | ppm | ASTM D5185(m) | >5   | <b>0</b>     | 0  | 0  |
| Vanadium | ppm | ASTM D5185(m) |      | <b>0</b>     | 0  | 0  |

**CONTAMINATION**

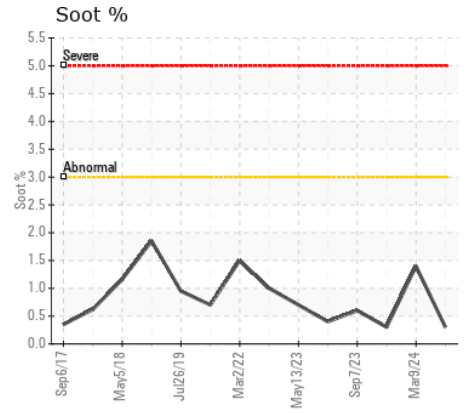
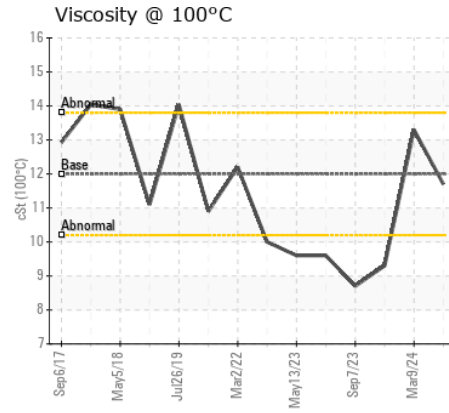
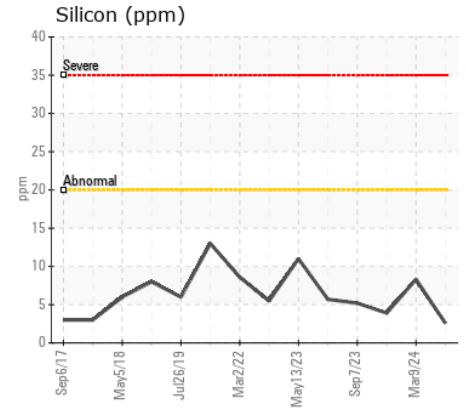
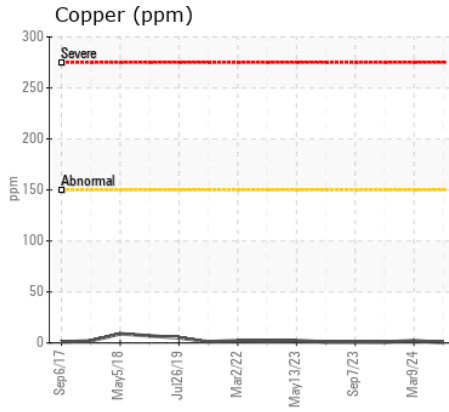
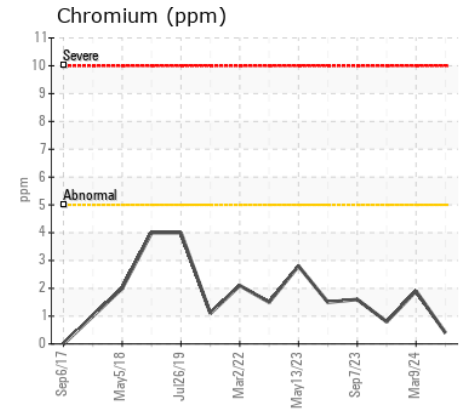
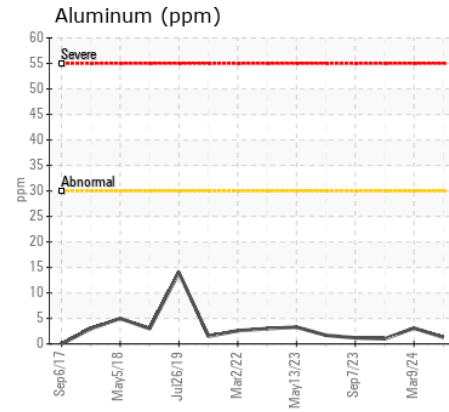
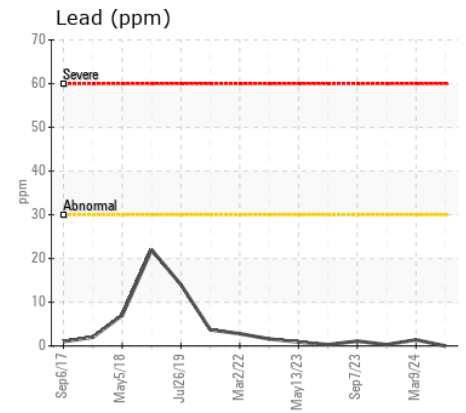
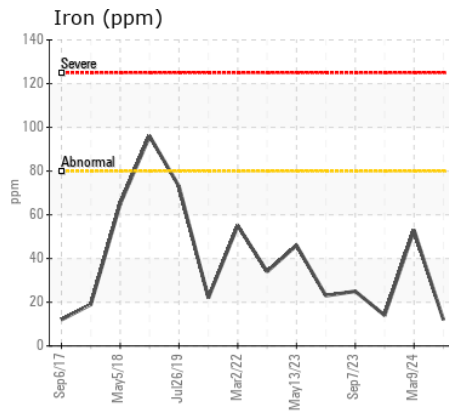
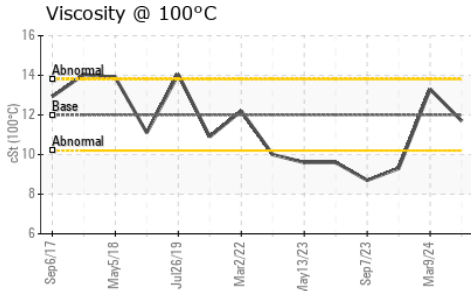
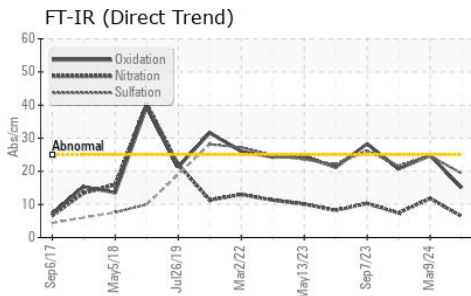
There is no indication of any contamination in the oil.

|                  |          |               |      |                |       |       |
|------------------|----------|---------------|------|----------------|-------|-------|
| Silicon          | ppm      | ASTM D5185(m) | >20  | <b>3</b>       | 8     | 4     |
| Potassium        | ppm      | ASTM D5185(m) | >20  | <b>&lt;1</b>   | <1    | 1     |
| Fuel             |          | WC Method     | >5   | <b>&lt;1.0</b> | ▲ 2.3 | ▲ 9.9 |
| Water            |          | WC Method     | >0.2 | <b>NEG</b>     | NEG   | NEG   |
| Glycol           |          | WC Method     |      | <b>NEG</b>     | NEG   | NEG   |
| Soot %           | %        | ASTM D7844*   | >3   | <b>0.3</b>     | 1.4   | 0.3   |
| Nitration        | Abs/cm   | ASTM D7624*   | >20  | <b>6.4</b>     | 11.8  | 7.4   |
| Sulfation        | Abs/.1mm | ASTM D7415*   | >30  | <b>19.4</b>    | 24.6  | 21.7  |
| Emulsified Water | scalar   | Visual*       | >0.2 | <b>NEG</b>     | NEG   | NEG   |

**FLUID CONDITION**

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

|              |          |               |       |             |      |       |
|--------------|----------|---------------|-------|-------------|------|-------|
| Sodium       | ppm      | ASTM D5185(m) |       | <b>4</b>    | 12   | 4     |
| Boron        | ppm      | ASTM D5185(m) | 2     | <b>4</b>    | 21   | 3     |
| Barium       | ppm      | ASTM D5185(m) | 0     | <b>0</b>    | 0    | 0     |
| Molybdenum   | ppm      | ASTM D5185(m) | 50    | <b>57</b>   | 60   | 51    |
| Manganese    | ppm      | ASTM D5185(m) | 0     | <b>0</b>    | 0    | 0     |
| Magnesium    | ppm      | ASTM D5185(m) | 950   | <b>903</b>  | 638  | 818   |
| Calcium      | ppm      | ASTM D5185(m) | 1050  | <b>1038</b> | 1328 | 891   |
| Phosphorus   | ppm      | ASTM D5185(m) | 995   | <b>946</b>  | 765  | 862   |
| Zinc         | ppm      | ASTM D5185(m) | 1180  | <b>1101</b> | 944  | 1006  |
| Sulfur       | ppm      | ASTM D5185(m) | 2600  | <b>2458</b> | 1951 | 2216  |
| Oxidation    | Abs/.1mm | ASTM D7414*   | >25   | <b>15.0</b> | 24.8 | 20.7  |
| Visc @ 100°C | cSt      | ASTM D7279(m) | 12.00 | <b>11.7</b> | 13.3 | ▲ 9.3 |



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0112573  
**Lab Number** : 02629861  
**Unique Number** : 5762993  
**Test Package** : MOB 1

**GFL Environmental - 554 - Edmonton SW**  
 8409 - 15th Street NW  
 Edmonton, AB  
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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.