

Machine Id  
**FREIGHTLINER 8474**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 10W30 (--- QTS)**

**DIAGNOSIS**

**Recommendation**

Resample at the next service interval to monitor.

**Wear**

All component wear rates are normal.

**Contamination**

There is no indication of any contamination in the oil.

**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.

| SAMPLE INFORMATION |                 | method | limit/base | current            | history1    | history2    |
|--------------------|-----------------|--------|------------|--------------------|-------------|-------------|
| Sample Number      | Client Info     |        |            | <b>PCA0073307</b>  | PCA0073479  | PCA0051868  |
| Sample Date        | Client Info     |        |            | <b>19 Oct 2023</b> | 22 Mar 2023 | 15 Jul 2022 |
| Machine Age        | mls Client Info |        |            | <b>628938</b>      | 600692      | 568072      |
| Oil Age            | mls Client Info |        |            | <b>28246</b>       | 32620       | 30128       |
| Oil Changed        | Client Info     |        |            | <b>Changed</b>     | Changed     | Changed     |
| Sample Status      |                 |        |            | <b>NORMAL</b>      | NORMAL      | NORMAL      |

| CONTAMINATION |           | method | limit/base | current        | history1 | history2 |
|---------------|-----------|--------|------------|----------------|----------|----------|
| Fuel          | WC Method | >5     |            | <b>&lt;1.0</b> | <1.0     | <1.0     |
| Glycol        | WC Method |        |            | <b>NEG</b>     | NEG      | NEG      |

| WEAR METALS |     | method      | limit/base | current      | history1 | history2 |
|-------------|-----|-------------|------------|--------------|----------|----------|
| Iron        | ppm | ASTM D5185m | >80        | <b>18</b>    | 32       | 35       |
| Chromium    | ppm | ASTM D5185m | >5         | <b>1</b>     | 2        | 2        |
| Nickel      | ppm | ASTM D5185m | >2         | <b>0</b>     | <1       | 0        |
| Titanium    | ppm | ASTM D5185m |            | <b>0</b>     | 0        | <1       |
| Silver      | ppm | ASTM D5185m | >3         | <b>0</b>     | 0        | <1       |
| Aluminum    | ppm | ASTM D5185m | >30        | <b>8</b>     | 15       | 16       |
| Lead        | ppm | ASTM D5185m | >30        | <b>0</b>     | 0        | <1       |
| Copper      | ppm | ASTM D5185m | >150       | <b>16</b>    | 27       | 25       |
| Tin         | ppm | ASTM D5185m | >5         | <b>&lt;1</b> | 2        | 1        |
| Antimony    | ppm | ASTM D5185m |            | <b>---</b>   | ---      | ---      |
| Vanadium    | ppm | ASTM D5185m |            | <b>0</b>     | <1       | 0        |
| Cadmium     | ppm | ASTM D5185m |            | <b>0</b>     | 0        | 0        |

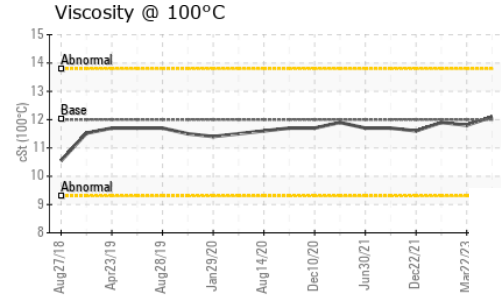
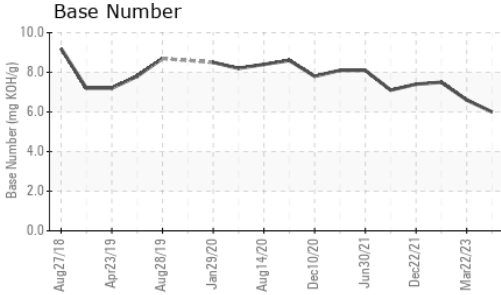
| ADDITIVES  |     | method      | limit/base | current      | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron      | ppm | ASTM D5185m | 2          | <b>20</b>    | 0        | 1        |
| Barium     | ppm | ASTM D5185m | 0          | <b>0</b>     | 0        | 0        |
| Molybdenum | ppm | ASTM D5185m | 50         | <b>34</b>    | 55       | 60       |
| Manganese  | ppm | ASTM D5185m | 0          | <b>&lt;1</b> | 1        | <1       |
| Magnesium  | ppm | ASTM D5185m | 950        | <b>749</b>   | 851      | 863      |
| Calcium    | ppm | ASTM D5185m | 1050       | <b>1267</b>  | 1178     | 1072     |
| Phosphorus | ppm | ASTM D5185m | 995        | <b>835</b>   | 838      | 951      |
| Zinc       | ppm | ASTM D5185m | 1180       | <b>914</b>   | 1170     | 1190     |
| Sulfur     | ppm | ASTM D5185m | 2600       | <b>2600</b>  | 2557     | 2583     |

| CONTAMINANTS |     | method      | limit/base | current  | history1 | history2 |
|--------------|-----|-------------|------------|----------|----------|----------|
| Silicon      | ppm | ASTM D5185m | >20        | <b>6</b> | 7        | 5        |
| Sodium       | ppm | ASTM D5185m |            | <b>4</b> | 3        | 2        |
| Potassium    | ppm | ASTM D5185m | >20        | <b>4</b> | <1       | 2        |

| INFRA-RED |          | method      | limit/base | current     | history1 | history2 |
|-----------|----------|-------------|------------|-------------|----------|----------|
| Soot %    | %        | *ASTM D7844 | >3         | <b>0.8</b>  | 0.9      | 0.9      |
| Nitration | Abs/cm   | *ASTM D7624 | >20        | <b>10.0</b> | 10.3     | 10.7     |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30        | <b>22.6</b> | 21.2     | 22.9     |

| FLUID DEGRADATION |          | method      | limit/base | current     | history1 | history2 |
|-------------------|----------|-------------|------------|-------------|----------|----------|
| Oxidation         | Abs/.1mm | *ASTM D7414 | >25        | <b>18.1</b> | 17.3     | 18.4     |
| Base Number (BN)  | mg KOH/g | ASTM D2896  |            | <b>6.0</b>  | 6.6      | 7.5      |

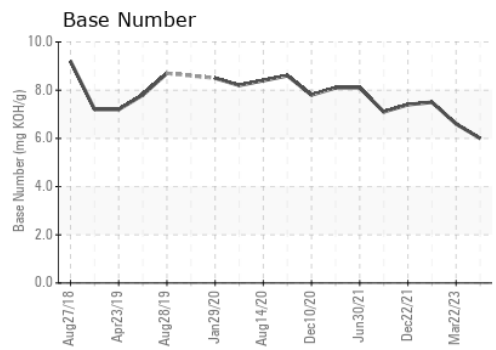
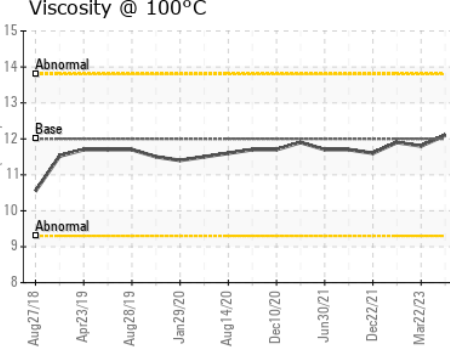
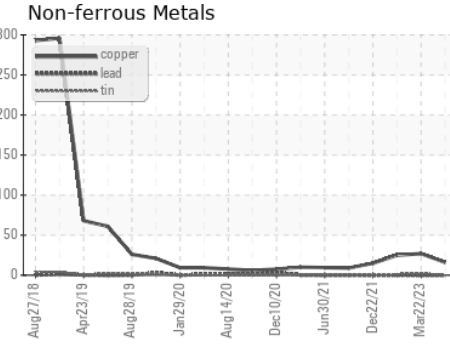
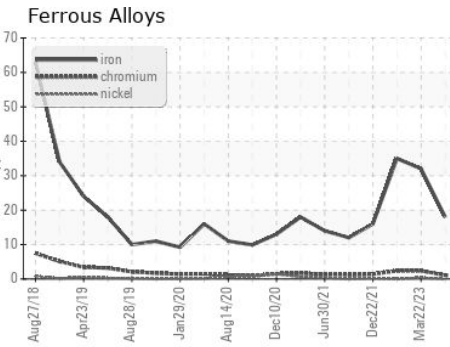
# OIL ANALYSIS REPORT



| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
| Precipitate      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Silt             | scalar | *Visual    | NONE    | NONE     | NONE     |
| Debris           | scalar | *Visual    | NONE    | NONE     | NONE     |
| Sand/Dirt        | scalar | *Visual    | NONE    | NONE     | NONE     |
| Appearance       | scalar | *Visual    | NORML   | NORML    | NORML    |
| Odor             | scalar | *Visual    | NORML   | NORML    | NORML    |
| 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 D445  | 12.00   | <b>12.1</b> | 11.8     | 11.9 |

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0073307 **Received** : 31 Oct 2023  
**Lab Number** : 05994053 **Diagnosed** : 31 Oct 2023  
**Unique Number** : 10722413 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

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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)