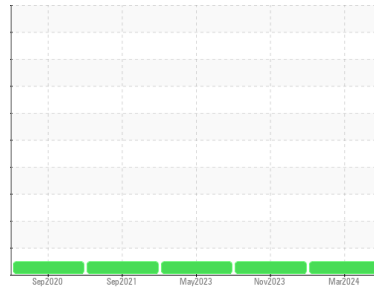


# OIL ANALYSIS REPORT

## Sample Rating Trend



**NORMAL**



Machine Id  
**302143**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 10W30 (--- QTS)**

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

#### 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>PCA0110671</b>  | PCA0097366  | PCA0083840  |
| Sample Date        | Client Info |             |            | <b>21 Mar 2024</b> | 30 Nov 2023 | 12 May 2023 |
| Machine Age        | mls         | Client Info |            | <b>149266</b>      | 136567      | 113189      |
| Oil Age            | mls         | Client Info |            | <b>12699</b>       | 23378       | 42934       |
| 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     |
| Water         | WC Method | >0.2   |            | <b>NEG</b>     | NEG      | NEG      |
| Glycol        | WC Method |        |            | <b>NEG</b>     | NEG      | NEG      |

| WEAR METALS |     | method      | limit/base | current      | history1 | history2 |
|-------------|-----|-------------|------------|--------------|----------|----------|
| Iron        | ppm | ASTM D5185m | >100       | <b>16</b>    | 33       | 50       |
| Chromium    | ppm | ASTM D5185m | >20        | <b>&lt;1</b> | 1        | 1        |
| Nickel      | ppm | ASTM D5185m | >4         | <b>0</b>     | <1       | <1       |
| Titanium    | ppm | ASTM D5185m |            | <b>54</b>    | 10       | 72       |
| Silver      | ppm | ASTM D5185m | >3         | <b>0</b>     | 0        | 0        |
| Aluminum    | ppm | ASTM D5185m | >20        | <b>8</b>     | 14       | 19       |
| Lead        | ppm | ASTM D5185m | >40        | <b>0</b>     | 0        | <1       |
| Copper      | ppm | ASTM D5185m | >330       | <b>6</b>     | 2        | 4        |
| Tin         | ppm | ASTM D5185m | >15        | <b>&lt;1</b> | 2        | 2        |
| Antimony    | ppm | ASTM D5185m |            | <b>---</b>   | ---      | ---      |
| Vanadium    | ppm | ASTM D5185m |            | <b>&lt;1</b> | 0        | <1       |
| Cadmium     | ppm | ASTM D5185m |            | <b>0</b>     | 0        | 0        |

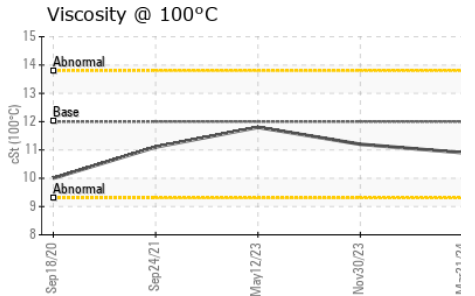
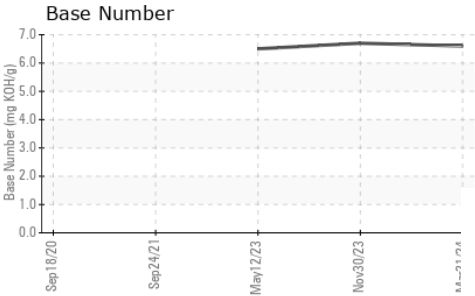
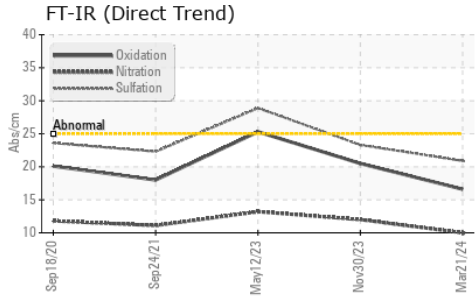
| ADDITIVES  |     | method      | limit/base | current     | history1 | history2 |
|------------|-----|-------------|------------|-------------|----------|----------|
| Boron      | ppm | ASTM D5185m | 2          | <b>57</b>   | 4        | 19       |
| Barium     | ppm | ASTM D5185m | 0          | <b>0</b>    | 0        | 2        |
| Molybdenum | ppm | ASTM D5185m | 50         | <b>19</b>   | 59       | 26       |
| Manganese  | ppm | ASTM D5185m | 0          | <b>0</b>    | <1       | <1       |
| Magnesium  | ppm | ASTM D5185m | 950        | <b>544</b>  | 995      | 547      |
| Calcium    | ppm | ASTM D5185m | 1050       | <b>1670</b> | 1302     | 1709     |
| Phosphorus | ppm | ASTM D5185m | 995        | <b>1029</b> | 1137     | 1056     |
| Zinc       | ppm | ASTM D5185m | 1180       | <b>1184</b> | 1304     | 1207     |
| Sulfur     | ppm | ASTM D5185m | 2600       | <b>4344</b> | 3452     | 3779     |

| CONTAMINANTS |     | method      | limit/base | current  | history1 | history2 |
|--------------|-----|-------------|------------|----------|----------|----------|
| Silicon      | ppm | ASTM D5185m | >25        | <b>5</b> | 4        | 5        |
| Sodium       | ppm | ASTM D5185m |            | <b>2</b> | 2        | 0        |
| Potassium    | ppm | ASTM D5185m | >20        | <b>7</b> | 8        | 18       |

| INFRA-RED |          | method      | limit/base | current     | history1 | history2 |
|-----------|----------|-------------|------------|-------------|----------|----------|
| Soot %    | %        | *ASTM D7844 | >3         | <b>0.5</b>  | 0.8      | 1.1      |
| Nitration | Abs/cm   | *ASTM D7624 | >20        | <b>10.0</b> | 12.0     | 13.2     |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30        | <b>20.9</b> | 23.3     | 28.9     |

| FLUID DEGRADATION |          | method      | limit/base | current     | history1 | history2 |
|-------------------|----------|-------------|------------|-------------|----------|----------|
| Oxidation         | Abs/.1mm | *ASTM D7414 | >25        | <b>16.6</b> | 20.5     | 25.3     |
| Base Number (BN)  | mg KOH/g | ASTM D2896  |            | <b>6.6</b>  | 6.7      | 6.5      |

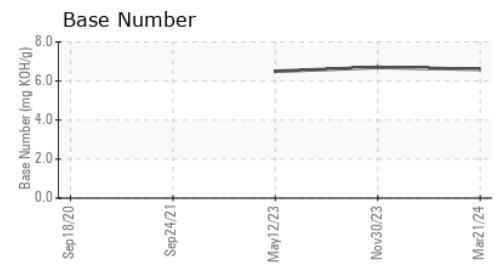
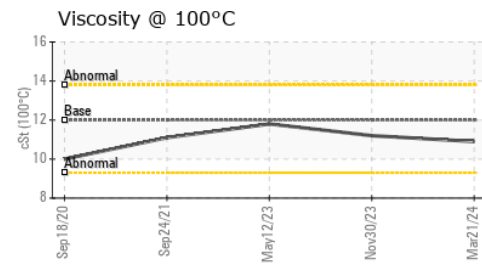
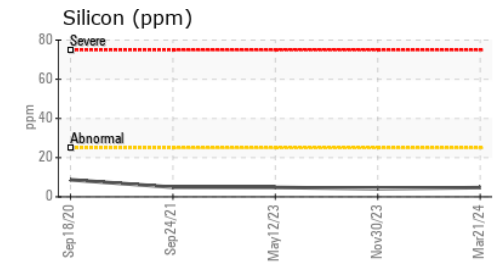
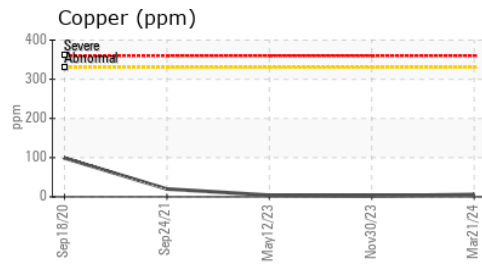
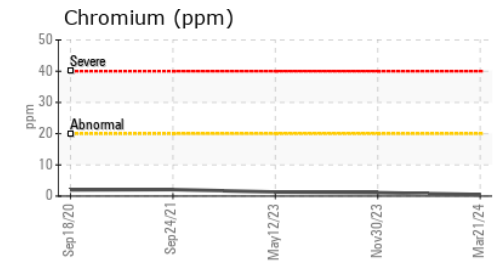
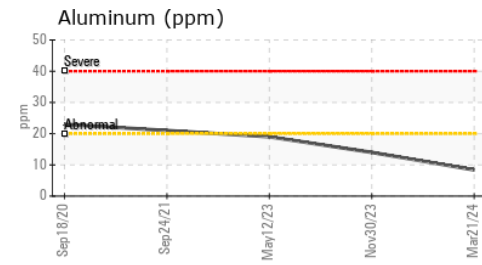
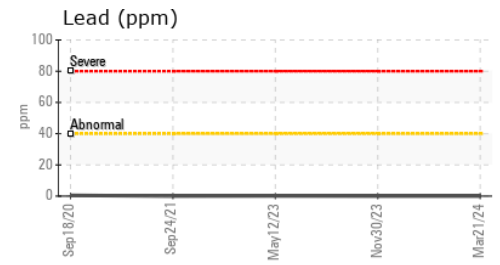
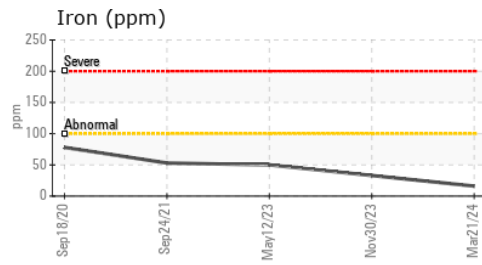
# OIL ANALYSIS REPORT



| PARAMETER        | 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   | 10.9     | 11.2     |

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0110671      **Received** : 08 Apr 2024  
**Lab Number** : 06140810      **Tested** : 08 Apr 2024  
**Unique Number** : 10965618      **Diagnosed** : 10 Apr 2024 - Sean Felton  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**MILLER TRUCK LEASING #123**  
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 LANCASTER, PA  
 US 17601  
 Contact: RON ROBERTS  
 roberts@millertransgroup.com  
 T: (717)945-6205  
 F: (717)945-5818

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)