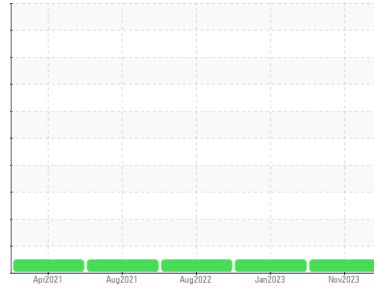


# OIL ANALYSIS REPORT

## Sample Rating Trend



**NORMAL**



Machine Id  
**302151**  
 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>PCA0097359</b>  | PCA0083865  | PCA0071677  |
| Sample Date        | Client Info     |        |            | <b>15 Nov 2023</b> | 17 Jan 2023 | 25 Aug 2022 |
| Machine Age        | mls Client Info |        |            | <b>105408</b>      | 87530       | 80591       |
| Oil Age            | mls Client Info |        |            | <b>17878</b>       | 6939        | 43838       |
| 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>33</b>    | 27       | 58       |
| Chromium    | ppm | ASTM D5185m | >20        | <b>1</b>     | <1       | 3        |
| Nickel      | ppm | ASTM D5185m | >4         | <b>&lt;1</b> | <1       | 2        |
| Titanium    | ppm | ASTM D5185m |            | <b>23</b>    | 63       | 3        |
| Silver      | ppm | ASTM D5185m | >3         | <b>0</b>     | 0        | <1       |
| Aluminum    | ppm | ASTM D5185m | >20        | <b>13</b>    | 9        | 24       |
| Lead        | ppm | ASTM D5185m | >40        | <b>&lt;1</b> | <1       | <1       |
| Copper      | ppm | ASTM D5185m | >330       | <b>2</b>     | 2        | 6        |
| Tin         | ppm | ASTM D5185m | >15        | <b>2</b>     | <1       | 2        |
| Antimony    | ppm | ASTM D5185m |            | <b>---</b>   | ---      | ---      |
| Vanadium    | ppm | ASTM D5185m |            | <b>&lt;1</b> | <1       | 2        |
| Cadmium     | ppm | ASTM D5185m |            | <b>0</b>     | 0        | <1       |

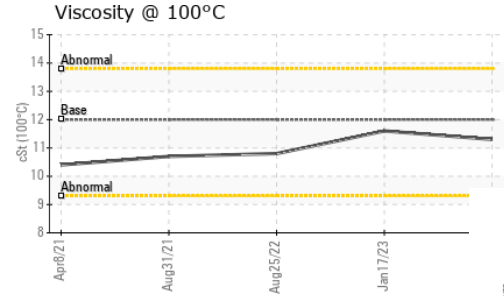
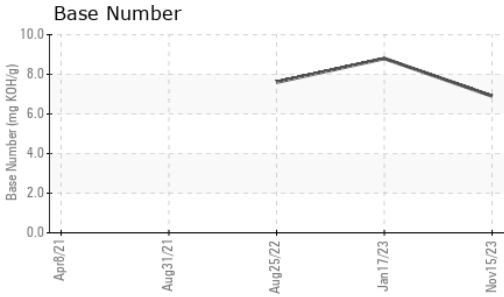
| ADDITIVES  |     | method      | limit/base | current      | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron      | ppm | ASTM D5185m | 2          | <b>12</b>    | 90       | 6        |
| Barium     | ppm | ASTM D5185m | 0          | <b>12</b>    | 0        | <1       |
| Molybdenum | ppm | ASTM D5185m | 50         | <b>51</b>    | 22       | 59       |
| Manganese  | ppm | ASTM D5185m | 0          | <b>&lt;1</b> | <1       | 2        |
| Magnesium  | ppm | ASTM D5185m | 950        | <b>927</b>   | 585      | 927      |
| Calcium    | ppm | ASTM D5185m | 1050       | <b>1365</b>  | 1629     | 1153     |
| Phosphorus | ppm | ASTM D5185m | 995        | <b>1127</b>  | 984      | 940      |
| Zinc       | ppm | ASTM D5185m | 1180       | <b>1341</b>  | 1216     | 1180     |
| Sulfur     | ppm | ASTM D5185m | 2600       | <b>3711</b>  | 4015     | 3231     |

| CONTAMINANTS |     | method      | limit/base | current  | history1 | history2 |
|--------------|-----|-------------|------------|----------|----------|----------|
| Silicon      | ppm | ASTM D5185m | >25        | <b>4</b> | 5        | 8        |
| Sodium       | ppm | ASTM D5185m |            | <b>2</b> | 3        | 5        |
| Potassium    | ppm | ASTM D5185m | >20        | <b>7</b> | 9        | 28       |

| INFRA-RED |          | method      | limit/base | current     | history1 | history2 |
|-----------|----------|-------------|------------|-------------|----------|----------|
| Soot %    | %        | *ASTM D7844 | >3         | <b>0.7</b>  | 0.3      | 0.8      |
| Nitration | Abs/cm   | *ASTM D7624 | >20        | <b>11.2</b> | 8.7      | 12.3     |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30        | <b>22.6</b> | 19.9     | 24.8     |

| FLUID DEGRADATION |          | method      | limit/base | current     | history1 | history2 |
|-------------------|----------|-------------|------------|-------------|----------|----------|
| Oxidation         | Abs/.1mm | *ASTM D7414 | >25        | <b>19.4</b> | 15.1     | 19.7     |
| Base Number (BN)  | mg KOH/g | ASTM D2896  |            | <b>6.9</b>  | 8.8      | 7.6      |

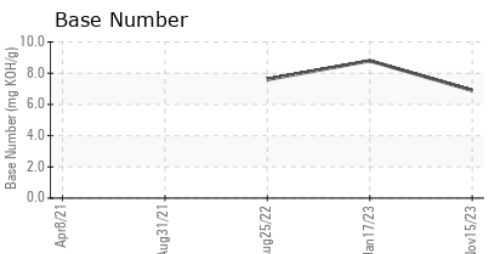
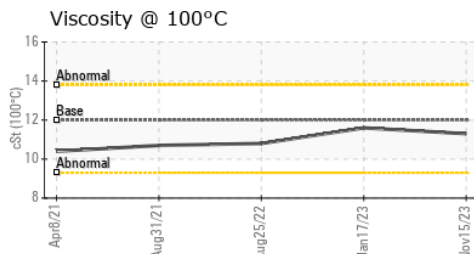
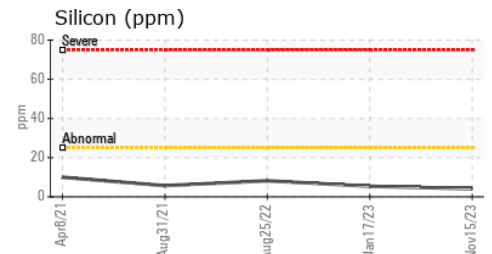
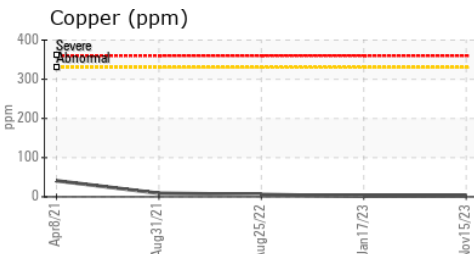
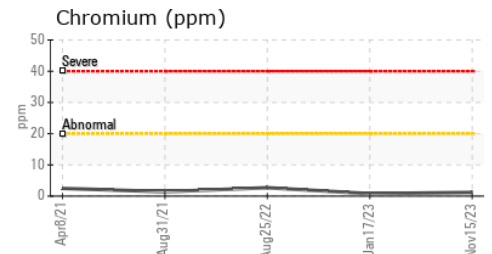
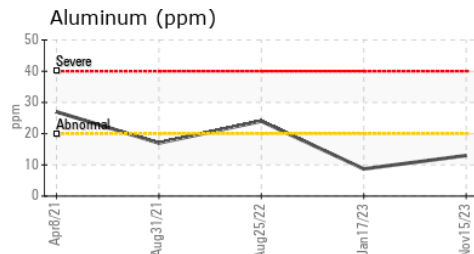
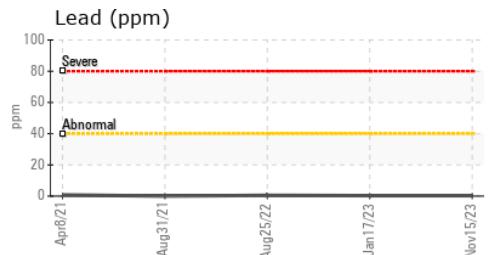
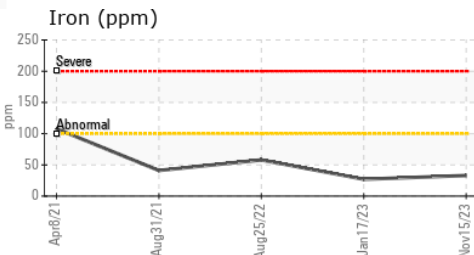
# OIL ANALYSIS REPORT



| 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>11.3</b> | 11.6     | 10.8 |

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0097359 **Recieved** : 29 Dec 2023  
**Lab Number** : 06047630 **Diagnosed** : 02 Jan 2024  
**Unique Number** : 10808238 **Diagnostician** : Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**MILLER TRUCK LEASING #123**  
 66 KELLER AVENUE  
 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)