

# OIL ANALYSIS REPORT

**Sample Rating Trend**

**NORMAL**

 Machine Id  
**RO186688**

 Component  
**Diesel Engine**

 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**
**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>PCA0098679</b>  | ---      | ---      |
| Sample Date        | Client Info |             |            | <b>10 Apr 2024</b> | ---      | ---      |
| Machine Age        | hrs         | Client Info |            | <b>0</b>           | ---      | ---      |
| Oil Age            | hrs         | Client Info |            | <b>0</b>           | ---      | ---      |
| Oil Changed        | Client Info |             |            | <b>N/A</b>         | ---      | ---      |
| Sample Status      |             |             |            | <b>NORMAL</b>      | ---      | ---      |

| CONTAMINATION |           | method | limit/base | current        | history1 | history2 |
|---------------|-----------|--------|------------|----------------|----------|----------|
| Fuel          | WC Method | >5     |            | <b>&lt;1.0</b> | ---      | ---      |
| Water         | WC Method | >0.2   |            | <b>NEG</b>     | ---      | ---      |
| Glycol        | WC Method |        |            | <b>NEG</b>     | ---      | ---      |

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

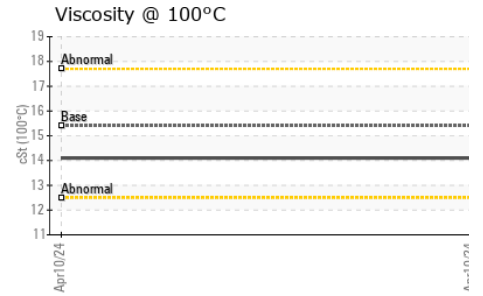
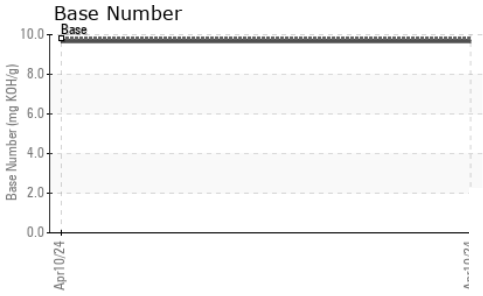
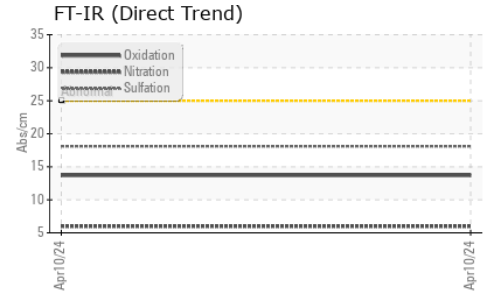
| ADDITIVES  |     | method      | limit/base | current      | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron      | ppm | ASTM D5185m | 0          | <b>4</b>     | ---      | ---      |
| Barium     | ppm | ASTM D5185m | 0          | <b>0</b>     | ---      | ---      |
| Molybdenum | ppm | ASTM D5185m | 60         | <b>60</b>    | ---      | ---      |
| Manganese  | ppm | ASTM D5185m | 0          | <b>&lt;1</b> | ---      | ---      |
| Magnesium  | ppm | ASTM D5185m | 1010       | <b>1054</b>  | ---      | ---      |
| Calcium    | ppm | ASTM D5185m | 1070       | <b>1213</b>  | ---      | ---      |
| Phosphorus | ppm | ASTM D5185m | 1150       | <b>1196</b>  | ---      | ---      |
| Zinc       | ppm | ASTM D5185m | 1270       | <b>1422</b>  | ---      | ---      |
| Sulfur     | ppm | ASTM D5185m | 2060       | <b>3987</b>  | ---      | ---      |

| CONTAMINANTS |     | method      | limit/base | current      | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Silicon      | ppm | ASTM D5185m | >25        | <b>3</b>     | ---      | ---      |
| Sodium       | ppm | ASTM D5185m |            | <b>&lt;1</b> | ---      | ---      |
| Potassium    | ppm | ASTM D5185m | >20        | <b>5</b>     | ---      | ---      |

| INFRA-RED |          | method      | limit/base | current     | history1 | history2 |
|-----------|----------|-------------|------------|-------------|----------|----------|
| Soot %    | %        | *ASTM D7844 | >3         | <b>0.3</b>  | ---      | ---      |
| Nitration | Abs/cm   | *ASTM D7624 | >20        | <b>6.0</b>  | ---      | ---      |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30        | <b>18.1</b> | ---      | ---      |

| FLUID DEGRADATION |          | method      | limit/base | current     | history1 | history2 |
|-------------------|----------|-------------|------------|-------------|----------|----------|
| Oxidation         | Abs/.1mm | *ASTM D7414 | >25        | <b>13.7</b> | ---      | ---      |
| Base Number (BN)  | mg KOH/g | ASTM D2896  | 9.8        | <b>9.66</b> | ---      | ---      |

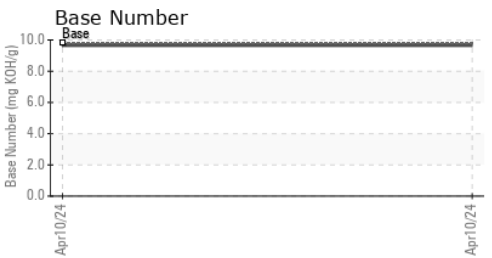
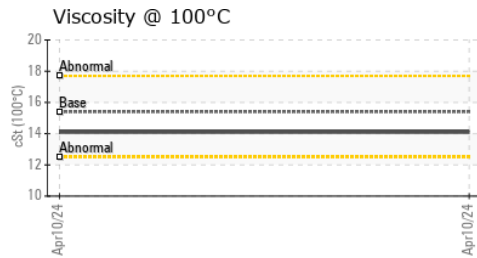
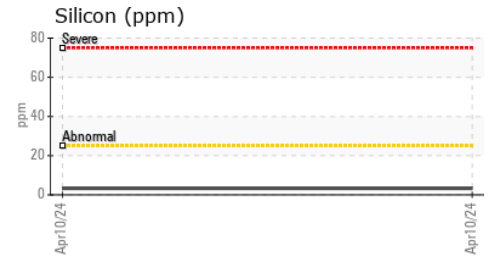
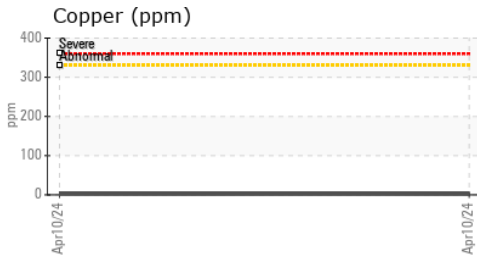
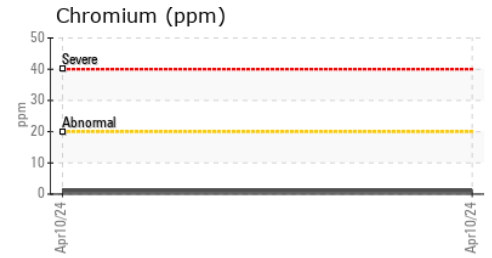
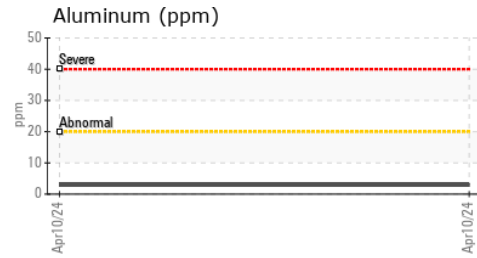
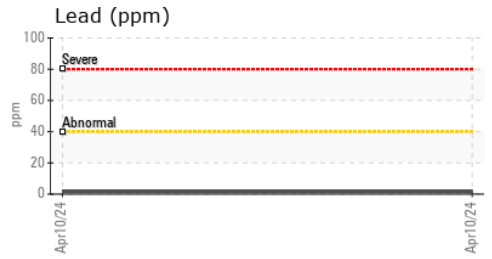
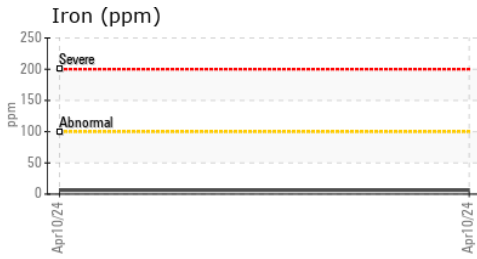
# OIL ANALYSIS REPORT



| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | ---      |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | ---      |
| Precipitate      | scalar | *Visual    | NONE    | NONE     | ---      |
| Silt             | scalar | *Visual    | NONE    | NONE     | ---      |
| Debris           | scalar | *Visual    | NONE    | NONE     | ---      |
| Sand/Dirt        | scalar | *Visual    | NONE    | NONE     | ---      |
| Appearance       | scalar | *Visual    | NORML   | NORML    | ---      |
| Odor             | scalar | *Visual    | NORML   | NORML    | ---      |
| Emulsified Water | scalar | *Visual    | >0.2    | NEG      | ---      |
| Free Water       | scalar | *Visual    |         | NEG      | ---      |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 100°C     | cSt    | ASTM D445  | 15.4    | 14.1     | ---      |

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0098679  
**Lab Number** : 06147561  
**Unique Number** : 10977639  
**Test Package** : MOB 2

**WIN Waste Innovations - Shop # - Taunton**  
 565 WINTHROP ST  
 TAUNTON, MA  
 US 02780  
 Contact: Dave Wilson  
 dwilson1@win-waste.com

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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F: