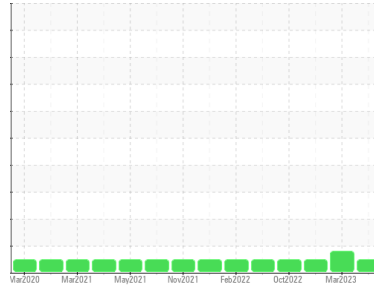


# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**RST1525**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON UHP 5W40 (7 LTR)**

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

## SAMPLE INFORMATION

|               | method      | limit/base  | current            | history1    | history2    |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info |             | <b>PC0078310</b>   | PC0072031   | PC0072917   |
| Sample Date   | Client Info |             | <b>27 Feb 2024</b> | 28 Mar 2023 | 27 Feb 2023 |
| Machine Age   | hrs         | Client Info | <b>6561</b>        | 4190        | 3743        |
| Oil Age       | hrs         | Client Info | <b>0</b>           | 500         | 500         |
| Oil Changed   | Client Info |             | <b>Changed</b>     | Changed     | Changed     |
| Sample Status |             |             | <b>NORMAL</b>      | ABNORMAL    | 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 D5185(m) >100 | <b>5</b>     | 11       | 13       |
| Chromium  | ppm    | ASTM D5185(m) >20  | <b>1</b>     | 1        | 2        |
| Nickel    | ppm    | ASTM D5185(m) >4   | <b>&lt;1</b> | <1       | <1       |
| Titanium  | ppm    | ASTM D5185(m)      | <b>0</b>     | <1       | <1       |
| Silver    | ppm    | ASTM D5185(m) >3   | <b>0</b>     | 0        | 0        |
| Aluminum  | ppm    | ASTM D5185(m) >20  | <b>2</b>     | 3        | 3        |
| Lead      | ppm    | ASTM D5185(m) >40  | <b>0</b>     | 0        | <1       |
| Copper    | ppm    | ASTM D5185(m) >330 | <b>&lt;1</b> | <1       | <1       |
| Tin       | ppm    | ASTM D5185(m) >15  | <b>0</b>     | 0        | <1       |
| Antimony  | ppm    | ASTM D5185(m)      | <b>0</b>     | 0        | 0        |
| Vanadium  | ppm    | ASTM D5185(m)      | <b>0</b>     | 0        | 0        |
| Beryllium | ppm    | ASTM D5185(m)      | <b>0</b>     | 0        | 0        |
| Cadmium   | ppm    | ASTM D5185(m)      | <b>0</b>     | 0        | 0        |

## ADDITIVES

|            | method | limit/base         | current      | history1 | history2 |
|------------|--------|--------------------|--------------|----------|----------|
| Boron      | ppm    | ASTM D5185(m) 65   | <b>42</b>    | 52       | 42       |
| Barium     | ppm    | ASTM D5185(m) 0    | <b>0</b>     | 0        | 0        |
| Molybdenum | ppm    | ASTM D5185(m) 65   | <b>52</b>    | 67       | 65       |
| Manganese  | ppm    | ASTM D5185(m) 0    | <b>0</b>     | <1       | <1       |
| Magnesium  | ppm    | ASTM D5185(m) 1160 | <b>1028</b>  | 1283     | 1169     |
| Calcium    | ppm    | ASTM D5185(m) 820  | <b>787</b>   | 993      | 904      |
| Phosphorus | ppm    | ASTM D5185(m) 1160 | <b>935</b>   | 1087     | 1088     |
| Zinc       | ppm    | ASTM D5185(m) 1260 | <b>1095</b>  | 1318     | 1225     |
| Sulfur     | ppm    | ASTM D5185(m) 3000 | <b>2666</b>  | 2752     | 2774     |
| Lithium    | ppm    | ASTM D5185(m)      | <b>&lt;1</b> | <1       | <1       |

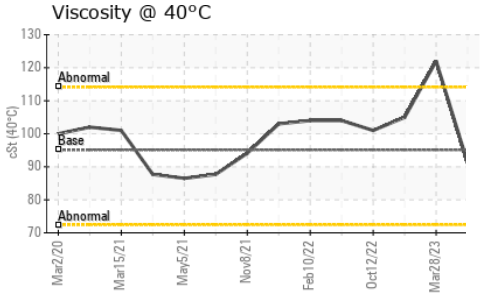
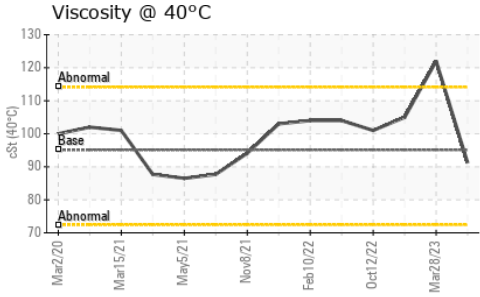
## CONTAMINANTS

|           | method | limit/base        | current      | history1 | history2 |
|-----------|--------|-------------------|--------------|----------|----------|
| Silicon   | ppm    | ASTM D5185(m) >25 | <b>7</b>     | 8        | 8        |
| Sodium    | ppm    | ASTM D5185(m)     | <b>4</b>     | 6        | 5        |
| Potassium | ppm    | ASTM D5185(m) >20 | <b>&lt;1</b> | <1       | 0        |

## INFRA-RED

|           | method   | limit/base      | current     | history1 | history2 |
|-----------|----------|-----------------|-------------|----------|----------|
| Soot %    | %        | ASTM D7844* >3  | <b>0</b>    | 0        | 0        |
| Nitration | Abs/cm   | ASTM D7624* >20 | <b>10.9</b> | 6.8      | 12.2     |
| Sulfation | Abs/.1mm | ASTM D7415* >30 | <b>21.3</b> | 19.2     | 26.0     |

# OIL ANALYSIS REPORT

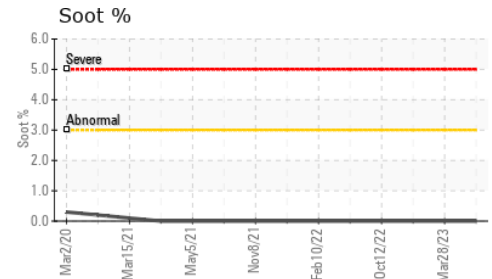
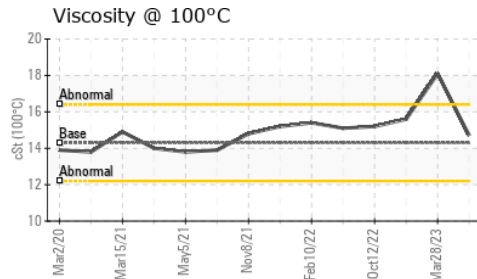
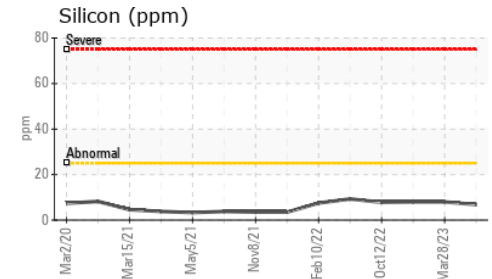
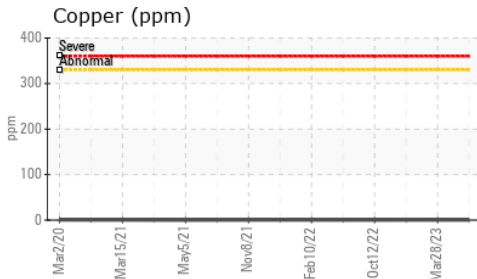
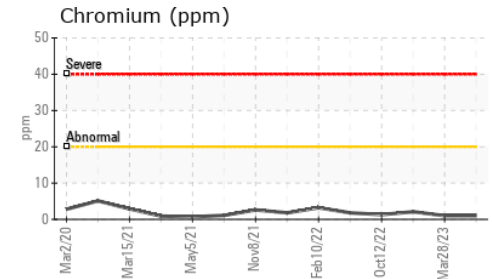
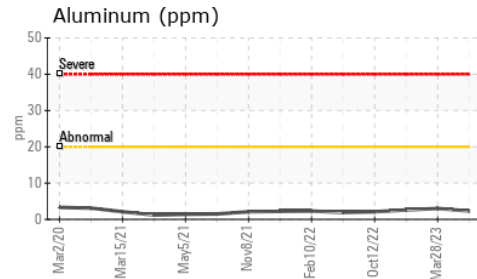
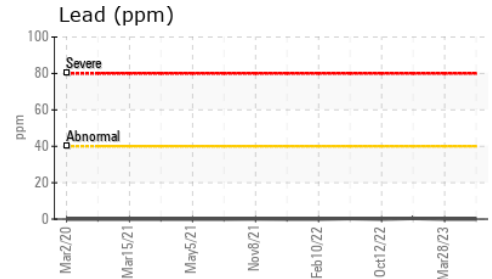
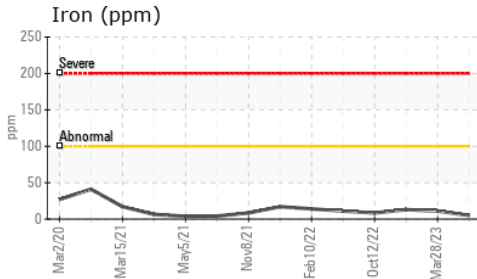


| FLUID DEGRADATION |          | method      | limit/base | current     | history1 | history2 |
|-------------------|----------|-------------|------------|-------------|----------|----------|
| Oxidation         | Abs./1mm | ASTM D7414* | >25        | <b>23.9</b> | 13.7     | 27.2     |

| VISUAL           |        | method  | limit/base | current    | history1 | history2 |
|------------------|--------|---------|------------|------------|----------|----------|
| Emulsified Water | scalar | Visual* | >0.2       | <b>NEG</b> | NEG      | NEG      |
| Free Water       | scalar | Visual* |            | <b>NEG</b> | NEG      | NEG      |

| FLUID PROPERTIES     |       | method        | limit/base | current     | history1 | history2 |
|----------------------|-------|---------------|------------|-------------|----------|----------|
| Visc @ 40°C          | cSt   | ASTM D7279(m) | 95.1       | <b>91.2</b> | ▲ 122    | 105      |
| Visc @ 100°C         | cSt   | ASTM D7279(m) | 14.3       | <b>14.7</b> | ▲ 18.1   | 15.6     |
| Viscosity Index (VI) | Scale | ASTM D2270*   | 169        | <b>168</b>  | 165      | 157      |

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0078310  
**Lab Number** : 02619183  
**Unique Number** : 5736293  
**Test Package** : MOB 1 ( Additional Tests: KV40, VI )

Green Infrastructure and Partners Inc (GIPI) - 286 - Shoring & Foundations  
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 CA L4A 2G8  
 Contact: Shannon Abbott  
 sabbott@gipi.com  
 T: (905)750-5900  
 F:

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.