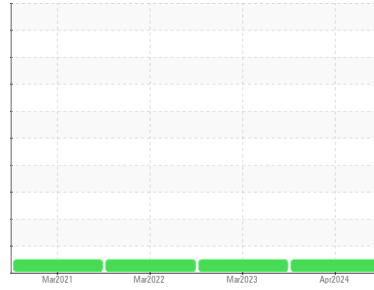


# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id

**OR890**

Component

**Diesel Engine**

Fluid

**PETRO CANADA SUPREME SYNTHETIC 5W40 (8 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>PC0089311</b>   | PC0056512   | PC0060982   |
| Sample Date        | Client Info |             |            | <b>20 Apr 2024</b> | 08 Mar 2023 | 21 Mar 2022 |
| Machine Age        | hrs         | Client Info |            | <b>8510</b>        | 8223        | 7718        |
| Oil Age            | hrs         | Client Info |            | <b>0</b>           | 500         | 0           |
| 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      |

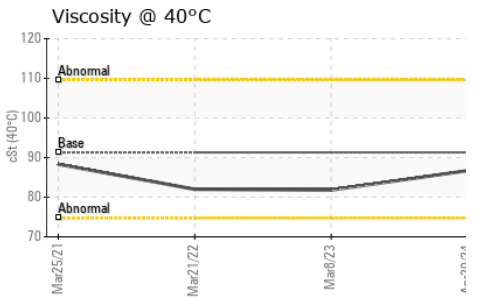
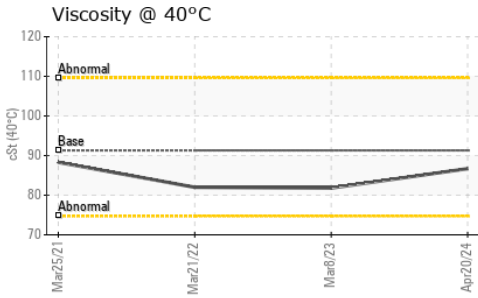
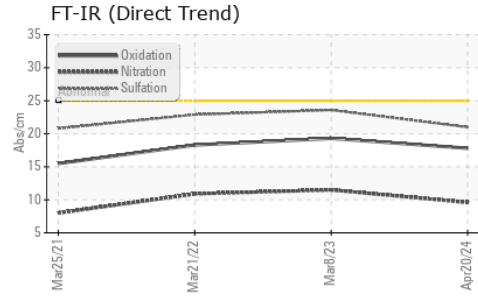
| WEAR METALS |     | method        | limit/base | current      | history1 | history2 |
|-------------|-----|---------------|------------|--------------|----------|----------|
| Iron        | ppm | ASTM D5185(m) | >100       | <b>32</b>    | 42       | 24       |
| Chromium    | ppm | ASTM D5185(m) | >20        | <b>&lt;1</b> | 1        | <1       |
| Nickel      | ppm | ASTM D5185(m) | >4         | <b>&lt;1</b> | <1       | <1       |
| Titanium    | ppm | ASTM D5185(m) |            | <b>0</b>     | <1       | 0        |
| Silver      | ppm | ASTM D5185(m) | >3         | <b>0</b>     | 0        | 0        |
| Aluminum    | ppm | ASTM D5185(m) | >20        | <b>4</b>     | 4        | 3        |
| Lead        | ppm | ASTM D5185(m) | >40        | <b>0</b>     | 0        | 0        |
| Copper      | ppm | ASTM D5185(m) | >330       | <b>3</b>     | 4        | 2        |
| Tin         | ppm | ASTM D5185(m) | >15        | <b>0</b>     | <1       | <1       |
| Antimony    | ppm | ASTM D5185(m) |            | <b>0</b>     | 0        | <1       |
| 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) | 190        | <b>45</b>    | 39       | 60       |
| Barium     | ppm | ASTM D5185(m) | 0          | <b>0</b>     | 0        | 0        |
| Molybdenum | ppm | ASTM D5185(m) | 79         | <b>57</b>    | 57       | 54       |
| Manganese  | ppm | ASTM D5185(m) |            | <b>&lt;1</b> | <1       | <1       |
| Magnesium  | ppm | ASTM D5185(m) | 564        | <b>1087</b>  | 1080     | 1010     |
| Calcium    | ppm | ASTM D5185(m) | 993        | <b>817</b>   | 912      | 997      |
| Phosphorus | ppm | ASTM D5185(m) | 763        | <b>987</b>   | 1107     | 1089     |
| Zinc       | ppm | ASTM D5185(m) | 835        | <b>1158</b>  | 1214     | 1257     |
| Sulfur     | ppm | ASTM D5185(m) | 2536       | <b>2675</b>  | 2856     | 2928     |
| 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>11</b>    | 10       | 8        |
| Sodium       | ppm | ASTM D5185(m) |            | <b>4</b>     | 5        | 4        |
| Potassium    | ppm | ASTM D5185(m) | >20        | <b>&lt;1</b> | <1       | 2        |

| INFRA-RED |          | method      | limit/base | current     | history1 | history2 |
|-----------|----------|-------------|------------|-------------|----------|----------|
| Soot %    | %        | ASTM D7844* | >3         | <b>1</b>    | 0.8      | 1.2      |
| Nitration | Abs/cm   | ASTM D7624* | >20        | <b>9.6</b>  | 11.5     | 10.9     |
| Sulfation | Abs/.1mm | ASTM D7415* | >30        | <b>21.0</b> | 23.6     | 22.9     |

# OIL ANALYSIS REPORT

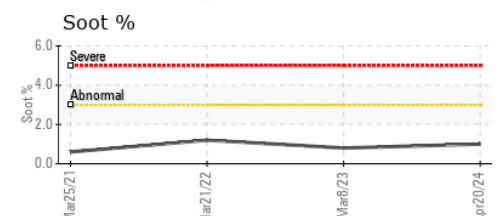
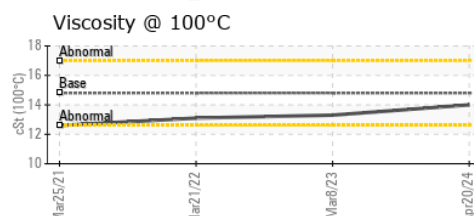
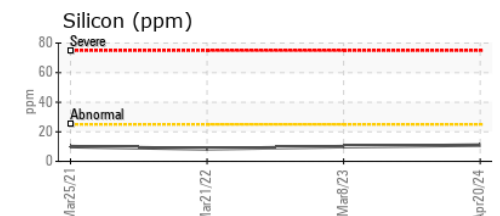
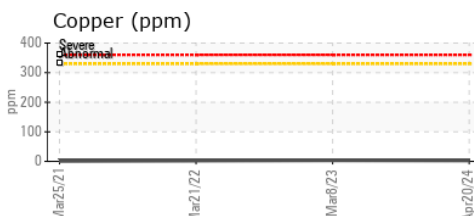
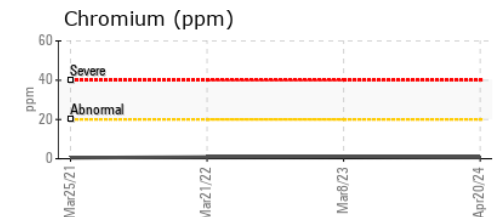
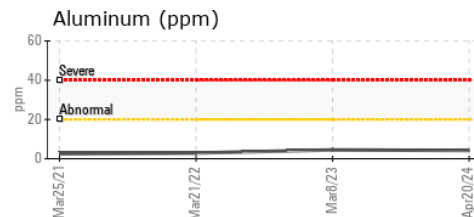
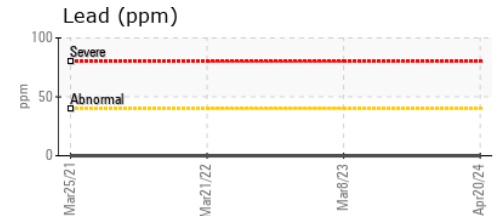
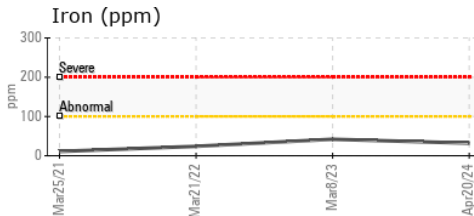


| FLUID DEGRADATION |          | method      | limit/base | current     | history1 | history2 |
|-------------------|----------|-------------|------------|-------------|----------|----------|
| Oxidation         | Abs./1mm | ASTM D7414* | >25        | <b>17.8</b> | 19.3     | 18.3     |

| VISUAL           |        | method  | limit/base | current      | history1 | history2 |
|------------------|--------|---------|------------|--------------|----------|----------|
| White Metal      | scalar | Visual* | NONE       | <b>VLITE</b> | ---      | ---      |
| Yellow Metal     | scalar | Visual* | NONE       | <b>NONE</b>  | ---      | ---      |
| Precipitate      | scalar | Visual* | NONE       | <b>NONE</b>  | ---      | ---      |
| Silt             | scalar | Visual* | NONE       | <b>NONE</b>  | ---      | ---      |
| Debris           | scalar | Visual* | NONE       | <b>NONE</b>  | ---      | ---      |
| Sand/Dirt        | scalar | Visual* | NONE       | <b>NONE</b>  | ---      | ---      |
| Appearance       | scalar | Visual* | NORML      | <b>NORML</b> | ---      | ---      |
| Odor             | scalar | Visual* | NORML      | <b>NORML</b> | NORML    | NORML    |
| 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) | 91.3       | <b>86.7</b> | 81.8     | 82.0     |
| Visc @ 100°C         | cSt   | ASTM D7279(m) | 14.8       | <b>14.0</b> | 13.3     | 13.1     |
| Viscosity Index (VI) | Scale | ASTM D2270*   | 170        | <b>166</b>  | 164      | 160      |

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0089311  
**Lab Number** : 02631262  
**Unique Number** : 5772415  
**Test Package** : MOB 1 ( Additional Tests: KV40, VI, Visual )  
**Received** : 25 Apr 2024  
**Tested** : 25 Apr 2024  
**Diagnosed** : 25 Apr 2024 - Wes Davis

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 CA L4A 2G8  
 Contact: Bill Acton  
 bacton@gipi.com

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.