

# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**

 Area  
**[67433]**  
 Machine Id  
**TTH038**

 Component  
**Right Final Drive**  
 Fluid

**PETRO CANADA PRODURO TO-4 SAE 50 (--- GAL)**

**DIAGNOSIS**
**Recommendation**

Resample at the next service interval to monitor. ( Customer Sample Comment: PM-1 sampled fluid )

**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>PCA0070656</b>  | ---      | ---      |
| Sample Date   | Client Info |             | <b>05 Dec 2023</b> | ---      | ---      |
| Machine Age   | hrs         | Client Info | <b>453</b>         | ---      | ---      |
| Oil Age       | hrs         | Client Info | <b>453</b>         | ---      | ---      |
| Oil Changed   | Client Info |             | <b>N/A</b>         | ---      | ---      |
| Sample Status |             |             | <b>NORMAL</b>      | ---      | ---      |

**CONTAMINATION**

|       | method    | limit/base | current    | history1 | history2 |
|-------|-----------|------------|------------|----------|----------|
| Water | WC Method | >0.2       | <b>NEG</b> | ---      | ---      |

**WEAR METALS**

|          | method | limit/base       | current      | history1 | history2 |
|----------|--------|------------------|--------------|----------|----------|
| Iron     | ppm    | ASTM D5185m >500 | <b>79</b>    | ---      | ---      |
| Chromium | ppm    | ASTM D5185m >10  | <b>1</b>     | ---      | ---      |
| Nickel   | ppm    | ASTM D5185m >10  | <b>0</b>     | ---      | ---      |
| Titanium | ppm    | ASTM D5185m      | <b>0</b>     | ---      | ---      |
| Silver   | ppm    | ASTM D5185m      | <b>0</b>     | ---      | ---      |
| Aluminum | ppm    | ASTM D5185m >25  | <b>1</b>     | ---      | ---      |
| Lead     | ppm    | ASTM D5185m >25  | <b>0</b>     | ---      | ---      |
| Copper   | ppm    | ASTM D5185m >50  | <b>&lt;1</b> | ---      | ---      |
| Tin      | ppm    | ASTM D5185m >10  | <b>0</b>     | ---      | ---      |
| Vanadium | ppm    | ASTM D5185m      | <b>0</b>     | ---      | ---      |
| Cadmium  | ppm    | ASTM D5185m      | <b>0</b>     | ---      | ---      |

**ADDITIVES**

|            | method | limit/base       | current      | history1 | history2 |
|------------|--------|------------------|--------------|----------|----------|
| Boron      | ppm    | ASTM D5185m 2    | <b>0</b>     | ---      | ---      |
| Barium     | ppm    | ASTM D5185m 0    | <b>0</b>     | ---      | ---      |
| Molybdenum | ppm    | ASTM D5185m 0    | <b>0</b>     | ---      | ---      |
| Manganese  | ppm    | ASTM D5185m 0    | <b>&lt;1</b> | ---      | ---      |
| Magnesium  | ppm    | ASTM D5185m 9    | <b>&lt;1</b> | ---      | ---      |
| Calcium    | ppm    | ASTM D5185m 3114 | <b>193</b>   | ---      | ---      |
| Phosphorus | ppm    | ASTM D5185m 1099 | <b>146</b>   | ---      | ---      |
| Zinc       | ppm    | ASTM D5185m 1245 | <b>54</b>    | ---      | ---      |
| Sulfur     | ppm    | ASTM D5185m 7086 | <b>13987</b> | ---      | ---      |

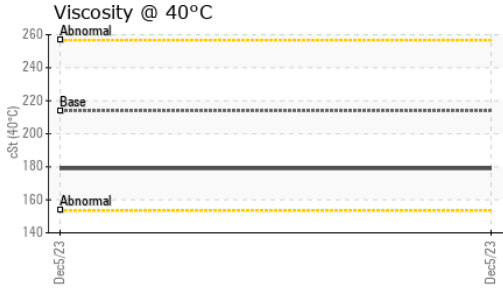
**CONTAMINANTS**

|           | method | limit/base      | current  | history1 | history2 |
|-----------|--------|-----------------|----------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >75 | <b>6</b> | ---      | ---      |
| Sodium    | ppm    | ASTM D5185m     | <b>0</b> | ---      | ---      |
| Potassium | ppm    | ASTM D5185m >20 | <b>2</b> | ---      | ---      |

**VISUAL**

|                  | method | limit/base    | current      | history1 | history2 |
|------------------|--------|---------------|--------------|----------|----------|
| White Metal      | scalar | *Visual NONE  | <b>NONE</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> | ---      | ---      |
| Emulsified Water | scalar | *Visual >0.2  | <b>NEG</b>   | ---      | ---      |
| Free Water       | scalar | *Visual       | <b>NEG</b>   | ---      | ---      |

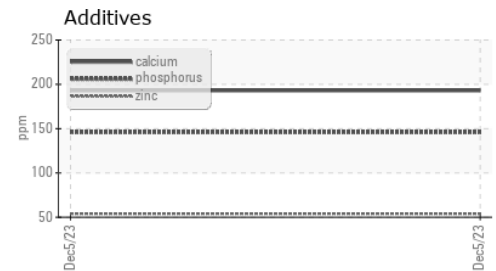
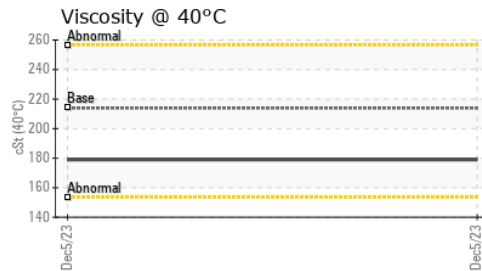
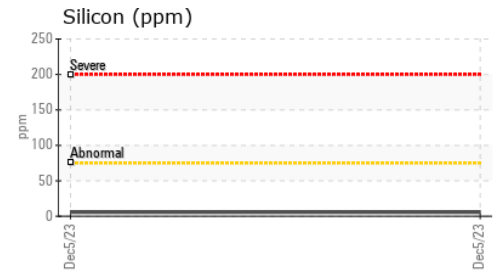
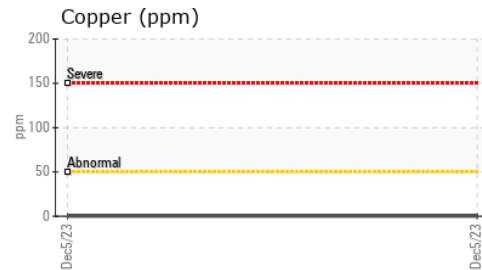
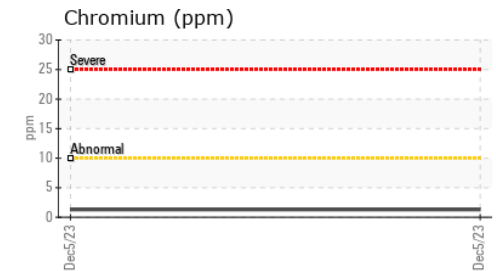
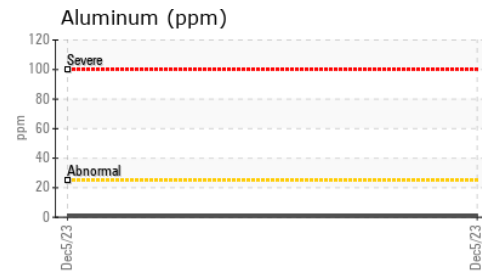
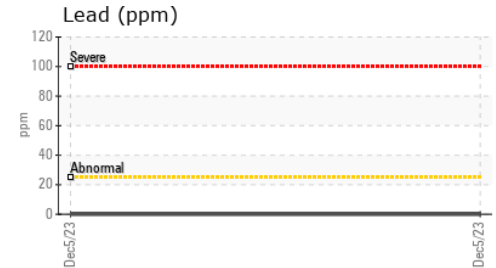
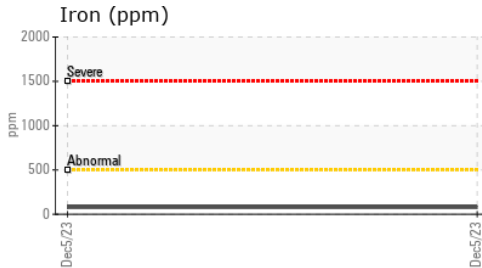
# OIL ANALYSIS REPORT



| FLUID PROPERTIES | method | limit/base | current | history1   | history2 |     |
|------------------|--------|------------|---------|------------|----------|-----|
| Visc @ 40°C      | cSt    | ASTM D445  | 213.9   | <b>179</b> | ---      | --- |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
| Color         |        |            |         | no image | no image |
| Bottom        |        |            |         | no image | no image |

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0070656 **Recieved** : 13 Dec 2023  
**Lab Number** : **06034217** **Diagnosed** : 18 Dec 2023  
**Unique Number** : 10789446 **Diagnostician** : Jonathan Hester  
**Test Package** : MOB 1

**Kemp Quarries - Muskogee Sand**  
 3395 W 50th St N  
 Porter, OK  
 US 74454  
 Contact:  
 muskogee@muskogeessand.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)

T:  
F: