



# Ackerman Oil

## OIL ANALYSIS REPORT

|                 |               |
|-----------------|---------------|
| WEAR            | <b>NORMAL</b> |
| CONTAMINATION   | <b>NORMAL</b> |
| FLUID CONDITION | <b>NORMAL</b> |

Machine Id

**627**

Component

**Diesel Engine**

Fluid

**PETRO CANADA TEST OIL GREY II HDEO 0W20 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>AK0000104</b>   | AK0000109   | AK0000111   |
| Sample Date    |     | Client Info |           | <b>10 Jan 2024</b> | 08 Dec 2023 | 31 Oct 2023 |
| Machine Age    | mls | Client Info |           | <b>419002</b>      | 408569      | 395802      |
| Oil Age        | mls | Client Info |           | <b>10433</b>       | 50186       | 0           |
| Filter Age     | mls | Client Info |           | <b>0</b>           | 0           | 0           |
| Oil Changed    |     | Client Info |           | <b>Not Changd</b>  | Changed     | N/A         |
| Filter Changed |     | Client Info |           | <b>Not Changd</b>  | Changed     | N/A         |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | NORMAL      |

### WEAR

All component wear rates are normal.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >90  | <b>6</b>     | 21   | 13   |
| Chromium     | ppm    | ASTM D5185m | >20  | <b>0</b>     | <1   | <1   |
| Nickel       | ppm    | ASTM D5185m | >2   | <b>0</b>     | <1   | <1   |
| Titanium     | ppm    | ASTM D5185m | >2   | <b>0</b>     | <1   | 0    |
| Silver       | ppm    | ASTM D5185m | >2   | <b>0</b>     | 0    | <1   |
| Aluminum     | ppm    | ASTM D5185m | >20  | <b>&lt;1</b> | 3    | 3    |
| Lead         | ppm    | ASTM D5185m | >40  | <b>&lt;1</b> | 2    | 3    |
| Copper       | ppm    | ASTM D5185m | >330 | <b>&lt;1</b> | 1    | 0    |
| Tin          | ppm    | ASTM D5185m | >15  | <b>0</b>     | <1   | 1    |
| Vanadium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | 0    | 0    |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |

### CONTAMINATION

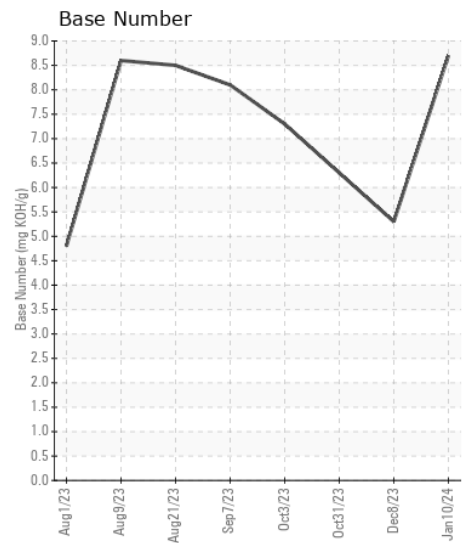
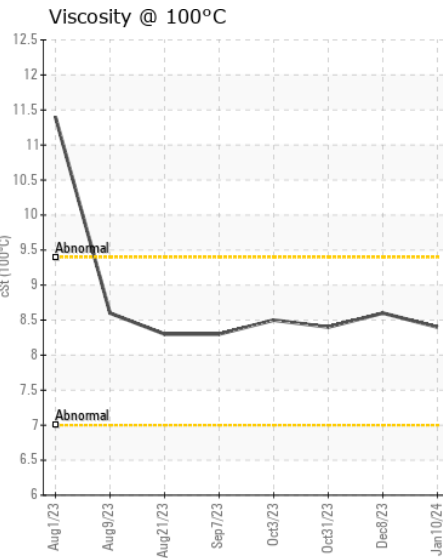
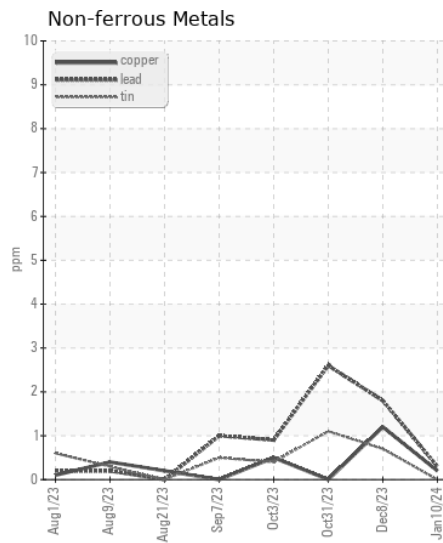
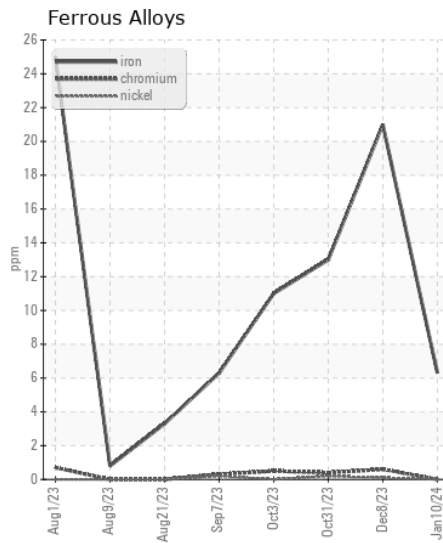
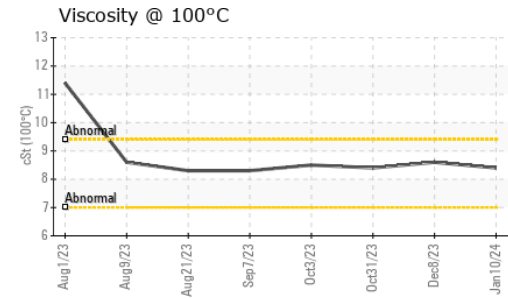
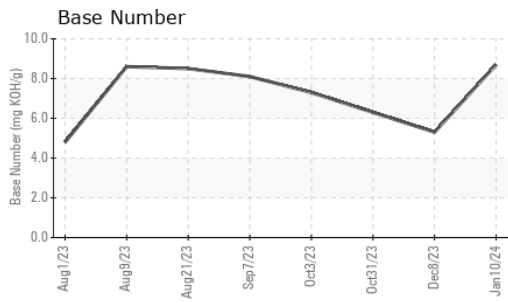
There is no indication of any contamination in the oil.

|                  |          |             |       |                |       |       |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >25   | <b>4</b>       | 5     | 4     |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>&lt;1</b>   | 7     | 5     |
| Fuel             |          | WC Method   | >3.0  | <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   |
| Soot %           | %        | *ASTM D7844 | >6    | <b>0.1</b>     | 0.4   | 0.4   |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>7.1</b>     | 10.8  | 10.0  |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>25.2</b>    | 29.0  | 27.8  |
| Silt             | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | NONE  |
| Debris           | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | NONE  |
| Sand/Dirt        | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | NONE  |
| Appearance       | scalar   | *Visual     | NORML | <b>NORML</b>   | NORML | NORML |
| Odor             | scalar   | *Visual     | NORML | <b>NORML</b>   | NORML | NORML |
| Emulsified Water | scalar   | *Visual     | >0.2  | <b>NEG</b>     | NEG   | NEG   |

### 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.

|                  |          |             |     |              |      |      |
|------------------|----------|-------------|-----|--------------|------|------|
| Sodium           | ppm      | ASTM D5185m |     | <b>2</b>     | 0    | <1   |
| Boron            | ppm      | ASTM D5185m |     | <b>0</b>     | 0    | 3    |
| Barium           | ppm      | ASTM D5185m |     | <b>0</b>     | 9    | 0    |
| Molybdenum       | ppm      | ASTM D5185m |     | <b>60</b>    | 66   | 62   |
| Manganese        | ppm      | ASTM D5185m |     | <b>&lt;1</b> | <1   | <1   |
| Magnesium        | ppm      | ASTM D5185m |     | <b>1024</b>  | 1005 | 976  |
| Calcium          | ppm      | ASTM D5185m |     | <b>1042</b>  | 1115 | 1073 |
| Phosphorus       | ppm      | ASTM D5185m |     | <b>1110</b>  | 1077 | 1017 |
| Zinc             | ppm      | ASTM D5185m |     | <b>1304</b>  | 1291 | 1319 |
| Sulfur           | ppm      | ASTM D5185m |     | <b>3156</b>  | 2920 | 2944 |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25 | <b>22.1</b>  | 27.1 | 25.0 |
| Base Number (BN) | mg KOH/g | ASTM D2896  |     | <b>8.7</b>   | 5.3  | 6.3  |
| Visc @ 100°C     | cSt      | ASTM D445   |     | <b>8.4</b>   | 8.6  | 8.4  |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : AK0000104 **Received** : 18 Jan 2024  
**Lab Number** : 06064819 **Diagnosed** : 19 Jan 2024  
**Unique Number** : 10836201 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

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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