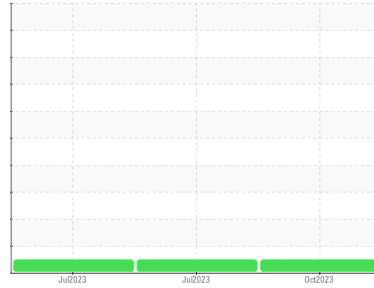


# OIL ANALYSIS REPORT

## Sample Rating Trend



**NORMAL**



Machine Id  
**60AE**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON EXTRA 15W40 (9 GAL)**

### 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 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>PCA0105998</b>  | PCA0095295  | PCA0098094  |
| Sample Date   | Client Info |             | <b>23 Oct 2023</b> | 27 Jul 2023 | 13 Jul 2023 |
| Machine Age   | hrs         | Client Info | <b>7922</b>        | 7433        | 7131        |
| Oil Age       | hrs         | Client Info | <b>489</b>         | 302         | 0           |
| Oil Changed   | Client Info |             | <b>Not Chngd</b>   | Not Chngd   | Not Chngd   |
| Sample Status |             |             | <b>NORMAL</b>      | NORMAL      | NORMAL      |

### CONTAMINATION

|        | method    | limit/base | current        | history1 | history2 |
|--------|-----------|------------|----------------|----------|----------|
| Fuel   | WC Method | >3.0       | <b>&lt;1.0</b> | <1.0     | <1.0     |
| Glycol | WC Method |            | <b>NEG</b>     | NEG      | NEG      |

### WEAR METALS

|          | method | limit/base       | current      | history1 | history2 |
|----------|--------|------------------|--------------|----------|----------|
| Iron     | ppm    | ASTM D5185m >120 | <b>4</b>     | 4        | 5        |
| Chromium | ppm    | ASTM D5185m >20  | <b>0</b>     | <1       | <1       |
| Nickel   | ppm    | ASTM D5185m >5   | <b>&lt;1</b> | <1       | 0        |
| Titanium | ppm    | ASTM D5185m >2   | <b>0</b>     | 0        | 0        |
| Silver   | ppm    | ASTM D5185m >2   | <b>&lt;1</b> | 0        | 0        |
| Aluminum | ppm    | ASTM D5185m >20  | <b>2</b>     | 3        | 3        |
| Lead     | ppm    | ASTM D5185m >40  | <b>&lt;1</b> | 0        | <1       |
| Copper   | ppm    | ASTM D5185m >330 | <b>1</b>     | 2        | 2        |
| Tin      | ppm    | ASTM D5185m >15  | <b>&lt;1</b> | <1       | <1       |
| Vanadium | ppm    | ASTM D5185m      | <b>0</b>     | 0        | 0        |
| Cadmium  | ppm    | ASTM D5185m      | <b>&lt;1</b> | 0        | 0        |

### ADDITIVES

|            | method | limit/base       | current      | history1 | history2 |
|------------|--------|------------------|--------------|----------|----------|
| Boron      | ppm    | ASTM D5185m 0    | <b>&lt;1</b> | <1       | 2        |
| Barium     | ppm    | ASTM D5185m 0    | <b>4</b>     | 0        | 0        |
| Molybdenum | ppm    | ASTM D5185m 60   | <b>61</b>    | 59       | 60       |
| Manganese  | ppm    | ASTM D5185m 0    | <b>0</b>     | <1       | <1       |
| Magnesium  | ppm    | ASTM D5185m 1010 | <b>892</b>   | 928      | 919      |
| Calcium    | ppm    | ASTM D5185m 1070 | <b>1040</b>  | 1039     | 1063     |
| Phosphorus | ppm    | ASTM D5185m 1150 | <b>1028</b>  | 985      | 989      |
| Zinc       | ppm    | ASTM D5185m 1270 | <b>1172</b>  | 1212     | 1206     |
| Sulfur     | ppm    | ASTM D5185m 2150 | <b>3164</b>  | 3135     | 3110     |

### CONTAMINANTS

|           | method | limit/base      | current  | history1 | history2 |
|-----------|--------|-----------------|----------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >25 | <b>4</b> | 5        | 3        |
| Sodium    | ppm    | ASTM D5185m     | <b>3</b> | 6        | 6        |
| Potassium | ppm    | ASTM D5185m >20 | <b>3</b> | 2        | 3        |

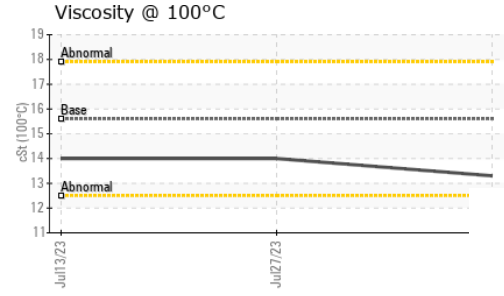
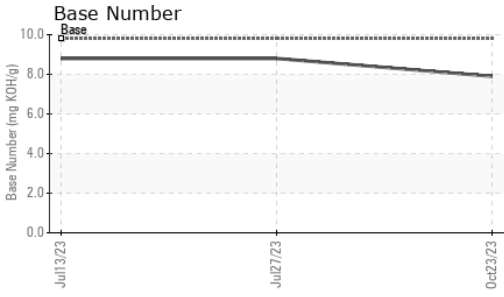
### INFRA-RED

|           | method  | limit/base      | current     | history1 | history2 |
|-----------|---------|-----------------|-------------|----------|----------|
| Soot %    | %       | *ASTM D7844 >4  | <b>0.2</b>  | 0.2      | 0.2      |
| Nitration | Abs/cm  | *ASTM D7624 >20 | <b>6.2</b>  | 6.2      | 6.5      |
| Sulfation | Abs.1mm | *ASTM D7415 >30 | <b>18.1</b> | 18.6     | 18.5     |

### FLUID DEGRADATION

|                  | method   | limit/base      | current     | history1 | history2 |
|------------------|----------|-----------------|-------------|----------|----------|
| Oxidation        | Abs.1mm  | *ASTM D7414 >25 | <b>13.9</b> | 14.1     | 14.1     |
| Base Number (BN) | mg KOH/g | ASTM D2896 9.8  | <b>7.9</b>  | 8.8      | 8.8      |

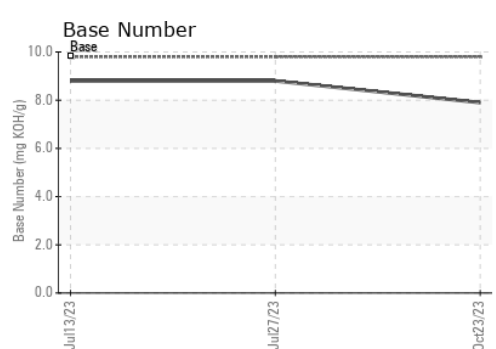
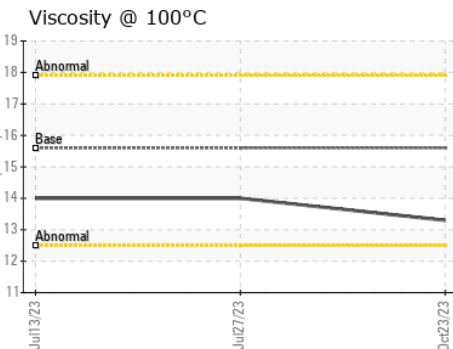
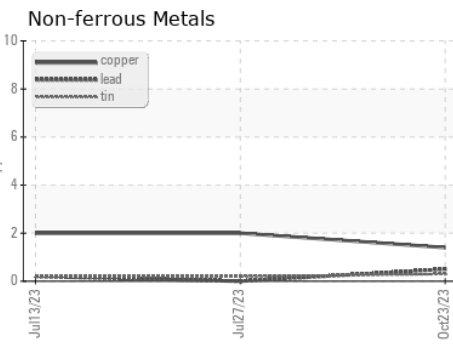
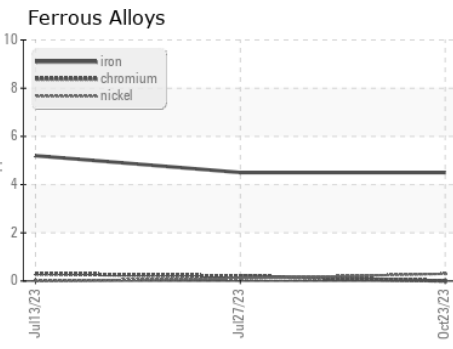
# OIL ANALYSIS REPORT



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

| FLUID PROPERTIES | method | limit/base | current | history1    | history2 |      |
|------------------|--------|------------|---------|-------------|----------|------|
| Visc @ 100°C     | cSt    | ASTM D445  | 15.6    | <b>13.3</b> | 14.0     | 14.0 |

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0105998 **Received** : 31 Oct 2023  
**Lab Number** : 05994971 **Diagnosed** : 01 Nov 2023  
**Unique Number** : 10723331 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**LRS - BETHEL HEIGHTS (NWA AR)**  
 848 HWY 264 E  
 BETHEL HEIGHTS, AR  
 US 72764  
 Contact: JAMIE HAYWORTH  
 jhayworth@lrsrecycles.com  
 T: (479)878-1384  
 F:

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)