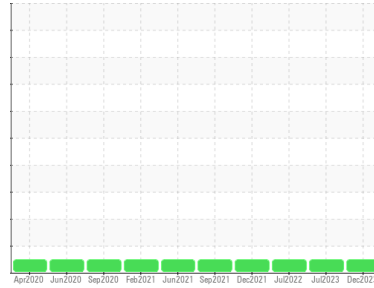


# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**556**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON HP 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

### 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>PCA0082869</b>  | PCA0069586  | PCA0058382  |
| Sample Date   | Client Info |             | <b>29 Dec 2023</b> | 24 Jul 2023 | 29 Jul 2022 |
| Machine Age   | hrs         | Client Info | <b>0</b>           | 10694       | 6757        |
| Oil Age       | hrs         | Client Info | <b>0</b>           | 1004        | 6757        |
| Oil Changed   | Client Info |             | <b>Not Chngd</b>   | Not Chngd   | N/A         |
| 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 D5185m >100 | <b>17</b>    | 12       | 16       |
| Chromium | ppm    | ASTM D5185m >20  | <b>1</b>     | <1       | <1       |
| Nickel   | ppm    | ASTM D5185m >4   | <b>&lt;1</b> | 0        | 0        |
| Titanium | ppm    | ASTM D5185m      | <b>&lt;1</b> | 0        | 0        |
| Silver   | ppm    | ASTM D5185m >3   | <b>0</b>     | 0        | 0        |
| Aluminum | ppm    | ASTM D5185m >20  | <b>6</b>     | 4        | 7        |
| Lead     | ppm    | ASTM D5185m >40  | <b>2</b>     | <1       | 1        |
| Copper   | ppm    | ASTM D5185m >330 | <b>25</b>    | 44       | 2        |
| Tin      | ppm    | ASTM D5185m >15  | <b>&lt;1</b> | <1       | <1       |
| Antimony | ppm    | ASTM D5185m      | <b>---</b>   | ---      | ---      |
| Vanadium | ppm    | ASTM D5185m      | <b>0</b>     | 0        | 0        |
| Cadmium  | ppm    | ASTM D5185m      | <b>0</b>     | 0        | 0        |

## ADDITIVES

|            | method | limit/base  | current      | history1 | history2 |
|------------|--------|-------------|--------------|----------|----------|
| Boron      | ppm    | ASTM D5185m | <b>4</b>     | 3        | 5        |
| Barium     | ppm    | ASTM D5185m | <b>0</b>     | 0        | 0        |
| Molybdenum | ppm    | ASTM D5185m | <b>64</b>    | 67       | 61       |
| Manganese  | ppm    | ASTM D5185m | <b>&lt;1</b> | <1       | <1       |
| Magnesium  | ppm    | ASTM D5185m | <b>967</b>   | 1086     | 918      |
| Calcium    | ppm    | ASTM D5185m | <b>1128</b>  | 1204     | 1126     |
| Phosphorus | ppm    | ASTM D5185m | <b>1044</b>  | 1145     | 1000     |
| Zinc       | ppm    | ASTM D5185m | <b>1290</b>  | 1410     | 1218     |
| Sulfur     | ppm    | ASTM D5185m | <b>3015</b>  | 3691     | 3527     |

## CONTAMINANTS

|           | method | limit/base      | current      | history1 | history2 |
|-----------|--------|-----------------|--------------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >25 | <b>8</b>     | 6        | 6        |
| Sodium    | ppm    | ASTM D5185m     | <b>&lt;1</b> | 1        | 2        |
| Potassium | ppm    | ASTM D5185m >20 | <b>17</b>    | 2        | 14       |

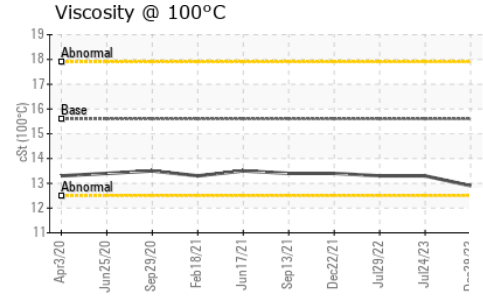
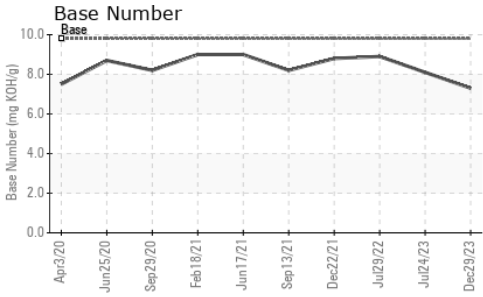
## INFRA-RED

|           | method   | limit/base      | current     | history1 | history2 |
|-----------|----------|-----------------|-------------|----------|----------|
| Soot %    | %        | *ASTM D7844 >3  | <b>0.5</b>  | 0.4      | 0.3      |
| Nitration | Abs/cm   | *ASTM D7624 >20 | <b>9.3</b>  | 8.2      | 9.4      |
| Sulfation | Abs/.1mm | *ASTM D7415 >30 | <b>20.8</b> | 20.4     | 21.7     |

## FLUID DEGRADATION

|                  | method   | limit/base      | current     | history1 | history2 |
|------------------|----------|-----------------|-------------|----------|----------|
| Oxidation        | Abs/.1mm | *ASTM D7414 >25 | <b>17.6</b> | 16.5     | 18.0     |
| Base Number (BN) | mg KOH/g | ASTM D2896 9.8  | <b>7.3</b>  | 8.1      | 8.9      |

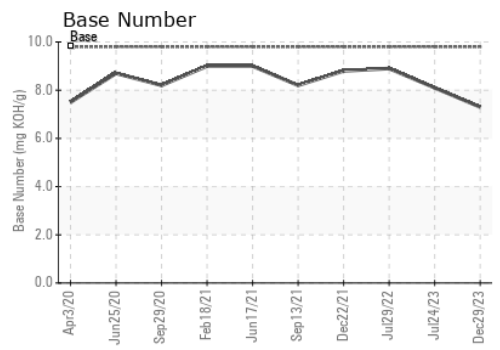
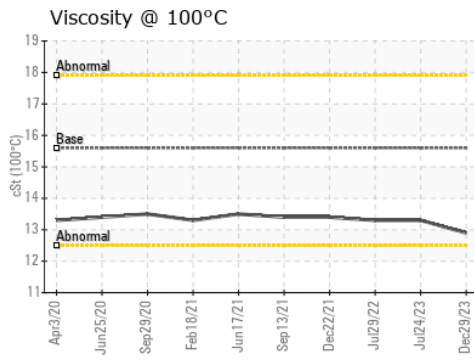
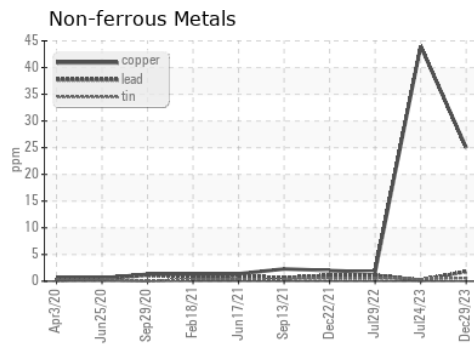
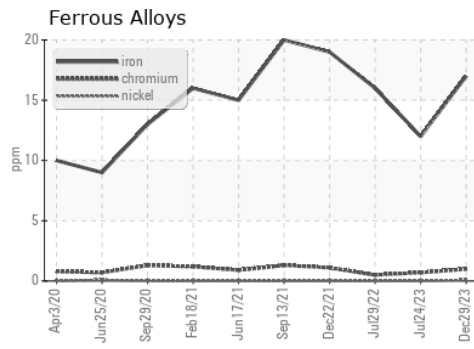
# OIL ANALYSIS REPORT



| 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>12.9</b> | 13.3     | 13.3 |

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0082869  
**Lab Number** : 06121929  
**Unique Number** : 10936080  
**Test Package** : FLEET

**Received** : 19 Mar 2024  
**Tested** : 19 Mar 2024  
**Diagnosed** : 19 Mar 2024 - Wes Davis

**AVR - APPLE VALLEY READY MIX**  
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 Contact: senia zimmer  
 avrconcrete.senia@gmail.com  
 T: (952)953-2992  
 F: (952)953-2994

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)