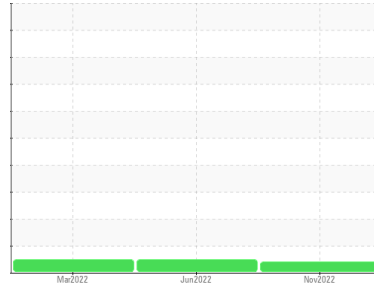




# PROBLEM SUMMARY

Sample Rating Trend



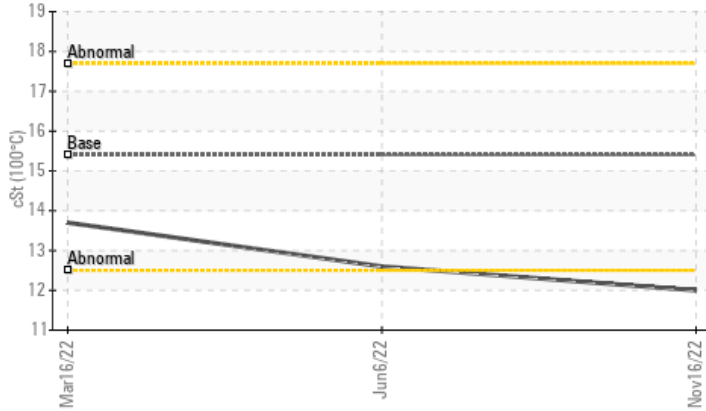
## VISCOSITY



Machine Id  
**INTERNATIONAL 727074-310082**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

### COMPONENT CONDITION SUMMARY

#### ▲ Viscosity @ 100°C



### RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

### PROBLEMATIC TEST RESULTS

| Sample Status |     |           |      | ATTENTION | NORMAL | NORMAL |
|---------------|-----|-----------|------|-----------|--------|--------|
| Visc @ 100°C  | cSt | ASTM D445 | 15.4 | ▲ 12.0    | 12.6   | 13.7   |

Customer Id: GFL9999  
 Sample No.: GFL0051313  
 Lab Number: 05705803  
 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Jonathan Hester +1 919-379-4092 x4092  
[jhester@wearcheckusa.com](mailto:jhester@wearcheckusa.com)

To change component or sample information:  
 Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

| Action        | Status | Date | Done By | Description   |
|---------------|--------|------|---------|---|
| Change Fluid  | ---    | ---  | ?       | Oil and filter change at the time of sampling has been noted. |
| Change Filter | ---    | ---  | ?       | Oil and filter change at the time of sampling has been noted. |

## HISTORICAL DIAGNOSIS

### 06 Jun 2022 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report



### 16 Mar 2022 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the component make and model with your next sample. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

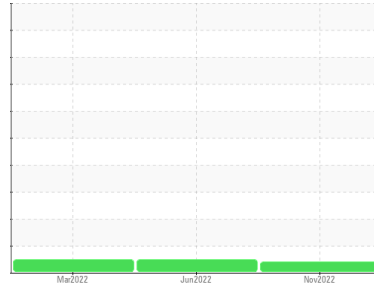
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Machine Id  
**INTERNATIONAL 727074-310082**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

## DIAGNOSIS

### ▲ Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

Fuel content negligible. There is no indication of any contamination in the oil.

### ▲ Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

## SAMPLE INFORMATION

| method        | limit/base  | current            | history1    | history2    |
|---------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | <b>GFL0051313</b>  | GFL0051274  | GFL0048685  |
| Sample Date   | Client Info | <b>16 Nov 2022</b> | 06 Jun 2022 | 16 Mar 2022 |
| Machine Age   | hrs         | <b>0</b>           | 35143       | 9067        |
| Oil Age       | hrs         | <b>0</b>           | 450         | 0           |
| Oil Changed   | Client Info | <b>Changed</b>     | Changed     | Not Changed |
| Sample Status |             | <b>ATTENTION</b>   | NORMAL      | NORMAL      |

## CONTAMINATION

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

## WEAR METALS

| method   | limit/base | current          | history1     | history2 |    |
|----------|------------|------------------|--------------|----------|----|
| Iron     | ppm        | ASTM D5185m >100 | <b>16</b>    | 18       | 1  |
| Chromium | ppm        | ASTM D5185m >20  | <b>&lt;1</b> | <1       | 0  |
| Nickel   | ppm        | ASTM D5185m >4   | <b>&lt;1</b> | 0        | 0  |
| Titanium | ppm        | ASTM D5185m      | <b>0</b>     | 0        | 0  |
| Silver   | ppm        | ASTM D5185m >3   | <b>0</b>     | <1       | <1 |
| Aluminum | ppm        | ASTM D5185m >20  | <b>&lt;1</b> | 2        | <1 |
| Lead     | ppm        | ASTM D5185m >40  | <b>2</b>     | 3        | <1 |
| Copper   | ppm        | ASTM D5185m >330 | <b>1</b>     | 2        | <1 |
| 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>0</b>     | 0        | 0  |

## ADDITIVES

| method     | limit/base | current          | history1     | history2 |      |
|------------|------------|------------------|--------------|----------|------|
| Boron      | ppm        | ASTM D5185m 0    | <b>4</b>     | 8        | <1   |
| Barium     | ppm        | ASTM D5185m 0    | <b>0</b>     | 0        | 0    |
| Molybdenum | ppm        | ASTM D5185m 60   | <b>62</b>    | 61       | 59   |
| Manganese  | ppm        | ASTM D5185m 0    | <b>&lt;1</b> | <1       | 0    |
| Magnesium  | ppm        | ASTM D5185m 1010 | <b>955</b>   | 900      | 1006 |
| Calcium    | ppm        | ASTM D5185m 1070 | <b>1110</b>  | 1124     | 1133 |
| Phosphorus | ppm        | ASTM D5185m 1150 | <b>992</b>   | 1020     | 1100 |
| Zinc       | ppm        | ASTM D5185m 1270 | <b>1218</b>  | 1291     | 1308 |
| Sulfur     | ppm        | ASTM D5185m 2060 | <b>3373</b>  | 3091     | 2714 |

## CONTAMINANTS

| method    | limit/base | current         | history1     | history2 |      |
|-----------|------------|-----------------|--------------|----------|------|
| Silicon   | ppm        | ASTM D5185m >25 | <b>3</b>     | 2        | <1   |
| Sodium    | ppm        | ASTM D5185m     | <b>8</b>     | 7        | 0    |
| Potassium | ppm        | ASTM D5185m >20 | <b>&lt;1</b> | 2        | 1    |
| Fuel      | %          | ASTM D3524 >5   | <b>0.8</b>   | <1.0     | <1.0 |

## INFRA-RED

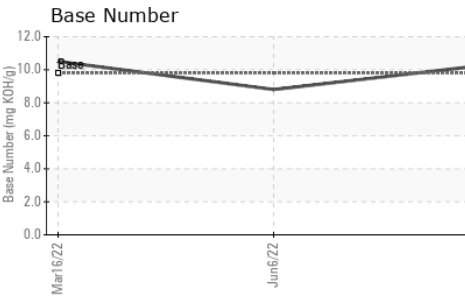
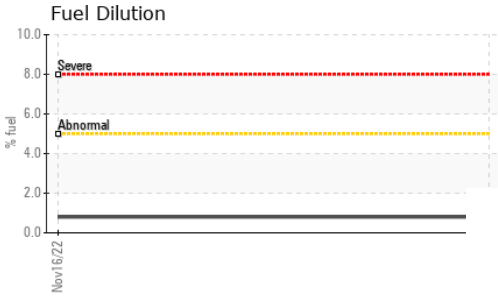
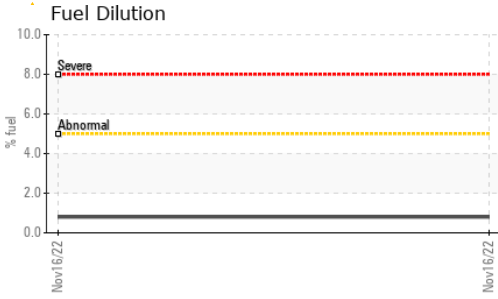
| method    | limit/base | current         | history1    | history2 |      |
|-----------|------------|-----------------|-------------|----------|------|
| Soot %    | %          | *ASTM D7844 >3  | <b>0.3</b>  | 0.3      | 0.1  |
| Nitration | Abs/cm     | *ASTM D7624 >20 | <b>7.3</b>  | 7.4      | 6.6  |
| Sulfation | Abs/.1mm   | *ASTM D7415 >30 | <b>20.3</b> | 20.0     | 18.6 |

## FLUID DEGRADATION

| method           | limit/base | current         | history1    | history2 |      |
|------------------|------------|-----------------|-------------|----------|------|
| Oxidation        | Abs/.1mm   | *ASTM D7414 >25 | <b>15.6</b> | 16.0     | 14.3 |
| Base Number (BN) | mg KOH/g   | ASTM D2896 9.8  | <b>10.3</b> | 8.8      | 10.5 |



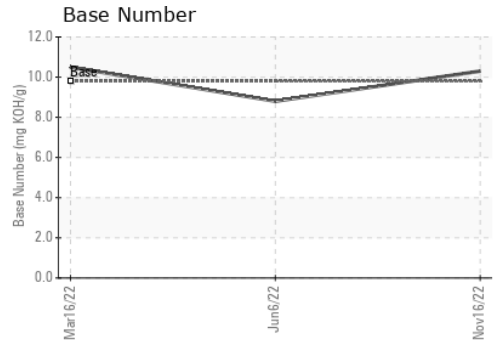
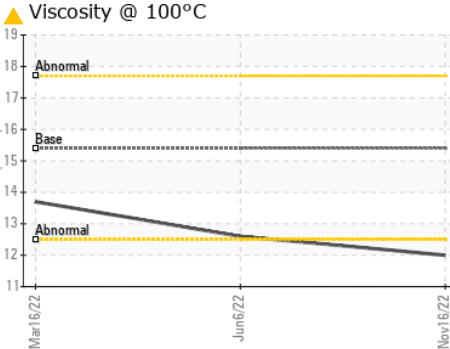
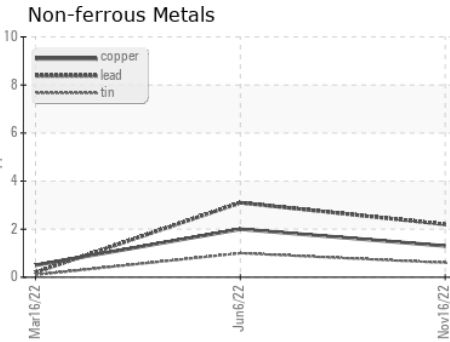
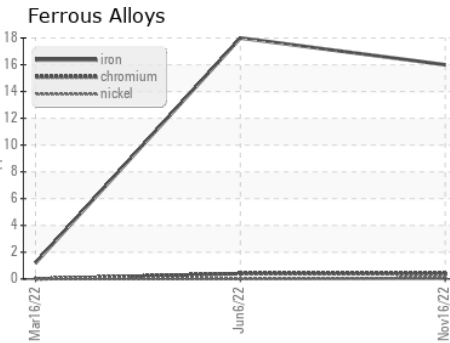
# OIL ANALYSIS REPORT



| 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  | 15.4 ▲ <b>12.0</b> | 12.6     | 13.7     |

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0051313 **Received** : 01 Dec 2022  
**Lab Number** : **05705803** **Diagnosed** : 05 Dec 2022  
**Unique Number** : 10240378 **Diagnostician** : Jonathan Hester  
**Test Package** : FLEET ( Additional Tests: FuelDilution, PercentFuel )

GFL Environmental - 9999 - Moved No Longer Used Units

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)

US  
Contact:

T:  
F: