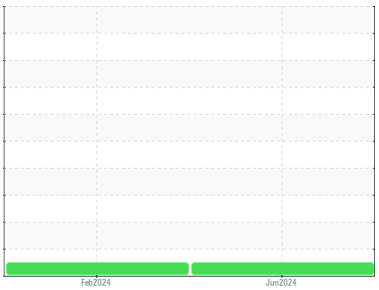
# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Machine Id
**833064**
Component
**Natural Gas Engine**
Fluid
**PETRO CANADA DURON GEO LD 15W40 (24 LTR)**

## 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 condition of the oil is acceptable for the time in service.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **GFL0118934** | GFL0086782 | --- |
| Sample Date | | Client Info | | **24 Jun 2024** | 08 Feb 2024 | --- |
| Machine Age | hrs | Client Info | | **1866** | 1179 | --- |
| Oil Age | hrs | Client Info | | **1200** | 1179 | --- |
| Oil Changed | | Client Info | | **Changed** | Changed | --- |
| Sample Status | | | | **NORMAL** | NORMAL | --- |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Water | | WC Method | >0.1 | **NEG** | NEG | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185(m) | >50 | **17** | 61 | --- |
| Chromium | ppm | ASTM D5185(m) | >4 | **<1** | 1 | --- |
| Nickel | ppm | ASTM D5185(m) | >2 | **<1** | 2 | --- |
| Titanium | ppm | ASTM D5185(m) | | **0** | 0 | --- |
| Silver | ppm | ASTM D5185(m) | >3 | **<1** | <1 | --- |
| Aluminum | ppm | ASTM D5185(m) | >9 | **2** | 5 | --- |
| Lead | ppm | ASTM D5185(m) | >30 | **<1** | 2 | --- |
| Copper | ppm | ASTM D5185(m) | >35 | **4** | 16 | --- |
| Tin | ppm | ASTM D5185(m) | >4 | **<1** | 2 | --- |
| Antimony | ppm | ASTM D5185(m) | | **0** | 0 | --- |
| Vanadium | ppm | ASTM D5185(m) | | **0** | 0 | --- |
| Beryllium | ppm | ASTM D5185(m) | | **0** | 0 | --- |
| Cadmium | ppm | ASTM D5185(m) | | **0** | 0 | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185(m) | 50 | **6** | 6 | --- |
| Barium | ppm | ASTM D5185(m) | 5 | **<1** | 3 | --- |
| Molybdenum | ppm | ASTM D5185(m) | 50 | **59** | 98 | --- |
| Manganese | ppm | ASTM D5185(m) | 0 | **2** | 11 | --- |
| Magnesium | ppm | ASTM D5185(m) | 560 | **571** | 684 | --- |
| Calcium | ppm | ASTM D5185(m) | 1510 | **1531** | 1487 | --- |
| Phosphorus | ppm | ASTM D5185(m) | 780 | **679** | 732 | --- |
| Zinc | ppm | ASTM D5185(m) | 870 | **912** | 883 | --- |
| Sulfur | ppm | ASTM D5185(m) | 2040 | **1960** | 2261 | --- |
| Lithium | ppm | ASTM D5185(m) | | **<1** | <1 | --- |

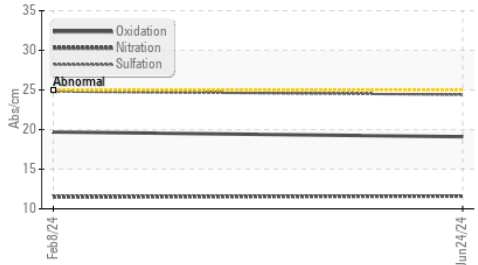
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185(m) | >+100 | **6** | 24 | --- |
| Sodium | ppm | ASTM D5185(m) | | **3** | 4 | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | **<1** | 2 | --- |

| INFRA-RED | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Soot % | % | ASTM D7844* | | **0** | 0 | --- |
| Nitration | Abs/cm | ASTM D7624* | >20 | **11.6** | 11.5 | --- |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | **24.4** | 24.8 | --- |

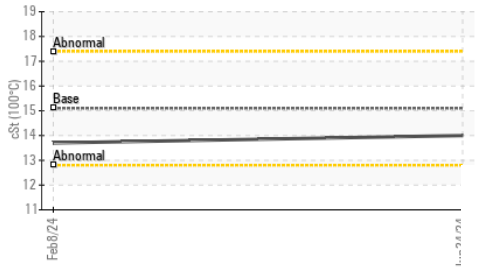
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | **19.1** | 19.7 | --- |

# OIL ANALYSIS REPORT

FT-IR (Direct Trend)




Viscosity @ 100°C

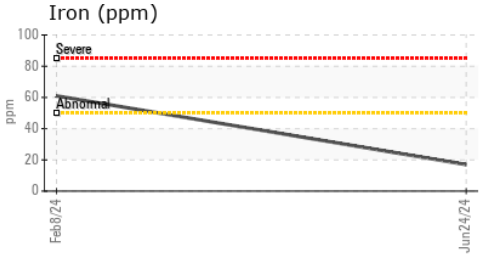



| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | Visual* | NONE | **NONE** | --- | --- |
| Yellow Metal | scalar | Visual* | NONE | **NONE** | --- | --- |
| Precipitate | scalar | Visual* | NONE | **NONE** | --- | --- |
| Silt | scalar | Visual* | NONE | **NONE** | --- | --- |
| Debris | scalar | Visual* | NONE | **NONE** | --- | --- |
| Sand/Dirt | scalar | Visual* | NONE | **NONE** | --- | --- |
| Appearance | scalar | Visual* | NORML | **NORML** | --- | --- |
| Odor | scalar | Visual* | NORML | **NORML** | NORML | --- |
| Emulsified Water | scalar | Visual* | >0.1 | **NEG** | NEG | --- |
| Free Water | scalar | Visual* | | **NEG** | NEG | --- |

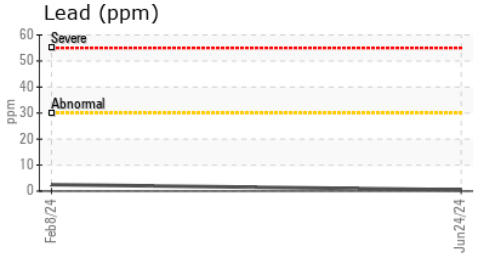
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 100°C | cSt | ASTM D7279(m) | 15.1 | **14.0** | 13.7 | --- |

## GRAPHS

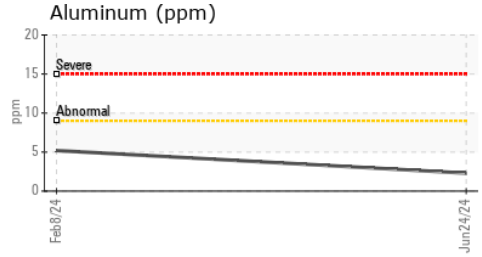
Iron (ppm)



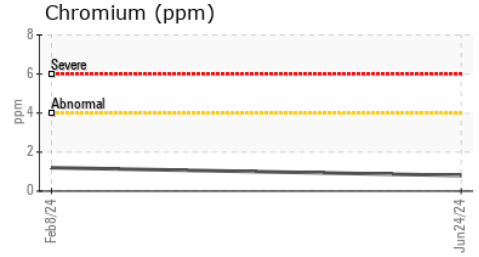

Lead (ppm)



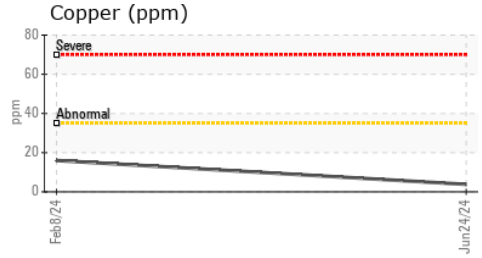

Aluminum (ppm)



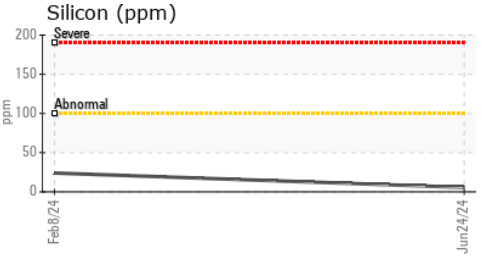

Chromium (ppm)



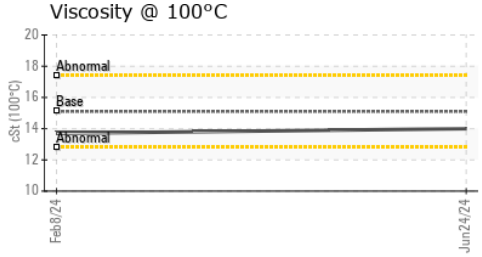

Copper (ppm)



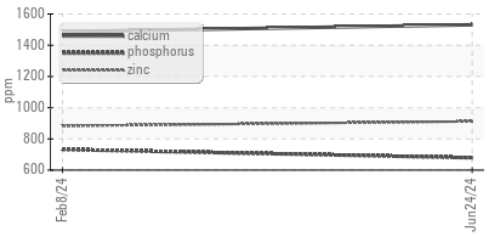

Silicon (ppm)




Viscosity @ 100°C




Additives




ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : GFL0118934
**Lab Number** : 02644013
**Unique Number** : 5801552
**Test Package** : MOB 1 ( Additional Tests: Visual )

**Received** : 25 Jun 2024
**Tested** : 25 Jun 2024
**Diagnosed** : 25 Jun 2024 - Wes Davis

*To discuss this sample report, contact Customer Service at 1-800-268-2131.*
*Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.*
*Validity of results and interpretation are based on the sample and information as supplied.*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Report Id: GFL222 [WCAMIS] 02644013 (Generated: 06/25/2024 16:34:09) Rev: 1

Submitted By: Kim Thompson