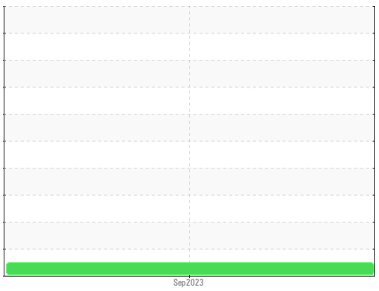
# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Machine Id
## KENWORTH 2049
Component
**Diesel Engine**
Fluid
**PETRO CANADA DURON SAE 10W30 (--- GAL)**

## DIAGNOSIS

**Recommendation**
Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

**Wear**
Metal levels are typical for a components first oil change.

**Contamination**
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

**Fluid Condition**
Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **PC0075843** | --- | --- |
| Sample Date | | Client Info | | **08 Sep 2023** | --- | --- |
| Machine Age | hrs | Client Info | | **624** | --- | --- |
| Oil Age | hrs | Client Info | | **624** | --- | --- |
| Oil Changed | | Client Info | | **Changed** | --- | --- |
| Sample Status | | | | **NORMAL** | --- | --- |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Fuel | | WC Method | >5 | **<1.0** | --- | --- |
| Glycol | | WC Method | | **NEG** | --- | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185(m) | >100 | **46** | --- | --- |
| Chromium | ppm | ASTM D5185(m) | >20 | **<1** | --- | --- |
| Nickel | ppm | ASTM D5185(m) | >4 | **<1** | --- | --- |
| Titanium | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Silver | ppm | ASTM D5185(m) | >3 | **<1** | --- | --- |
| Aluminum | ppm | ASTM D5185(m) | >20 | **9** | --- | --- |
| Lead | ppm | ASTM D5185(m) | >40 | **2** | --- | --- |
| Copper | ppm | ASTM D5185(m) | >330 | **69** | --- | --- |
| Tin | ppm | ASTM D5185(m) | >15 | **<1** | --- | --- |
| Antimony | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Vanadium | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Beryllium | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Cadmium | ppm | ASTM D5185(m) | | **0** | --- | --- |

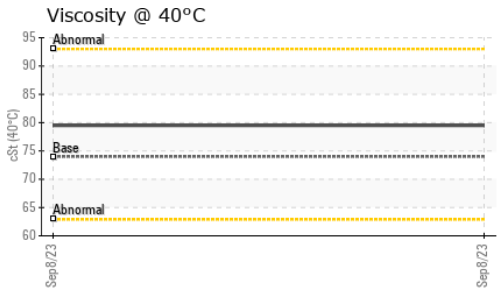
| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185(m) | 1 | **32** | --- | --- |
| Barium | ppm | ASTM D5185(m) | 1 | **1** | --- | --- |
| Molybdenum | ppm | ASTM D5185(m) | 1 | **21** | --- | --- |
| Manganese | ppm | ASTM D5185(m) | 1 | **1** | --- | --- |
| Magnesium | ppm | ASTM D5185(m) | 10 | **774** | --- | --- |
| Calcium | ppm | ASTM D5185(m) | 2942 | **1352** | --- | --- |
| Phosphorus | ppm | ASTM D5185(m) | 1102 | **807** | --- | --- |
| Zinc | ppm | ASTM D5185(m) | 1351 | **922** | --- | --- |
| Sulfur | ppm | ASTM D5185(m) | 3903 | **2434** | --- | --- |
| Lithium | ppm | ASTM D5185(m) | | **<1** | --- | --- |

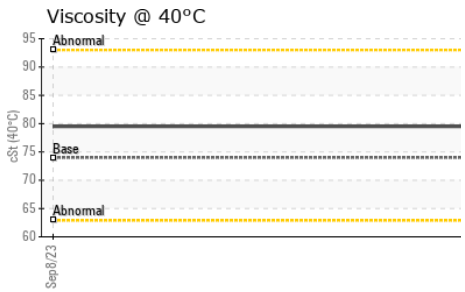
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185(m) | >25 | **12** | --- | --- |
| Sodium | ppm | ASTM D5185(m) | | **4** | --- | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | **34** | --- | --- |

| INFRA-RED | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Soot % | % | ASTM D7844* | >3 | **0** | --- | --- |
| Nitration | Abs/cm | ASTM D7624* | >20 | **9.3** | --- | --- |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | **21.2** | --- | --- |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | **16.1** | --- | --- |

# OIL ANALYSIS REPORT

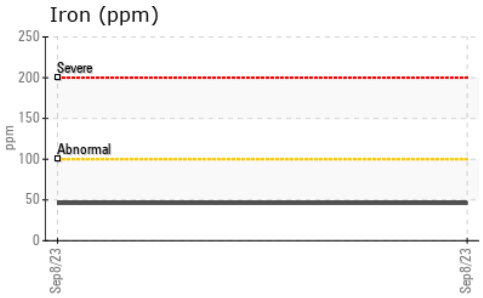


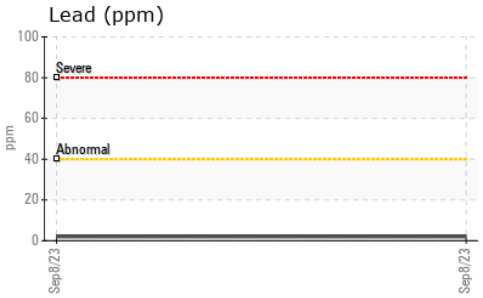



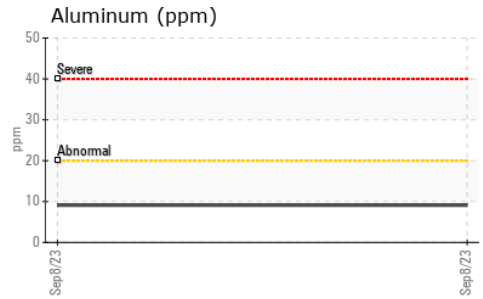

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Emulsified Water | scalar | Visual* | >0.2 | **NEG** | --- | --- |
| Free Water | scalar | Visual* | | **NEG** | --- | --- |

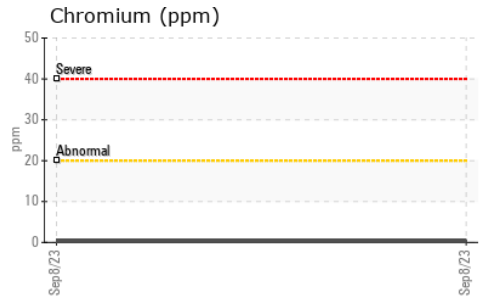
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D7279(m) | 74.0 | **79.5** | --- | --- |
| Visc @ 100°C | cSt | ASTM D7279(m) | 11.4 | **11.8** | --- | --- |
| Viscosity Index (VI) | Scale | ASTM D2270* | 146 | **142** | --- | --- |

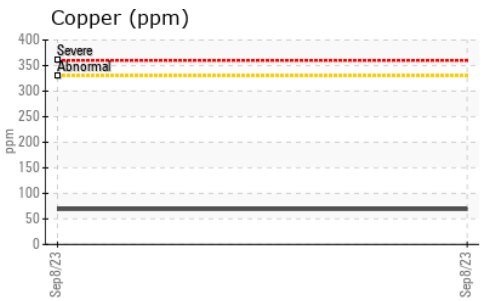
## GRAPHS

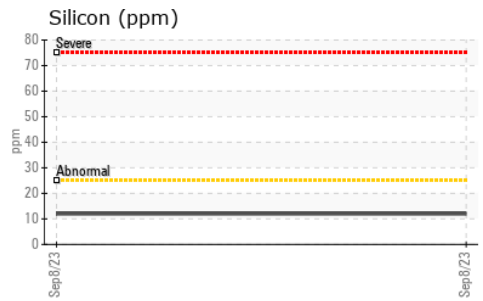


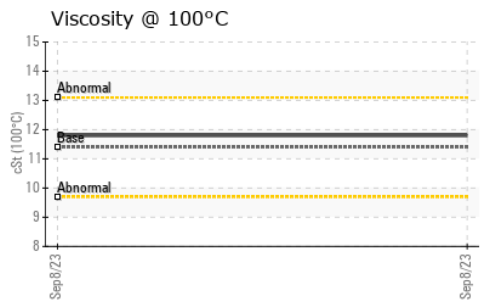



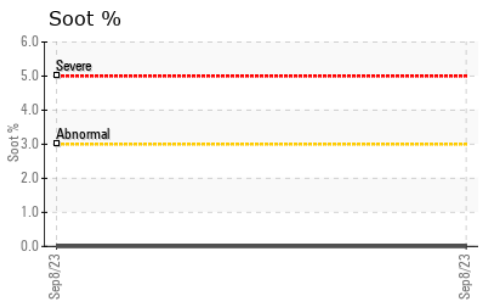




ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : PC0075843 **Received** : 25 Sep 2023
**Lab Number** : 02584820 **Diagnosed** : 25 Sep 2023
**Unique Number** : 5645885 **Diagnostician** : Wes Davis
**Test Package** : MOB 1 ( Additional Tests: KV40, VI )

*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.*


**B FREGEAU & FILS INC**
402 RUE ST DENIS
ST ALEXANDRE, QC
CA J0J 1S0
Contact: Steve M.
stevem@bfregeau.com
T:
F: