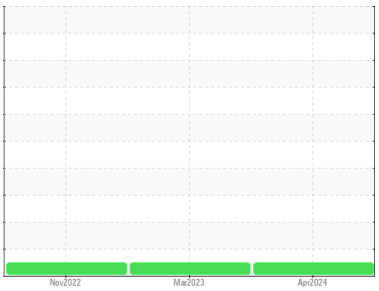
# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Machine Id
**621550**
Component
**Diesel Engine**
Fluid
**PETRO CANADA DURON SHP 10W30 (--- QTS)**

## DIAGNOSIS

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

**Wear**
Metal levels are typical for a new component breaking in.

**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**
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 | | **PCA0123236** | PCA0078786 | PCA0078742 |
| Sample Date | | Client Info | | **08 Apr 2024** | 08 Mar 2023 | 17 Nov 2022 |
| Machine Age | mls | Client Info | | **74267** | 56980 | 42311 |
| Oil Age | mls | Client Info | | **0** | 0 | 0 |
| Oil Changed | | Client Info | | **Changed** | Not Changd | Changed |
| Sample Status | | | | **NORMAL** | NORMAL | NORMAL |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Fuel | | WC Method | >5 | **<1.0** | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | **NEG** | NEG | NEG |
| Glycol | | WC Method | | **NEG** | NEG | NEG |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >100 | **41** | 27 | 84 |
| Chromium | ppm | ASTM D5185m | >20 | **2** | 2 | 4 |
| Nickel | ppm | ASTM D5185m | >4 | **<1** | <1 | 0 |
| Titanium | ppm | ASTM D5185m | | **<1** | 6 | <1 |
| Silver | ppm | ASTM D5185m | >3 | **<1** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | **19** | 13 | 46 |
| Lead | ppm | ASTM D5185m | >40 | **<1** | 0 | 0 |
| Copper | ppm | ASTM D5185m | >330 | **118** | 35 | 101 |
| Tin | ppm | ASTM D5185m | >15 | **4** | 4 | 19 |
| Vanadium | ppm | ASTM D5185m | | **<1** | <1 | 0 |
| Cadmium | ppm | ASTM D5185m | | **<1** | 0 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | 2 | **6** | 10 | 17 |
| Barium | ppm | ASTM D5185m | 0 | **0** | 2 | 0 |
| Molybdenum | ppm | ASTM D5185m | 50 | **57** | 57 | 47 |
| Manganese | ppm | ASTM D5185m | 0 | **2** | 1 | 3 |
| Magnesium | ppm | ASTM D5185m | 950 | **783** | 860 | 562 |
| Calcium | ppm | ASTM D5185m | 1050 | **1284** | 1242 | 1829 |
| Phosphorus | ppm | ASTM D5185m | 995 | **837** | 1026 | 760 |
| Zinc | ppm | ASTM D5185m | 1180 | **1086** | 1204 | 957 |
| Sulfur | ppm | ASTM D5185m | 2600 | **2396** | 3005 | 2441 |

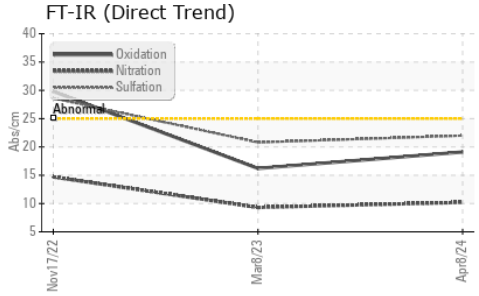
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >25 | **6** | 5 | 10 |
| Sodium | ppm | ASTM D5185m | | **5** | 4 | 3 |
| Potassium | ppm | ASTM D5185m | >20 | **48** | 51 | 138 |

| INFRA-RED | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Soot % | % | *ASTM D7844 | >3 | **0.9** | 0.7 | 1.5 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | **10.2** | 9.3 | 14.7 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | **22.0** | 20.8 | 28.6 |

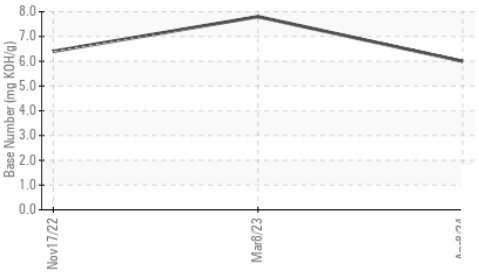
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | **19.1** | 16.2 | 29.8 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | **6.0** | 7.8 | 6.4 |

# OIL ANALYSIS REPORT

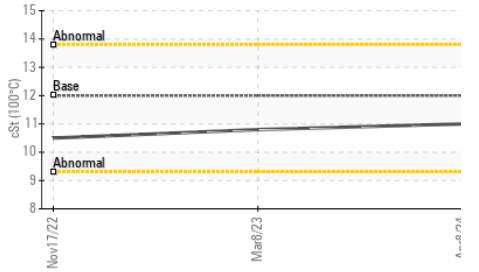
FT-IR (Direct Trend)




Base Number




Viscosity @ 100°C

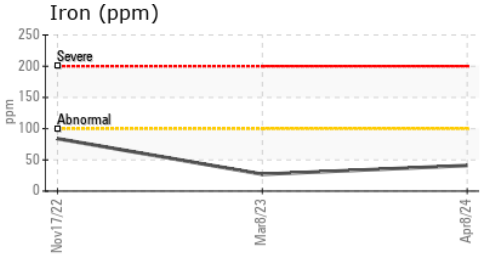



| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
|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

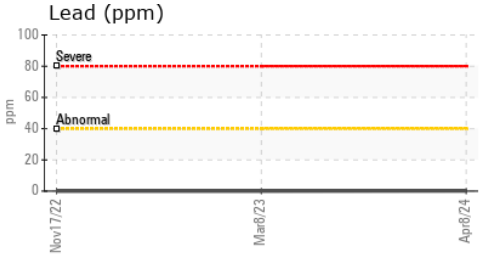
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 100°C | cSt | ASTM D445 | 12.00 | **11.0** | 10.8 | 10.5 |

## GRAPHS

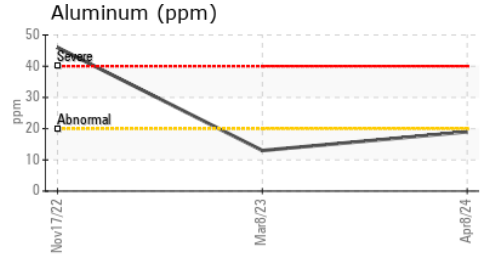
Iron (ppm)



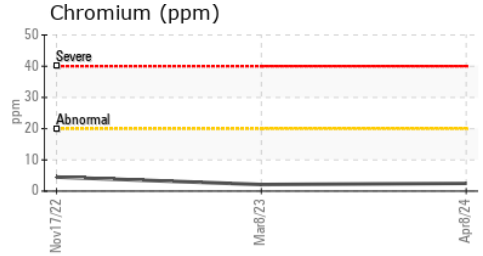

Lead (ppm)



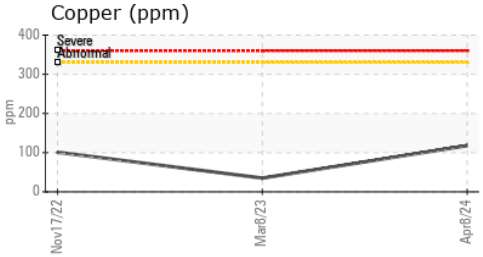

Aluminum (ppm)



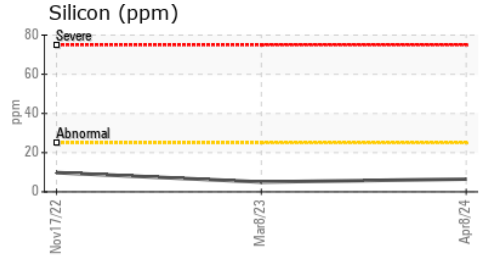

Chromium (ppm)



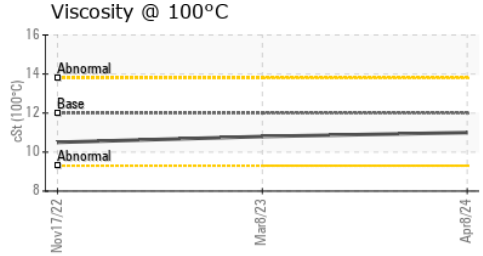

Copper (ppm)



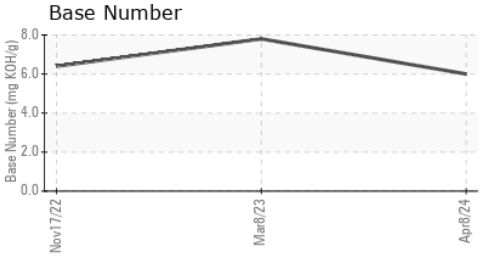

Silicon (ppm)




Viscosity @ 100°C




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : PCA0123236
**Lab Number** : 06153985
**Unique Number** : 10989408
**Test Package** : MOB 1 ( Additional Tests: TBN )

**Received** : 19 Apr 2024
**Tested** : 22 Apr 2024
**Diagnosed** : 22 Apr 2024 - Wes Davis

*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)*

**MILLER TRUCK LEASING #117**
2666 LEISCZS BRIDGE RD
LEESPORT, PA
US 19533
Contact: JAMEY RITZ
jritz@millertransgroup.com
T:
F: