FLEET LUBE 360 OIL DIAGNOSTICS

# OIL ANALYSIS REPORT

| | |
|---|---|
| WEAR | NORMAL |
| CONTAMINATION | NORMAL |
| FLUID CONDITION | NORMAL |

Area
**(H31502)**
Machine Id
**921036-260196**
Component
**Diesel Engine**
Fluid
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

## WEAR

Metal levels are typical for a new component breaking in.

## CONTAMINATION

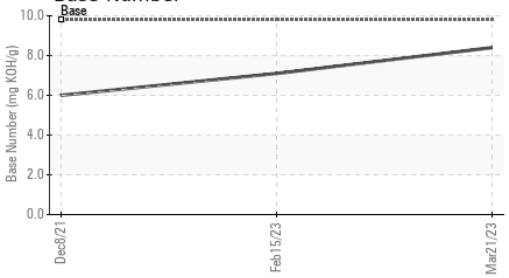
There is no indication of any contamination in the oil.

## FLUID CONDITION

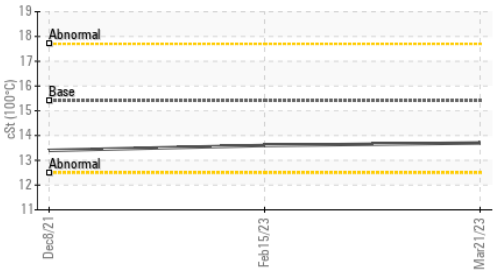
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **GFL0074718** | GFL0046916 | GFL0037255 |
| Sample Date | | Client Info | | **21 Mar 2023** | 15 Feb 2023 | 08 Dec 2021 |
| Machine Age | hrs | Client Info | | **249** | 205 | 17360 |
| Oil Age | hrs | Client Info | | **17360** | 205 | 0 |
| Filter Age | hrs | Client Info | | **0** | 0 | 0 |
| Oil Changed | | Client Info | | **Changed** | Changed | Changed |
| Filter Changed | | Client Info | | **Changed** | Changed | Changed |
| Sample Status | | | | **NORMAL** | NORMAL | NORMAL |
| Iron | ppm | ASTM D5185m | >120 | **40** | 37 | 19 |
| Chromium | ppm | ASTM D5185m | >20 | **1** | 1 | <1 |
| Nickel | ppm | ASTM D5185m | >5 | **20** | 14 | <1 |
| Titanium | ppm | ASTM D5185m | >2 | **<1** | <1 | <1 |
| Silver | ppm | ASTM D5185m | >2 | **0** | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >20 | **6** | 4 | 5 |
| Lead | ppm | ASTM D5185m | >40 | **<1** | 1 | 4 |
| Copper | ppm | ASTM D5185m | >330 | **4** | 5 | 2 |
| Tin | ppm | ASTM D5185m | >15 | **3** | 3 | 1 |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Silicon | ppm | ASTM D5185m | >25 | **25** | 30 | 13 |
| Potassium | ppm | ASTM D5185m | >20 | **8** | 7 | 1 |
| Fuel | | WC Method | >5 | **<1.0** | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | **NEG** | NEG | NEG |
| Glycol | | WC Method | | **NEG** | NEG | NEG |
| Soot % | % | *ASTM D7844 | >4 | **0.6** | 0.6 | 1 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | **8.5** | 8.7 | 11.3 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | **19.0** | 18.5 | 26.2 |
| 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 |
| Sodium | ppm | ASTM D5185m | | **9** | 11 | 10 |
| Boron | ppm | ASTM D5185m | 0 | **15** | 14 | 30 |
| Barium | ppm | ASTM D5185m | 0 | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 60 | **67** | 64 | 81 |
| Manganese | ppm | ASTM D5185m | 0 | **2** | 2 | <1 |
| Magnesium | ppm | ASTM D5185m | 1010 | **856** | 877 | 813 |
| Calcium | ppm | ASTM D5185m | 1070 | **1135** | 1067 | 1279 |
| Phosphorus | ppm | ASTM D5185m | 1150 | **988** | 906 | 825 |
| Zinc | ppm | ASTM D5185m | 1270 | **1188** | 1163 | 1003 |
| Sulfur | ppm | ASTM D5185m | 2060 | **2894** | 3347 | 2346 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | **14.5** | 14.5 | 23 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | **8.4** | 7.1 | 6 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | **13.7** | 13.6 | 13.4 |

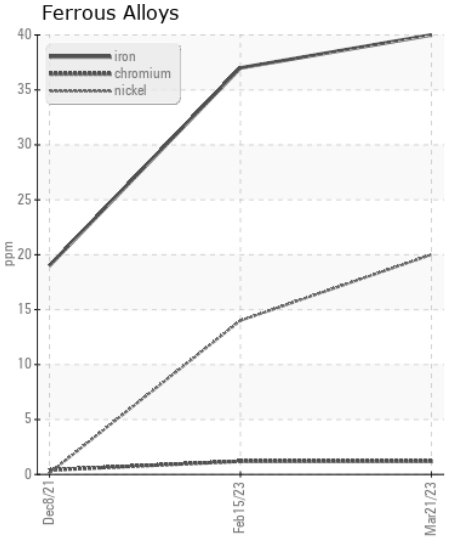
Base Number



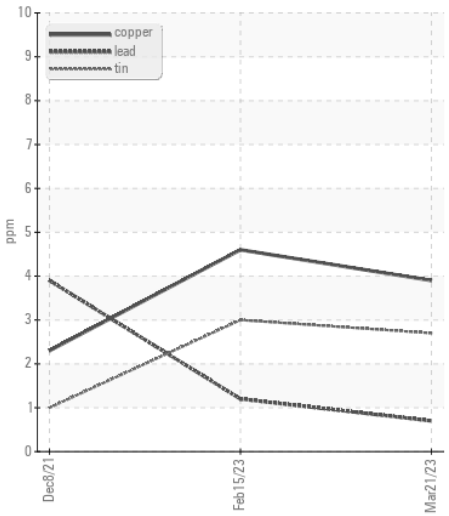

Viscosity @ 100°C



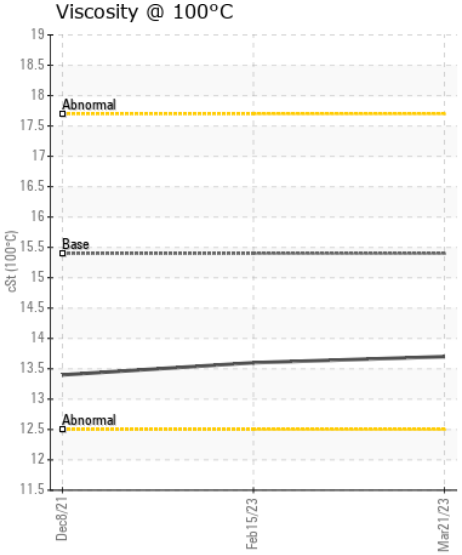

Ferrous Alloys



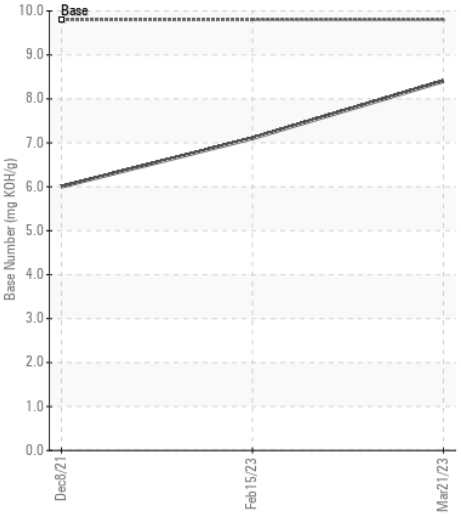

Non-ferrous Metals




Viscosity @ 100°C




Base Number




Certificate L2367

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|---|---|---|---|
| **Laboratory** | : WearCheck USA - 501 Madison Ave., Cary, NC 27513 | | |
| **Sample No.** | : GFL0074718 | **Recieved** | : 27 Mar 2023 |
| **Lab Number** | : 05801947 | **Diagnosed** | : 30 Mar 2023 |
| **Unique Number** | : 10399476 | **Diagnostician** | : Wes Davis |
| **Test Package** | : FLEET | | |

*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)*

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