FLEET LUBE 360 OIL DIAGNOSTICS

# OIL ANALYSIS REPORT

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

Machine Id
**810060**
Component
**Diesel Engine**
Fluid
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

## WEAR

All component wear rates are normal.

## CONTAMINATION

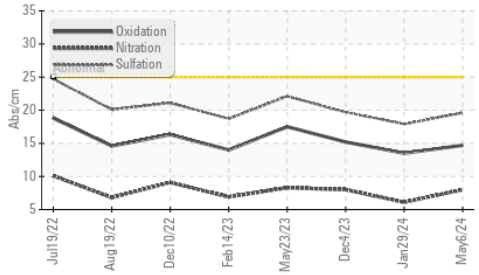
There is no indication of any contamination in the oil.

## FLUID CONDITION

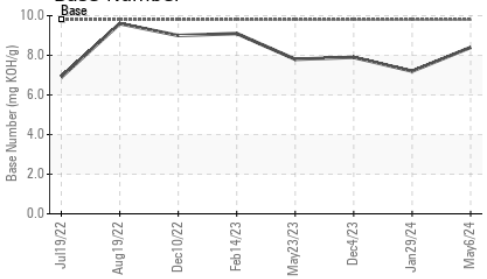
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **GFL0116148** | GFL0104556 | GFL0092601 |
| Sample Date | | Client Info | | **06 May 2024** | 29 Jan 2024 | 04 Dec 2023 |
| Machine Age | hrs | Client Info | | **4367** | 3776 | 3454 |
| Oil Age | hrs | Client Info | | **591** | 322 | 610 |
| Filter Age | hrs | Client Info | | **591** | 322 | 610 |
| Oil Changed | | Client Info | | **Changed** | Changed | Not Changd |
| Filter Changed | | Client Info | | **Changed** | Changed | N/A |
| Sample Status | | | | **NORMAL** | NORMAL | NORMAL |
| Iron | ppm | ASTM D5185m | >100 | **16** | 3 | 16 |
| Chromium | ppm | ASTM D5185m | >20 | **1** | <1 | 1 |
| Nickel | ppm | ASTM D5185m | >4 | **<1** | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | **<1** | <1 | 0 |
| Silver | ppm | ASTM D5185m | >3 | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | **8** | 3 | 7 |
| Lead | ppm | ASTM D5185m | >40 | **<1** | 0 | 0 |
| Copper | ppm | ASTM D5185m | >330 | **2** | <1 | 1 |
| Tin | ppm | ASTM D5185m | >15 | **<1** | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | **<1** | 0 | 0 |
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Silicon | ppm | ASTM D5185m | >25 | **5** | 1 | 5 |
| Potassium | ppm | ASTM D5185m | >20 | **8** | 5 | 12 |
| 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 | >3 | **0.7** | 0.4 | 0.7 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | **8.0** | 6.1 | 8.0 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | **19.6** | 17.9 | 19.7 |
| 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 | | **0** | 0 | 3 |
| Boron | ppm | ASTM D5185m | 0 | **0** | 0 | 0 |
| Barium | ppm | ASTM D5185m | 0 | **2** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 60 | **92** | 62 | 77 |
| Manganese | ppm | ASTM D5185m | 0 | **<1** | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | 1010 | **1359** | 948 | 1215 |
| Calcium | ppm | ASTM D5185m | 1070 | **1470** | 1070 | 1254 |
| Phosphorus | ppm | ASTM D5185m | 1150 | **1470** | 996 | 1199 |
| Zinc | ppm | ASTM D5185m | 1270 | **1696** | 1235 | 1543 |
| Sulfur | ppm | ASTM D5185m | 2060 | **4413** | 3132 | 3283 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | **14.7** | 13.5 | 15.2 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | **8.4** | 7.2 | 7.9 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | **13.5** | 13.8 | 13.6 |

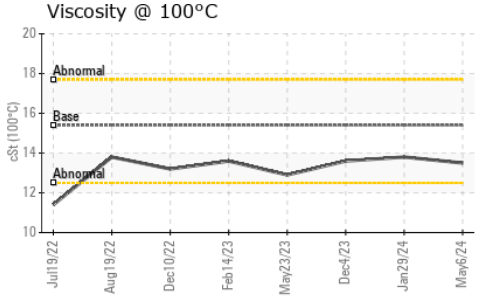
FT-IR (Direct Trend)



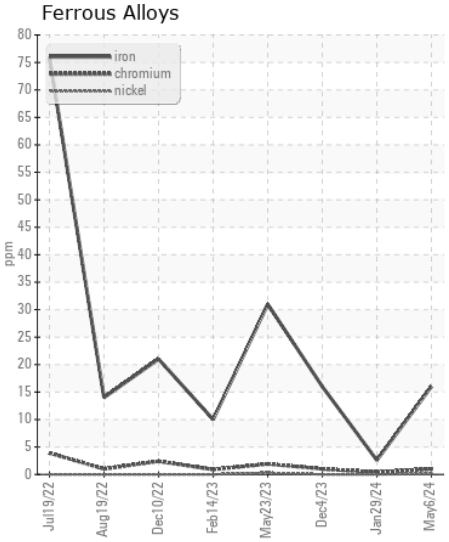

Base Number



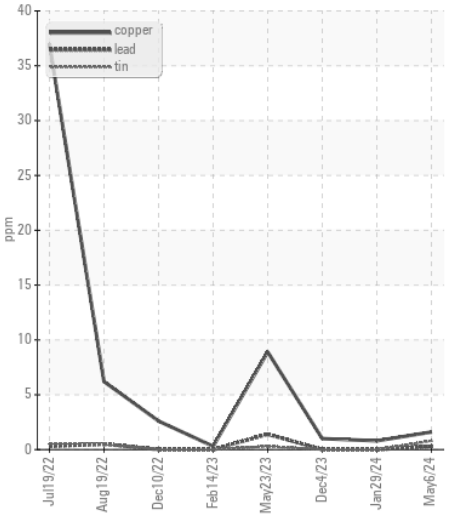

Viscosity @ 100°C



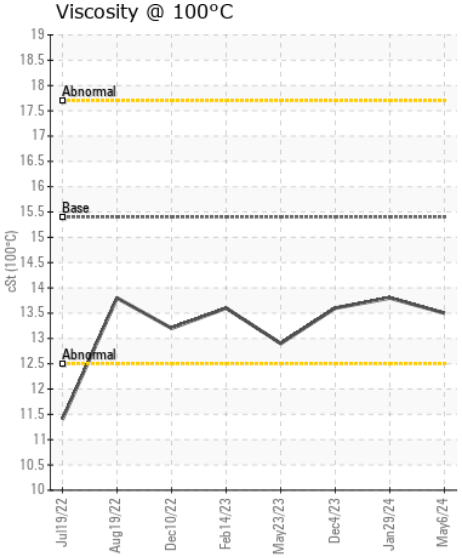

Ferrous Alloys




Non-ferrous Metals




Viscosity @ 100°C

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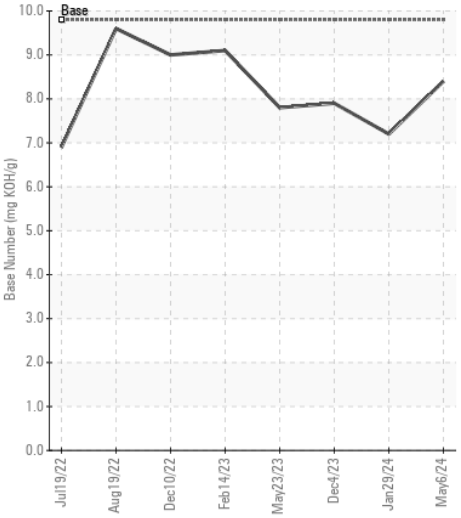


Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : GFL0116148
**Lab Number** : 06176528
**Unique Number** : 11022581
**Test Package** : FLEET

**Received** : 10 May 2024
**Tested** : 13 May 2024
**Diagnosed** : 14 May 2024 - Sean Felton

*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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