FLEET LUBE 360 OIL DIAGNOSTICS

# OIL ANALYSIS REPORT

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

Machine Id
## 427109 - URN18
Component
## Diesel Engine
Fluid
## PETRO CANADA DURON SHP 15W40 (--- QTS)

## RECOMMENDATION

Resample at the next service interval to monitor.

## WEAR

Metal levels are typical for a new component breaking in.

## CONTAMINATION

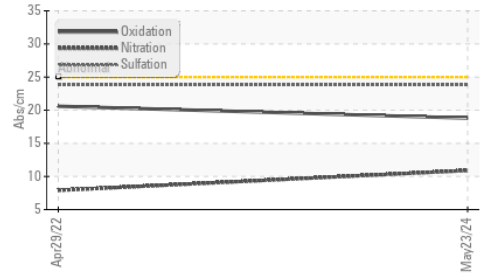
There is no indication of any contamination in the oil.

## FLUID CONDITION

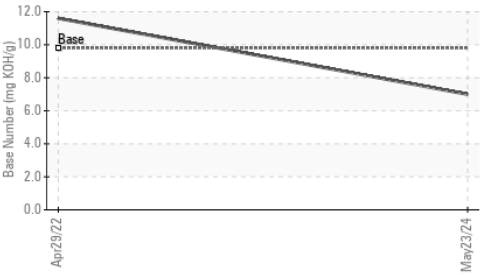
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | GFL0099783 | GFL0036669 | --- |
| Sample Date | | Client Info | | 23 May 2024 | 29 Apr 2022 | --- |
| Machine Age | hrs | Client Info | | 600 | 227454 | --- |
| Oil Age | hrs | Client Info | | 600 | 600 | --- |
| Filter Age | hrs | Client Info | | 600 | 600 | --- |
| Oil Changed | | Client Info | | Changed | Changed | --- |
| Filter Changed | | Client Info | | Changed | Changed | --- |
| Sample Status | | | | NORMAL | NORMAL | --- |
| Iron | ppm | ASTM D5185m | >90 | 79 | 31 | --- |
| Chromium | ppm | ASTM D5185m | >20 | 3 | 1 | --- |
| Nickel | ppm | ASTM D5185m | >2 | <1 | 1 | --- |
| Titanium | ppm | ASTM D5185m | >2 | 0 | <1 | --- |
| Silver | ppm | ASTM D5185m | >2 | <1 | 1 | --- |
| Aluminum | ppm | ASTM D5185m | >20 | 5 | 5 | --- |
| Lead | ppm | ASTM D5185m | >40 | 22 | 3 | --- |
| Copper | ppm | ASTM D5185m | >330 | 27 | 27 | --- |
| Tin | ppm | ASTM D5185m | >15 | 2 | 2 | --- |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | --- |
| White Metal | scalar | *Visual | NONE | NONE | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | --- |
| Silicon | ppm | ASTM D5185m | >25 | 7 | 29 | --- |
| Potassium | ppm | ASTM D5185m | >20 | <1 | 4 | --- |
| Fuel | | WC Method | >3.0 | <1.0 | <1.0 | --- |
| Water | | WC Method | >0.2 | NEG | NEG | --- |
| Glycol | | WC Method | | NEG | NEG | --- |
| Soot % | % | *ASTM D7844 | >6 | 1.4 | 0.4 | --- |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 10.9 | 7.9 | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 23.8 | 23.8 | --- |
| Silt | scalar | *Visual | NONE | NONE | NONE | --- |
| Debris | scalar | *Visual | NONE | NONE | NONE | --- |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | --- |
| Appearance | scalar | *Visual | NORML | NORML | NORML | --- |
| Odor | scalar | *Visual | NORML | NORML | NORML | --- |
| Emulsified Water | scalar | *Visual | >0.2 | NEG | NEG | --- |
| Sodium | ppm | ASTM D5185m | | 5 | 4 | --- |
| Boron | ppm | ASTM D5185m | 0 | 8 | 37 | --- |
| Barium | ppm | ASTM D5185m | 0 | 0 | 2 | --- |
| Molybdenum | ppm | ASTM D5185m | 60 | 93 | 32 | --- |
| Manganese | ppm | ASTM D5185m | 0 | <1 | 5 | --- |
| Magnesium | ppm | ASTM D5185m | 1010 | 1047 | 413 | --- |
| Calcium | ppm | ASTM D5185m | 1070 | 1356 | 2178 | --- |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1121 | 806 | --- |
| Zinc | ppm | ASTM D5185m | 1270 | 1443 | 1016 | --- |
| Sulfur | ppm | ASTM D5185m | 2060 | 3436 | 2486 | --- |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 18.8 | 20.6 | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 7.0 | 11.6 | --- |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 13.4 | 13.1 | --- |

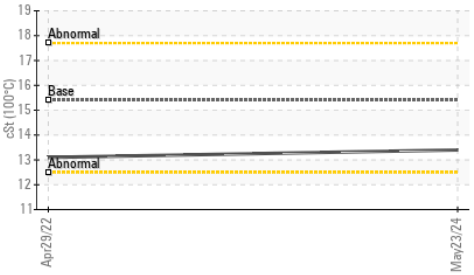
FT-IR (Direct Trend)



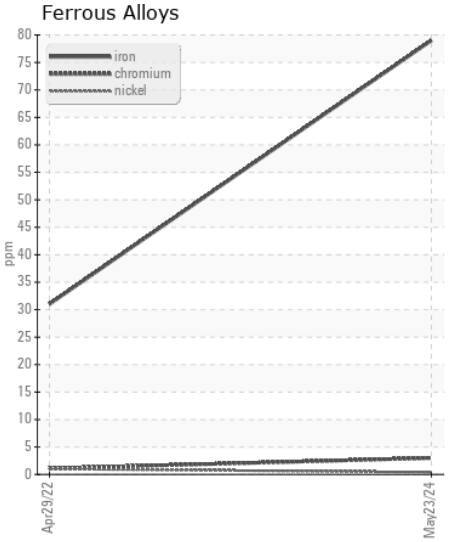

Base Number



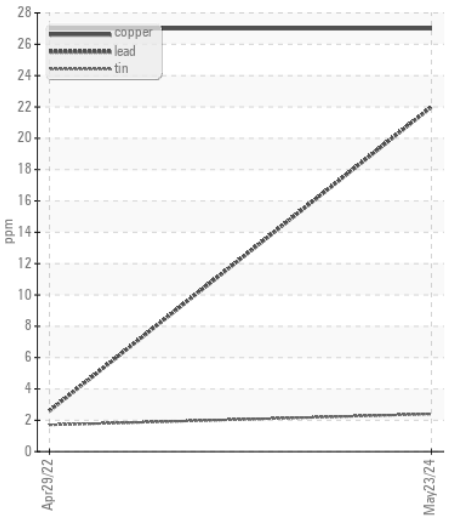

Viscosity @ 100°C



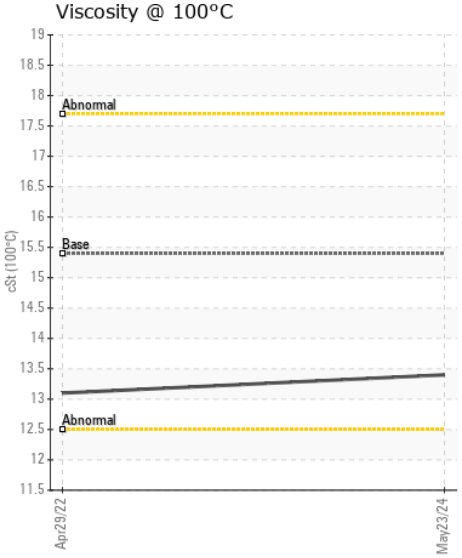

Ferrous Alloys



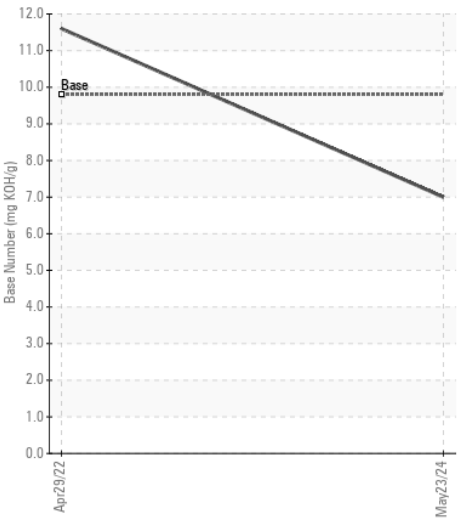

Non-ferrous Metals




Viscosity @ 100°C




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : GFL0099783
**Lab Number** : 06193198
**Unique Number** : 11049950
**Test Package** : FLEET

**Received** : 28 May 2024
**Tested** : 30 May 2024
**Diagnosed** : 30 May 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)*

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