FLEET LUBE 360 OIL DIAGNOSTICS

# OIL ANALYSIS REPORT

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

Machine Id
**913027**
Component
**Diesel Engine**
Fluid
**PETRO CANADA DURON SHP 15W40 (10 GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

## WEAR

All component wear rates are normal.

## CONTAMINATION

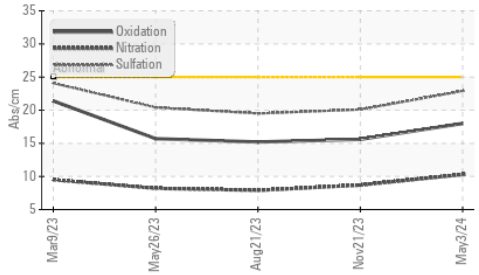
There is no indication of any contamination in the oil.

## FLUID CONDITION

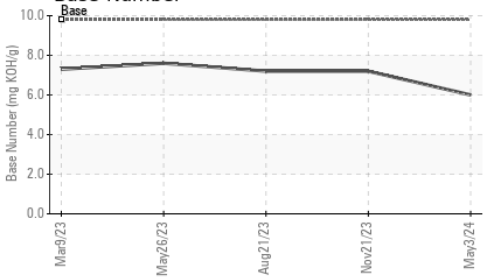
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | GFL0095355 | GFL0095376 | GFL0076927 |
| Sample Date | | Client Info | | 03 May 2024 | 21 Nov 2023 | 21 Aug 2023 |
| Machine Age | hrs | Client Info | | 3282 | 2195 | 1631 |
| Oil Age | hrs | Client Info | | 566 | 564 | 554 |
| Filter Age | hrs | Client Info | | 566 | 564 | 554 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |
| Iron | ppm | ASTM D5185m | >120 | 26 | 15 | 13 |
| Chromium | ppm | ASTM D5185m | >20 | 1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >5 | 7 | 4 | 1 |
| Titanium | ppm | ASTM D5185m | >2 | <1 | <1 | 0 |
| Silver | ppm | ASTM D5185m | >2 | <1 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >20 | 2 | 2 | 4 |
| Lead | ppm | ASTM D5185m | >40 | <1 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >330 | 4 | 8 | 53 |
| Tin | ppm | ASTM D5185m | >15 | 2 | 1 | 1 |
| 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 | 6 | 5 | 5 |
| Potassium | ppm | ASTM D5185m | >20 | 4 | 4 | 1 |
| Fuel | | WC Method | >3.0 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >4 | 0.9 | 0.6 | 0.5 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 10.3 | 8.7 | 7.9 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 22.9 | 20.1 | 19.5 |
| 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 | | 7 | 7 | 8 |
| Boron | ppm | ASTM D5185m | 0 | 10 | 5 | 6 |
| Barium | ppm | ASTM D5185m | 0 | 2 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 60 | 65 | 55 | 61 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 1010 | 942 | 884 | 1009 |
| Calcium | ppm | ASTM D5185m | 1070 | 1159 | 1076 | 1214 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1082 | 828 | 1040 |
| Zinc | ppm | ASTM D5185m | 1270 | 1219 | 1136 | 1335 |
| Sulfur | ppm | ASTM D5185m | 2060 | 2937 | 3072 | 3313 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 18.0 | 15.6 | 15.2 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 6.0 | 7.2 | 7.2 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 13.8 | 13.7 | 13.6 |

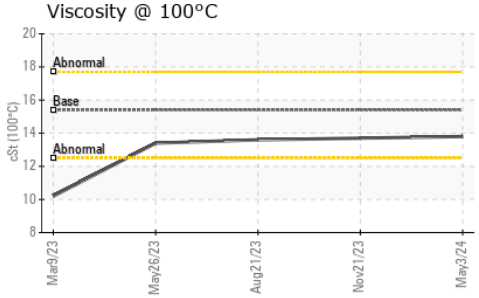
FT-IR (Direct Trend)



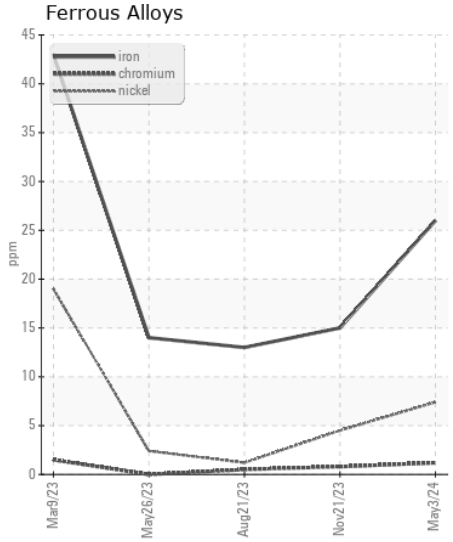

Base Number



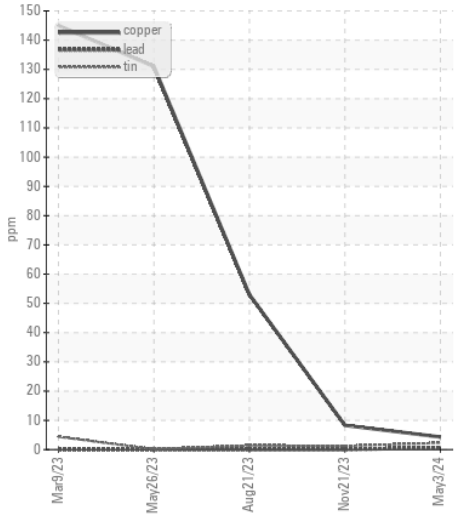

Viscosity @ 100°C



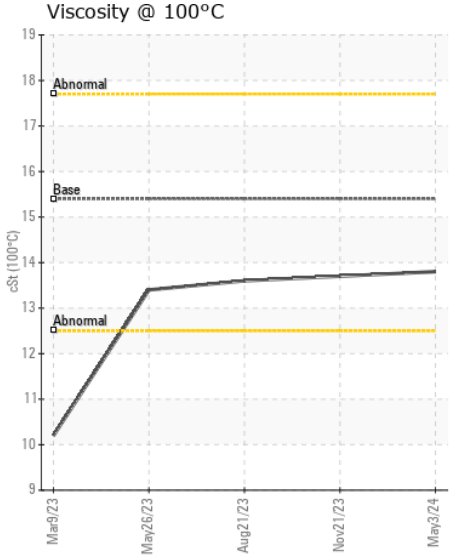

Ferrous Alloys



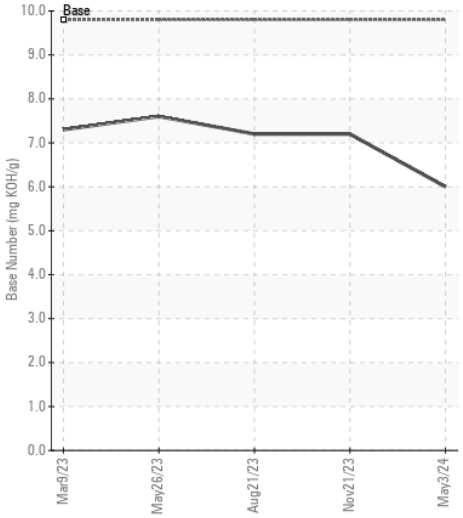

Non-ferrous Metals




Viscosity @ 100°C




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : GFL0095355
**Lab Number** : 06176610
**Unique Number** : 11022663
**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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