FLEET LUBE 360 OIL DIAGNOSTICS

# OIL ANALYSIS REPORT

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

Area
**(EAQ340)**
Machine Id
**10976**
Component
**Diesel Engine**
Fluid
**PETRO CANADA DURON SHP 15W40 (8 GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

## WEAR

Metal levels are typical for a new component breaking in.

## CONTAMINATION

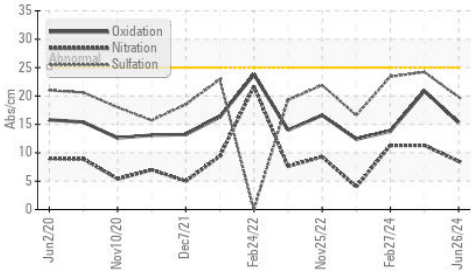
There is no indication of any contamination in the oil.

## FLUID CONDITION

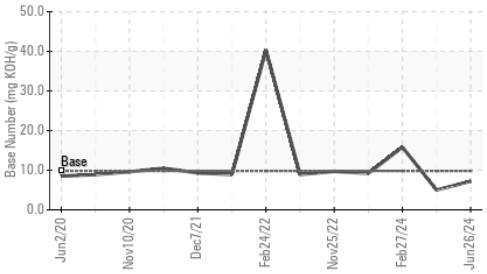
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | GFL0077450 | GFL0077445 | GFL0089604 |
| Sample Date | | Client Info | | 26 Jun 2024 | 21 May 2024 | 27 Feb 2024 |
| Machine Age | hrs | Client Info | | 1355 | 90 | 0 |
| Oil Age | hrs | Client Info | | 1265 | 0 | 0 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | Not Changd | Not Changd |
| Filter Changed | | Client Info | | N/A | N/A | N/A |
| Sample Status | | | | NORMAL | NORMAL | ABNORMAL |
| Iron | ppm | ASTM D5185m | >75 | 11 | 50 | 124 |
| Chromium | ppm | ASTM D5185m | >5 | <1 | 3 | 2 |
| Nickel | ppm | ASTM D5185m | >4 | 0 | <1 | <1 |
| Titanium | ppm | ASTM D5185m | >2 | <1 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >15 | 7 | 29 | 8 |
| Lead | ppm | ASTM D5185m | >25 | 2 | <1 | 1 |
| Copper | ppm | ASTM D5185m | >100 | 0 | 8 | 16 |
| Tin | ppm | ASTM D5185m | >4 | 0 | 1 | <1 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silicon | ppm | ASTM D5185m | >25 | 6 | 7 | ▲ 77 |
| Potassium | ppm | ASTM D5185m | >20 | <1 | 38 | 10 |
| 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 | >6 | 0.4 | 0.9 | 2.2 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 8.5 | 11.3 | 11.3 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 19.8 | 24.2 | 23.4 |
| 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 | | 2 | 25 | ▲ 2082 |
| Boron | ppm | ASTM D5185m | 0 | 3 | 3 | 124 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 60 | 55 | 65 | 124 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | 1 | 2 |
| Magnesium | ppm | ASTM D5185m | 1010 | 928 | 902 | 866 |
| Calcium | ppm | ASTM D5185m | 1070 | 1004 | 1071 | 967 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1040 | 995 | 970 |
| Zinc | ppm | ASTM D5185m | 1270 | 1254 | 1212 | 1088 |
| Sulfur | ppm | ASTM D5185m | 2060 | 3360 | 2718 | 3040 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 15.3 | 20.9 | 13.8 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 7.2 | 5.0 | ▲ 15.8 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 12.8 | 13.6 | 13.8 |

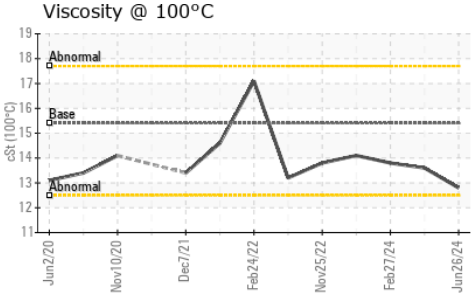
FT-IR (Direct Trend)



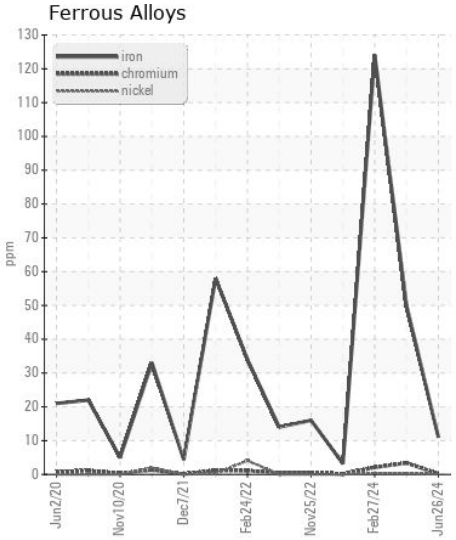

Base Number



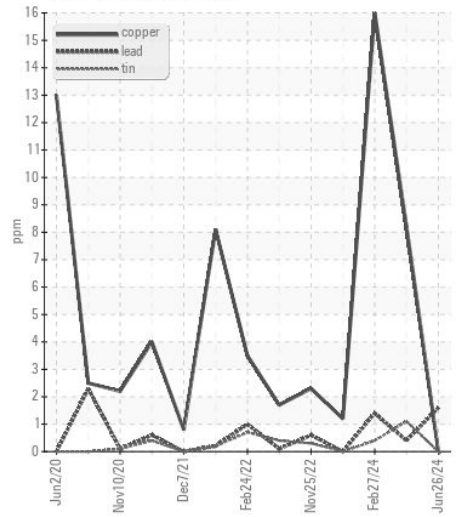

Viscosity @ 100°C



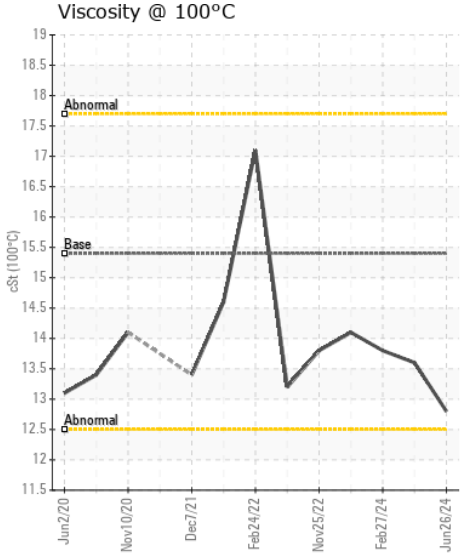

Ferrous Alloys



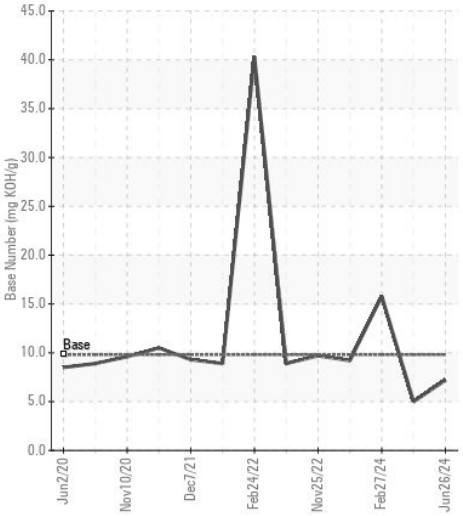

Non-ferrous Metals




Viscosity @ 100°C




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : GFL0077450
**Lab Number** : 06228275
**Unique Number** : 11111768
**Test Package** : FLEET

**Received** : 05 Jul 2024
**Tested** : 05 Jul 2024
**Diagnosed** : 05 Jul 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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