FLEET LUBE 360 OIL DIAGNOSTICS

# OIL ANALYSIS REPORT

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

Machine Id
**10533**
Component
**Diesel Engine**
Fluid
**PETRO CANADA DURON SHP 15W40 (11 GAL)**

## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

## WEAR

All component wear rates are normal.

## CONTAMINATION

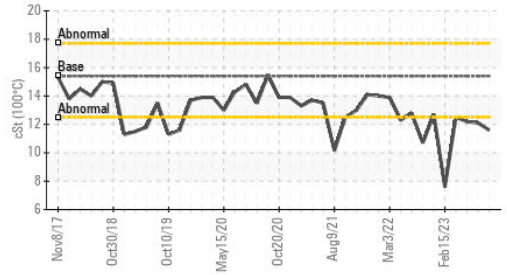
Fuel content negligible. No other contaminants were detected in the oil.

## FLUID CONDITION

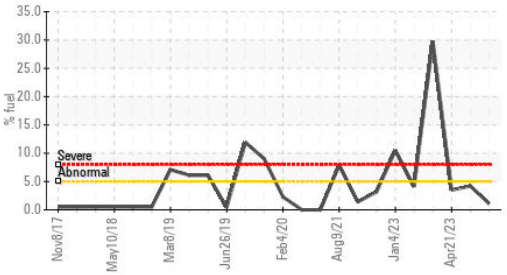
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | GFL0074645 | GFL0074617 | GFL0074599 |
| Sample Date | | Client Info | | 17 Jan 2024 | 11 Jan 2024 | 09 May 2023 |
| Machine Age | hrs | Client Info | | 14826 | 14789 | 13673 |
| Oil Age | hrs | Client Info | | 602 | 565 | 18166 |
| Filter Age | hrs | Client Info | | 602 | 565 | 18166 |
| Oil Changed | | Client Info | | Changed | Not Changd | Changed |
| Filter Changed | | Client Info | | Changed | Not Changd | Changed |
| Sample Status | | | | ATTENTION | NORMAL | MARGINAL |
| Iron | ppm | ASTM D5185m | >100 | 42 | 37 | 14 |
| Chromium | ppm | ASTM D5185m | >20 | 2 | 1 | 1 |
| Nickel | ppm | ASTM D5185m | >4 | <1 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 7 | 6 | 2 |
| Lead | ppm | ASTM D5185m | >40 | 1 | 1 | <1 |
| Copper | ppm | ASTM D5185m | >330 | 5 | 5 | 0 |
| Tin | ppm | ASTM D5185m | >15 | <1 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | <1 | <1 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silicon | ppm | ASTM D5185m | >25 | 11 | 10 | 6 |
| Potassium | ppm | ASTM D5185m | >20 | 5 | 3 | 6 |
| Fuel | % | ASTM D3524 | >5 | 1.1 | <1.0 | ▲ 4.2 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.5 | 0.4 | 0.5 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 11.6 | 11.5 | 9.2 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 22.6 | 22.0 | 20.1 |
| 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 | 17 |
| Boron | ppm | ASTM D5185m | 0 | 40 | 32 | 7 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 60 | 96 | 87 | 62 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 1010 | 771 | 674 | 887 |
| Calcium | ppm | ASTM D5185m | 1070 | 1365 | 1249 | 1031 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 862 | 826 | 970 |
| Zinc | ppm | ASTM D5185m | 1270 | 1066 | 949 | 1205 |
| Sulfur | ppm | ASTM D5185m | 2060 | 3012 | 2610 | 3275 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 23.2 | 22.3 | 16.5 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 5.4 | 5.8 | 7.6 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | ▲ 11.6 | 12.1 | 12.2 |

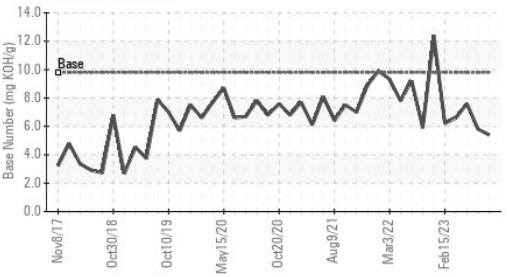
Viscosity @ 100°C



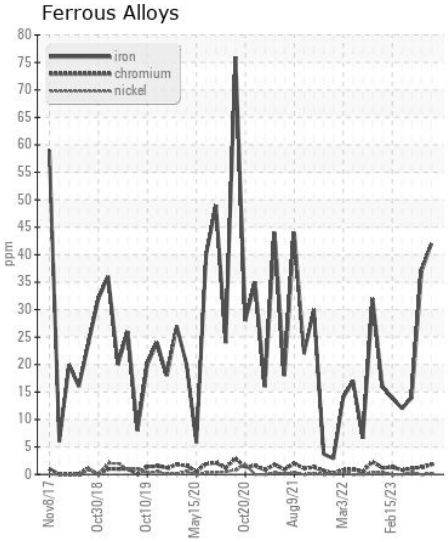

Fuel Dilution



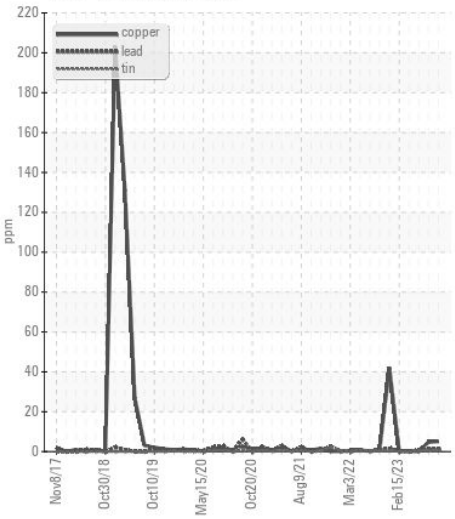

Base Number



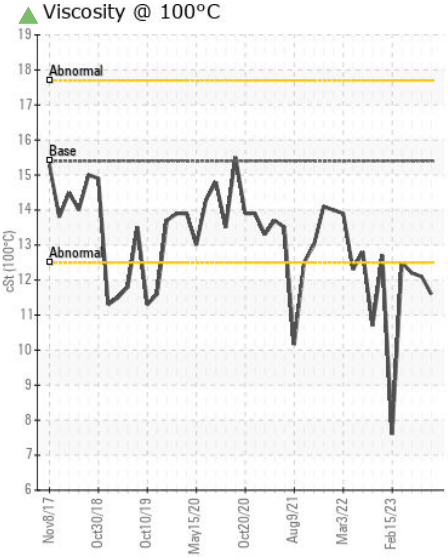

Ferrous Alloys




Non-ferrous Metals




Viscosity @ 100°C

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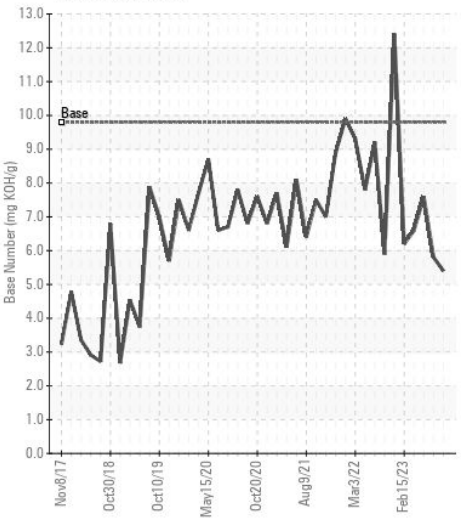


Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : GFL0074645 **Recieved** : 19 Jan 2024
**Lab Number** : 06065454 **Diagnosed** : 23 Jan 2024
**Unique Number** : 10836836 **Diagnostician** : Sean Felton
**Test Package** : FLEET ( Additional Tests: FuelDilution, PercentFuel )

*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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