FLEET LUBE 360 OIL DIAGNOSTICS

# OIL ANALYSIS REPORT

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

Area
**{UNASSIGNED}**
Machine Id
**834092**
Component
**Natural Gas 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

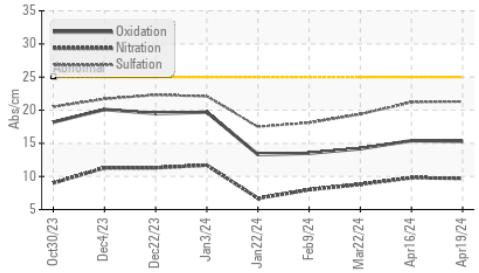
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

## FLUID CONDITION

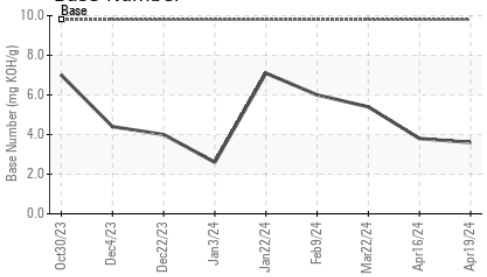
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | GFL0118025 | GFL0115674 | GFL0115746 |
| Sample Date | | Client Info | | 19 Apr 2024 | 16 Apr 2024 | 22 Mar 2024 |
| Machine Age | hrs | Client Info | | 1180 | 1153 | 1021 |
| Oil Age | hrs | Client Info | | 585 | 558 | 426 |
| Filter Age | hrs | Client Info | | 585 | 558 | 426 |
| Oil Changed | | Client Info | | Changed | Not Changd | Not Changd |
| Filter Changed | | Client Info | | Changed | Not Changd | Not Changd |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |
| Iron | ppm | ASTM D5185m | >50 | 29 | 27 | 23 |
| Chromium | ppm | ASTM D5185m | >4 | 3 | 3 | 2 |
| Nickel | ppm | ASTM D5185m | >2 | <1 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >9 | 70 | 67 | 47 |
| Lead | ppm | ASTM D5185m | >30 | <1 | <1 | <1 |
| Copper | ppm | ASTM D5185m | >35 | 1 | 0 | 3 |
| Tin | ppm | ASTM D5185m | >4 | 2 | 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 | >+100 | 10 | 9 | 8 |
| Potassium | ppm | ASTM D5185m | >20 | 178 | 164 | 112 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | | 0 | 0 | 0 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 9.7 | 9.8 | 8.8 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 21.3 | 21.2 | 19.4 |
| 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 | >0.1 | NEG | NEG | NEG |
| Sodium | ppm | ASTM D5185m | | 6 | 4 | 5 |
| Boron | ppm | ASTM D5185m | 0 | 4 | 3 | 3 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 60 | 70 | 67 | 65 |
| Manganese | ppm | ASTM D5185m | 0 | 3 | 2 | 2 |
| Magnesium | ppm | ASTM D5185m | 1010 | 938 | 912 | 968 |
| Calcium | ppm | ASTM D5185m | 1070 | 1127 | 1116 | 1175 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1015 | 962 | 1001 |
| Zinc | ppm | ASTM D5185m | 1270 | 1255 | 1212 | 1213 |
| Sulfur | ppm | ASTM D5185m | 2060 | 3363 | 3133 | 3460 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 15.3 | 15.4 | 14.2 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 3.6 | 3.8 | 5.4 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 13.4 | 13.4 | 13.5 |

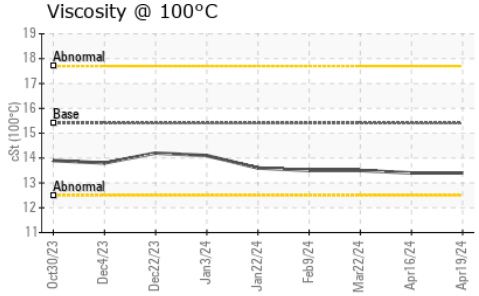
FT-IR (Direct Trend)



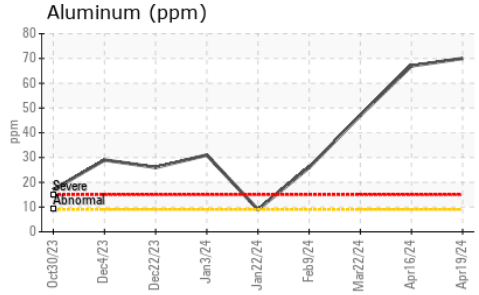

Base Number



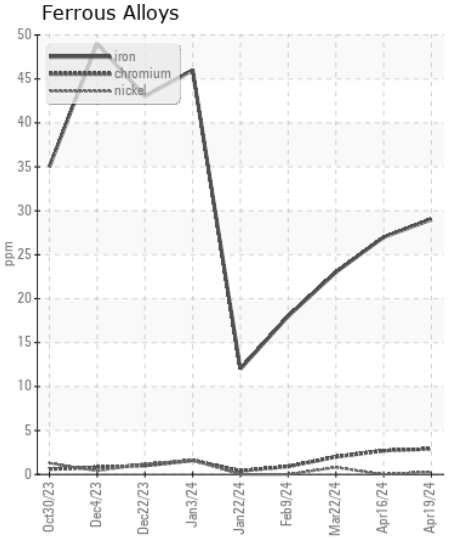

Viscosity @ 100°C



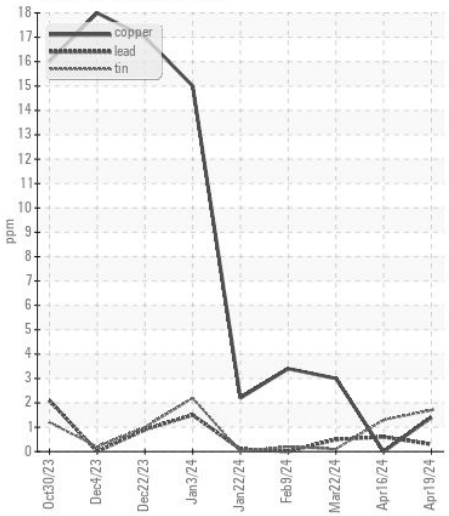

Aluminum (ppm)



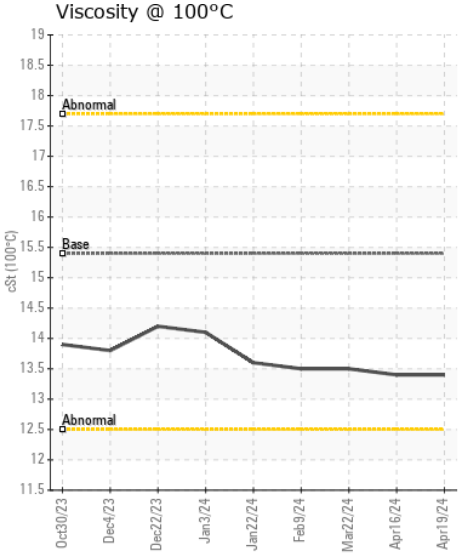

Ferrous Alloys



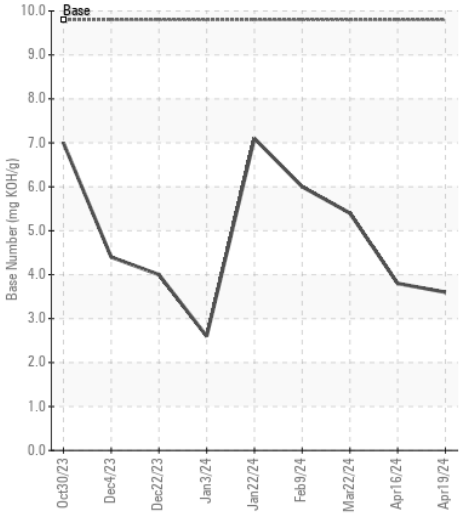

Non-ferrous Metals




Viscosity @ 100°C




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : GFL0118025
**Lab Number** : 06156793
**Unique Number** : 10992216
**Test Package** : FLEET

**Received** : 22 Apr 2024
**Tested** : 23 Apr 2024
**Diagnosed** : 23 Apr 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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