FLEET LUBE 360 OIL DIAGNOSTICS

# OIL ANALYSIS REPORT

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

Machine Id
**714012**
Component
**Diesel Engine**
Fluid
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

## WEAR

Metal levels are typical for a new component breaking in.

## CONTAMINATION

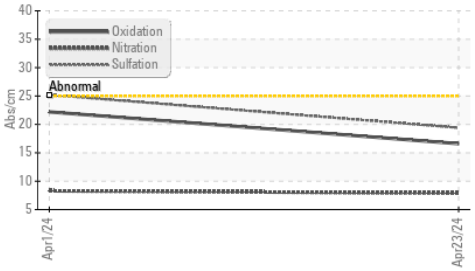
There is no indication of any contamination in the oil.

## FLUID CONDITION

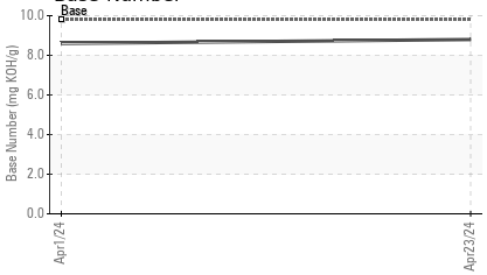
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | GFL0117606 | GFL0117632 | --- |
| Sample Date | | Client Info | | 23 Apr 2024 | 01 Apr 2024 | --- |
| Machine Age | hrs | Client Info | | 627 | 442 | --- |
| Oil Age | hrs | Client Info | | 442 | 0 | --- |
| Filter Age | hrs | Client Info | | 442 | 0 | --- |
| Oil Changed | | Client Info | | Changed | Not Changd | --- |
| Filter Changed | | Client Info | | Changed | Not Changd | --- |
| Sample Status | | | | NORMAL | ABNORMAL | --- |
| Iron | ppm | ASTM D5185m | >120 | 10 | 27 | --- |
| Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | --- |
| Nickel | ppm | ASTM D5185m | >5 | 0 | 3 | --- |
| Titanium | ppm | ASTM D5185m | >2 | 0 | 0 | --- |
| Silver | ppm | ASTM D5185m | >2 | 0 | <1 | --- |
| Aluminum | ppm | ASTM D5185m | >20 | 2 | 9 | --- |
| Lead | ppm | ASTM D5185m | >40 | <1 | 1 | --- |
| Copper | ppm | ASTM D5185m | >330 | 3 | 181 | --- |
| Tin | ppm | ASTM D5185m | >15 | 0 | 1 | --- |
| 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 | 3 | ▲ 71 | --- |
| Potassium | ppm | ASTM D5185m | >20 | <1 | 15 | --- |
| Fuel | | WC Method | >3.0 | <1.0 | 0.4 | --- |
| Water | | WC Method | >0.2 | NEG | NEG | --- |
| Glycol | | WC Method | | NEG | NEG | --- |
| Soot % | % | *ASTM D7844 | >4 | 0.2 | 0.2 | --- |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 7.9 | 8.3 | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 19.4 | 25.2 | --- |
| 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 | | 8 | 3 | --- |
| Boron | ppm | ASTM D5185m | 0 | 0 | 335 | --- |
| Barium | ppm | ASTM D5185m | 0 | 0 | <1 | --- |
| Molybdenum | ppm | ASTM D5185m | 60 | 62 | 122 | --- |
| Manganese | ppm | ASTM D5185m | 0 | 0 | 4 | --- |
| Magnesium | ppm | ASTM D5185m | 1010 | 1080 | 699 | --- |
| Calcium | ppm | ASTM D5185m | 1070 | 1180 | 1486 | --- |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1108 | 729 | --- |
| Zinc | ppm | ASTM D5185m | 1270 | 1392 | 855 | --- |
| Sulfur | ppm | ASTM D5185m | 2060 | 3893 | 2809 | --- |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 16.6 | 22.2 | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 8.8 | 8.6 | --- |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 14.3 | ● 9.6 | --- |

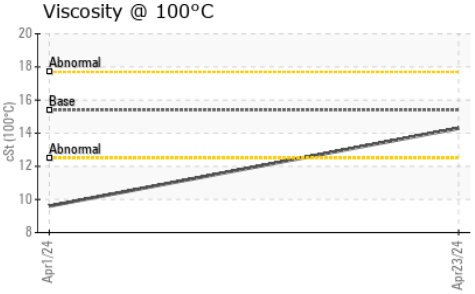
FT-IR (Direct Trend)



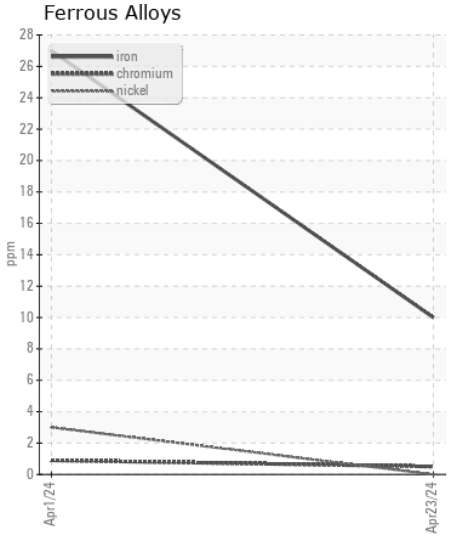

Base Number



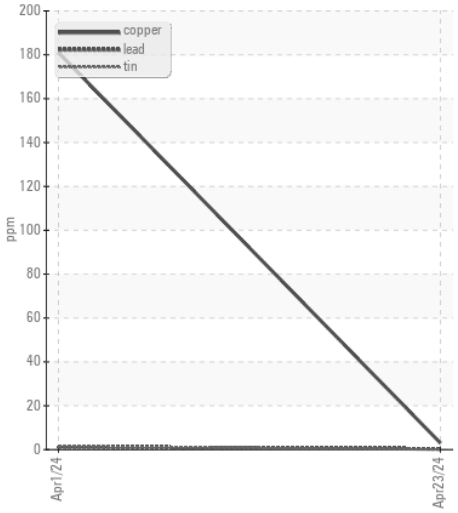

Viscosity @ 100°C



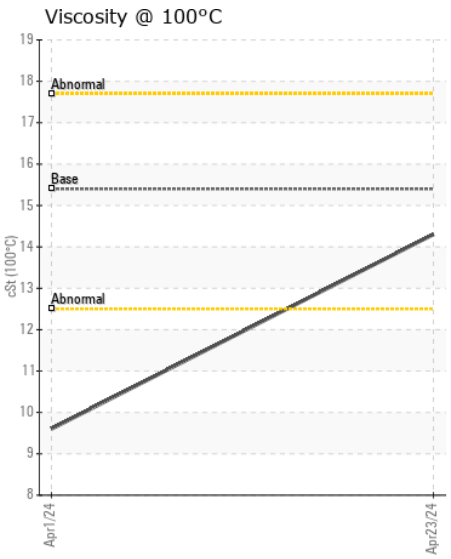

Ferrous Alloys



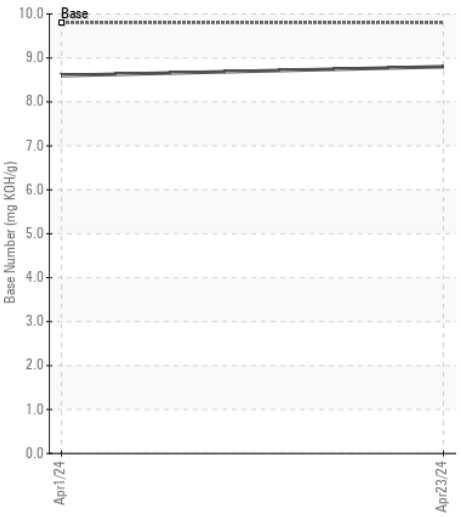

Non-ferrous Metals




Viscosity @ 100°C




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : GFL0117606
**Lab Number** : 06160061
**Unique Number** : 10995484
**Test Package** : FLEET

**Received** : 25 Apr 2024
**Tested** : 25 Apr 2024
**Diagnosed** : 25 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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