



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

Area

(TLD5317)

Machine Id

733026

Component

Natural Gas Engine

Fluid

PETRO CANADA DURON GEO LD 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | GFL0117775 | GFL0117746 | GFL0100549 |
| Sample Date | | Client Info | | 20 May 2024 | 24 Apr 2024 | 23 Dec 2023 |
| Machine Age | hrs | Client Info | | 1341 | 14014 | 580 |
| Oil Age | hrs | Client Info | | 761 | 0 | 201 |
| Filter Age | hrs | Client Info | | 761 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | Not Changd | Changed |
| Filter Changed | | Client Info | | Changed | Not Changd | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >50 | 29 | 31 | 47 |
| Chromium | ppm | ASTM D5185m | >4 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >2 | <1 | 1 | <1 |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >3 | <1 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >9 | 5 | 6 | 10 |
| Lead | ppm | ASTM D5185m | >30 | 2 | <1 | 2 |
| Copper | ppm | ASTM D5185m | >35 | 5 | 5 | 18 |
| Tin | ppm | ASTM D5185m | >4 | <1 | 1 | 1 |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

There is no indication of any contamination in the oil.

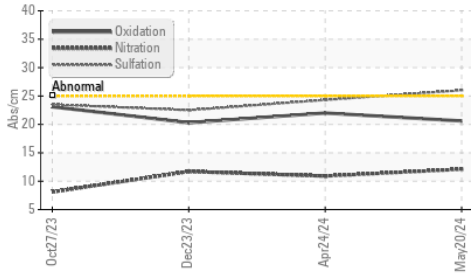
| | | | | | | |
|------------------|----------|-------------|-------|--------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >+100 | 10 | 21 | 32 |
| Potassium | ppm | ASTM D5185m | >20 | 10 | 16 | 29 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | | 0 | 0.1 | 0 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 12.1 | 10.9 | 11.7 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 26.0 | 24.3 | 22.5 |
| 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 | >0.1 | NEG | NEG | NEG |

FLUID CONDITION

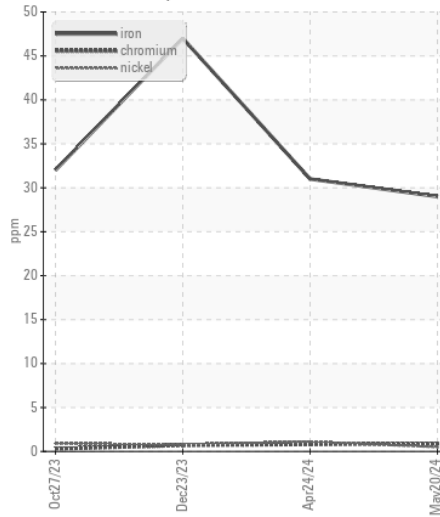
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| | | | | | | |
|------------------|----------|-------------|------|-------------|------|------|
| Sodium | ppm | ASTM D5185m | | 9 | 7 | 5 |
| Boron | ppm | ASTM D5185m | 50 | 11 | 9 | 9 |
| Barium | ppm | ASTM D5185m | 5 | 0 | 3 | 2 |
| Molybdenum | ppm | ASTM D5185m | 50 | 62 | 52 | 52 |
| Manganese | ppm | ASTM D5185m | 0 | 4 | 8 | 15 |
| Magnesium | ppm | ASTM D5185m | 560 | 680 | 623 | 734 |
| Calcium | ppm | ASTM D5185m | 1510 | 1863 | 1346 | 1267 |
| Phosphorus | ppm | ASTM D5185m | 780 | 815 | 675 | 653 |
| Zinc | ppm | ASTM D5185m | 870 | 1128 | 879 | 925 |
| Sulfur | ppm | ASTM D5185m | 2040 | 3248 | 2399 | 2296 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 20.6 | 22.0 | 20.3 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 10.2 | 3.0 | 4.5 | 4.3 |
| Visc @ 100°C | cSt | ASTM D445 | 15.1 | 14.2 | 14.3 | 14.3 |

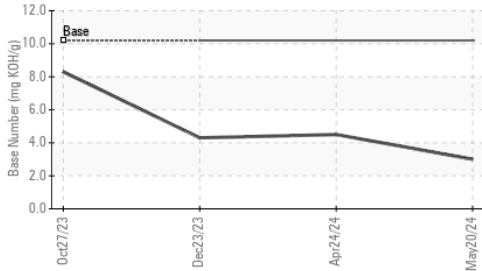
FT-IR (Direct Trend)



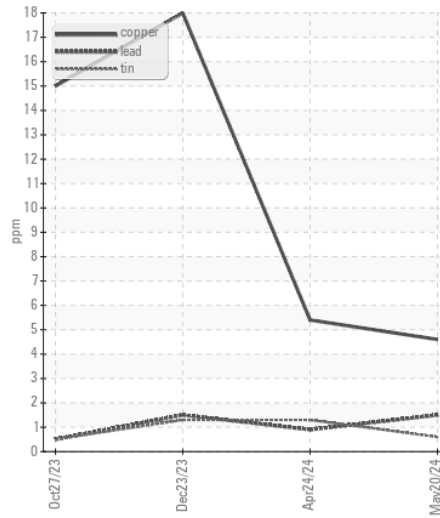
Ferrous Alloys



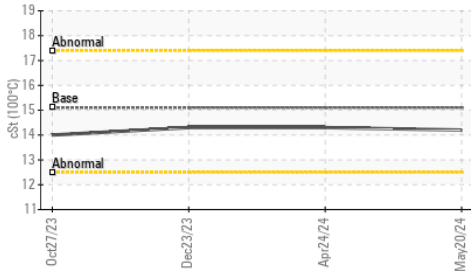
Base Number



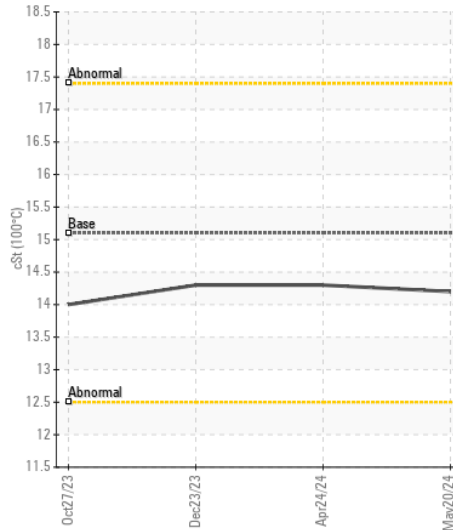
Non-ferrous Metals



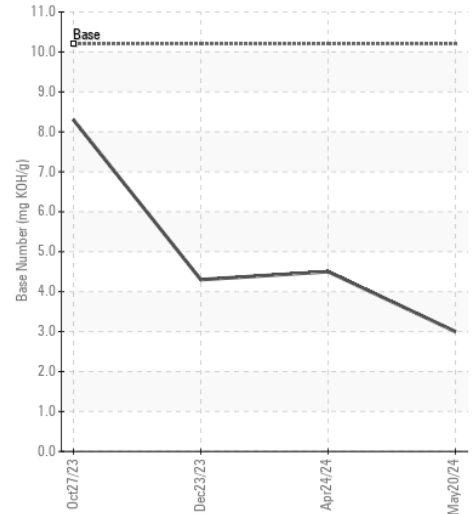
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0117775
Lab Number : 06193346
Unique Number : 11050098
Test Package : FLEET

Received : 28 May 2024
Tested : 30 May 2024
Diagnosed : 30 May 2024 - Wes Davis

GFL Environmental - 865 - East Mount Hauling
 7213 East Mount Houston Road
 Houston, TX
 US 77050
 Contact: TECHNICIAN ACCOUNT
 wcgfldemo@gmail.com

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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