



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

Area

(YA154614)

Machine Id

10370C

Component

Natural Gas Engine

Fluid

PETRO CANADA DURON GEO LD 15W40 (30 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | GFL0123419 | GFL0082476 | GFL0082410 |
| Sample Date | | Client Info | | 18 Jun 2024 | 18 Oct 2023 | 05 Jul 2023 |
| Machine Age | hrs | Client Info | | 92731 | 92731 | 4164 |
| Oil Age | hrs | Client Info | | 92731 | 600 | 1120 |
| Filter Age | hrs | Client Info | | 92731 | 600 | 1120 |
| Oil Changed | | Client Info | | N/A | Changed | Changed |
| Filter Changed | | Client Info | | N/A | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >50 | 8 | 36 | 12 |
| Chromium | ppm | ASTM D5185m | >4 | <1 | 2 | <1 |
| Nickel | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | <1 | 0 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >9 | 1 | 7 | <1 |
| Lead | ppm | ASTM D5185m | >30 | 4 | 0 | <1 |
| Copper | ppm | ASTM D5185m | >35 | 2 | 1 | 2 |
| Tin | ppm | ASTM D5185m | >4 | 0 | 0 | <1 |
| Vanadium | ppm | ASTM D5185m | | <1 | <1 | <1 |
| 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.

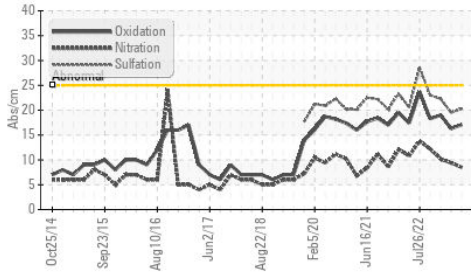
| | | | | | | |
|------------------|----------|-------------|-------|--------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >+100 | 4 | 4 | 3 |
| Potassium | ppm | ASTM D5185m | >20 | 3 | 3 | 3 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | | 0 | 0.5 | 0.1 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 8.5 | 9.4 | 10.2 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 20.3 | 19.5 | 22.3 |
| 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

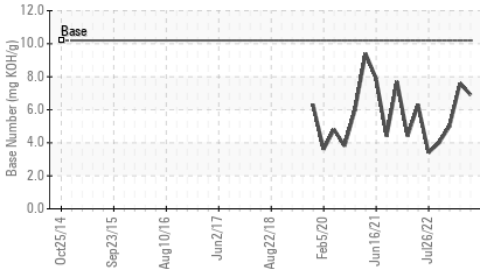
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| | | | | | | |
|------------------|----------|-------------|------|--------------|------|------|
| Sodium | ppm | ASTM D5185m | | 6 | 3 | 6 |
| Boron | ppm | ASTM D5185m | 50 | 23 | 0 | 9 |
| Barium | ppm | ASTM D5185m | 5 | 0 | 0 | <1 |
| Molybdenum | ppm | ASTM D5185m | 50 | 50 | 61 | 53 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 560 | 595 | 994 | 565 |
| Calcium | ppm | ASTM D5185m | 1510 | 1723 | 1100 | 1680 |
| Phosphorus | ppm | ASTM D5185m | 780 | 852 | 1029 | 740 |
| Zinc | ppm | ASTM D5185m | 870 | 1040 | 1301 | 970 |
| Sulfur | ppm | ASTM D5185m | 2040 | 3029 | 2985 | 2848 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 17.1 | 16.3 | 19.0 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 10.2 | 6.9 | 7.6 | 5.0 |
| Visc @ 100°C | cSt | ASTM D445 | 15.1 | 14.4 | 13.5 | 14.4 |

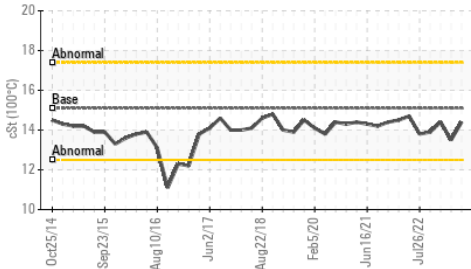
FT-IR (Direct Trend)



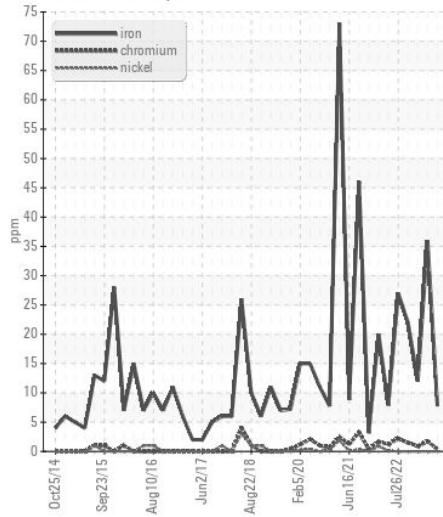
Base Number



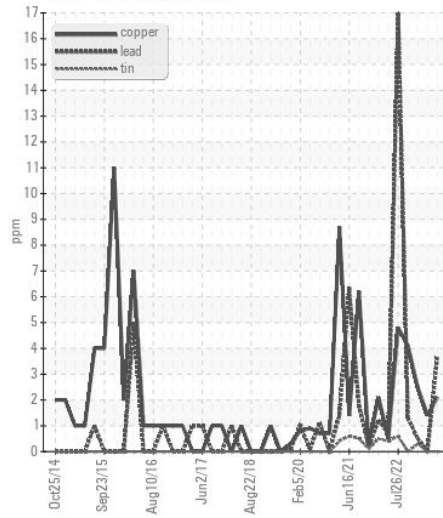
Viscosity @ 100°C



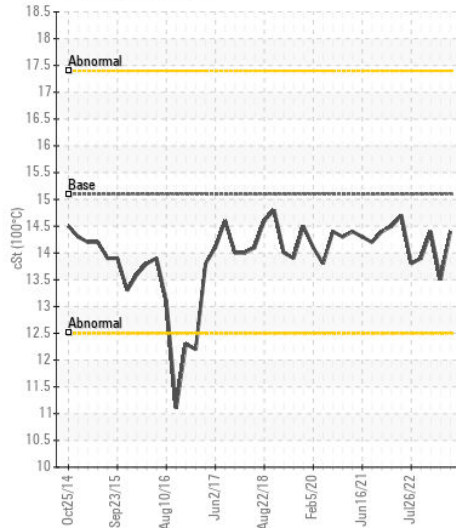
Ferrous Alloys



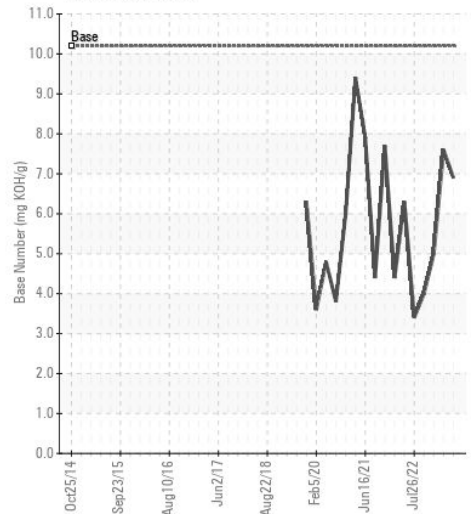
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0123419
Lab Number : 06215571
Unique Number : 11088435
Test Package : FLEET

Received : 20 Jun 2024
Tested : 21 Jun 2024
Diagnosed : 21 Jun 2024 - Wes Davis

GFL Environmental - 007 - Brunswick
 2809 Galloway Road
 Bolivia, NC
 US 28422
 Contact: DONALD CRAVEN
 dcraven@gflenv.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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