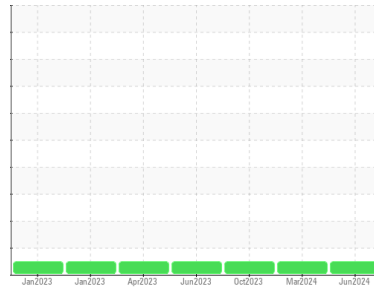




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
(P853642)

Machine Id
932029

Component
Natural Gas Engine

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

DIAGNOSIS

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.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|--------------------|-------------|-------------|------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | | GFL0125698 | GFL0101744 | GFL0090115 |
| Sample Date | Client Info | | | 20 Jun 2024 | 22 Mar 2024 | 18 Oct 2023 |
| Machine Age | mls | Client Info | | 61880 | 37207 | 27540 |
| Oil Age | mls | Client Info | | 24673 | 9667 | 600 |
| Oil Changed | Client Info | | | Not Chngd | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---------------|-----------|--------|------------|------------|----------|----------|
| Water | WC Method | | >0.1 | NEG | NEG | NEG |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|-------------|-----|-------------|------------|----------|----------|----------|
| Iron | ppm | ASTM D5185m | >50 | 3 | 5 | 3 |
| Chromium | ppm | ASTM D5185m | >4 | 0 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >2 | 0 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >9 | 2 | 1 | <1 |
| Lead | ppm | ASTM D5185m | >30 | 9 | 2 | <1 |
| Copper | ppm | ASTM D5185m | >35 | 2 | 2 | 2 |
| Tin | ppm | ASTM D5185m | >4 | 1 | 1 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | <1 |
| Cadmium | ppm | ASTM D5185m | | 0 | <1 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m | 50 | 5 | 13 | 8 |
| Barium | ppm | ASTM D5185m | 5 | 0 | <1 | 0 |
| Molybdenum | ppm | ASTM D5185m | 50 | 49 | 49 | 48 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 560 | 584 | 540 | 511 |
| Calcium | ppm | ASTM D5185m | 1510 | 1650 | 1565 | 1464 |
| Phosphorus | ppm | ASTM D5185m | 780 | 774 | 799 | 616 |
| Zinc | ppm | ASTM D5185m | 870 | 977 | 942 | 858 |
| Sulfur | ppm | ASTM D5185m | 2040 | 2785 | 2558 | 2188 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|-------------|------------|----------|----------|----------|
| Silicon | ppm | ASTM D5185m | >+100 | 6 | 7 | 8 |
| Sodium | ppm | ASTM D5185m | | 9 | 3 | 8 |
| Potassium | ppm | ASTM D5185m | >20 | 4 | 2 | 5 |

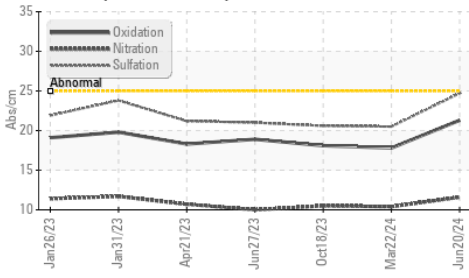
| INFRA-RED | | method | limit/base | current | history1 | history2 |
|-----------|----------|-------------|------------|-------------|----------|----------|
| Soot % | % | *ASTM D7844 | | 0 | 0 | 0 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 11.6 | 10.4 | 10.5 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 24.7 | 20.5 | 20.6 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|-------------|------------|-------------|----------|----------|
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 21.3 | 17.8 | 18.1 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 10.2 | 2.7 | 5.5 | 5.3 |

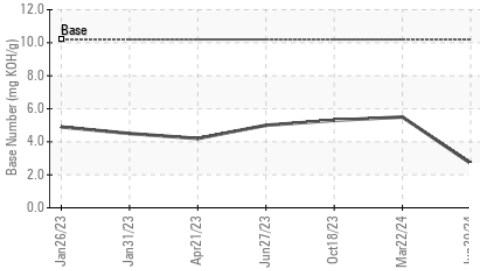


OIL ANALYSIS REPORT

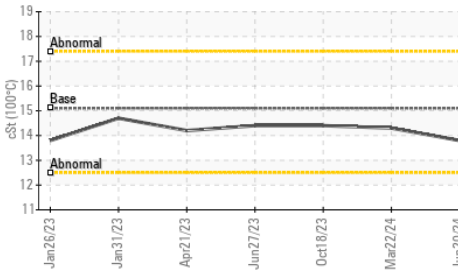
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

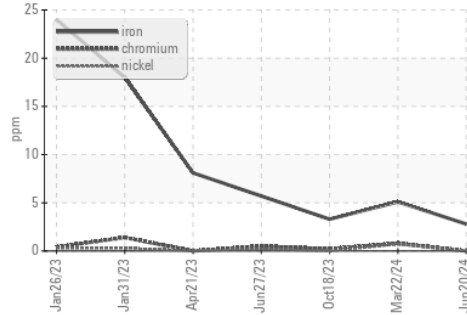


| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE |
| 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 | >0.1 | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG |

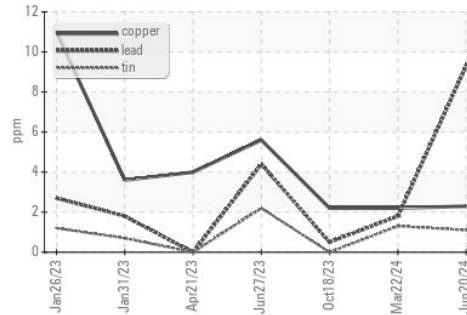
| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 100°C | cSt | ASTM D445 | 15.1 | 13.8 | 14.3 |

GRAPHS

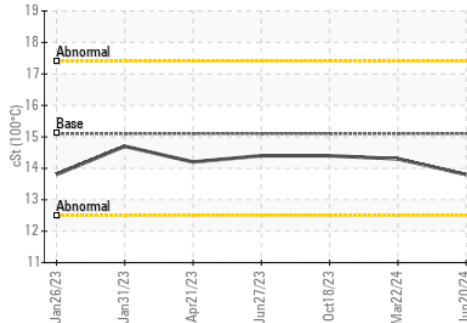
Ferrous Alloys



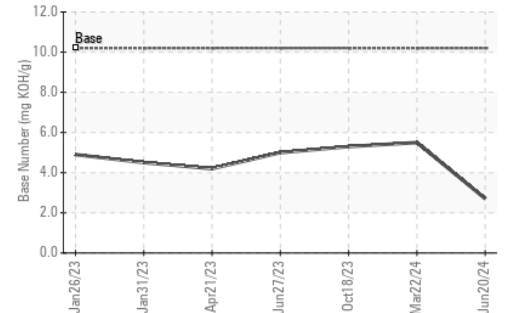
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0125698
 Lab Number : 06216711
 Unique Number : 11089575
 Test Package : FLEET

Received : 21 Jun 2024
 Tested : 24 Jun 2024
 Diagnosed : 24 Jun 2024 - Wes Davis

GFL Environmental - 030 - Conway Myrtle Beach
 3010 HWY 378
 Conway, SC
 US 29527

Contact: ARCILIO RUEZ
 aruiz@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)

T:
 F: