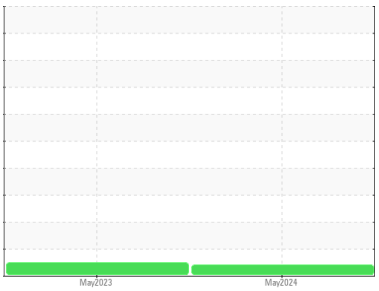
# OIL ANALYSIS REPORT

Sample Rating Trend




VISCOSITY

Machine Id
**420086**
Component
**2 Differential**
Fluid
**GEAR OIL SAE 80W90 (--- GAL)**

## DIAGNOSIS

**Recommendation**
The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. ( Customer Sample Comment: 2nd Axle / Tag )

**Wear**
All component wear rates are normal.

**Contamination**
There is no indication of any contamination in the oil.

**Fluid Condition**
The oil viscosity is lower than normal. Confirm oil type.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **GFL0112055** | GFL0075334 | --- |
| Sample Date | | Client Info | | **04 May 2024** | 20 May 2023 | --- |
| Machine Age | mls | Client Info | | **223991** | 190226 | --- |
| Oil Age | mls | Client Info | | **223991** | 190226 | --- |
| Oil Changed | | Client Info | | **Changed** | Changed | --- |
| Sample Status | | | | **ATTENTION** | NORMAL | --- |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Water | | WC Method | >.2 | **NEG** | NEG | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >500 | **178** | 120 | --- |
| Chromium | ppm | ASTM D5185m | >10 | **1** | <1 | --- |
| Nickel | ppm | ASTM D5185m | >10 | **0** | <1 | --- |
| Titanium | ppm | ASTM D5185m | | **0** | <1 | --- |
| Silver | ppm | ASTM D5185m | | **0** | 0 | --- |
| Aluminum | ppm | ASTM D5185m | >25 | **<1** | 0 | --- |
| Lead | ppm | ASTM D5185m | >25 | **0** | 0 | --- |
| Copper | ppm | ASTM D5185m | >100 | **0** | 10 | --- |
| Tin | ppm | ASTM D5185m | >10 | **0** | <1 | --- |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | --- |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | 400 | **24** | 101 | --- |
| Barium | ppm | ASTM D5185m | 200 | **<1** | 0 | --- |
| Molybdenum | ppm | ASTM D5185m | 12 | **3** | <1 | --- |
| Manganese | ppm | ASTM D5185m | | **3** | 17 | --- |
| Magnesium | ppm | ASTM D5185m | 12 | **2** | 8 | --- |
| Calcium | ppm | ASTM D5185m | 150 | **183** | 16 | --- |
| Phosphorus | ppm | ASTM D5185m | 1650 | **446** | 753 | --- |
| Zinc | ppm | ASTM D5185m | 125 | **323** | 21 | --- |
| Sulfur | ppm | ASTM D5185m | 22500 | **4611** | 19476 | --- |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >75 | **16** | 53 | --- |
| Sodium | ppm | ASTM D5185m | >170 | **1** | 3 | --- |
| Potassium | ppm | ASTM D5185m | >20 | **<1** | 2 | --- |

| 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 | >.2 | **NEG** | NEG | --- |
| Free Water | scalar | *Visual | | **NEG** | NEG | --- |

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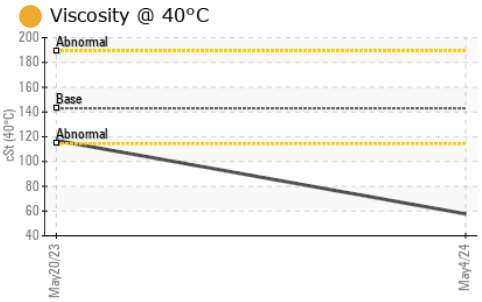
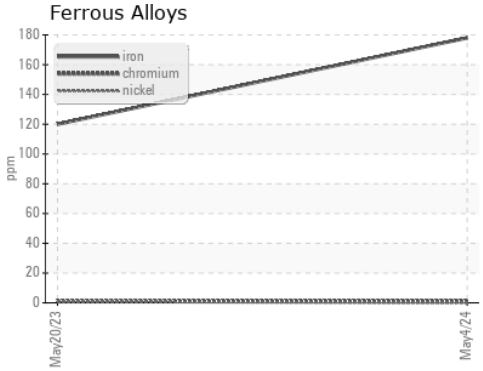



| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 143 | **57.7** | 117 | --- |

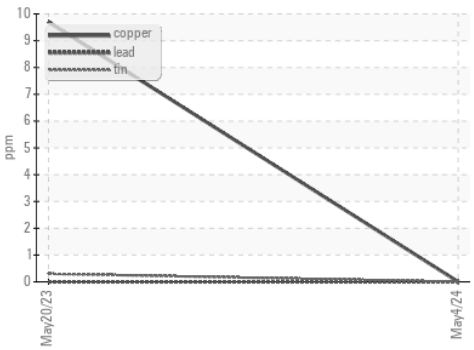
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | | *no image* | *no image* | *no image* |
| Bottom | | | *no image* | *no image* | *no image* |

## GRAPHS

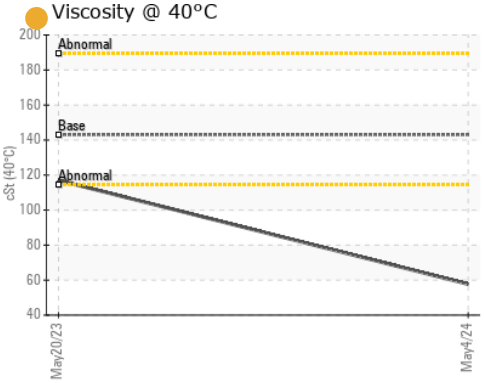
Ferrous Alloys




Non-ferrous Metals




Viscosity @ 40°C




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : GFL0112055
**Lab Number** : 06174308
**Unique Number** : 11020361
**Test Package** : FLEET

**Received** : 09 May 2024
**Tested** : 10 May 2024
**Diagnosed** : 13 May 2024 - Don Baldridge

**GFL Environmental - 983 - Sugar Land Hauling**
16011 West Belfort Street
Sugar Land, TX
US 77498
Contact: TECHNICIAN ACCOUNT
wcgfldemo@gmail.com
T:
F:

*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)*