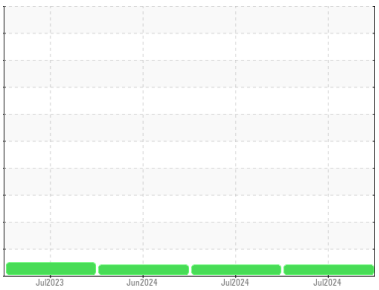
# OIL ANALYSIS REPORT

Sample Rating Trend




VISCOSITY

Machine Id
## 420097 - SW4006
Component
**2 Differential**
Fluid
**GEAR OIL SAE 80W90 (--- GAL)**

## DIAGNOSIS

**Recommendation**
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 | | **GFL0128726** | GFL0105472 | GFL0123521 |
| Sample Date | | Client Info | | **10 Jul 2024** | 03 Jul 2024 | 19 Jun 2024 |
| Machine Age | mls | Client Info | | **231528** | 233426 | 231528 |
| Oil Age | mls | Client Info | | **231528** | 233426 | 231528 |
| Oil Changed | | Client Info | | **Not Changd** | Not Changd | Changed |
| Sample Status | | | | **ATTENTION** | ATTENTION | ATTENTION |

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

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >1200 | **120** | 113 | 264 |
| Chromium | ppm | ASTM D5185m | >8 | **<1** | <1 | 1 |
| Nickel | ppm | ASTM D5185m | >20 | **6** | 6 | 18 |
| Titanium | ppm | ASTM D5185m | >4 | **<1** | <1 | <1 |
| Silver | ppm | ASTM D5185m | | **0** | <1 | 0 |
| Aluminum | ppm | ASTM D5185m | >30 | **3** | 3 | 5 |
| Lead | ppm | ASTM D5185m | >25 | **0** | 0 | 0 |
| Copper | ppm | ASTM D5185m | >50 | **<1** | <1 | <1 |
| Tin | ppm | ASTM D5185m | >5 | **0** | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | **0** | <1 | 0 |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | 400 | **36** | 33 | 70 |
| Barium | ppm | ASTM D5185m | 200 | **0** | <1 | 0 |
| Molybdenum | ppm | ASTM D5185m | 12 | **0** | <1 | 0 |
| Manganese | ppm | ASTM D5185m | | **2** | 1 | 3 |
| Magnesium | ppm | ASTM D5185m | 12 | **1** | 1 | 3 |
| Calcium | ppm | ASTM D5185m | 150 | **17** | 6 | 2 |
| Phosphorus | ppm | ASTM D5185m | 1650 | **598** | 623 | 713 |
| Zinc | ppm | ASTM D5185m | 125 | **7** | 11 | 11 |
| Sulfur | ppm | ASTM D5185m | 22500 | **19329** | 15363 | 14523 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >230 | **49** | 44 | 115 |
| Sodium | ppm | ASTM D5185m | >170 | **2** | 0 | 2 |
| Potassium | ppm | ASTM D5185m | >20 | **<1** | 2 | 2 |

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| 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 | >.2 | **NEG** | NEG | NEG |
| Free Water | scalar | *Visual | | **NEG** | NEG | NEG |

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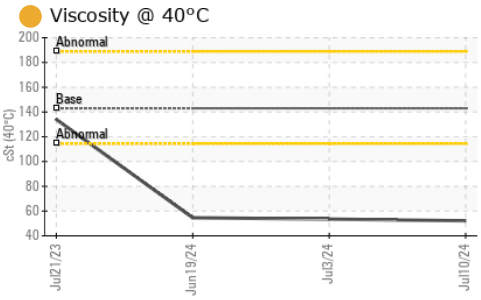
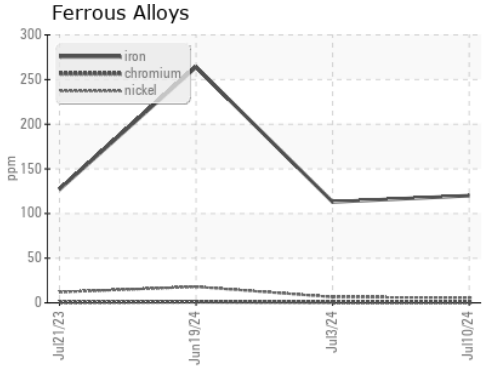



| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 143 | **52.1** | 53.5 | 54.6 |

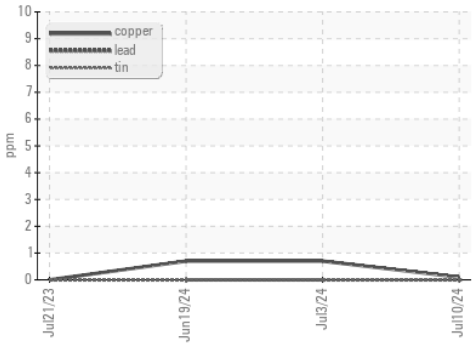
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | | *no image* | *no image* | *no image* |
| Bottom | | | *no image* | *no image* | *no image* |

## GRAPHS

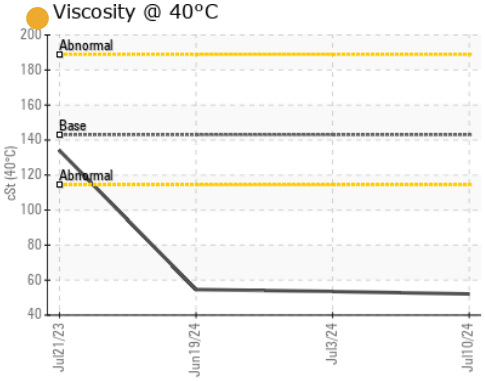
Ferrous Alloys




Non-ferrous Metals




Viscosity @ 40°C




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : GFL0128726
**Lab Number** : 06238245
**Unique Number** : 11127079
**Test Package** : FLEET

**Received** : 16 Jul 2024
**Tested** : 17 Jul 2024
**Diagnosed** : 18 Jul 2024 - Sean Felton

*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)*

**GFL Environmental - 983 - Sugar Land Hauling**
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T:
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Report Id: GFL983 [WUSCAR] 06238245 (Generated: 07/18/2024 12:19:58) Rev: 1

Submitted By: TECHNICIAN ACCOUNT