



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

**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 )

**WEAR**

All component wear rates are normal.

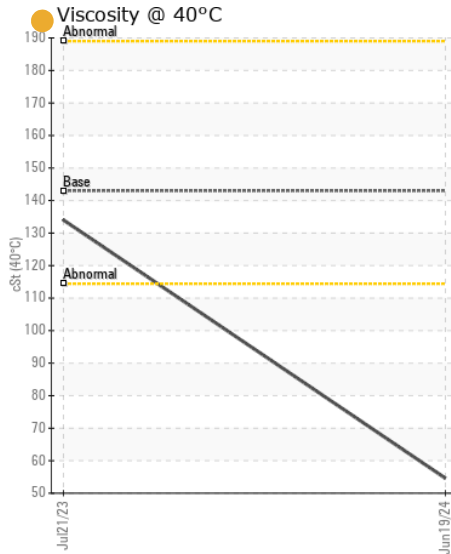
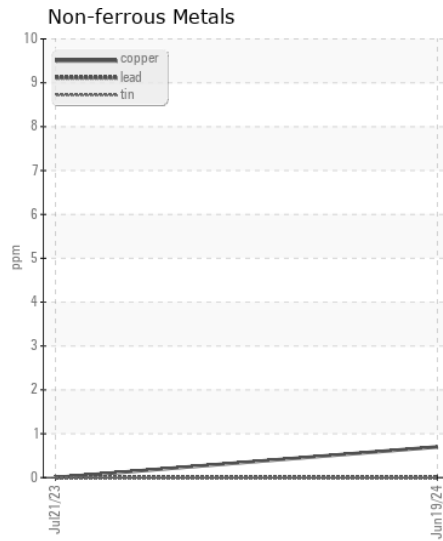
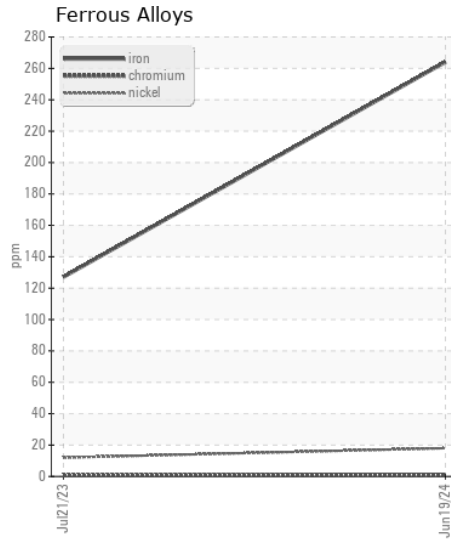
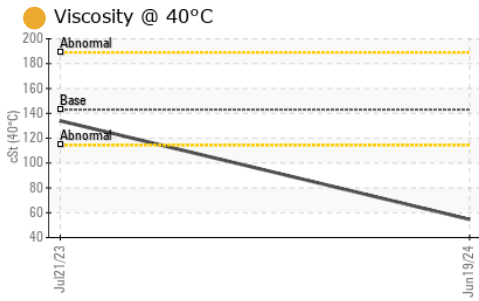
**CONTAMINATION**

There is no indication of any contamination in the oil.

**FLUID CONDITION**

The oil viscosity is lower than normal. Confirm oil type.

| Test             | UOM    | Method      | Limit/Abn | Current            | History1    | History2 |
|------------------|--------|-------------|-----------|--------------------|-------------|----------|
| Sample Number    |        | Client Info |           | <b>GFL0123521</b>  | GFL0089413  | ---      |
| Sample Date      |        | Client Info |           | <b>19 Jun 2024</b> | 21 Jul 2023 | ---      |
| Machine Age      | mls    | Client Info |           | <b>231528</b>      | 194100      | ---      |
| Oil Age          | mls    | Client Info |           | <b>231528</b>      | 0           | ---      |
| Filter Age       | mls    | Client Info |           | <b>0</b>           | 0           | ---      |
| Oil Changed      |        | Client Info |           | <b>Changed</b>     | N/A         | ---      |
| Filter Changed   |        | Client Info |           | <b>Changed</b>     | N/A         | ---      |
| Sample Status    |        |             |           | <b>ATTENTION</b>   | NORMAL      | ---      |
| Iron             | ppm    | ASTM D5185m | >1200     | <b>264</b>         | 127         | ---      |
| Chromium         | ppm    | ASTM D5185m | >8        | <b>1</b>           | <1          | ---      |
| Nickel           | ppm    | ASTM D5185m | >20       | <b>18</b>          | 12          | ---      |
| Titanium         | ppm    | ASTM D5185m | >4        | <b>&lt;1</b>       | <1          | ---      |
| Silver           | ppm    | ASTM D5185m |           | <b>0</b>           | 0           | ---      |
| Aluminum         | ppm    | ASTM D5185m | >30       | <b>5</b>           | 4           | ---      |
| Lead             | ppm    | ASTM D5185m | >25       | <b>0</b>           | 0           | ---      |
| Copper           | ppm    | ASTM D5185m | >50       | <b>&lt;1</b>       | 0           | ---      |
| Tin              | ppm    | ASTM D5185m | >5        | <b>0</b>           | 0           | ---      |
| Vanadium         | ppm    | ASTM D5185m |           | <b>0</b>           | 0           | ---      |
| White Metal      | scalar | *Visual     | NONE      | <b>NONE</b>        | NONE        | ---      |
| Yellow Metal     | scalar | *Visual     | NONE      | <b>NONE</b>        | NONE        | ---      |
| Silicon          | ppm    | ASTM D5185m | >230      | <b>115</b>         | 149         | ---      |
| Potassium        | ppm    | ASTM D5185m | >20       | <b>2</b>           | 0           | ---      |
| Water            |        | WC Method   | >.2       | <b>NEG</b>         | NEG         | ---      |
| Silt             | scalar | *Visual     | NONE      | <b>NONE</b>        | NONE        | ---      |
| Debris           | scalar | *Visual     | NONE      | <b>NONE</b>        | NONE        | ---      |
| Sand/Dirt        | scalar | *Visual     | NONE      | <b>NONE</b>        | NONE        | ---      |
| Appearance       | scalar | *Visual     | NORML     | <b>NORML</b>       | NORML       | ---      |
| Odor             | scalar | *Visual     | NORML     | <b>NORML</b>       | NORML       | ---      |
| Emulsified Water | scalar | *Visual     | >.2       | <b>NEG</b>         | NEG         | ---      |
| Sodium           | ppm    | ASTM D5185m | >170      | <b>2</b>           | 2           | ---      |
| Boron            | ppm    | ASTM D5185m | 400       | <b>70</b>          | 116         | ---      |
| Barium           | ppm    | ASTM D5185m | 200       | <b>0</b>           | 0           | ---      |
| Molybdenum       | ppm    | ASTM D5185m | 12        | <b>0</b>           | 0           | ---      |
| Manganese        | ppm    | ASTM D5185m |           | <b>3</b>           | 3           | ---      |
| Magnesium        | ppm    | ASTM D5185m | 12        | <b>3</b>           | 0           | ---      |
| Calcium          | ppm    | ASTM D5185m | 150       | <b>2</b>           | 6           | ---      |
| Phosphorus       | ppm    | ASTM D5185m | 1650      | <b>713</b>         | 859         | ---      |
| Zinc             | ppm    | ASTM D5185m | 125       | <b>11</b>          | 4           | ---      |
| Sulfur           | ppm    | ASTM D5185m | 22500     | <b>14523</b>       | 19809       | ---      |
| Visc @ 40°C      | cSt    | ASTM D445   | 143       | <b>54.6</b>        | 134         | ---      |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0123521  
**Lab Number** : 06220112  
**Unique Number** : 11098309  
**Test Package** : FLEET

**Received** : 25 Jun 2024  
**Tested** : 28 Jun 2024  
**Diagnosed** : 28 Jun 2024 - Jonathan Hester

**GFL Environmental - 983 - Sugar Land Hauling**  
 16011 West Belfort Street  
 Sugar Land, TX  
 US 77498

Contact: Adrian Martinez  
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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: