



# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**814034**  
 Component  
**Diesel Engine**  
 Fluid  
**{not provided} (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

### Wear

Metal levels are typical for a new component breaking in.

### Contamination

Tests indicate that there is no fuel present in the oil. 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 acceptable for the time in service.

## SAMPLE INFORMATION

|               | method      | limit/base  | current            | history1 | history2 |
|---------------|-------------|-------------|--------------------|----------|----------|
| Sample Number | Client Info |             | <b>GFL0102967</b>  | ---      | ---      |
| Sample Date   | Client Info |             | <b>04 Mar 2024</b> | ---      | ---      |
| Machine Age   | hrs         | Client Info | <b>145</b>         | ---      | ---      |
| Oil Age       | hrs         | Client Info | <b>0</b>           | ---      | ---      |
| Oil Changed   | Client Info |             | <b>N/A</b>         | ---      | ---      |
| Sample Status |             |             | <b>NORMAL</b>      | ---      | ---      |

## CONTAMINATION

|        | method    | limit/base | current    | history1 | history2 |
|--------|-----------|------------|------------|----------|----------|
| Water  | WC Method | >0.2       | <b>NEG</b> | ---      | ---      |
| Glycol | WC Method |            | <b>NEG</b> | ---      | ---      |

## WEAR METALS

|          | method | limit/base       | current   | history1 | history2 |
|----------|--------|------------------|-----------|----------|----------|
| Iron     | ppm    | ASTM D5185m >120 | <b>19</b> | ---      | ---      |
| Chromium | ppm    | ASTM D5185m >20  | <b>0</b>  | ---      | ---      |
| Nickel   | ppm    | ASTM D5185m >5   | <b>3</b>  | ---      | ---      |
| Titanium | ppm    | ASTM D5185m >2   | <b>0</b>  | ---      | ---      |
| Silver   | ppm    | ASTM D5185m >2   | <b>0</b>  | ---      | ---      |
| Aluminum | ppm    | ASTM D5185m >20  | <b>6</b>  | ---      | ---      |
| Lead     | ppm    | ASTM D5185m >40  | <b>0</b>  | ---      | ---      |
| Copper   | ppm    | ASTM D5185m >330 | <b>2</b>  | ---      | ---      |
| Tin      | ppm    | ASTM D5185m >15  | <b>2</b>  | ---      | ---      |
| Vanadium | ppm    | ASTM D5185m      | <b>0</b>  | ---      | ---      |
| Cadmium  | ppm    | ASTM D5185m      | <b>0</b>  | ---      | ---      |

## ADDITIVES

|            | method | limit/base  | current     | history1 | history2 |
|------------|--------|-------------|-------------|----------|----------|
| Boron      | ppm    | ASTM D5185m | <b>393</b>  | ---      | ---      |
| Barium     | ppm    | ASTM D5185m | <b>2</b>    | ---      | ---      |
| Molybdenum | ppm    | ASTM D5185m | <b>120</b>  | ---      | ---      |
| Manganese  | ppm    | ASTM D5185m | <b>2</b>    | ---      | ---      |
| Magnesium  | ppm    | ASTM D5185m | <b>719</b>  | ---      | ---      |
| Calcium    | ppm    | ASTM D5185m | <b>1362</b> | ---      | ---      |
| Phosphorus | ppm    | ASTM D5185m | <b>700</b>  | ---      | ---      |
| Zinc       | ppm    | ASTM D5185m | <b>797</b>  | ---      | ---      |
| Sulfur     | ppm    | ASTM D5185m | <b>2179</b> | ---      | ---      |

## CONTAMINANTS

|           | method | limit/base      | current      | history1 | history2 |
|-----------|--------|-----------------|--------------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >25 | <b>72</b>    | ---      | ---      |
| Sodium    | ppm    | ASTM D5185m     | <b>&lt;1</b> | ---      | ---      |
| Potassium | ppm    | ASTM D5185m >20 | <b>4</b>     | ---      | ---      |
| Fuel      | %      | ASTM D3524 >3.0 | <b>0.2</b>   | ---      | ---      |

## INFRA-RED

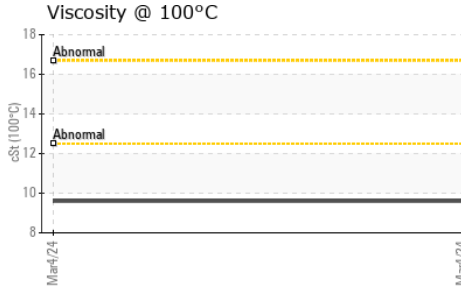
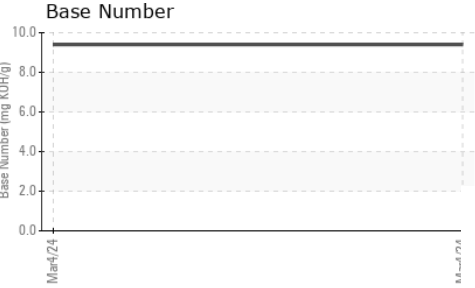
|           | method   | limit/base      | current     | history1 | history2 |
|-----------|----------|-----------------|-------------|----------|----------|
| Soot %    | %        | *ASTM D7844 >4  | <b>0.1</b>  | ---      | ---      |
| Nitration | Abs/cm   | *ASTM D7624 >20 | <b>6.7</b>  | ---      | ---      |
| Sulfation | Abs/.1mm | *ASTM D7415 >30 | <b>25.5</b> | ---      | ---      |

## FLUID DEGRADATION

|                  | method   | limit/base      | current     | history1 | history2 |
|------------------|----------|-----------------|-------------|----------|----------|
| Oxidation        | Abs/.1mm | *ASTM D7414 >25 | <b>20.4</b> | ---      | ---      |
| Base Number (BN) | mg KOH/g | ASTM D2896      | <b>9.4</b>  | ---      | ---      |



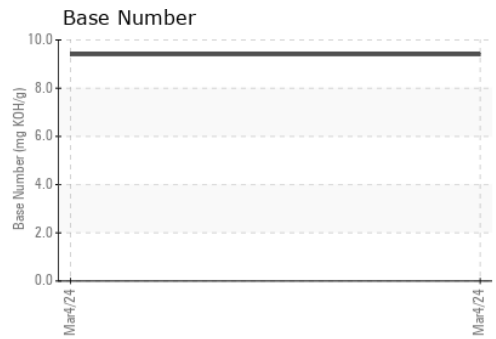
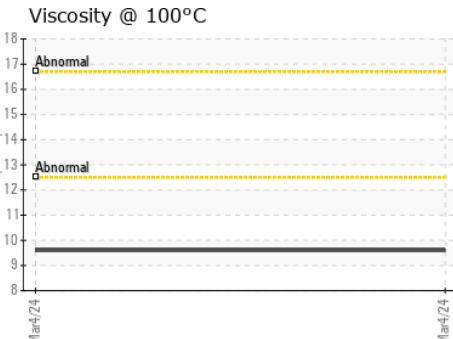
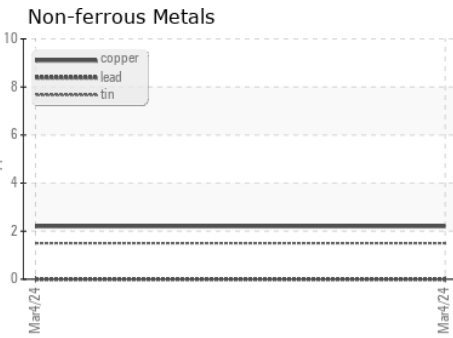
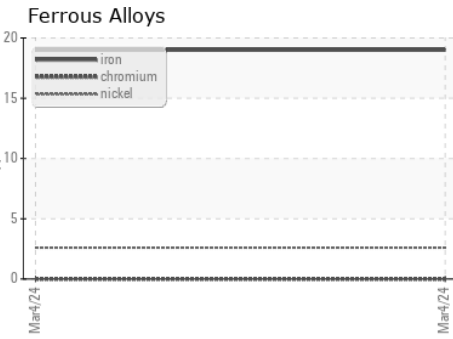
# OIL ANALYSIS REPORT



| VISUAL           | method | limit/base | current | history1 | history2 |     |
|------------------|--------|------------|---------|----------|----------|-----|
| White Metal      | scalar | *Visual    | NONE    | NONE     | ---      | --- |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | ---      | --- |
| Precipitate      | scalar | *Visual    | NONE    | NONE     | ---      | --- |
| Silt             | scalar | *Visual    | NONE    | NONE     | ---      | --- |
| Debris           | scalar | *Visual    | NONE    | NONE     | ---      | --- |
| Sand/Dirt        | scalar | *Visual    | NONE    | NONE     | ---      | --- |
| Appearance       | scalar | *Visual    | NORML   | NORML    | ---      | --- |
| Odor             | scalar | *Visual    | NORML   | NORML    | ---      | --- |
| Emulsified Water | scalar | *Visual    | >0.2    | NEG      | ---      | --- |
| Free Water       | scalar | *Visual    |         | NEG      | ---      | --- |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 100°C     | cSt    | ASTM D445  | 9.6     | ---      | ---      |

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0102967  
**Lab Number** : 06109122  
**Unique Number** : 10912619  
**Test Package** : FLEET ( Additional Tests: FuelDilution, PercentFuel )

**Received** : 05 Mar 2024  
**Tested** : 07 Mar 2024  
**Diagnosed** : 07 Mar 2024 - Sean Felton

**GFL Environmental - 816 - WCA of South Arkansas**  
 3083 Smackover Hwy  
 El Dorado, AR  
 US 71730  
 Contact: Mike Howell  
 mike.howell@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: