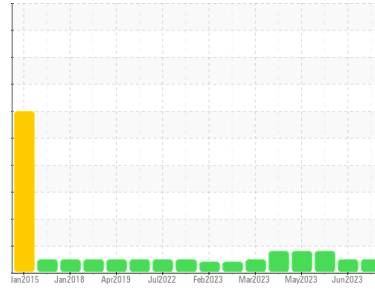




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**10536C**

Component  
**Natural Gas Engine**

Fluid  
**CHEVRON DELO 400 NG (12 GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### 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 |             | <b>GFL0083149</b>  | GFL0077420  | GFL0083175  |
| Sample Date   | Client Info |             | <b>06 Jul 2023</b> | 07 Jun 2023 | 22 May 2023 |
| Machine Age   | hrs         | Client Info | <b>0</b>           | 0           | 0           |
| Oil Age       | hrs         | Client Info | <b>0</b>           | 0           | 0           |
| Oil Changed   | Client Info |             | <b>Not Changed</b> | N/A         | Changed     |
| Sample Status |             |             | <b>NORMAL</b>      | NORMAL      | ABNORMAL    |

## WEAR METALS

|          | method | limit/base      | current      | history1 | history2 |
|----------|--------|-----------------|--------------|----------|----------|
| Iron     | ppm    | ASTM D5185m >50 | <b>6</b>     | 9        | 22       |
| Chromium | ppm    | ASTM D5185m >4  | <b>&lt;1</b> | 1        | ▲ 7      |
| Nickel   | ppm    | ASTM D5185m >2  | <b>&lt;1</b> | <1       | <1       |
| Titanium | ppm    | ASTM D5185m     | <b>&lt;1</b> | 0        | <1       |
| Silver   | ppm    | ASTM D5185m >3  | <b>0</b>     | 0        | <1       |
| Aluminum | ppm    | ASTM D5185m >9  | <b>2</b>     | <1       | 3        |
| Lead     | ppm    | ASTM D5185m >30 | <b>&lt;1</b> | <1       | <1       |
| Copper   | ppm    | ASTM D5185m >35 | <b>&lt;1</b> | <1       | 1        |
| Tin      | ppm    | ASTM D5185m >4  | <b>0</b>     | <1       | <1       |
| Vanadium | ppm    | ASTM D5185m     | <b>&lt;1</b> | 0        | <1       |
| Cadmium  | ppm    | ASTM D5185m     | <b>&lt;1</b> | 0        | 0        |

## ADDITIVES

|            | method | limit/base      | current      | history1 | history2 |
|------------|--------|-----------------|--------------|----------|----------|
| Boron      | ppm    | ASTM D5185m     | <b>37</b>    | 37       | 15       |
| Barium     | ppm    | ASTM D5185m     | <b>0</b>     | 2        | 0        |
| Molybdenum | ppm    | ASTM D5185m     | <b>52</b>    | 59       | 64       |
| Manganese  | ppm    | ASTM D5185m     | <b>&lt;1</b> | <1       | 1        |
| Magnesium  | ppm    | ASTM D5185m     | <b>564</b>   | 551      | 694      |
| Calcium    | ppm    | ASTM D5185m     | <b>1570</b>  | 1492     | 1693     |
| Phosphorus | ppm    | ASTM D5185m 800 | <b>715</b>   | 767      | 835      |
| Zinc       | ppm    | ASTM D5185m 880 | <b>902</b>   | 925      | 1096     |
| Sulfur     | ppm    | ASTM D5185m     | <b>2835</b>  | 2575     | 2933     |

## CONTAMINANTS

|           | method | limit/base        | current  | history1 | history2 |
|-----------|--------|-------------------|----------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >+100 | <b>4</b> | 4        | 7        |
| Sodium    | ppm    | ASTM D5185m       | <b>3</b> | 3        | 20       |
| Potassium | ppm    | ASTM D5185m >20   | <b>2</b> | <1       | 2        |

## INFRA-RED

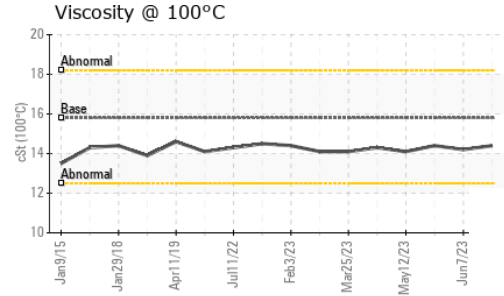
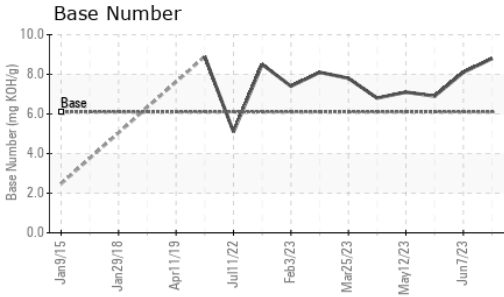
|           | method   | limit/base      | current     | history1 | history2 |
|-----------|----------|-----------------|-------------|----------|----------|
| Soot %    | %        | *ASTM D7844     | <b>0.1</b>  | 0.3      | 0.2      |
| Nitration | Abs/cm   | *ASTM D7624 >20 | <b>7.1</b>  | 7.4      | 10.2     |
| Sulfation | Abs/.1mm | *ASTM D7415 >30 | <b>19.1</b> | 19.8     | 20.5     |

## FLUID DEGRADATION

|                  | method   | limit/base      | current     | history1 | history2 |
|------------------|----------|-----------------|-------------|----------|----------|
| Oxidation        | Abs/.1mm | *ASTM D7414 >25 | <b>15.7</b> | 16.3     | 16.9     |
| Base Number (BN) | mg KOH/g | ASTM D2896 6.1  | <b>8.8</b>  | 8.1      | 6.9      |



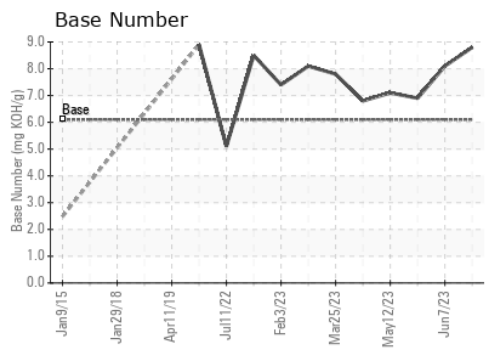
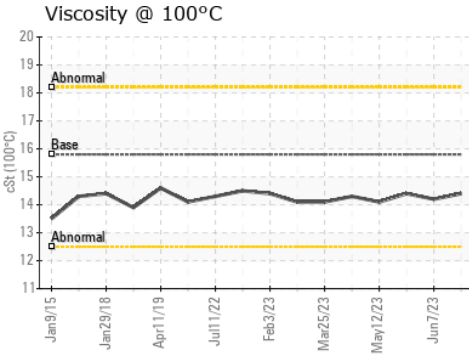
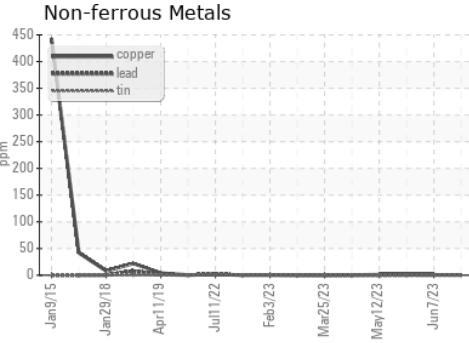
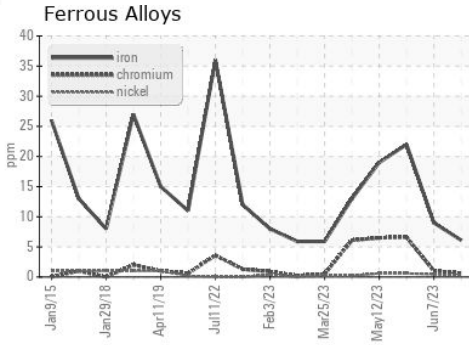
# OIL ANALYSIS REPORT



| 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  | 15.8    | <b>14.4</b> | 14.2     | 14.4 |

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0083149 **Received** : 11 Jul 2023  
**Lab Number** : 05894823 **Diagnosed** : 12 Jul 2023  
**Unique Number** : 10550633 **Diagnostician** : Don Baldrige  
**Test Package** : FLEET

**GFL Environmental - 074 - Douglas - Transwaste**  
 1219 Landfill Road  
 Douglas, GA  
 US 31533  
 Contact: CURTIS JACOBS  
 CURTIS.JACOBS@GFLENV.COM  
 T: (912)384-6001  
 F:

Certificate L2367  
 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)