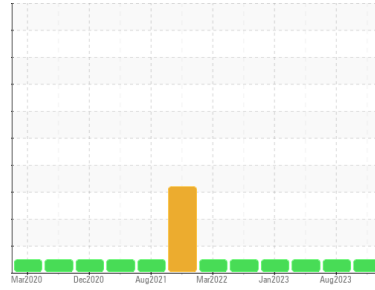




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**OR564**  
Component  
**Hydraulic System**  
Fluid  
**PETRO CANADA HYDREX AW 46 (110 LTR)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

### Fluid Condition

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>GFL0092215</b>  | GFL0087402  | GFL0087383  |
| Sample Date   | Client Info | <b>09 Feb 2024</b> | 22 Aug 2023 | 19 Jun 2023 |
| Machine Age   | hrs         | <b>20550</b>       | 18697       | 18697       |
| Oil Age       | hrs         | <b>19711</b>       | 2552        | 2559        |
| Oil Changed   | Client Info | <b>Not Changed</b> | Not Changed | Not Changed |
| Sample Status |             | <b>NORMAL</b>      | NORMAL      | NORMAL      |

## CONTAMINATION

| method | limit/base       | current    | history1 | history2 |
|--------|------------------|------------|----------|----------|
| Water  | WC Method >0.075 | <b>NEG</b> | NEG      | NEG      |

## WEAR METALS

| method    | limit/base            | current      | history1 | history2 |
|-----------|-----------------------|--------------|----------|----------|
| Iron      | ppm ASTM D5185(m) >71 | <b>4</b>     | 4        | 3        |
| Chromium  | ppm ASTM D5185(m) >11 | <b>7</b>     | 6        | 5        |
| Nickel    | ppm ASTM D5185(m) >6  | <b>&lt;1</b> | <1       | <1       |
| Titanium  | ppm ASTM D5185(m)     | <b>0</b>     | 0        | 0        |
| Silver    | ppm ASTM D5185(m)     | <b>0</b>     | 0        | 0        |
| Aluminum  | ppm ASTM D5185(m) >11 | <b>1</b>     | <1       | <1       |
| Lead      | ppm ASTM D5185(m) >13 | <b>0</b>     | 0        | 0        |
| Copper    | ppm ASTM D5185(m) >21 | <b>&lt;1</b> | <1       | <1       |
| Tin       | ppm ASTM D5185(m) >5  | <b>0</b>     | 0        | 0        |
| Antimony  | ppm ASTM D5185(m)     | <b>0</b>     | 0        | 0        |
| Vanadium  | ppm ASTM D5185(m)     | <b>0</b>     | 0        | 0        |
| Beryllium | ppm ASTM D5185(m)     | <b>0</b>     | 0        | 0        |
| Cadmium   | ppm ASTM D5185(m)     | <b>0</b>     | 0        | 0        |

## ADDITIVES

| method     | limit/base            | current      | history1 | history2 |
|------------|-----------------------|--------------|----------|----------|
| Boron      | ppm ASTM D5185(m) 0   | <b>&lt;1</b> | <1       | <1       |
| Barium     | ppm ASTM D5185(m) 0   | <b>0</b>     | 0        | 0        |
| Molybdenum | ppm ASTM D5185(m) 0   | <b>0</b>     | 0        | <1       |
| Manganese  | ppm ASTM D5185(m) 0   | <b>0</b>     | 0        | 0        |
| Magnesium  | ppm ASTM D5185(m) 0   | <b>5</b>     | 4        | 4        |
| Calcium    | ppm ASTM D5185(m) 50  | <b>118</b>   | 117      | 118      |
| Phosphorus | ppm ASTM D5185(m) 330 | <b>618</b>   | 641      | 647      |
| Zinc       | ppm ASTM D5185(m) 430 | <b>774</b>   | 766      | 783      |
| Sulfur     | ppm ASTM D5185(m) 760 | <b>1513</b>  | 1398     | 1420     |
| Lithium    | ppm ASTM D5185(m)     | <b>&lt;1</b> | <1       | <1       |

## CONTAMINANTS

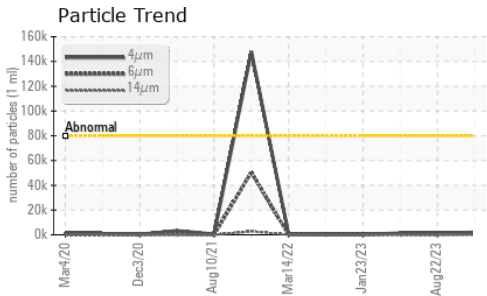
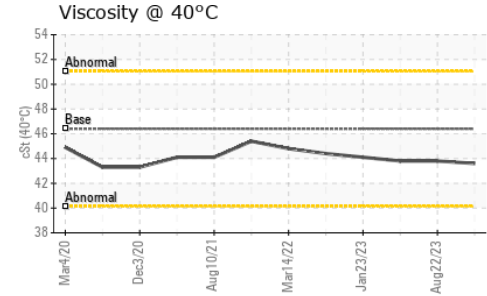
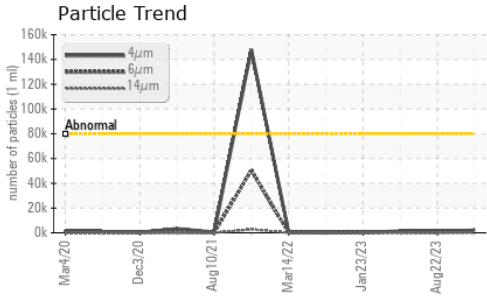
| method    | limit/base            | current      | history1 | history2 |
|-----------|-----------------------|--------------|----------|----------|
| Silicon   | ppm ASTM D5185(m) >24 | <b>2</b>     | 2        | 2        |
| Sodium    | ppm ASTM D5185(m) >21 | <b>3</b>     | 3        | 2        |
| Potassium | ppm ASTM D5185(m) >20 | <b>&lt;1</b> | <1       | <1       |

## FLUID CLEANLINESS

| method          | limit/base             | current         | history1 | history2 |
|-----------------|------------------------|-----------------|----------|----------|
| Particles >4µm  | ASTM D7647 >80000      | <b>2114</b>     | 1008     | 1411     |
| Particles >6µm  | ASTM D7647 >5000       | <b>789</b>      | 368      | 580      |
| Particles >14µm | ASTM D7647 >640        | <b>68</b>       | 44       | 97       |
| Particles >21µm | ASTM D7647 >160        | <b>15</b>       | 14       | 36       |
| Particles >38µm | ASTM D7647 >40         | <b>1</b>        | 0        | 1        |
| Particles >71µm | ASTM D7647 >10         | <b>0</b>        | 0        | 0        |
| Oil Cleanliness | ISO 4406 (c) >23/19/16 | <b>18/17/13</b> | 17/16/13 | 18/16/14 |



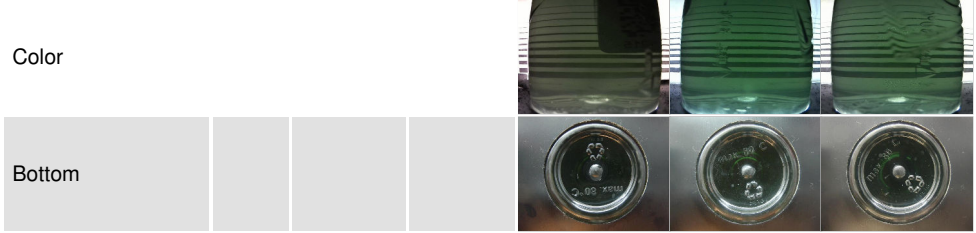
# OIL ANALYSIS REPORT



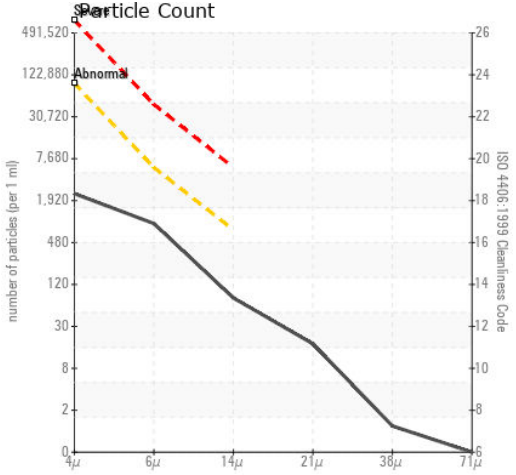
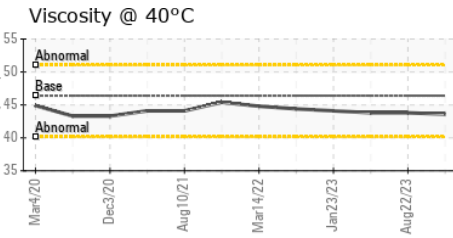
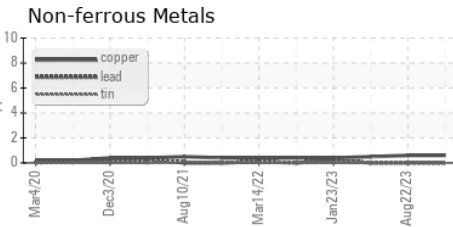
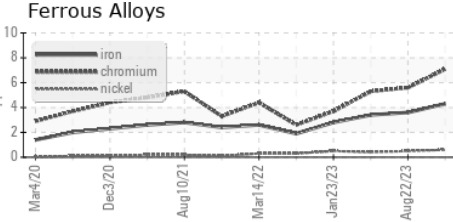
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | Visual*    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | Visual*    | NONE    | NONE     | NONE     |
| 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*    | >0.075  | NEG      | NEG      |
| Free Water       | scalar | Visual*    |         | NEG      | NEG      |

| FLUID PROPERTIES | method | limit/base    | current | history1 | history2 |
|------------------|--------|---------------|---------|----------|----------|
| Visc @ 40°C      | cSt    | ASTM D7279(m) | 46.4    | 43.6     | 43.8     |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
|---------------|--------|------------|---------|----------|----------|



## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0092215 **Received** : 13 Feb 2024  
**Lab Number** : 02615405 **Tested** : 14 Feb 2024  
**Unique Number** : 5724500 **Diagnosed** : 14 Feb 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: PrtCount )

**GFL Environmental - 720 - Lafleche - Landfill**  
 17125 Lafleche Road,  
 Moose Creek, ON  
 CA K0C 1W0  
 Contact: Charles Bergeron  
 cbergeron@gflenv.com  
 T: (613)538-4853  
 F:

To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.