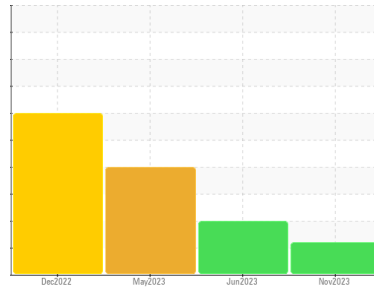




# OIL ANALYSIS REPORT

## Sample Rating Trend



ISO



Machine Id  
**711024**  
Component  
**Hydraulic System**  
Fluid  
**PETRO CANADA HYDREX MV 32 (--- GAL)**

## DIAGNOSIS

### Recommendation

Nous recommandons le remplacement des filtres de ce composant. Nous vous recommandons d'échantillonner de nouveau dès que possible afin de contrôler la situation.

### Wear

Les taux d'usure de tous les composants sont normaux.

### Contamination

Il y a une quantité modérée de particules (de 4 à 14 microns) dans l'huile.

### Fluid Condition

l'huile peut encore servir si la contamination peut être réduite à un niveau acceptable.

## SAMPLE INFORMATION

| method        | limit/base  | current            | history1    | history2    |
|---------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | <b>GFL0097084</b>  | GFL0084428  | GFL0084467  |
| Sample Date   | Client Info | <b>01 Nov 2023</b> | 19 Jun 2023 | 30 May 2023 |
| Machine Age   | hrs         | <b>66392</b>       | 55125       | 3808        |
| Oil Age       | hrs         | <b>0</b>           | 0           | 1200        |
| Oil Changed   | Client Info | <b>Not Chngd</b>   | Not Chngd   | Not Chngd   |
| Sample Status |             | <b>ABNORMAL</b>    | ABNORMAL    | SEVERE      |

## WEAR METALS

| method    | limit/base | current           | history1     | history2 |    |
|-----------|------------|-------------------|--------------|----------|----|
| Iron      | ppm        | ASTM D5185(m) >50 | <b>13</b>    | 8        | 11 |
| Chromium  | ppm        | ASTM D5185(m) >10 | <b>2</b>     | 2        | 2  |
| Nickel    | ppm        | ASTM D5185(m) >4  | <b>&lt;1</b> | 0        | <1 |
| Titanium  | ppm        | ASTM D5185(m)     | <b>0</b>     | 0        | <1 |
| Silver    | ppm        | ASTM D5185(m)     | <b>&lt;1</b> | 0        | 0  |
| Aluminum  | ppm        | ASTM D5185(m) >5  | <b>1</b>     | <1       | 1  |
| Lead      | ppm        | ASTM D5185(m) >4  | <b>&lt;1</b> | <1       | <1 |
| Copper    | ppm        | ASTM D5185(m) >15 | <b>6</b>     | 5        | 5  |
| Tin       | ppm        | ASTM D5185(m) >4  | <b>0</b>     | 0        | <1 |
| Antimony  | ppm        | ASTM D5185(m)     | <b>0</b>     | 0        | <1 |
| 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> | 0        | <1  |
| Barium     | ppm        | ASTM D5185(m) 0   | <b>&lt;1</b> | 0        | 0   |
| Molybdenum | ppm        | ASTM D5185(m) 0   | <b>0</b>     | 0        | 0   |
| Manganese  | ppm        | ASTM D5185(m) 1   | <b>0</b>     | 0        | <1  |
| Magnesium  | ppm        | ASTM D5185(m) 0   | <b>1</b>     | 1        | 2   |
| Calcium    | ppm        | ASTM D5185(m) 50  | <b>65</b>    | 59       | 66  |
| Phosphorus | ppm        | ASTM D5185(m) 330 | <b>371</b>   | 357      | 379 |
| Zinc       | ppm        | ASTM D5185(m) 430 | <b>468</b>   | 443      | 433 |
| Sulfur     | ppm        | ASTM D5185(m) 760 | <b>869</b>   | 810      | 847 |
| Lithium    | ppm        | ASTM D5185(m)     | <b>&lt;1</b> | <1       | <1  |

## CONTAMINANTS

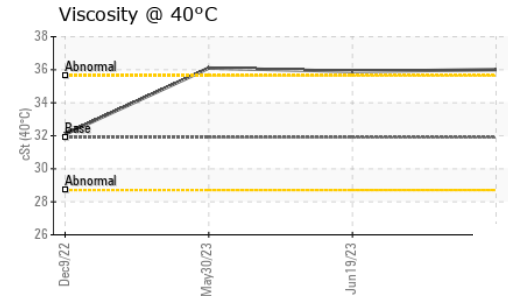
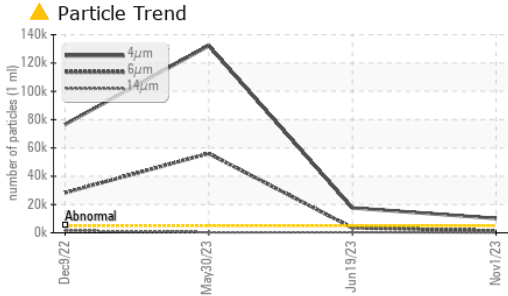
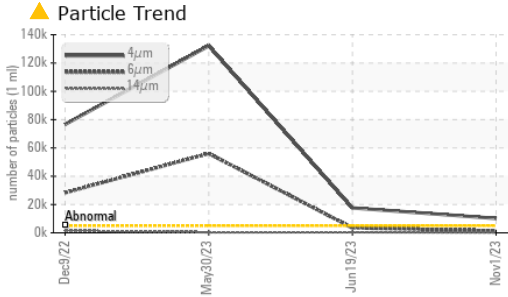
| method    | limit/base | current           | history1     | history2 |    |
|-----------|------------|-------------------|--------------|----------|----|
| Silicon   | ppm        | ASTM D5185(m) >15 | <b>3</b>     | 3        | 4  |
| Sodium    | ppm        | ASTM D5185(m)     | <b>7</b>     | 7        | 12 |
| Potassium | ppm        | ASTM D5185(m) >20 | <b>&lt;1</b> | <1       | <1 |

## FLUID CLEANLINESS

| method          | limit/base             | current           | history1   | history2   |
|-----------------|------------------------|-------------------|------------|------------|
| Particles >4µm  | ASTM D7647 >5000       | <b>▲ 10167</b>    | ▲ 17614    | ● 132136   |
| Particles >6µm  | ASTM D7647 >1300       | <b>▲ 1351</b>     | ▲ 3490     | ● 56045    |
| Particles >14µm | ASTM D7647 >160        | <b>140</b>        | ▲ 395      | ▲ 336      |
| Particles >21µm | ASTM D7647 >40         | <b>44</b>         | ▲ 114      | 32         |
| Particles >38µm | ASTM D7647 >10         | <b>5</b>          | 3          | 1          |
| Particles >71µm | ASTM D7647 >3          | <b>2</b>          | 0          | 0          |
| Oil Cleanliness | ISO 4406 (c) >19/17/14 | <b>▲ 21/18/14</b> | ▲ 21/19/16 | ● 24/23/16 |



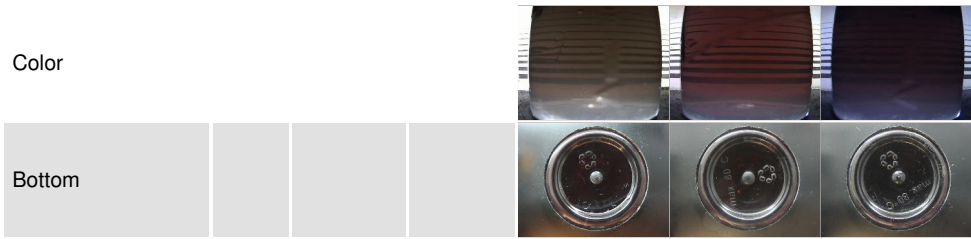
# OIL ANALYSIS REPORT



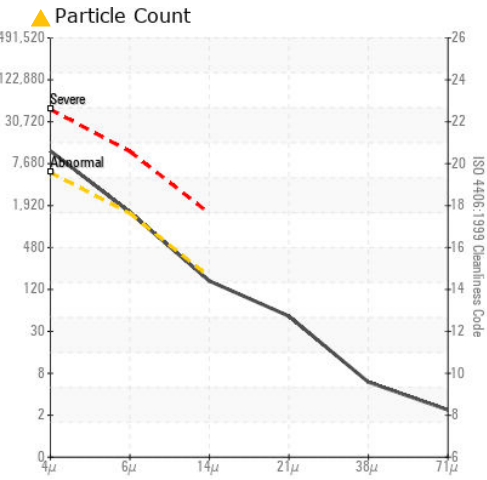
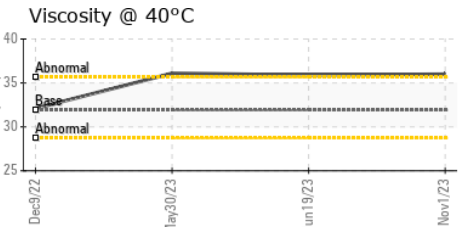
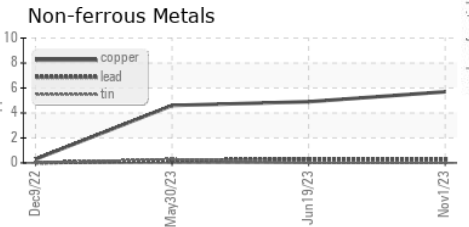
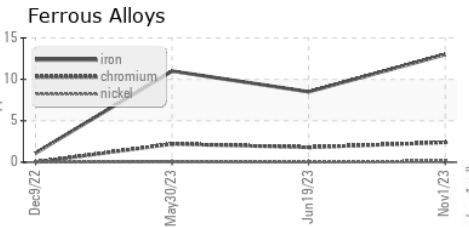
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | Visual*    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | Visual*    | NONE    | NONE     | NONE     |
| Precipitate      | scalar | Visual*    | NONE    | NONE     | NONE     |
| Silt             | scalar | Visual*    | NONE    | NONE     | NONE     |
| Debris           | scalar | Visual*    | NONE    | NONE     | NONE     |
| Sand/Dirt        | scalar | Visual*    | NONE    | NONE     | VLITE    |
| 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 @ 40°C      | cSt    | ASTM D7279(m) | 31.9    | 36.0     | 35.9     |

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



## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 780 - GMA - ICI - Solid Waste  
**Sample No.** : GFL0097084 **Received** : 03 Nov 2023  
**Lab Number** : 02593951 **Diagnosed** : 03 Nov 2023  
**Unique Number** : 5671030 **Diagnostician** : Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: PrtCount )

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.

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