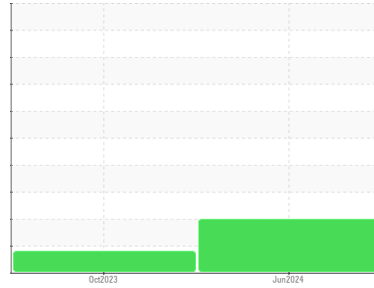




# OIL ANALYSIS REPORT

Sample Rating Trend

VISUAL METAL



Area

## ORIN CONTRACTORS

Machine Id

### 100-007

Component

### Hydraulic System

Fluid

### PETRO CANADA HYDREX AW 46 (--- GAL)



#### DIAGNOSIS

##### ● Recommendation

We advise that you check for visible metal particles in the oil. The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

##### ▲ Wear

Light concentration of visible metal present.

##### ● Contamination

There is a light amount of silt (particulates < 14 microns in size) present in the oil.

##### Fluid Condition

The AN level is acceptable for this fluid.

Particle Filter (Magn: 100 x)



#### SAMPLE INFORMATION

|               | method      | limit/base  | current            | history1    | history2 |
|---------------|-------------|-------------|--------------------|-------------|----------|
| Sample Number | Client Info |             | <b>WC0932654</b>   | LH0275200   | ---      |
| Sample Date   | Client Info |             | <b>28 Jun 2024</b> | 17 Oct 2023 | ---      |
| Machine Age   | hrs         | Client Info | <b>0</b>           | 2632        | ---      |
| Oil Age       | hrs         | Client Info | <b>0</b>           | 0           | ---      |
| Oil Changed   | Client Info |             | <b>Not Chngd</b>   | Changed     | ---      |
| Sample Status |             |             | <b>ATTENTION</b>   | ABNORMAL    | ---      |

#### CONTAMINATION

|       | method    | limit/base | current    | history1 | history2 |
|-------|-----------|------------|------------|----------|----------|
| Water | WC Method | >0.1       | <b>NEG</b> | NEG      | ---      |

#### WEAR METALS

|           | method | limit/base    | current | history1     | history2 |     |
|-----------|--------|---------------|---------|--------------|----------|-----|
| Iron      | ppm    | ASTM D5185(m) | >25     | <b>5</b>     | 5        | --- |
| Chromium  | ppm    | ASTM D5185(m) | >10     | <b>&lt;1</b> | <1       | --- |
| Nickel    | ppm    | ASTM D5185(m) | >10     | <b>&lt;1</b> | <1       | --- |
| Titanium  | ppm    | ASTM D5185(m) |         | <b>0</b>     | 0        | --- |
| Silver    | ppm    | ASTM D5185(m) |         | <b>0</b>     | <1       | --- |
| Aluminum  | ppm    | ASTM D5185(m) | >20     | <b>5</b>     | 5        | --- |
| Lead      | ppm    | ASTM D5185(m) | >20     | <b>&lt;1</b> | <1       | --- |
| Copper    | ppm    | ASTM D5185(m) | >150    | <b>16</b>    | 16       | --- |
| Tin       | ppm    | ASTM D5185(m) | >10     | <b>0</b>     | 0        | --- |
| Antimony  | ppm    | ASTM D5185(m) |         | <b>0</b>     | 0        | --- |
| Vanadium  | ppm    | ASTM D5185(m) |         | <b>0</b>     | 0        | --- |
| Beryllium | ppm    | ASTM D5185(m) |         | <b>0</b>     | 0        | --- |
| Cadmium   | ppm    | ASTM D5185(m) |         | <b>0</b>     | 0        | --- |

#### ADDITIVES

|            | method | limit/base    | current | history1     | history2 |     |
|------------|--------|---------------|---------|--------------|----------|-----|
| Boron      | ppm    | ASTM D5185(m) | 0       | <b>1</b>     | 1        | --- |
| Barium     | ppm    | ASTM D5185(m) | 0       | <b>&lt;1</b> | <1       | --- |
| Molybdenum | ppm    | ASTM D5185(m) | 0       | <b>0</b>     | 0        | --- |
| Manganese  | ppm    | ASTM D5185(m) | 0       | <b>0</b>     | 0        | --- |
| Magnesium  | ppm    | ASTM D5185(m) | 0       | <b>9</b>     | 11       | --- |
| Calcium    | ppm    | ASTM D5185(m) | 50      | <b>244</b>   | 263      | --- |
| Phosphorus | ppm    | ASTM D5185(m) | 330     | <b>357</b>   | 355      | --- |
| Zinc       | ppm    | ASTM D5185(m) | 430     | <b>452</b>   | 451      | --- |
| Sulfur     | ppm    | ASTM D5185(m) | 760     | <b>1066</b>  | 1088     | --- |
| Lithium    | ppm    | ASTM D5185(m) |         | <b>&lt;1</b> | <1       | --- |

#### CONTAMINANTS

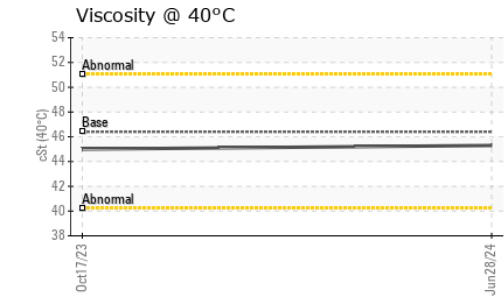
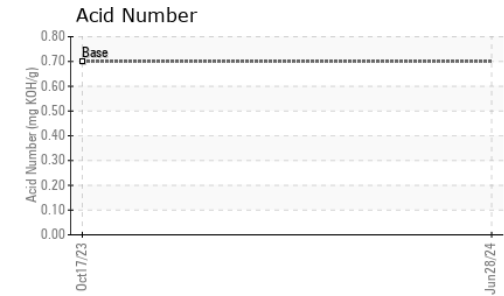
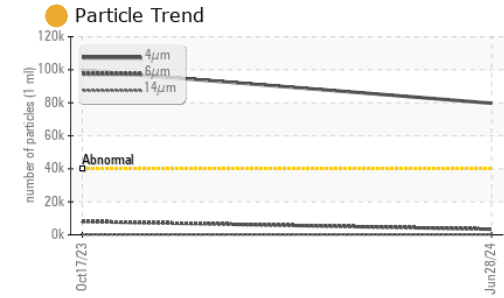
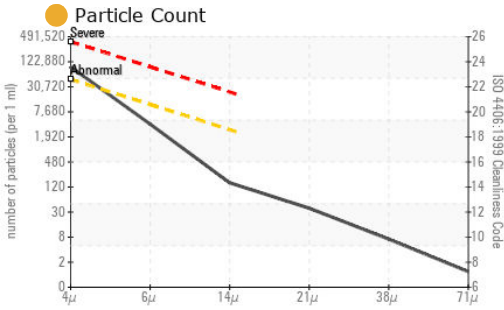
|           | method | limit/base    | current | history1     | history2 |     |
|-----------|--------|---------------|---------|--------------|----------|-----|
| Silicon   | ppm    | ASTM D5185(m) | >50     | <b>2</b>     | 2        | --- |
| Sodium    | ppm    | ASTM D5185(m) |         | <b>&lt;1</b> | <1       | --- |
| Potassium | ppm    | ASTM D5185(m) | >20     | <b>&lt;1</b> | <1       | --- |

#### FLUID CLEANLINESS

|                 | method       | limit/base | current           | history1   | history2 |
|-----------------|--------------|------------|-------------------|------------|----------|
| Particles >4µm  | ASTM D7647   | >40000     | ● <b>79701</b>    | ▲ 99571    | ---      |
| Particles >6µm  | ASTM D7647   | >10000     | <b>3396</b>       | 8090       | ---      |
| Particles >14µm | ASTM D7647   | >2500      | <b>134</b>        | 126        | ---      |
| Particles >21µm | ASTM D7647   | >640       | <b>33</b>         | 28         | ---      |
| Particles >38µm | ASTM D7647   | >160       | <b>6</b>          | 3          | ---      |
| Particles >71µm | ASTM D7647   | >40        | <b>1</b>          | 0          | ---      |
| Oil Cleanliness | ISO 4406 (c) | >22/20/18  | ● <b>23/19/14</b> | ▲ 24/20/14 | ---      |




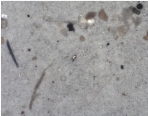
# OIL ANALYSIS REPORT



| FLUID DEGRADATION | method   | limit/base | current | history1    | history2 |     |
|-------------------|----------|------------|---------|-------------|----------|-----|
| Acid Number (AN)  | mg KOH/g | ASTM D974* | 0.70    | <b>0.51</b> | ---      | --- |

| VISUAL           | method | limit/base | current | history1       | history2 |     |
|------------------|--------|------------|---------|----------------|----------|-----|
| White Metal      | scalar | Visual*    | NONE    | <b>▲ VLITE</b> | NONE     | --- |
| Yellow Metal     | scalar | Visual*    | NONE    | <b>NONE</b>    | NONE     | --- |
| Precipitate      | scalar | Visual*    | NONE    | <b>NONE</b>    | NONE     | --- |
| 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*    | >0.1    | <b>NEG</b>     | NEG      | --- |
| Free Water       | scalar | Visual*    |         | <b>NEG</b>     | NEG      | --- |

| FLUID PROPERTIES | method | limit/base    | current | history1    | history2 |     |
|------------------|--------|---------------|---------|-------------|----------|-----|
| Visc @ 40°C      | cSt    | ASTM D7279(m) | 46.4    | <b>45.3</b> | 45.0     | --- |

| SAMPLE IMAGES | method | limit/base | current | history1  | history2   |          |
|---------------|--------|------------|---------|---|--|----------|
| Color         |        |            |         |    |   | no image |
| Bottom        |        |            |         |   |  | no image |
| PrtFilter     |        |            |         |  | no image   | no image |



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **RONI/IRON SHORE EXCAVATING LTD.**  
**Sample No.** : WC0932654 **Received** : 10 Jul 2024 100 MACINTOSH BLVD  
**Lab Number** : **02647052** **Tested** : 12 Jul 2024 VAUGHAN, ON  
**Unique Number** : 5812604 **Diagnosed** : 12 Jul 2024 - Kevin Marson CA L4K 4P3  
**Test Package** : MOBCE ( Additional Tests: Bottom, BottomAnalysis, FILTERPATCH, PrtFilter, TAN Max) **Contact:** Service Team  
 service.team@roni.ca

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