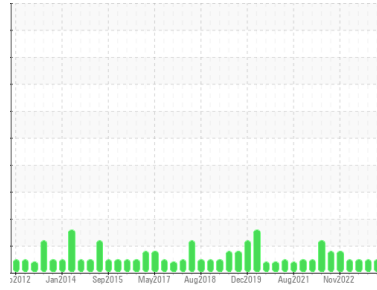


# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**TEAM 15**  
Machine Id  
**150353**

Component  
**Hydraulic System**  
Fluid

**PETRO CANADA HYDREX XV ALL SEASON HYDRAULIC OIL (100 GAL)**

## 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 AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

| method        | limit/base       | current            | history1    | history2    |
|---------------|------------------|--------------------|-------------|-------------|
| Sample Number | Client Info      | <b>PC0077029</b>   | PC0074827   | PC0074767   |
| Sample Date   | Client Info      | <b>02 Nov 2023</b> | 16 Aug 2023 | 25 May 2023 |
| Machine Age   | mths Client Info | <b>0</b>           | 0           | 0           |
| Oil Age       | mths Client Info | <b>0</b>           | 0           | 0           |
| Oil Changed   | Client Info      | <b>N/A</b>         | N/A         | N/A         |
| Sample Status |                  | <b>NORMAL</b>      | NORMAL      | NORMAL      |

## CONTAMINATION

| method | limit/base      | current    | history1 | history2 |
|--------|-----------------|------------|----------|----------|
| Water  | WC Method >0.05 | <b>NEG</b> | NEG      | NEG      |

## WEAR METALS

| method    | limit/base            | current      | history1 | history2 |
|-----------|-----------------------|--------------|----------|----------|
| Iron      | ppm ASTM D5185(m) >30 | <b>&lt;1</b> | <1       | <1       |
| Chromium  | ppm ASTM D5185(m) >2  | <b>0</b>     | 0        | 0        |
| Nickel    | ppm ASTM D5185(m) >2  | <b>&lt;1</b> | 0        | <1       |
| Titanium  | ppm ASTM D5185(m)     | <b>0</b>     | 0        | 0        |
| Silver    | ppm ASTM D5185(m)     | <b>&lt;1</b> | 0        | 0        |
| Aluminum  | ppm ASTM D5185(m) >2  | <b>0</b>     | <1       | <1       |
| Lead      | ppm ASTM D5185(m) >10 | <b>&lt;1</b> | <1       | <1       |
| Copper    | ppm ASTM D5185(m) >25 | <b>10</b>    | 10       | 10       |
| Tin       | ppm ASTM D5185(m) >20 | <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>&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        | 0        |
| Magnesium  | ppm ASTM D5185(m) 0    | <b>&lt;1</b> | <1       | <1       |
| Calcium    | ppm ASTM D5185(m) 100  | <b>98</b>    | 99       | 106      |
| Phosphorus | ppm ASTM D5185(m) 670  | <b>631</b>   | 654      | 678      |
| Zinc       | ppm ASTM D5185(m) 850  | <b>789</b>   | 794      | 807      |
| Sulfur     | ppm ASTM D5185(m) 1600 | <b>1410</b>  | 1448     | 1524     |
| Lithium    | ppm ASTM D5185(m)      | <b>&lt;1</b> | <1       | <1       |

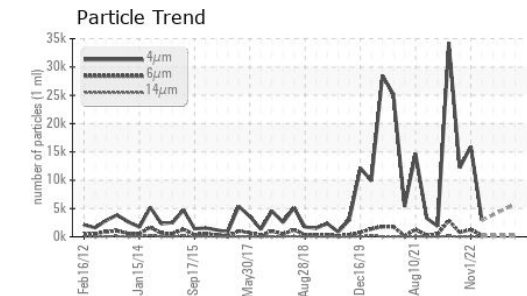
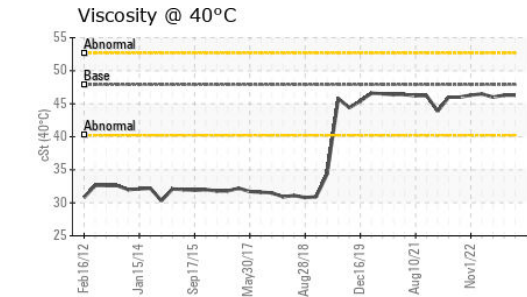
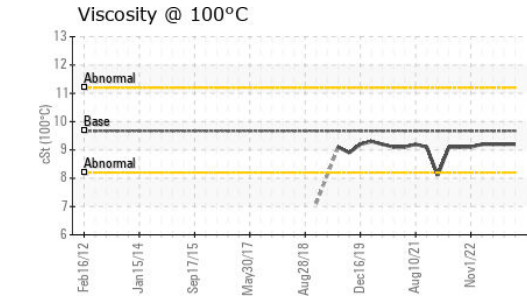
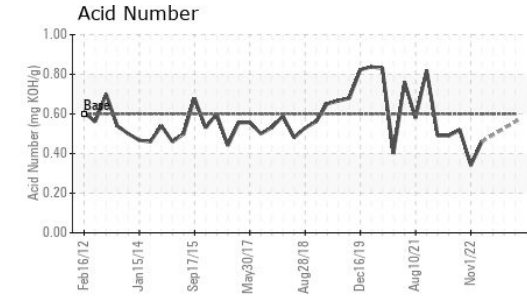
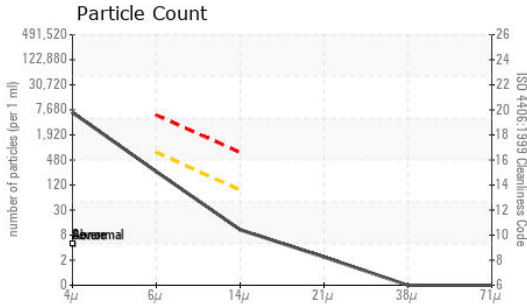
## CONTAMINANTS

| method    | limit/base            | current      | history1 | history2 |
|-----------|-----------------------|--------------|----------|----------|
| Silicon   | ppm ASTM D5185(m) >25 | <b>&lt;1</b> | <1       | <1       |
| Sodium    | ppm ASTM D5185(m)     | <b>0</b>     | 0        | 0        |
| Potassium | ppm ASTM D5185(m) >20 | <b>0</b>     | <1       | <1       |

## FLUID CLEANLINESS

| method          | limit/base             | current         | history1 | history2 |
|-----------------|------------------------|-----------------|----------|----------|
| Particles >4µm  | ASTM D7647             | <b>5785</b>     | ---      | ---      |
| Particles >6µm  | ASTM D7647 >640        | <b>222</b>      | ---      | ---      |
| Particles >14µm | ASTM D7647 >80         | <b>9</b>        | ---      | ---      |
| Particles >21µm | ASTM D7647 >20         | <b>2</b>        | ---      | ---      |
| Particles >38µm | ASTM D7647 >4          | <b>0</b>        | ---      | ---      |
| Particles >71µm | ASTM D7647 >3          | <b>0</b>        | ---      | ---      |
| Oil Cleanliness | ISO 4406 (c) >--/16/13 | <b>20/15/10</b> | ---      | ---      |

# OIL ANALYSIS REPORT

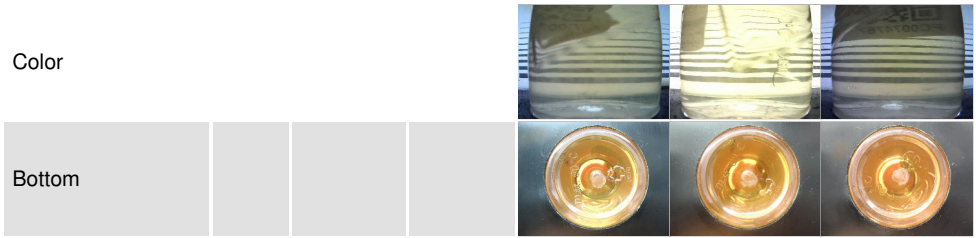


| FLUID DEGRADATION |          | method     | limit/base | current     | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN)  | mg KOH/g | ASTM D974* | 0.60       | <b>0.56</b> | ---      | ---      |

| VISUAL           |        | method  | limit/base | current      | history1 | history2 |
|------------------|--------|---------|------------|--------------|----------|----------|
| White Metal      | scalar | Visual* | NONE       | <b>NONE</b>  | NONE     | NONE     |
| Yellow Metal     | scalar | Visual* | NONE       | <b>NONE</b>  | NONE     | NONE     |
| Precipitate      | scalar | Visual* | NONE       | <b>NONE</b>  | NONE     | NONE     |
| Silt             | scalar | Visual* | NONE       | <b>NONE</b>  | NONE     | NONE     |
| Debris           | scalar | Visual* | NONE       | <b>NONE</b>  | VLITE    | NONE     |
| Sand/Dirt        | scalar | Visual* | NONE       | <b>NONE</b>  | NONE     | NONE     |
| Appearance       | scalar | Visual* | NORML      | <b>NORML</b> | NORML    | NORML    |
| Odor             | scalar | Visual* | NORML      | <b>NORML</b> | NORML    | NORML    |
| Emulsified Water | scalar | Visual* | >0.05      | <b>NEG</b>   | NEG      | NEG      |
| Free Water       | scalar | Visual* |            | <b>NEG</b>   | NEG      | NEG      |

| FLUID PROPERTIES     |       | method        | limit/base | current     | history1 | history2 |
|----------------------|-------|---------------|------------|-------------|----------|----------|
| Visc @ 40°C          | cSt   | ASTM D7279(m) | 47.9       | <b>46.3</b> | 46.3     | 46.0     |
| Visc @ 100°C         | cSt   | ASTM D7279(m) | 9.67       | <b>9.2</b>  | 9.2      | 9.2      |
| Viscosity Index (VI) | Scale | ASTM D2270*   | 192        | <b>185</b>  | 185      | 187      |

## SAMPLE IMAGES



Color

Bottom



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0077029 **Received** : 20 Nov 2023  
**Lab Number** : **02597542** **Diagnosed** : 21 Nov 2023  
**Unique Number** : 5682622 **Diagnostician** : Wes Davis  
**Test Package** : IND 2 ( Additional Tests: KV100, VI )

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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