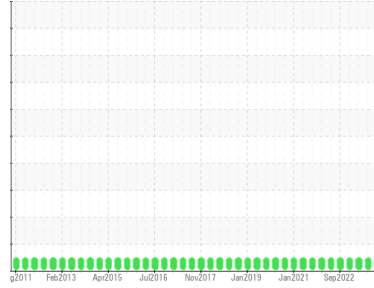


# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**TEAM 3**  
Machine Id  
**165250**  
Component  
**Gearbox**  
Fluid  
**PETRO CANADA ENDURATEX EP 220 (40 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 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>PC0077094</b>   | PC0069883   | PC0069716   |
| Sample Date   | Client Info |             | <b>13 Jan 2024</b> | 27 Sep 2023 | 29 Mar 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 | >0.2       | <b>NEG</b> | NEG      | NEG      |

## WEAR METALS

|           | method      | limit/base         | current      | history1 | history2 |
|-----------|-------------|--------------------|--------------|----------|----------|
| PQ        | ASTM D8184* |                    | <b>0</b>     | 0        | 0        |
| Iron      | ppm         | ASTM D5185(m) >100 | <b>8</b>     | 8        | 9        |
| Chromium  | ppm         | ASTM D5185(m)      | <b>0</b>     | 0        | 0        |
| Nickel    | ppm         | ASTM D5185(m)      | <b>0</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)      | <b>&lt;1</b> | 0        | <1       |
| Lead      | ppm         | ASTM D5185(m) >15  | <b>&lt;1</b> | <1       | 0        |
| Copper    | ppm         | ASTM D5185(m) >35  | <b>&lt;1</b> | <1       | <1       |
| Tin       | ppm         | ASTM D5185(m)      | <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) 60    | <b>66</b>    | 62       | 66       |
| Barium     | ppm    | ASTM D5185(m) 0     | <b>0</b>     | <1       | 0        |
| Molybdenum | ppm    | ASTM D5185(m) 0     | <b>0</b>     | 0        | 0        |
| Manganese  | ppm    | ASTM D5185(m) 0     | <b>0</b>     | 0        | 0        |
| Magnesium  | ppm    | ASTM D5185(m) 0     | <b>&lt;1</b> | <1       | <1       |
| Calcium    | ppm    | ASTM D5185(m) 0     | <b>4</b>     | 5        | 4        |
| Phosphorus | ppm    | ASTM D5185(m) 270   | <b>242</b>   | 240      | 269      |
| Zinc       | ppm    | ASTM D5185(m) 0     | <b>1</b>     | 2        | 2        |
| Sulfur     | ppm    | ASTM D5185(m) 11200 | <b>5421</b>  | 5187     | 5833     |
| Lithium    | ppm    | ASTM D5185(m)       | <b>&lt;1</b> | <1       | <1       |

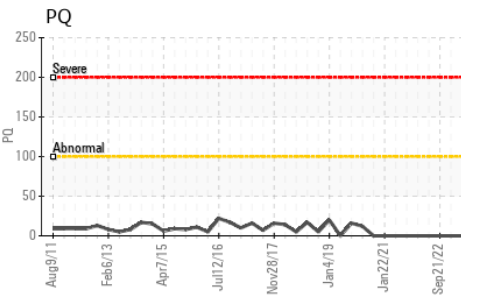
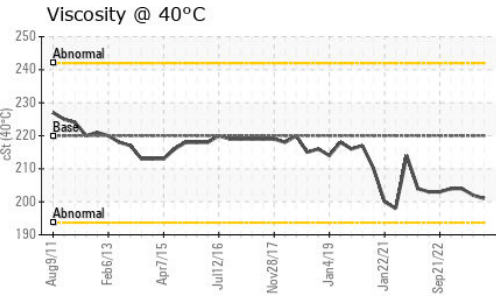
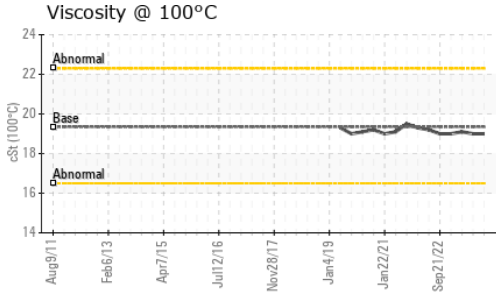
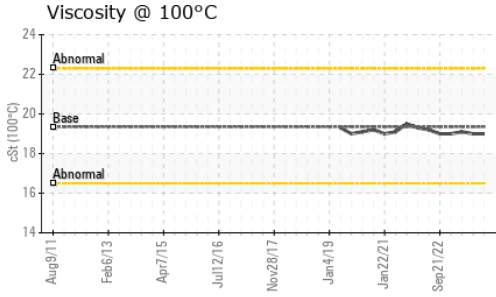
## CONTAMINANTS

|           | method | limit/base        | current      | history1 | history2 |
|-----------|--------|-------------------|--------------|----------|----------|
| Silicon   | ppm    | ASTM D5185(m) >50 | <b>3</b>     | 3        | 3        |
| Sodium    | ppm    | ASTM D5185(m)     | <b>0</b>     | <1       | 0        |
| Potassium | ppm    | ASTM D5185(m) >20 | <b>&lt;1</b> | 0        | 0        |

## FLUID DEGRADATION

|                  | method   | limit/base      | current     | history1 | history2 |
|------------------|----------|-----------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D974* 0.40 | <b>0.42</b> | 0.40     | 0.44     |

# OIL ANALYSIS REPORT

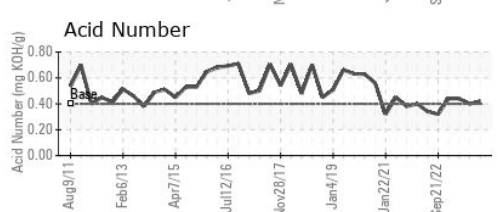
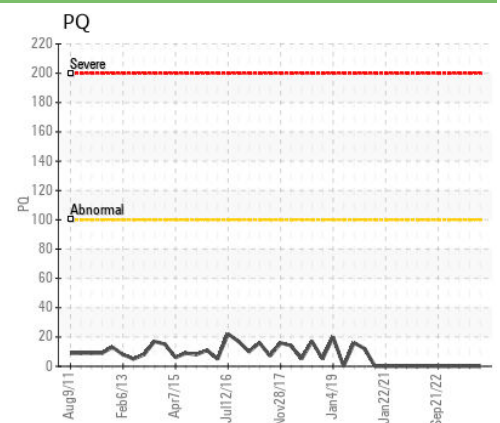
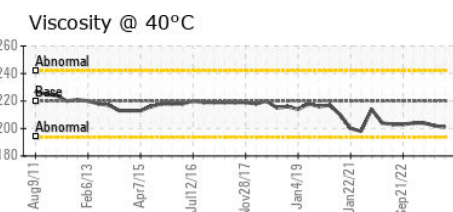
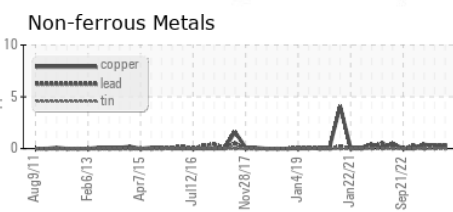
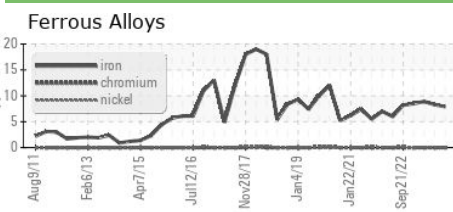


| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | Visual*    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | Visual*    | NONE    | NONE     | NONE     |
| 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*    | >0.2    | NEG      | NEG      |
| Free Water       | scalar | Visual*    |         | NEG      | NEG      |

| FLUID PROPERTIES     | method | limit/base    | current | history1 | history2 |
|----------------------|--------|---------------|---------|----------|----------|
| Visc @ 40°C          | cSt    | ASTM D7279(m) | 220     | 201      | 202      |
| Visc @ 100°C         | cSt    | ASTM D7279(m) | 19.35   | 19.0     | 19.1     |
| Viscosity Index (VI) | Scale  | ASTM D2270*   | 99      | 106      | 105      |

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

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0077094 **Received** : 24 Jan 2024  
**Lab Number** : 02610994 **Diagnosed** : 24 Jan 2024  
**Unique Number** : 5720089 **Diagnostician** : Wes Davis  
**Test Package** : IND 2 ( Additional Tests: KV100, TAN Man, VI )

**Dryden Fibre**  
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 Dryden, ON  
 CA P8N 2Z7  
 Contact: Adebukola Adekanye  
 aadekanye@drydenfibre.ca  
 T: (807)223-9950  
 F: (807)223-9176

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.