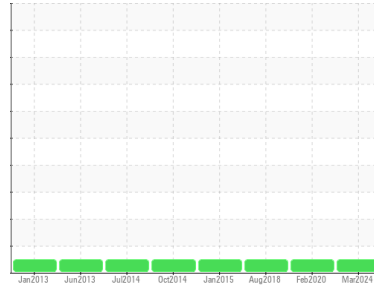


# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**TORQUE MASTER L-14 BASE REDUCTION**

Component  
**Gearbox**

Fluid  
**PETRO CANADA ENDURATEX EP 220 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.  
NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

### 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>PCA0119622</b>  | PCA0012621  | PCAI2002696 |
| Sample Date   | Client Info |             | <b>08 Mar 2024</b> | 22 Feb 2020 | 06 Aug 2018 |
| Machine Age   | hrs         | Client Info | <b>0</b>           | 0           | 20048       |
| Oil Age       | hrs         | Client Info | <b>0</b>           | 0           | 0           |
| Oil Changed   | Client Info |             | <b>N/A</b>         | N/A         | Not Changd  |
| 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 |
|----------|--------|------------------|--------------|----------|----------|
| Iron     | ppm    | ASTM D5185m >200 | <b>&lt;1</b> | 2        | 5        |
| Chromium | ppm    | ASTM D5185m >15  | <b>0</b>     | 0        | 0        |
| Nickel   | ppm    | ASTM D5185m >15  | <b>0</b>     | <1       | <1       |
| Titanium | ppm    | ASTM D5185m      | <b>0</b>     | 0        | 0        |
| Silver   | ppm    | ASTM D5185m      | <b>0</b>     | <1       | 0        |
| Aluminum | ppm    | ASTM D5185m >25  | <b>0</b>     | 0        | <1       |
| Lead     | ppm    | ASTM D5185m >100 | <b>0</b>     | 0        | 0        |
| Copper   | ppm    | ASTM D5185m >200 | <b>&lt;1</b> | <1       | <1       |
| Tin      | ppm    | ASTM D5185m >25  | <b>0</b>     | <1       | 0        |
| Antimony | ppm    | ASTM D5185m >5   | <b>---</b>   | 0        | <1       |
| Vanadium | ppm    | ASTM D5185m      | <b>0</b>     | 0        | 0        |
| Cadmium  | ppm    | ASTM D5185m      | <b>0</b>     | 0        | 0        |

## ADDITIVES

|            | method | limit/base        | current     | history1 | history2 |
|------------|--------|-------------------|-------------|----------|----------|
| Boron      | ppm    | ASTM D5185m 60    | <b>23</b>   | 31       | 8        |
| Barium     | ppm    | ASTM D5185m 0     | <b>0</b>    | 0        | 2        |
| Molybdenum | ppm    | ASTM D5185m 0     | <b>0</b>    | 0        | 0        |
| Manganese  | ppm    | ASTM D5185m 0     | <b>0</b>    | <1       | 0        |
| Magnesium  | ppm    | ASTM D5185m 0     | <b>0</b>    | <1       | <1       |
| Calcium    | ppm    | ASTM D5185m 0     | <b>0</b>    | 1        | 2        |
| Phosphorus | ppm    | ASTM D5185m 270   | <b>390</b>  | 407      | 317      |
| Zinc       | ppm    | ASTM D5185m 0     | <b>0</b>    | 0        | 4        |
| Sulfur     | ppm    | ASTM D5185m 11200 | <b>6529</b> | 5180     | 4890     |

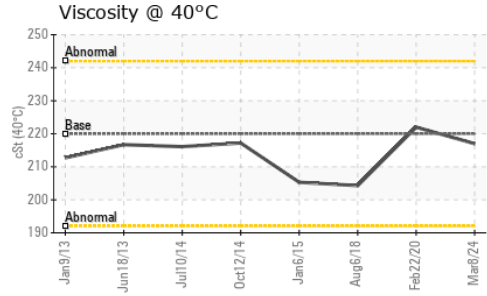
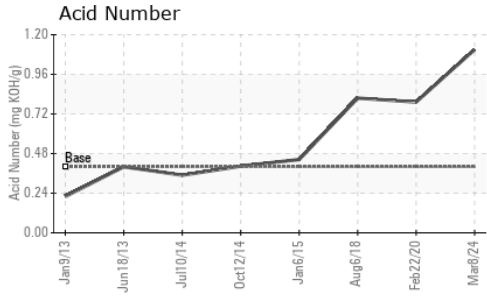
## CONTAMINANTS

|           | method | limit/base      | current  | history1 | history2 |
|-----------|--------|-----------------|----------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >50 | <b>0</b> | 2        | 1        |
| Sodium    | ppm    | ASTM D5185m     | <b>0</b> | 1        | 1        |
| Potassium | ppm    | ASTM D5185m >20 | <b>0</b> | <1       | 0        |

## FLUID DEGRADATION

|                  | method   | limit/base      | current     | history1 | history2 |
|------------------|----------|-----------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 0.40 | <b>1.11</b> | 0.792    | 0.816    |

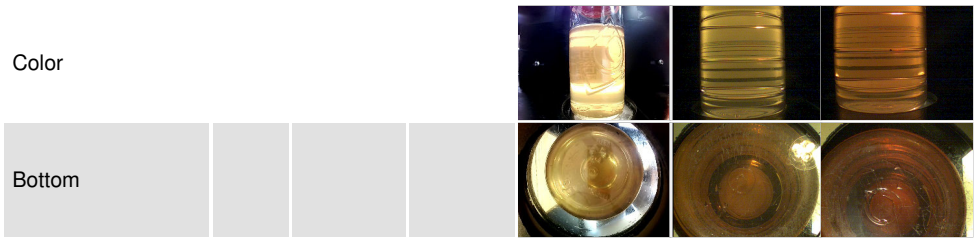
# OIL ANALYSIS REPORT



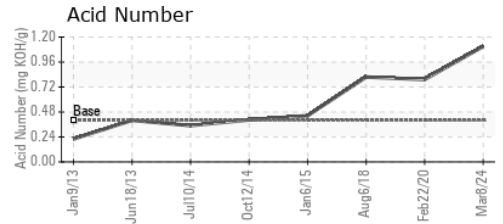
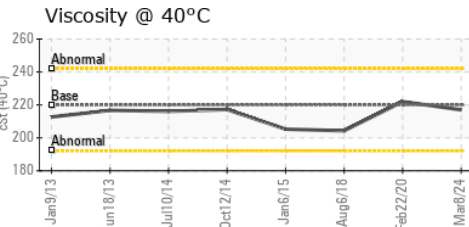
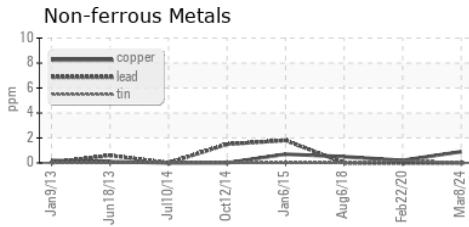
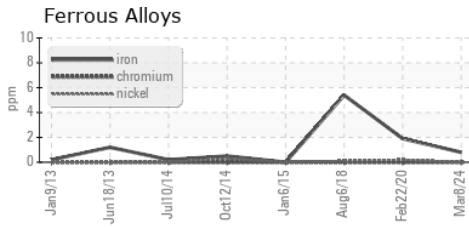
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
| 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 D445 220 | <b>217</b> | 222      | 204.3    |

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



## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0119622  
**Lab Number** : **06120263**  
**Unique Number** : 10929096  
**Test Package** : IND 2

**Received** : 15 Mar 2024  
**Tested** : 19 Mar 2024  
**Diagnosed** : 19 Mar 2024 - Wes Davis

**CERTAINTED CORP**  
 701 E WASHINGTON ST  
 JACKSON, MI  
 US 49203  
 Contact: SIDNEY CHAPPELL  
 SIDNEY.A.CHAPPELL@SAINT-GOBAIN.COM  
 T:  
 F: (517)787-8974

To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)