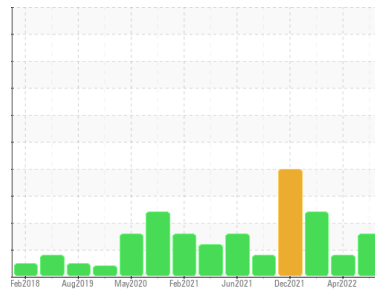




# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id  
**B40392 SOUTH**  
 Component  
**Gearbox**  
 Fluid  
**PETRO CANADA 220 (--- GAL)**

## DIAGNOSIS

### Recommendation

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is a high amount of particulates present 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>WC0930430</b>   | WC0665056   | WC0664930   |
| Sample Date   | Client Info | <b>06 Jun 2024</b> | 08 Apr 2022 | 17 Feb 2022 |
| Machine Age   | hrs         | <b>0</b>           | 0           | 0           |
| Oil Age       | hrs         | <b>0</b>           | 0           | 0           |
| Oil Changed   | Client Info | <b>N/A</b>         | N/A         | N/A         |
| Sample Status |             | <b>ABNORMAL</b>    | ABNORMAL    | ABNORMAL    |

## 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>13</b>    | 60       | 13       |
| Chromium | ppm ASTM D5185m >10  | <b>&lt;1</b> | <1       | 0        |
| Nickel   | ppm ASTM D5185m >10  | <b>0</b>     | <1       | 0        |
| Titanium | ppm ASTM D5185m      | <b>&lt;1</b> | 0        | 0        |
| Silver   | ppm ASTM D5185m      | <b>0</b>     | 0        | 0        |
| Aluminum | ppm ASTM D5185m >25  | <b>2</b>     | <1       | 0        |
| Lead     | ppm ASTM D5185m >50  | <b>0</b>     | 0        | 0        |
| Copper   | ppm ASTM D5185m >200 | <b>0</b>     | 0        | 0        |
| Tin      | ppm ASTM D5185m >10  | <b>0</b>     | <1       | <1       |
| Antimony | ppm ASTM D5185m >5   | <b>---</b>   | ---      | 0        |
| 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 | <b>0</b>     | 1        | 3        |
| Barium     | ppm ASTM D5185m | <b>0</b>     | 0        | 0        |
| Molybdenum | ppm ASTM D5185m | <b>0</b>     | 0        | 0        |
| Manganese  | ppm ASTM D5185m | <b>0</b>     | <1       | <1       |
| Magnesium  | ppm ASTM D5185m | <b>&lt;1</b> | 0        | 0        |
| Calcium    | ppm ASTM D5185m | <b>0</b>     | 0        | 4        |
| Phosphorus | ppm ASTM D5185m | <b>117</b>   | 159      | 185      |
| Zinc       | ppm ASTM D5185m | <b>1</b>     | 0        | 0        |
| Sulfur     | ppm ASTM D5185m | <b>628</b>   | 665      | 692      |

## CONTAMINANTS

| method    | limit/base          | current  | history1 | history2 |
|-----------|---------------------|----------|----------|----------|
| Silicon   | ppm ASTM D5185m >50 | <b>9</b> | 3        | 5        |
| Sodium    | ppm ASTM D5185m     | <b>0</b> | <1       | 0        |
| Potassium | ppm ASTM D5185m >20 | <b>1</b> | 0        | 0        |

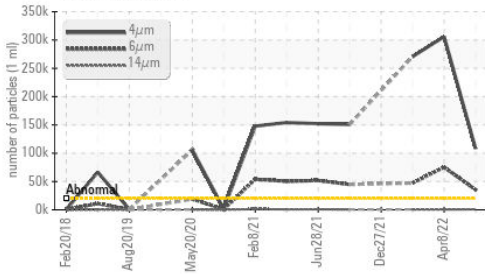
## FLUID CLEANLINESS

| method          | limit/base             | current           | history1   | history2   |
|-----------------|------------------------|-------------------|------------|------------|
| Particles >4µm  | ASTM D7647 >20000      | <b>▲ 108097</b>   | ▲ 306012   | ▲ 270777   |
| Particles >6µm  | ASTM D7647 >5000       | <b>▲ 35538</b>    | ▲ 75278    | ▲ 47256    |
| Particles >14µm | ASTM D7647 >640        | <b>▲ 831</b>      | 552        | 576        |
| Particles >21µm | ASTM D7647 >160        | <b>123</b>        | 52         | 61         |
| Particles >38µm | ASTM D7647 >40         | <b>6</b>          | 0          | 3          |
| Particles >71µm | ASTM D7647 >10         | <b>4</b>          | 0          | 0          |
| Oil Cleanliness | ISO 4406 (c) >21/19/16 | <b>▲ 24/22/17</b> | ▲ 25/23/16 | ▲ 25/23/16 |

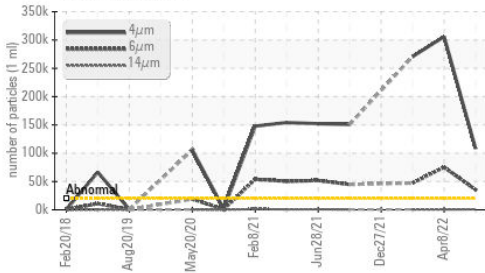


# OIL ANALYSIS REPORT

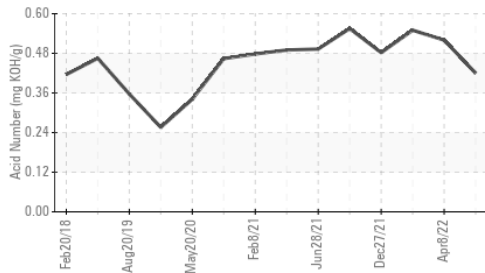
▲ Particle Trend



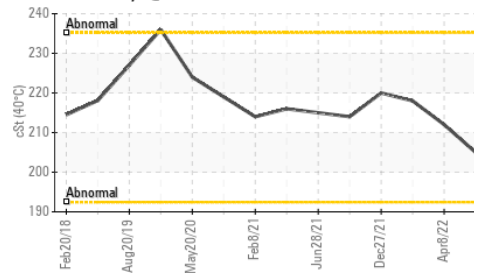
▲ Particle Trend



Acid Number



Viscosity @ 40°C



| FLUID DEGRADATION | method | limit/base | current | history1 | history2 |
|-------------------|--------|------------|---------|----------|----------|
|-------------------|--------|------------|---------|----------|----------|

|                  |          |            |             |      |      |
|------------------|----------|------------|-------------|------|------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | <b>0.42</b> | 0.52 | 0.55 |
|------------------|----------|------------|-------------|------|------|

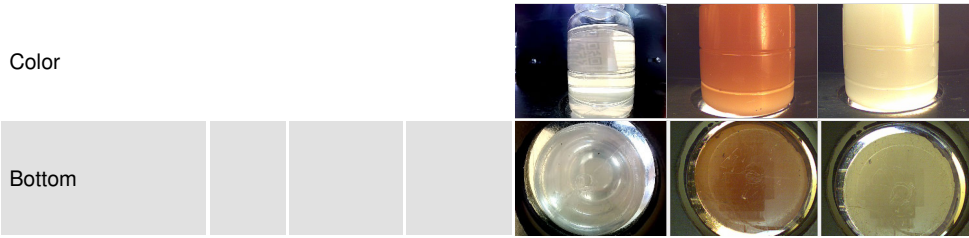
| VISUAL | method | limit/base | current | history1 | history2 |
|--------|--------|------------|---------|----------|----------|
|--------|--------|------------|---------|----------|----------|

|                  |        |         |       |              |       |       |
|------------------|--------|---------|-------|--------------|-------|-------|
| 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 | >0.2  | <b>NEG</b>   | NEG   | 0.2%  |
| Free Water       | scalar | *Visual |       | <b>NEG</b>   | NEG   | NEG   |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
|------------------|--------|------------|---------|----------|----------|

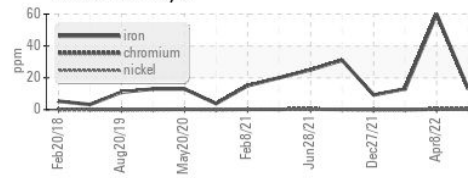
|             |     |           |            |     |     |
|-------------|-----|-----------|------------|-----|-----|
| Visc @ 40°C | cSt | ASTM D445 | <b>205</b> | 212 | 218 |
|-------------|-----|-----------|------------|-----|-----|

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

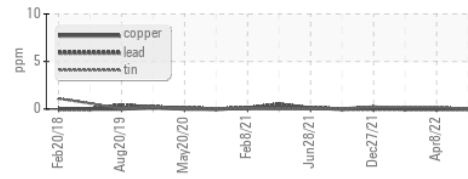


### GRAPHS

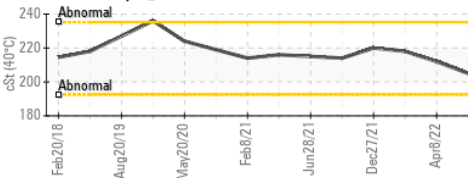
Ferrous Alloys



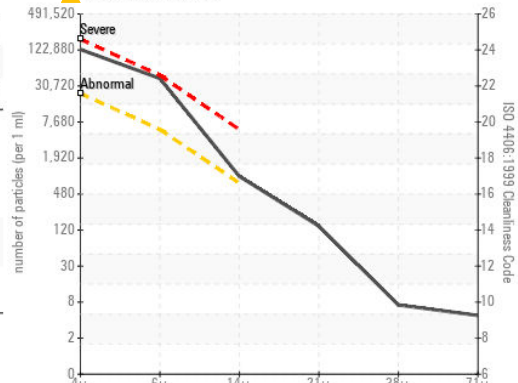
Non-ferrous Metals



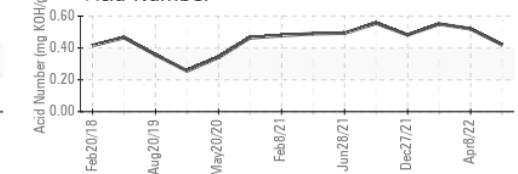
Viscosity @ 40°C



▲ Particle Count



Acid Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : WC0930430

**Lab Number** : 06214652

**Unique Number** : 11087516

**Test Package** : IND 2 ( Additional Tests: PrtCount )

**Received** : 19 Jun 2024

**Tested** : 20 Jun 2024

**Diagnosed** : 21 Jun 2024 - Don Baldrige

**Rochelle Foods - PRE**

1001 South Main, P.O. Box 45

Rochelle, IL

US 61068

Contact: JAMES ROBINSON III

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T:

F: (815)562-4147

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)