

# **OIL ANALYSIS REPORT**

# PHASE 1 HTS HT 04

Component **Agitator Gearbox** 

PETRO CANADA PURITY FG SYNTH EP GEAR 220

# Sample Rating Trend



### **DIAGNOSIS**

### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

All component wear rates are normal.

### Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil. Elemental level of silicon (Si) above normal indicating ingress of seal material.

### **Fluid Condition**

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

| EAR 220 ( LTR    | <b>?</b> ) | Fel          | 2023       | Aug2023 Jan20     | 24                              |                   |
|------------------|------------|--------------|------------|-------------------|---------------------------------|-------------------|
| SAMPLE INFORI    | MATION     | method       | limit/base | current           | history1                        | history2          |
| Sample Number    |            | Client Info  |            | PCA0111038        | USP247594                       | USP247604         |
| Sample Date      |            | Client Info  |            | 31 Jan 2024       | 01 Aug 2023                     | 13 Feb 2023       |
| Machine Age      | hrs        | Client Info  |            | 0                 | 0                               | 0                 |
| Oil Age          | hrs        | Client Info  |            | 0                 | 0                               | 0                 |
| Oil Changed      |            | Client Info  |            | Not Changd        | N/A                             | N/A               |
| Sample Status    |            |              |            | ABNORMAL          | ABNORMAL                        | ABNORMAL          |
| CONTAMINAT       | ION        | method       | limit/base | current           | history1                        | history2          |
| Water            |            | WC Method    | >0.1       | NEG               | NEG                             | NEG               |
| WEAR METAL       | S          | method       | limit/base | current           | history1                        | history2          |
| Iron             | ppm        | ASTM D5185m  | >150       | 7                 | 31                              | 58                |
| Chromium         | ppm        | ASTM D5185m  | >10        | <1                | <1                              | <1                |
| Nickel           | ppm        | ASTM D5185m  | >10        | 0                 | 0                               | <1                |
| Titanium         | ppm        | ASTM D5185m  |            | 0                 | 0                               | <1                |
| Silver           | ppm        | ASTM D5185m  |            | 0                 | 0                               | 0                 |
| Aluminum         | ppm        | ASTM D5185m  | >25        | 0                 | <1                              | <1                |
| Lead             | ppm        | ASTM D5185m  | >100       | 0                 | 0                               | 0                 |
| Copper           | ppm        | ASTM D5185m  | >50        | 14                | <b>△</b> 53                     | <b>△</b> 176      |
| Tin              | ppm        | ASTM D5185m  | >10        | 2                 | 4                               | 7                 |
| Vanadium         | ppm        | ASTM D5185m  |            | 0                 | 0                               | 0                 |
| Cadmium          | ppm        | ASTM D5185m  |            | 0                 | 0                               | 0                 |
| ADDITIVES        |            | method       | limit/base | current           | history1                        | history2          |
| Boron            | ppm        | ASTM D5185m  |            | 4                 | 27                              | 138               |
| Barium           | ppm        | ASTM D5185m  |            | 0                 | 0                               | 0                 |
| Molybdenum       | ppm        | ASTM D5185m  |            | 11                | 27                              | 52                |
| Manganese        | ppm        | ASTM D5185m  |            | 0                 | <1                              | <1                |
| Magnesium        | ppm        | ASTM D5185m  |            | 0                 | 5                               | 4                 |
| Calcium          | ppm        | ASTM D5185m  |            | 41                | 124                             | 400               |
| Phosphorus       | ppm        | ASTM D5185m  |            | 426               | 563                             | 804               |
| Zinc             | ppm        | ASTM D5185m  |            | 30                | 75                              | 234               |
| Sulfur           | ppm        | ASTM D5185m  |            | 1868              | 7802                            | 15808             |
| CONTAMINAN       | TS         | method       | limit/base | current           | history1                        | history2          |
| Silicon          | ppm        | ASTM D5185m  | >50        | <b>65</b>         | 11                              | 12                |
| Sodium           | ppm        | ASTM D5185m  |            | 0                 | 3                               | 6                 |
| Potassium        | ppm        | ASTM D5185m  | >20        | 2                 | 11                              | 38                |
| FLUID CLEANL     | INESS      | method       | limit/base | current           | history1                        | history2          |
| Particles >4µm   |            | ASTM D7647   | >20000     | <b>107670</b>     | <u>^</u> 202900                 | <u>225614</u>     |
| Particles >6µm   |            | ASTM D7647   | >5000      | <u>4</u> 24303    | <u>▲</u> 67597                  | ▲ 65523           |
| Particles >14μm  |            | ASTM D7647   | >640       | 186               | 452                             | 118               |
| Particles >21µm  |            | ASTM D7647   | >160       | 53                | 78                              | 17                |
| Particles >38μm  |            | ASTM D7647   | >40        | 4                 | 1                               | 1                 |
| Particles >71µm  |            | ASTM D7647   | >10        | 1                 | 0                               | 0                 |
| Oil Cleanliness  |            | ISO 4406 (c) | >21/19/16  | <u>4</u> 24/22/15 | <u>\$\rightarrow\$ 25/23/16</u> | <u>△</u> 25/23/14 |
| FLUID DEGRA      | OATION     | method       | limit/base | current           | history1                        | history2          |
| Acid Number (AN) | mg KOH/g   | ASTM D8045   | 0.59       | 0.54              | 0.69                            | 1.07              |



## **OIL ANALYSIS REPORT**





Certificate L2367

**Unique Number** 

: 10861881

Diagnosed

: 07 Feb 2024

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

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