

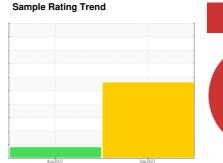
## **PROBLEM SUMMARY**

**PIKRITE 30098006** 

Component

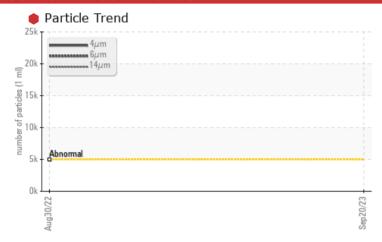
**Hydraulic System** 

PETRO CANADA DURATRAN (120 GAL)





### **COMPONENT CONDITION SUMMARY**



### RECOMMENDATION

We advise that you check all areas where contaminants can enter the system. The oil change at the time of sampling has been noted. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation.

| PROBLEMATIC TEST RESULTS |              |           |                 |          |  |  |  |  |  |  |
|--------------------------|--------------|-----------|-----------------|----------|--|--|--|--|--|--|
| Sample Status            |              |           | SEVERE          | ABNORMAL |  |  |  |  |  |  |
| Particles >4µm           | ASTM D7647   | >5000     | <b>24332</b>    |          |  |  |  |  |  |  |
| Particles >6µm           | ASTM D7647   | >1300     | <b>10343</b>    |          |  |  |  |  |  |  |
| Particles >14μm          | ASTM D7647   | >160      | <u> </u>        |          |  |  |  |  |  |  |
| Particles >21μm          | ASTM D7647   | >40       | <b>327</b>      |          |  |  |  |  |  |  |
| Oil Cleanliness          | ISO 4406 (c) | >19/17/14 | <b>22/21/17</b> |          |  |  |  |  |  |  |

Customer Id: MCG3CHA **Sample No.:** PC0069567 Lab Number: 02584682 Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data: Wes Davis +1 905-569-8600 x223 wesd@wearcheck.ca

To change component or sample information: Gloria Gonzalez +1 (289)291-4643 x4643 gloria.gonzalez@wearcheck.com

#### **RECOMMENDED ACTIONS** Done By Action **Status** Date Description ? Resample Resample in 30-45 days to monitor this situation. The air breather requires service. If unrated, we recommend that you replace with a **Check Breathers** ? suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We advise that you check all areas where contaminants can enter the ? **Check Dirt Access** system.

### HISTORICAL DIAGNOSIS

VISCOSITV

### 30 Aug 2022 Diag: Kevin Marson

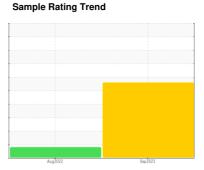


Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please provide more complete information on your next sample. All component wear rates are normal. There is no indication of any contamination in the sample. Viscosity of sample indicates oil is within SAE 75W80 range, advise investigate. The AN level is acceptable for this fluid. The condition of the sample is suitable for further service.





## **OIL ANALYSIS REPORT**





# **PIKRITE 30098006**

Component

**Hydraulic System** 

PETRO CANADA DURATRAN (120 GAL)

### **DIAGNOSIS**

### Recommendation

We advise that you check all areas where contaminants can enter the system. The oil change at the time of sampling has been noted. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation.

### Wear

All component wear rates are normal.

### Contamination

There is a high amount of particulates (2 to 100 microns in size) present in the oil.

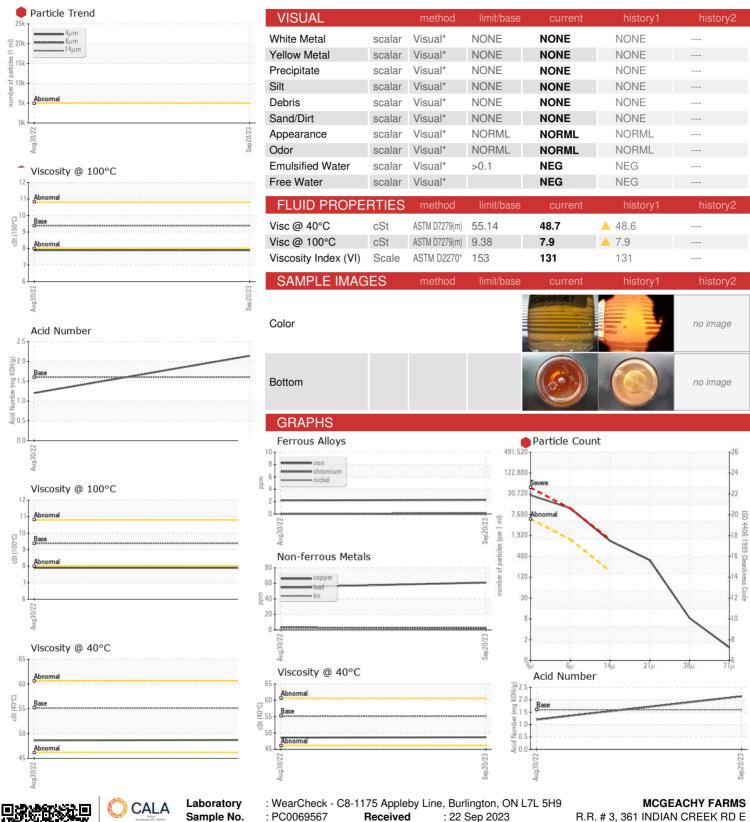
### **Fluid Condition**

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

|  |   |  | Aug <sup>2</sup> 022   | Sep2023   |  |                                      |
|--|---|--|--|---|--|--------------------------------------|
| SAMPLE INFORI  | MATION  | method   | limit/base   | current   | history1   | history2                             |
| Sample Number  |   | Client Info  |  | PC0069567   | PC0043996  |                                      |
| Sample Date  |   | Client Info  |  | 20 Sep 2023   | 30 Aug 2022  |                                      |
| Machine Age  | hrs   | Client Info  |  | 0   | 1528   |                                      |
| Oil Age  | hrs   | Client Info  |  | 1650  | 200  |                                      |
| Oil Changed  |   | Client Info  |  | Changed   | N/A  |                                      |
| Sample Status  |   |  |  | SEVERE  | ABNORMAL   |                                      |
| WEAR METAL   | S   | method   | limit/base   | current   | history1   | history2                             |
| Iron   | ppm   | ASTM D5185(m)  | >20  | 2   | 2  |                                      |
| Chromium   | ppm   | ASTM D5185(m)  | >10  | 0   | 0  |                                      |
| Nickel   | ppm   | ASTM D5185(m)  | >10  | <1  | 0  |                                      |
| Titanium   | ppm   | ASTM D5185(m)  |  | 0   | <1   |                                      |
| Silver   | ppm   | ASTM D5185(m)  |  | 0   | 0  |                                      |
| Aluminum   | ppm   | ASTM D5185(m)  | >10  | <1  | <1   |                                      |
| Lead   | ppm   | ASTM D5185(m)  | >10  | 2   | 3  |                                      |
| Copper   | ppm   | ASTM D5185(m)  | >75  | 61  | 55   |                                      |
| Tin  | ppm   | ASTM D5185(m)  | >10  | 0   | 0  |                                      |
| Antimony   | ppm   | ASTM D5185(m)  |  | 0   | 0  |                                      |
| Vanadium   | ppm   | ASTM D5185(m)  |  | 0   | 0  |                                      |
| Beryllium  | ppm   | ASTM D5185(m)  |  | 0   | 0  |                                      |
| Cadmium  | ppm   | ASTM D5185(m)  |  | 0   | 0  |                                      |
| ADDITIVES  |   | method   | limit/base   | ourrent   | history1   | history2                             |
|  |   |  |  | current   | · ·  | HISTOLYZ                             |
| Boron  | ppm   | ASTM D5185(m)  | 110  | 73  | 76   |                                      |
| Barium   | ppm   | ASTM D5185(m)  | 0.0  | 0   | 0  |                                      |
| Molybdenum   | ppm   | ASTM D5185(m)  | 0.0  | 1   | 1  |                                      |
| Manganese  | ppm   | ( /  | 1  | <1  | <1   |                                      |
| Magnesium  | ppm   | ASTM D5185(m)  | 13   | 26  | 25   |                                      |
| Calcium  | ppm   | ASTM D5185(m)  | 3610   |   |  |                                      |
|  |   | 1  |  | 2736  | 2803   |                                      |
| Phosphorus   | ppm   | ASTM D5185(m)  | 1192   | 986   | 893  |                                      |
| Zinc   |   | ASTM D5185(m)<br>ASTM D5185(m)   | 1192<br>1455   | 986<br>1130   | 893<br>1101  |                                      |
| Zinc<br>Sulfur   | ppm   | ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)  | 1192   | 986<br>1130<br>2355   | 893<br>1101<br>2339                                  |                                      |
| Zinc   | ppm   | ASTM D5185(m)<br>ASTM D5185(m)   | 1192<br>1455   | 986<br>1130   | 893<br>1101  |                                      |
| Zinc<br>Sulfur   | ppm<br>ppm<br>ppm                                   | ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)  | 1192<br>1455   | 986<br>1130<br>2355   | 893<br>1101<br>2339                                  |                                      |
| Zinc<br>Sulfur<br>Lithium  | ppm<br>ppm<br>ppm                                   | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  | 1192<br>1455<br>2641   | 986<br>1130<br>2355<br><1   | 893<br>1101<br>2339<br><1                            |                                      |
| Zinc<br>Sulfur<br>Lithium  | ppm<br>ppm<br>ppm<br>ppm                            | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  | 1192<br>1455<br>2641<br>limit/base   | 986<br>1130<br>2355<br><1   | 893<br>1101<br>2339<br><1<br>history1                | <br><br><br>history2                 |
| Zinc Sulfur Lithium CONTAMINAN Silicon   | ppm<br>ppm<br>ppm<br>ppm                            | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  method  ASTM D5185(m)   | 1192<br>1455<br>2641<br>limit/base   | 986<br>1130<br>2355<br><1<br>current  | 893<br>1101<br>2339<br><1<br>history1                | <br><br><br>history2                 |
| Zinc Sulfur Lithium CONTAMINAN Silicon Sodium  | ppm<br>ppm<br>ppm<br>ppm                            | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  method  ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)   | 1192<br>1455<br>2641<br>limit/base<br>>20  | 986<br>1130<br>2355<br><1<br>current<br>5                                       | 893<br>1101<br>2339<br><1<br>history1<br>5           | <br><br>history2                     |
| Zinc Sulfur Lithium  CONTAMINAN Silicon Sodium Potassium   | ppm<br>ppm<br>ppm<br>ppm                            | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  method  ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)   | 1192<br>1455<br>2641<br>limit/base<br>>20<br>>20   | 986<br>1130<br>2355<br><1<br>current<br>5<br>4                                  | 893<br>1101<br>2339<br><1<br>history1<br>5<br>4<br>2 | <br><br>history2<br>                 |
| Zinc Sulfur Lithium  CONTAMINAN Silicon Sodium Potassium  FLUID CLEANI   | ppm<br>ppm<br>ppm<br>ppm                            | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  method  ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  ASTM D5185(m)  method  | 1192<br>1455<br>2641<br>limit/base<br>>20<br>>20<br>limit/base   | 986<br>1130<br>2355<br><1<br>current<br>5<br>4<br>0                             | 893<br>1101<br>2339<br><1<br>history1<br>5<br>4<br>2 | <br><br>history2<br><br><br>history2 |
| Zinc Sulfur Lithium  CONTAMINAN Silicon Sodium Potassium  FLUID CLEANI Particles >4µm  | ppm<br>ppm<br>ppm<br>ppm                            | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  Method  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  | 1192<br>1455<br>2641<br>limit/base<br>>20<br>>20<br>limit/base<br>>5000                                | 986 1130 2355 <1 current 5 4 0 current  24332                                   | 893 1101 2339 <1 history1 5 4 2 history1             | history2 history2                    |
| Zinc Sulfur Lithium  CONTAMINAN Silicon Sodium Potassium  FLUID CLEANI Particles >4µm Particles >6µm   | ppm<br>ppm<br>ppm<br>ppm                            | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  Method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7647 ASTM D7647  | 1192<br>1455<br>2641<br>limit/base<br>>20<br>>20<br>>20<br>limit/base<br>>5000<br>>1300                | 986 1130 2355 <1 current  5 4 0 current  △ 24332                                | 893 1101 2339 <1 history1 5 4 2 history1             | history2 history2                    |
| Zinc Sulfur Lithium  CONTAMINAN Silicon Sodium Potassium  FLUID CLEANI Particles >4µm Particles >6µm Particles >14µm   | ppm<br>ppm<br>ppm<br>ppm                            | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  Method  ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D7647 ASTM D7647 ASTM D7647  | 1192<br>1455<br>2641<br>limit/base<br>>20<br>>20<br>>20<br>limit/base<br>>5000<br>>1300<br>>160        | 986 1130 2355 <1 current  5 4 0 current  △ 24332                                | 893 1101 2339 <1 history1 5 4 2 history1             | history2 history2                    |
| Zinc Sulfur Lithium  CONTAMINAN Silicon Sodium Potassium  FLUID CLEANI Particles >4µm Particles >6µm Particles >14µm Particles >21µm                                 | ppm<br>ppm<br>ppm<br>ppm                            | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  Method  ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  ASTM D5185(m) ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647  | 1192<br>1455<br>2641<br>limit/base<br>>20<br>>20<br>limit/base<br>>5000<br>>1300<br>>160<br>>40        | 986 1130 2355 <1 current 5 4 0 current  24332 10343 1176 327                    | 893 1101 2339 <1 history1 5 4 2 history1             | history2 history2                    |
| Zinc Sulfur Lithium  CONTAMINAN Silicon Sodium Potassium  FLUID CLEANI Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm                 | ppm<br>ppm<br>ppm<br>ppm                            | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  Method  ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647  | 1192<br>1455<br>2641<br>limit/base<br>>20<br>>20<br>limit/base<br>>5000<br>>1300<br>>160<br>>40<br>>10 | 986 1130 2355 <1  current  5 4 0  current  △ 24332  △ 10343  △ 1176  △ 327  7   | 893 1101 2339 <1 history1 5 4 2 history1             | history2 history2                    |
| Zinc Sulfur Lithium  CONTAMINAN Silicon Sodium Potassium  FLUID CLEANI Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm Particles >71µm | ppm<br>ppm<br>ppm<br>ppm<br>TS<br>ppm<br>ppm<br>ppm | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  Method  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D7647  ASTM D7647 | 1192<br>1455<br>2641<br>limit/base<br>>20<br>>20<br>>20<br>>5000<br>>1300<br>>160<br>>40<br>>10<br>>3  | 986 1130 2355 <1  current  5 4 0  current  △ 24332  ♠ 10343  △ 1176  ♠ 327  7 1 | 893 1101 2339 <1 history1 5 4 2 history1             | history2 history2                    |



## OIL ANALYSIS REPORT





ISO 17025:2017 Accredited

Laboratory

Sample No. Lab Number **Unique Number** 

: PC0069567 : 02584682

Received : 5645747

Diagnosed : 25 Sep 2023 Diagnostician : Wes Davis

Test Package : IND 2 (Additional Tests: KV100, TAN MAN, 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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Contact/Location: SCOTT ? - MCG3CHA