

# **OIL ANALYSIS REPORT**

Sample Rating Trend

**NORMAL** 



Machine Id U1-12 Component

**Hydraulic System** 

PETRO CANADA PURITY FG HYDRAULIC

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

### Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

### **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   history 1   history 2   Sample Number   Client Info   PC0062068       Sample Date   Client Info   30 Mar 2023       Machine Age   hrs   Client Info   0       Oil Age   hrs   Client Info   0       Oil Changed   Client Info   N/A         Oil Changed   Client Info   N/A         Oil Changed   Sample Status   NORMAL         NORMAL         Oil Changed   Sample Status   NORMAL           Oil Changed   Sample Status   NORMAL           Oil Changed   Sample Status   NORMAL           Oil Changed   Sample Status   NORMAL           Oil Changed   Sample Status   NORMAL           Oil Changed   Sample Status   NORMAL             Oil Changed   Sample Status   NORMAL             Oil Changed   Sample Status   NORMAL             Oil Changed   Sample Status   NORMAL               Oil Changed   Sample Status   NORMAL             Oil Changed   Sample Status   NORMAL             Oil Changed   Sample Status   NORMAL             Oil Changed   Sample Status   NORMAL             Oil Changed   Sample Status   NORMAL             Oil Changed   Sample Status   NORMAL             Oil Changed   Sample Status   NORMAL           Oil Changed   Sample Status   NORMAL           Oil Changed   NORMAL           Oi	
Sample Number   Client Info   PC0062068         Sample Date   Client Info   30 Mar 2023         Machine Age   hrs   Client Info   41399         Oil Age   hrs   Client Info   0         Oil Changed   Client Info   N/A         Sample Status   NORMAL         WEAR METALS   method   limit/base   current   history 1   history 1     Iron   ppm   ASTM D5185(m)   >20   0         Chromium   ppm   ASTM D5185(m)   >20   0         Nickel   ppm   ASTM D5185(m)   >20   0         Titanium   ppm   ASTM D5185(m)   0         Silver   ppm   ASTM D5185(m)   >20   0         Aluminum   ppm   ASTM D5185(m)   >20   0         Lead   ppm   ASTM D5185(m)   >20   0         Copper   ppm   ASTM D5185(m)   >20   0         Tin   ppm   ASTM D5185(m)   >20   0         Antimony   ppm   ASTM D5185(m)   >20   0         Antimony   ppm   ASTM D5185(m)   0         Beryllium   ppm   ASTM D5185(m)   0         Cadmium   ppm   ASTM D5185(m)   0         ADDITIVES   method   limit/base   current   history 1   history 1     Boron   ppm   ASTM D5185(m)   <1	
Sample Number   Client Info   PC0062068         Sample Date   Client Info   30 Mar 2023         Machine Age   hrs   Client Info   41399         Oil Age   hrs   Client Info   0         Oil Changed   Client Info   N/A         Sample Status   NORMAL         WEAR METALS   method   limit/base   current   history 1   history 1     Iron   ppm   ASTM D5185(m)   >20   0         Chromium   ppm   ASTM D5185(m)   >20   0         Nickel   ppm   ASTM D5185(m)   >20   0         Titanium   ppm   ASTM D5185(m)   0         Silver   ppm   ASTM D5185(m)   >20   0         Aluminum   ppm   ASTM D5185(m)   >20   0         Lead   ppm   ASTM D5185(m)   >20   0         Tin   ppm   ASTM D5185(m)   >20   0         Antimony   ppm   ASTM D5185(m)   >20   0         Antimony   ppm   ASTM D5185(m)   0         Antimony   ppm   ASTM D5185(m)   0         Cadmium   ppm   ASTM D5185(m)   0         ADDITIVES   method   limit/base   current   history 1   history 1     Beron   ppm   ASTM D5185(m)   <1	
Sample Date   Client Info   30 Mar 2023         Machine Age   hrs   Client Info   0         Oil Age   hrs   Client Info   0         Oil Changed   Client Info   N/A         Sample Status   NORMAL         WEAR METALS   method   limit/base   current   history 1   history 1     Iron   ppm   ASTM D5185(m)   >20   0         Chromium   ppm   ASTM D5185(m)   >20   0         Nickel   ppm   ASTM D5185(m)   >20   0         Titanium   ppm   ASTM D5185(m)   0         Silver   ppm   ASTM D5185(m)   >20   0         Aluminum   ppm   ASTM D5185(m)   >20   0         Lead   ppm   ASTM D5185(m)   >20   0         Copper   ppm   ASTM D5185(m)   >20   0         Tin   ppm   ASTM D5185(m)   >20   0         Antimony   ppm   ASTM D5185(m)   >20   0         Antimony   ppm   ASTM D5185(m)   0         Beryllium   ppm   ASTM D5185(m)   0         ADDITIVES   method   limit/base   current   history 1   history 1     ADDITIVES   method   limit/base   current   history 1   history 1   history 1     ADDITIVES   method   limit/base   current   history 1   history 1   history 1     ADDITIVES   method   limit/base   current   history 1   history 1	
Machine Age         hrs         Client Info         41399             Oil Age         hrs         Client Info         0             Oil Changed         Client Info         N/A             Sample Status         NORMAL             WEAR METALS         method         limit/base         current         history 1         history           Iron         ppm         ASTM D5185(m)         >20         0             Chromium         ppm         ASTM D5185(m)         >20         0             Nickel         ppm         ASTM D5185(m)         >20         0             Silver         ppm         ASTM D5185(m)         >20         0             Aluminum         ppm         ASTM D5185(m)         >20         0             Lead         ppm         ASTM D5185(m)         >20         0             Copper         ppm         ASTM D5185(m)         >20         0             Tin	
Oil Age         hrs         Client Info         0             Oil Changed         Client Info         N/A             Sample Status         NORMAL             WEAR METALS         method         limit/base         current         history 1         history           Iron         ppm         ASTM D5185(m)         >20         0             Chromium         ppm         ASTM D5185(m)         >20         0             Nickel         ppm         ASTM D5185(m)         >20         0             Silver         ppm         ASTM D5185(m)         >20         0             Aluminum         ppm         ASTM D5185(m)         >20         0             Lead         ppm         ASTM D5185(m)         >20         0             Copper         ppm         ASTM D5185(m)         >20         <1	
Oil Changed         Client Info         N/A             Sample Status         NORMAL             WEAR METALS         method         limit/base         current         history 1         history           Iron         ppm         ASTM D5185(m)         >20         0             Chromium         ppm         ASTM D5185(m)         >20         0             Nickel         ppm         ASTM D5185(m)         >20         0             Titanium         ppm         ASTM D5185(m)         0             Silver         ppm         ASTM D5185(m)         >20         0             Aluminum         ppm         ASTM D5185(m)         >20         0             Lead         ppm         ASTM D5185(m)         >20         0             Copper         ppm         ASTM D5185(m)         >20         <1	
Sample Status	
WEAR METALS         method         limit/base         current         history 1         history 1           Iron         ppm         ASTM D5185(m)         >20         0             Chromium         ppm         ASTM D5185(m)         >20         0             Nickel         ppm         ASTM D5185(m)         >20         0             Titanium         ppm         ASTM D5185(m)         0             Silver         ppm         ASTM D5185(m)         >20         0             Aluminum         ppm         ASTM D5185(m)         >20         0             Lead         ppm         ASTM D5185(m)         >20         0             Copper         ppm         ASTM D5185(m)         >20         <1	
Iron         ppm         ASTM D5185(m)         >20         0             Chromium         ppm         ASTM D5185(m)         >20         0             Nickel         ppm         ASTM D5185(m)         >20         0             Titanium         ppm         ASTM D5185(m)         0             Silver         ppm         ASTM D5185(m)         >20         0             Aluminum         ppm         ASTM D5185(m)         >20         0             Lead         ppm         ASTM D5185(m)         >20         0             Copper         ppm         ASTM D5185(m)         >20         <1	v 2
Chromium         ppm         ASTM D5185(m)         >20         0             Nickel         ppm         ASTM D5185(m)         >20         0             Titanium         ppm         ASTM D5185(m)         0             Silver         ppm         ASTM D5185(m)         >20         0             Aluminum         ppm         ASTM D5185(m)         >20         0             Lead         ppm         ASTM D5185(m)         >20         0             Copper         ppm         ASTM D5185(m)         >20         0             Tin         ppm         ASTM D5185(m)         >20         0             Antimony         ppm         ASTM D5185(m)         0             Vanadium         ppm         ASTM D5185(m)         0             Beryllium         ppm         ASTM D5185(m)         0             Cadmium         ppm         ASTM D5185(m)         <1	,
Nickel         ppm         ASTM D5185(m)         >20         0             Titanium         ppm         ASTM D5185(m)         0             Silver         ppm         ASTM D5185(m)         >20         0             Aluminum         ppm         ASTM D5185(m)         >20         0             Lead         ppm         ASTM D5185(m)         >20         0             Copper         ppm         ASTM D5185(m)         >20         0             Tin         ppm         ASTM D5185(m)         >20         0             Antimony         ppm         ASTM D5185(m)         0             Vanadium         ppm         ASTM D5185(m)         0             Beryllium         ppm         ASTM D5185(m)         0             Cadmium         ppm         ASTM D5185(m)         0             Boron         ppm         ASTM D5185(m)         <1	
Titanium         ppm         ASTM D5185(m)         0             Silver         ppm         ASTM D5185(m)         0             Aluminum         ppm         ASTM D5185(m)         >20         0             Lead         ppm         ASTM D5185(m)         >20         0             Copper         ppm         ASTM D5185(m)         >20         <1	
Silver         ppm         ASTM D5185(m)         0             Aluminum         ppm         ASTM D5185(m)         >20         0             Lead         ppm         ASTM D5185(m)         >20         0             Copper         ppm         ASTM D5185(m)         >20         <1	
Aluminum         ppm         ASTM D5185(m)         >20         0             Lead         ppm         ASTM D5185(m)         >20         0             Copper         ppm         ASTM D5185(m)         >20         <1	
Lead         ppm         ASTM D5185(m)         >20         0             Copper         ppm         ASTM D5185(m)         >20         <1             Tin         ppm         ASTM D5185(m)         >20         0             Antimony         ppm         ASTM D5185(m)         0             Vanadium         ppm         ASTM D5185(m)         0             Beryllium         ppm         ASTM D5185(m)         0             Cadmium         ppm         ASTM D5185(m)         0             ADDITIVES         method         limit/base         current         history         history           Boron         ppm         ASTM D5185(m)         <1	
Copper         ppm         ASTM D5185(m)         >20         <1             Tin         ppm         ASTM D5185(m)         >20         0             Antimony         ppm         ASTM D5185(m)         0             Vanadium         ppm         ASTM D5185(m)         0             Beryllium         ppm         ASTM D5185(m)         0             Cadmium         ppm         ASTM D5185(m)         0             ADDITIVES         method         limit/base         current         history 1         history           Boron         ppm         ASTM D5185(m)         <1	
Tin         ppm         ASTM D5185(m)         >20         0             Antimony         ppm         ASTM D5185(m)         0             Vanadium         ppm         ASTM D5185(m)         0             Beryllium         ppm         ASTM D5185(m)         0             Cadmium         ppm         ASTM D5185(m)         0             ADDITIVES         method         limit/base         current         history 1         history           Boron         ppm         ASTM D5185(m)         <1	
Antimony         ppm         ASTM D5185(m)         0             Vanadium         ppm         ASTM D5185(m)         0             Beryllium         ppm         ASTM D5185(m)         0             Cadmium         ppm         ASTM D5185(m)         0             ADDITIVES         method         limit/base         current         history 1         history           Boron         ppm         ASTM D5185(m)         <1	
Vanadium         ppm         ASTM D5185(m)         0             Beryllium         ppm         ASTM D5185(m)         0             Cadmium         ppm         ASTM D5185(m)         0             ADDITIVES         method         limit/base         current         history 1         history           Boron         ppm         ASTM D5185(m)         <1	
Beryllium         ppm         ASTM D5185(m)         0             Cadmium         ppm         ASTM D5185(m)         0             ADDITIVES         method         limit/base         current         history 1         history           Boron         ppm         ASTM D5185(m)         <1	
Cadmium         ppm         ASTM D5185(m)         0             ADDITIVES         method         limit/base         current         history 1         history 1           Boron         ppm         ASTM D5185(m)         <1	
ADDITIVES method limit/base current history 1 history  Boron ppm ASTM D5185(m) <1	
Boron ppm ASTM D5185(m) <1	
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Barium         ppm         ASTM D5185(m)         0	
Molybdenum ppm ASTM D5185(m) 0	
Manganese ppm ASTM D5185(m) 0	
Magnesium         ppm         ASTM D5185(m)         <1	
Calcium         ppm         ASTM D5185(m)         <1	
Phosphorus         ppm         ASTM D5185(m)         415	
Zinc         ppm         ASTM D5185(m)         3	
Sulfur         ppm         ASTM D5185(m)         468	
Lithium         ppm         ASTM D5185(m)         <1	
CONTAMINANTS method limit/base current history 1 history	y 2
Silicon ppm ASTM D5185(m) >15 <1	
Sodium         ppm         ASTM D5185(m)         0	
Potassium ppm ASTM D5185(m) >20 <1	
FLUID CLEANLINESS method limit/base current history 1 history	y 2
Particles >4μm ASTM D7647 >5000 <b>179</b>	
Particles >6μm ASTM D7647 >1300 <b>61</b>	
Particles >14μm ASTM D7647 >160 <b>8</b>	
Particles >21μm ASTM D7647 >40 <b>4</b>	
Particles >38μm ASTM D7647 >10 <b>0</b>	
Particles >71μm ASTM D7647 >3 <b>0</b>	
Oil Cleanliness ISO 4406 (c) >19/17/14 <b>15/13/10</b>	
FLUID DEGRADATION method limit/base current history 1 history	

Acid Number (AN)

mg KOH/g ASTM D974\* 0.26

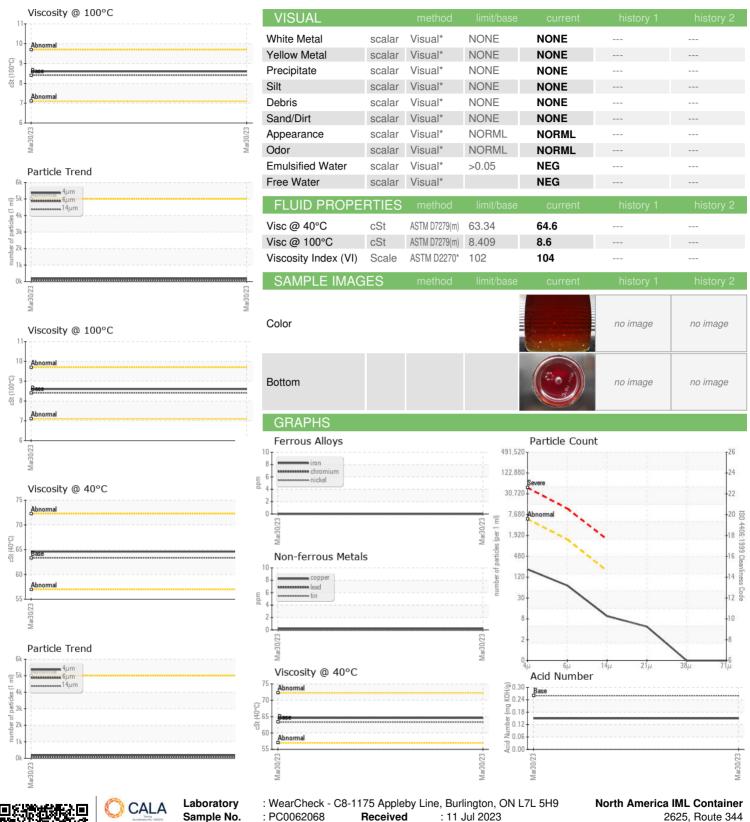
0.15

Report Id: IMLSTP [WCAMIS] 02569108 (Generated: 07/12/2023 09:33:20) Rev: 1

Contact/Location: Sebastien Brisson - IMLSTP



## **OIL ANALYSIS REPORT**





ISO 17025:2017 Accredited

Laboratory

Sample No. Lab Number **Unique Number** 

: PC0062068

: 02569108 : 5606154

Received Diagnosed

: 12 Jul 2023 : Wes Davis Diagnostician

Test Package : IND 2 (Additional Tests: KV100, 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.

2625, Route 344 St. Placide, QC **CA J0V 2B0** 

Contact: Sebastien Brisson sbrisson@iml.ca

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