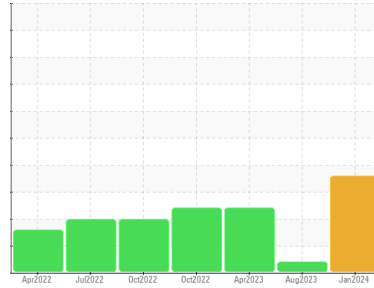


Machine Id  
**15 ROLL STAND**

Component  
**Hydraulic System**

Fluid  
**PETRO CANADA HYDREX AW 68 (--- GAL)**



**DIAGNOSIS**

**Recommendation**

We recommend you service the filters on this component. 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. Elemental level of silicon (Si) above normal.

**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>TO60001687</b>	TO60000490	TO60000501
Sample Date	Client Info	<b>05 Jan 2024</b>	05 Aug 2023	02 Apr 2023
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

**WEAR METALS**

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >20	<b>0</b>	0	<1
Chromium	ppm	ASTM D5185m >20	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m >20	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>0</b>	<1	0
Lead	ppm	ASTM D5185m >20	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m >20	<b>3</b>	2	2
Tin	ppm	ASTM D5185m >20	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	<1	0

**ADDITIVES**

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 0	<b>0</b>	0	0
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 0	<b>44</b>	71	64
Calcium	ppm	ASTM D5185m 50	<b>61</b>	82	90
Phosphorus	ppm	ASTM D5185m 330	<b>291</b>	311	320
Zinc	ppm	ASTM D5185m 430	<b>365</b>	389	409
Sulfur	ppm	ASTM D5185m 760	<b>1253</b>	1910	1904

**CONTAMINANTS**

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >15	<b>▲ 41</b>	<1	0
Sodium	ppm	ASTM D5185m	<b>0</b>	2	<1
Potassium	ppm	ASTM D5185m >20	<b>0</b>	2	0
Water	%	ASTM D6304 >0.05	<b>0.005</b>	0.006	0.007
ppm Water	ppm	ASTM D6304 >500	<b>50</b>	69.1	70.6

**FLUID CLEANLINESS**

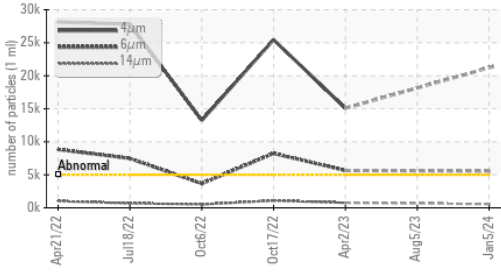
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	<b>▲ 21219</b>	---	▲ 15087
Particles >6µm	ASTM D7647 >1300	<b>▲ 5564</b>	---	▲ 5647
Particles >14µm	ASTM D7647 >160	<b>▲ 562</b>	---	▲ 758
Particles >21µm	ASTM D7647 >40	<b>▲ 189</b>	---	▲ 213
Particles >38µm	ASTM D7647 >10	<b>8</b>	---	▲ 23
Particles >71µm	ASTM D7647 >3	<b>0</b>	---	0
Oil Cleanliness	ISO 4406 (c) >19/17/14	<b>▲ 22/20/16</b>	---	▲ 21/20/17

**FLUID DEGRADATION**

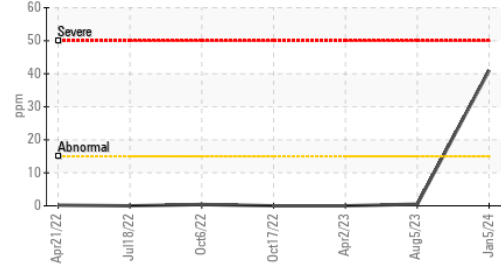
method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045 0.60	<b>0.31</b>	0.36	0.33

# OIL ANALYSIS REPORT

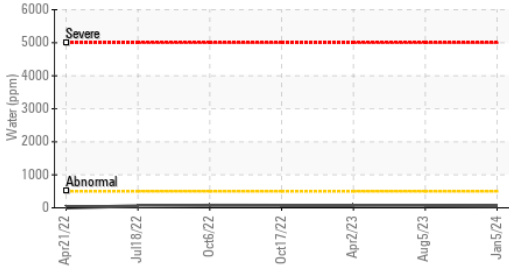
### ▲ Particle Trend



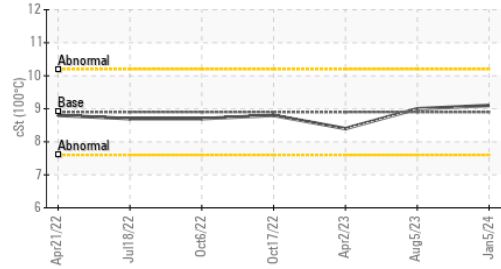
### ▲ Silicon (ppm)



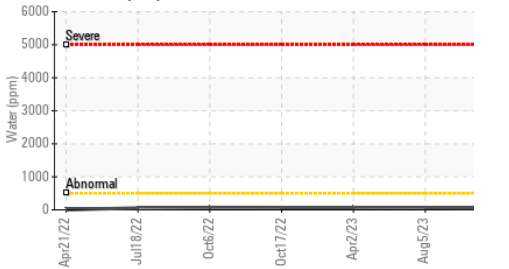
### Water (KF)



### Viscosity @ 100°C



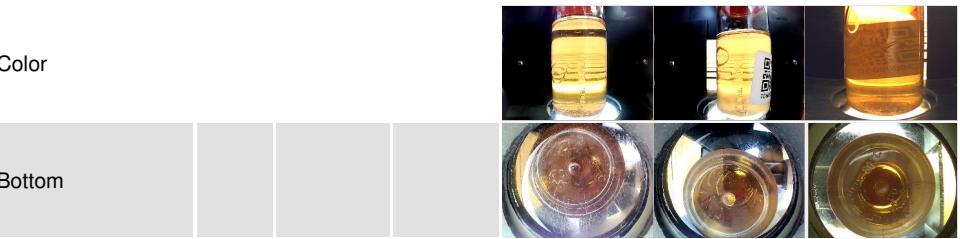
### Water (KF)



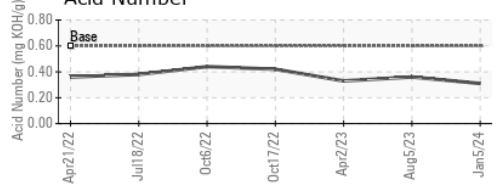
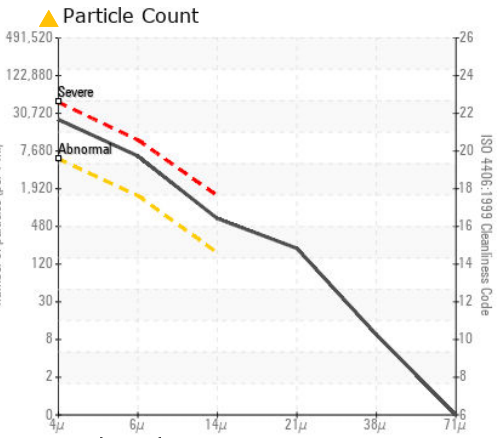
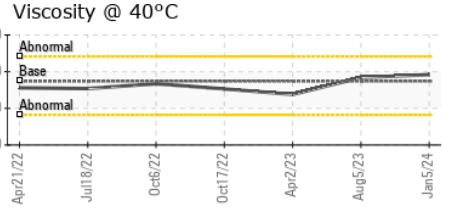
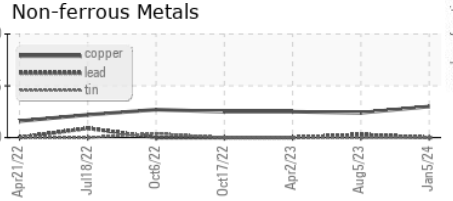
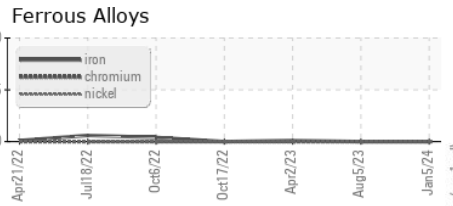
VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	▲ MODER	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	>0.05	<b>NEG</b>	NEG	NEG
Free Water	scalar	*Visual		<b>NEG</b>	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D445	67.4	<b>69.2</b>	68.4	63.8
Visc @ 100°C	cSt	ASTM D445	8.9	<b>9.1</b>	9	8.4
Viscosity Index (VI)	Scale	ASTM D2270	105	<b>106</b>	105	100

### SAMPLE IMAGES



### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TO60001687 **Received** : 19 Jan 2024  
**Lab Number** : 06065598 **Diagnosed** : 22 Jan 2024  
**Unique Number** : 10836980 **Diagnostician** : Don Baldrige  
**Test Package** : IND 2 ( Additional Tests: KF, KV100, VI )

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 HASTINGS, NE  
 US 68902  
 Contact: ADAM BARTEL  
 adam.bartel@onepapers.com  
 T:  
 F:

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)