

Machine Id  
**SCHWING #7 (S/N 11.800.04.4460.473)**  
Component  
**Hydraulic System**  
Fluid  
**PETRO CANADA HYDREX AW 46 (1000 LTR)**

**DIAGNOSIS**

- Recommendation**  
We recommend you service the filters on this component. We recommend an early resample to monitor this condition.
- Wear**  
Copper ppm levels are abnormal. Oil cooler core leaching or motor piston wear is indicated.
- Contamination**  
There is a moderate amount of silt (particulates < 14 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.

**SAMPLE INFORMATION**

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>PC0058419</b>	PC0058319	PC383420
Sample Date	Client Info	<b>09 Jul 2024</b>	16 Jan 2023	15 Aug 2017
Machine Age	hrs	<b>40297</b>	36651	25905
Oil Age	hrs	<b>0</b>	0	0
Oil Changed	Client Info	<b>Not Chngd</b>	Not Chngd	N/A
Sample Status		<b>ABNORMAL</b>	ABNORMAL	SEVERE

**CONTAMINATION**

method	limit/base	current	history1	history2
Water	WC Method	<b>NEG</b>	NEG	NEG

**WEAR METALS**

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m) >20	<b>1</b>	2	2
Chromium	ppm	ASTM D5185(m) >20	<b>1</b>	4	<1
Nickel	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	0
Lead	ppm	ASTM D5185(m) >20	<b>6</b>	2	15
Copper	ppm	ASTM D5185(m) >20	<b>84</b>	53	57
Tin	ppm	ASTM D5185(m) >20	<b>1</b>	<1	0
Antimony	ppm	ASTM D5185(m)	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)	<b>0</b>	0	0

**ADDITIVES**

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m) 0	<b>0</b>	<1	0
Barium	ppm	ASTM D5185(m) 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m) 0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m) 0	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m) 0	<b>&lt;1</b>	0	0
Calcium	ppm	ASTM D5185(m) 50	<b>44</b>	42	34
Phosphorus	ppm	ASTM D5185(m) 330	<b>310</b>	335	302
Zinc	ppm	ASTM D5185(m) 430	<b>362</b>	366	356
Sulfur	ppm	ASTM D5185(m) 760	<b>756</b>	829	702
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1

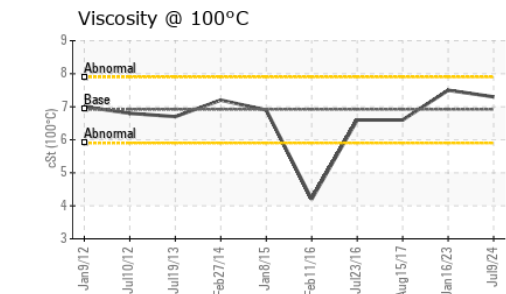
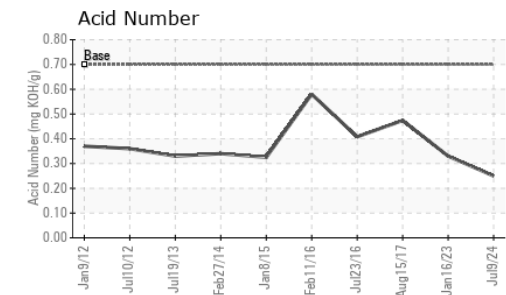
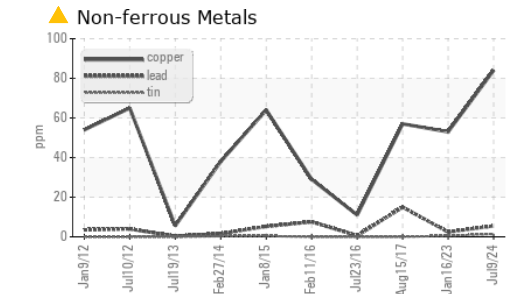
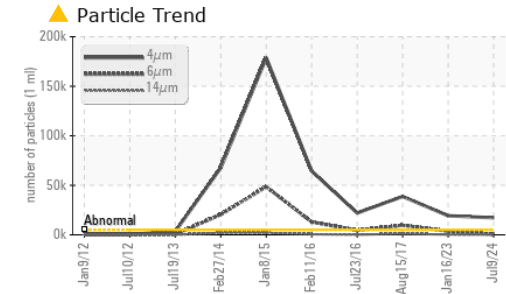
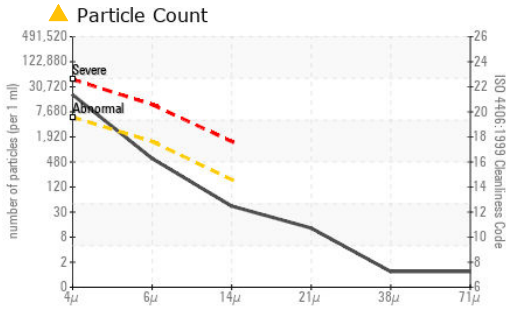
**CONTAMINANTS**

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m) >15	<b>0</b>	<1	<1
Sodium	ppm	ASTM D5185(m)	<b>0</b>	0	<1
Potassium	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	0

**FLUID CLEANLINESS**

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	<b>17194</b>	19246	38737
Particles >6µm	ASTM D7647 >1300	<b>511</b>	3660	9596
Particles >14µm	ASTM D7647 >160	<b>37</b>	224	1085
Particles >21µm	ASTM D7647 >40	<b>11</b>	47	329
Particles >38µm	ASTM D7647 >10	<b>1</b>	1	7
Particles >71µm	ASTM D7647 >3	<b>1</b>	0	0
Oil Cleanliness	ISO 4406 (c) >19/17/14	<b>21/16/12</b>	21/19/15	22/20/17

# OIL ANALYSIS REPORT



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0058419  
**Lab Number** : 02647827  
**Unique Number** : 5813379  
**Test Package** : IND 2 ( Additional Tests: KV100, VI )

ONTARIO CLEAN WATER AGENCY- SOUTH PEEL FACILITIES  
 1300 LAKESHORE RD  
 MISSISSAUGA, ON  
 CA L5E 1E9  
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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.

FLUID DEGRADATION						
	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D974*	0.70	<b>0.25</b>	0.33	0.474
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>	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	Visual*	NORML	<b>NORML</b>	NORML	▲ LAYRD
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.05	<b>NEG</b>	NEG	.2%
Free Water	scalar	Visual*		<b>NEG</b>	NEG	▲ >10%

FLUID PROPERTIES						
	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D7279(m)	46.4	<b>46.2</b>	45.9	45.5
Visc @ 100°C	cSt	ASTM D7279(m)	6.92	<b>7.3</b>	7.5	6.6
Viscosity Index (VI)	Scale	ASTM D2270*	104	<b>119</b>	128	95

SAMPLE IMAGES						
	method	limit/base	current	history1	history2	
Color						
Bottom						