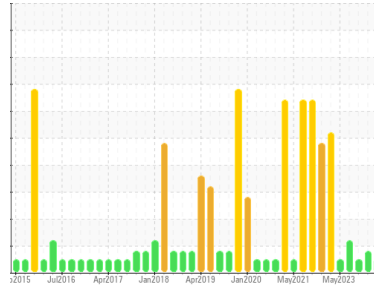


Area  
**Cranes [450255637]**  
 Machine Id  
**Crane - Mid - Hoisting Winch (S/N Sample Tag MA-04002-S5)**  
 Component  
**Gearbox**  
 Fluid  
**PETRO CANADA GEARLUBE TOS 80W90 (26 LTR)**



**DIAGNOSIS**

**Recommendation**  
 Resample at the next service interval to monitor.

**Wear**  
 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 history1 history2

Sample Number	Client Info	<b>PC0080322</b>	PC0076219	PC0052247
Sample Date	Client Info	<b>20 Jan 2024</b>	04 Oct 2023	12 Sep 2023
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>NORMAL</b>	ATTENTION	NORMAL

**CONTAMINATION** method limit/base current history1 history2

Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG
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**WEAR METALS** method limit/base current history1 history2

PQ	ASTM D8184*		<b>0</b>	0	0
Iron	ppm	ASTM D5185(m) >150	<b>1</b>	3	5
Chromium	ppm	ASTM D5185(m) >10	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m) >10	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185(m)	<b>0</b>	0	<1
Silver	ppm	ASTM D5185(m)	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185(m) >5	<b>&lt;1</b>	0	<1
Lead	ppm	ASTM D5185(m) >65	<b>0</b>	0	0
Copper	ppm	ASTM D5185(m) >80	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185(m) >8	<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m) >5	<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

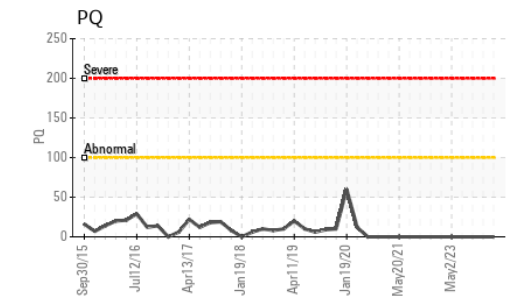
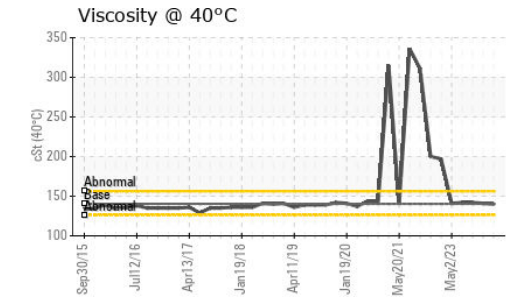
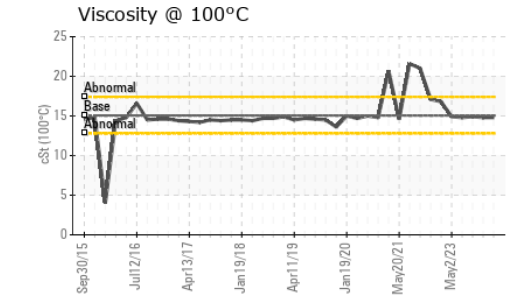
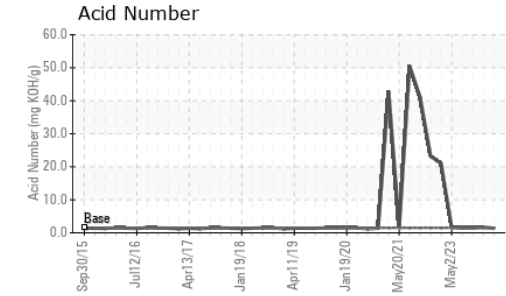
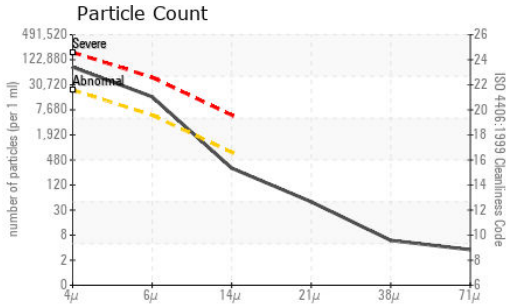
**ADDITIVES** method limit/base current history1 history2

Boron	ppm	ASTM D5185(m) 240	<b>241</b>	260	229
Barium	ppm	ASTM D5185(m) 1	<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185(m) 0.0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m) 2	<b>1</b>	<1	2
Calcium	ppm	ASTM D5185(m) 6	<b>3</b>	5	6
Phosphorus	ppm	ASTM D5185(m) 1000	<b>983</b>	965	1073
Zinc	ppm	ASTM D5185(m) 3	<b>5</b>	10	19
Sulfur	ppm	ASTM D5185(m) 19400	<b>17640</b>	17734	19689
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1

**CONTAMINANTS** method limit/base current history1 history2

Silicon	ppm	ASTM D5185(m) >20	<b>3</b>	4	6
Sodium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1
Potassium	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	0	0

# OIL ANALYSIS REPORT



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0080322 **Received** : 09 Feb 2024  
**Lab Number** : **02614509** **Tested** : 12 Feb 2024  
**Unique Number** : 5723604 **Diagnosed** : 12 Feb 2024 - Kevin Marson  
**Test Package** : IND 2 ( Additional Tests: KV100, PQ, PrtCount, 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.

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	<b>70894</b>	83761	128391	
Particles >6µm	ASTM D7647	>5000	<b>13764</b>	23548	48921	
Particles >14µm	ASTM D7647	>640	<b>269</b>	▲ 1000	546	
Particles >21µm	ASTM D7647	>160	<b>42</b>	176	58	
Particles >38µm	ASTM D7647	>40	<b>5</b>	9	9	
Particles >71µm	ASTM D7647	>10	<b>3</b>	2	8	
Oil Cleanliness	ISO 4406 (c)	>21/19/16	<b>23/21/15</b>	▲ 24/22/17	24/23/16	

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	1.5	<b>1.39</b>	1.72	1.42

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>VLITE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>	VLITE	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*	>0.2	<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 D7279(m)	140.3	<b>140</b>	141	142
Visc @ 100°C	cSt	ASTM D7279(m)	15.05	<b>14.8</b>	14.8	14.9
Viscosity Index (VI)	Scale	ASTM D2270*	109	<b>105</b>	104	105

SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						
Bottom						