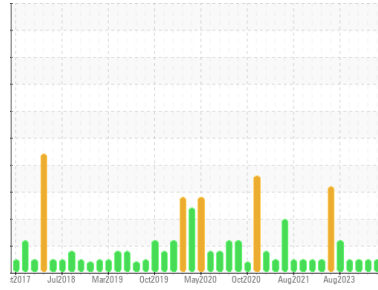


# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area

**Cranes**

Machine Id

**Crane - Fwd Slewing Gearbox #2 (S/N Sample Tag MA-04003-S8)**

Component

**Gearbox**

Fluid

**PETRO CANADA GEARLUBE TOS 80W90 (33 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>PC</b>	PC	PC0081065
Sample Date	Client Info		<b>16 May 2024</b>	20 Mar 2024	24 Jan 2024
Machine Age	hrs	Client Info	<b>0</b>	0	0
Oil Age	hrs	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

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

## WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184*		<b>0</b>	0	0
Iron	ppm	ASTM D5185(m) >150	<b>4</b>	6	3
Chromium	ppm	ASTM D5185(m) >10	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m) >10	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m) >5	<b>0</b>	0	<1
Lead	ppm	ASTM D5185(m) >65	<b>0</b>	0	0
Copper	ppm	ASTM D5185(m) >80	<b>0</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

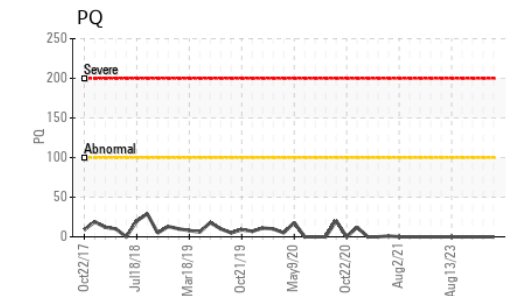
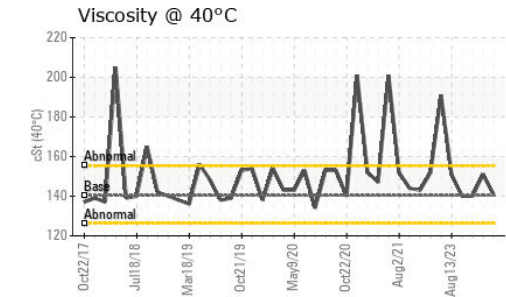
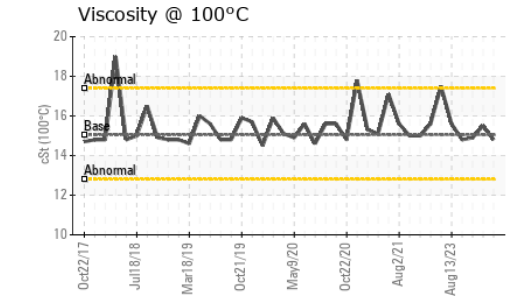
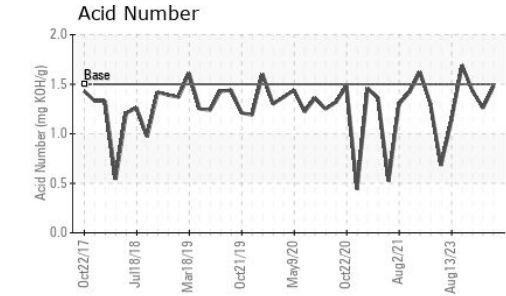
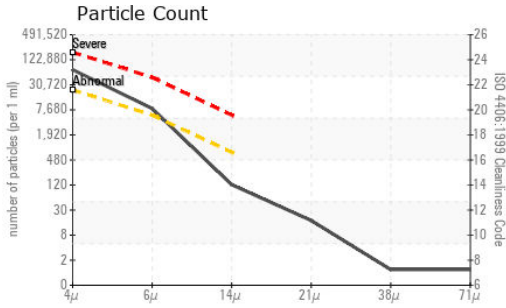
## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m) 240	<b>248</b>	182	254
Barium	ppm	ASTM D5185(m) 1	<b>0</b>	0	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	1
Calcium	ppm	ASTM D5185(m) 6	<b>4</b>	13	3
Phosphorus	ppm	ASTM D5185(m) 1000	<b>1001</b>	813	1012
Zinc	ppm	ASTM D5185(m) 3	<b>4</b>	11	4
Sulfur	ppm	ASTM D5185(m) 19400	<b>17465</b>	19791	17623
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>2</b>	<1	3
Sodium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1
Potassium	ppm	ASTM D5185(m) >20	<b>1</b>	<1	<1

# OIL ANALYSIS REPORT



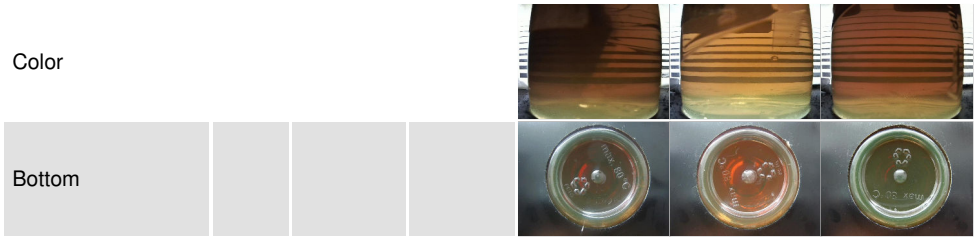
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	<b>61217</b>	21602	40605	
Particles >6µm	ASTM D7647	>5000	<b>7194</b>	1655	5093	
Particles >14µm	ASTM D7647	>640	<b>108</b>	27	81	
Particles >21µm	ASTM D7647	>160	<b>15</b>	6	13	
Particles >38µm	ASTM D7647	>40	<b>1</b>	1	2	
Particles >71µm	ASTM D7647	>10	<b>1</b>	1	1	
Oil Cleanliness	ISO 4406 (c)	>21/19/16	<b>23/20/14</b>	22/18/12	23/20/14	

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	1.5	<b>1.48</b>	1.26	1.43

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>VLITE</b>	NONE	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>141</b>	151	140
Visc @ 100°C	cSt	ASTM D7279(m)	15.05	<b>14.8</b>	15.5	14.9
Viscosity Index (VI)	Scale	ASTM D2270*	109	<b>104</b>	104	106

## SAMPLE IMAGES



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC  
**Lab Number** : **02638941**  
**Unique Number** : 5788103  
**Test Package** : MAR 2 ( Additional Tests: KV100, PQ, PrtCount, VI )  
**Received** : 30 May 2024  
**Tested** : 31 May 2024  
**Diagnosed** : 03 Jun 2024 - Kevin Marson

**Suncor - Terra Nova Projects**  
 Scotia Centre, 235 Water Street  
 St. John's, NL  
 CA A1C 1B6  
 Contact: Josh Hynes  
 joshynes@suncor.com  
 T: (709)778-3575  
 F: (709)724-2835

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.