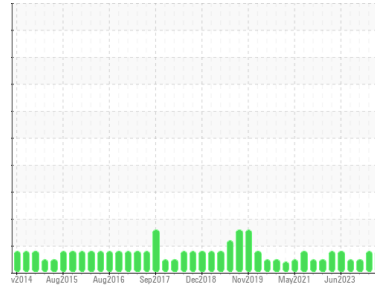


# OIL ANALYSIS REPORT

Sample Rating Trend



## VISCOSITY



Area

**Cranes**

Machine Id

**Crane - Mid Ship Distribution Gearbox (S/N Sample Tag MA-04002-S11)**

Component

**Gearbox**

Fluid

**PETRO CANADA TRAXON 80W90 (6 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**

Viscosity of sample indicates oil is within SAE 75W90 range, advise investigate. 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>	PC0081067	PC0076230
Sample Date	Client Info	<b>20 Mar 2024</b>	20 Jan 2024	04 Oct 2023
Machine Age	hrs	Client Info	<b>0</b>	0
Oil Age	hrs	Client Info	<b>0</b>	0
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>ABNORMAL</b>	ABNORMAL	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>5</b>	5
Chromium	ppm	ASTM D5185(m) >10	<b>0</b>	0
Nickel	ppm	ASTM D5185(m) >10	<b>0</b>	0
Titanium	ppm	ASTM D5185(m)	<b>0</b>	0
Silver	ppm	ASTM D5185(m)	<b>0</b>	0
Aluminum	ppm	ASTM D5185(m) >5	<b>&lt;1</b>	<1
Lead	ppm	ASTM D5185(m) >65	<b>0</b>	0
Copper	ppm	ASTM D5185(m) >80	<b>&lt;1</b>	<1
Tin	ppm	ASTM D5185(m) >8	<b>0</b>	0
Antimony	ppm	ASTM D5185(m) >5	<b>0</b>	0
Vanadium	ppm	ASTM D5185(m)	<b>0</b>	0
Beryllium	ppm	ASTM D5185(m)	<b>0</b>	0
Cadmium	ppm	ASTM D5185(m)	<b>0</b>	0

### ADDITIVES

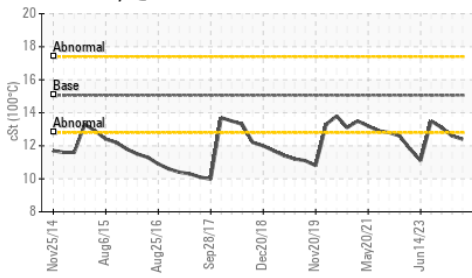
method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m) 243	<b>229</b>	227
Barium	ppm	ASTM D5185(m) 1	<b>&lt;1</b>	<1
Molybdenum	ppm	ASTM D5185(m)	<b>0</b>	0
Manganese	ppm	ASTM D5185(m)	<b>0</b>	0
Magnesium	ppm	ASTM D5185(m) 2	<b>1</b>	<1
Calcium	ppm	ASTM D5185(m) 6	<b>10</b>	10
Phosphorus	ppm	ASTM D5185(m) 987	<b>892</b>	926
Zinc	ppm	ASTM D5185(m) 1	<b>19</b>	18
Sulfur	ppm	ASTM D5185(m) 21530	<b>15694</b>	16558
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1

### CONTAMINANTS

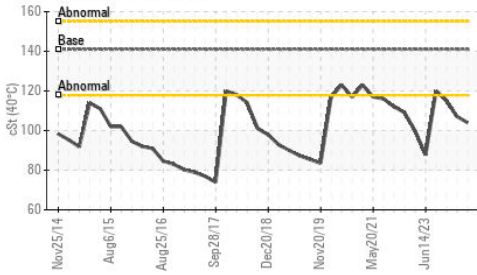
method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >20	<b>2</b>	3
Sodium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1
Potassium	ppm	ASTM D5185(m) >20	<b>0</b>	<1

# OIL ANALYSIS REPORT

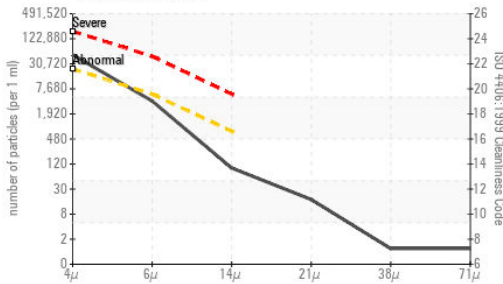
▲ Viscosity @ 100°C



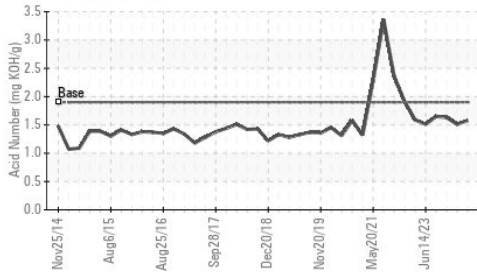
▲ Viscosity @ 40°C



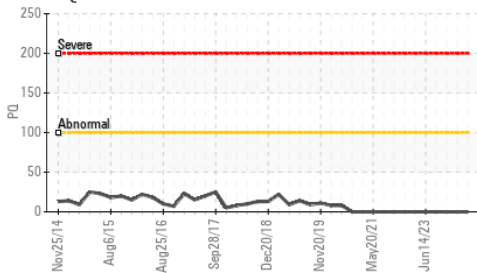
Particle Count



Acid Number



PQ



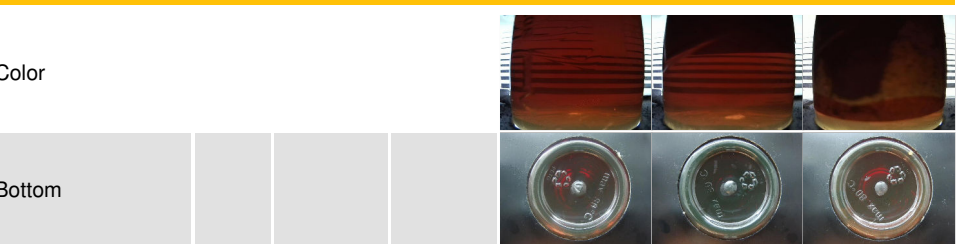
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	<b>43735</b>	47234	44087
Particles >6µm	ASTM D7647	>5000	<b>3421</b>	3887	4424
Particles >14µm	ASTM D7647	>640	<b>85</b>	98	124
Particles >21µm	ASTM D7647	>160	<b>15</b>	18	26
Particles >38µm	ASTM D7647	>40	<b>1</b>	1	3
Particles >71µm	ASTM D7647	>10	<b>1</b>	1	2
Oil Cleanliness	ISO 4406 (c)	>21/19/16	<b>23/19/14</b>	23/19/14	23/19/14

FLUID DEGRADATION	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D974*	1.9	<b>1.58</b>	1.51	1.63

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	VLITE
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)	141.0	▲ <b>104</b>	▲ 107	115
Visc @ 100°C	cSt	ASTM D7279(m)	15.06	▲ <b>12.4</b>	▲ 12.6	13.1
Viscosity Index (VI)	Scale	ASTM D2270*	108	<b>111</b>	110	108

SAMPLE IMAGES



ISO 17025:2017  
Accredited  
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
 Sample No. : PC  
 Lab Number : **02626216**  
 Unique Number : 5759348  
 Test Package : MAR 2 ( Additional Tests: KV100, PQ, PrtCount, TAN Man, VI )  
 Received : 02 Apr 2024  
 Tested : 03 Apr 2024  
 Diagnosed : 03 Apr 2024 - Kevin Marson

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.

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