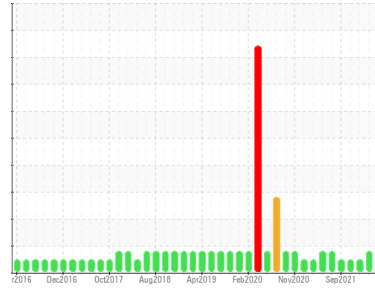


Area
Cranes
Machine Id
Crane - Aft - Slewing Gearbox N°2 (S/N Sample Tag MA-04001-S8)
Component
Gearbox
Fluid
PETRO CANADA GEARLUBE TOS 80W90 (8 LTR)



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	PC	PC0039820	PC
Sample Date	Client Info	26 Nov 2023	16 Aug 2023	16 May 2023
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		NORMAL	ATTENTION	NORMAL

CONTAMINATION method limit/base current history1 history2

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

PQ	ASTM D8184*		0	0	0
Iron	ppm	ASTM D5185(m) >150	8	9	7
Chromium	ppm	ASTM D5185(m) >10	0	0	0
Nickel	ppm	ASTM D5185(m) >10	2	2	<1
Titanium	ppm	ASTM D5185(m)	0	0	0
Silver	ppm	ASTM D5185(m)	<1	<1	0
Aluminum	ppm	ASTM D5185(m) >5	0	<1	<1
Lead	ppm	ASTM D5185(m) >65	<1	0	0
Copper	ppm	ASTM D5185(m) >80	10	2	2
Tin	ppm	ASTM D5185(m) >8	<1	0	0
Antimony	ppm	ASTM D5185(m) >5	0	0	<1
Vanadium	ppm	ASTM D5185(m)	0	0	0
Beryllium	ppm	ASTM D5185(m)	0	0	0
Cadmium	ppm	ASTM D5185(m)	0	0	0

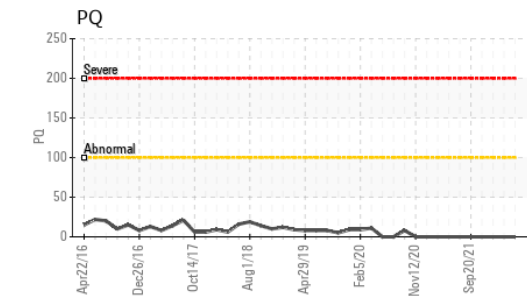
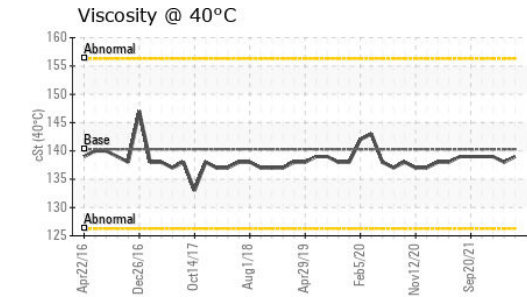
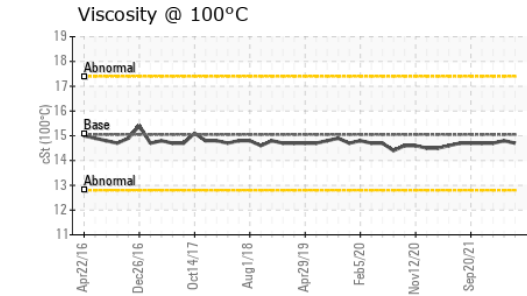
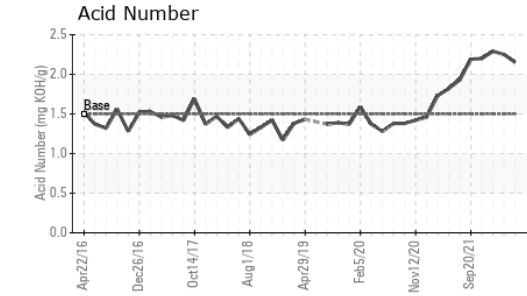
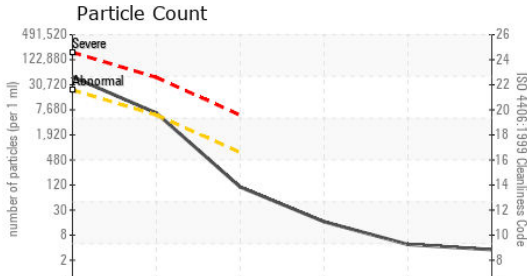
ADDITIVES method limit/base current history1 history2

Boron	ppm	ASTM D5185(m) 240	204	215	236
Barium	ppm	ASTM D5185(m) 1	2	2	1
Molybdenum	ppm	ASTM D5185(m) 0.0	0	0	0
Manganese	ppm	ASTM D5185(m)	0	<1	<1
Magnesium	ppm	ASTM D5185(m) 2	<1	1	<1
Calcium	ppm	ASTM D5185(m) 6	22	23	27
Phosphorus	ppm	ASTM D5185(m) 1000	960	1036	1087
Zinc	ppm	ASTM D5185(m) 3	227	224	244
Sulfur	ppm	ASTM D5185(m) 19400	21281	21601	24528
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS method limit/base current history1 history2

Silicon	ppm	ASTM D5185(m) >20	2	3	3
Sodium	ppm	ASTM D5185(m)	1	<1	<1
Potassium	ppm	ASTM D5185(m) >20	0	<1	0

OIL ANALYSIS REPORT



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC
Lab Number : 02599084
Unique Number : 5684164
Test Package : MAR 2 (Additional Tests: KV100, PQ, PrtCount, TAN Man, VI)
Received : 27 Nov 2023
Diagnosed : 28 Nov 2023
Diagnostician : 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.

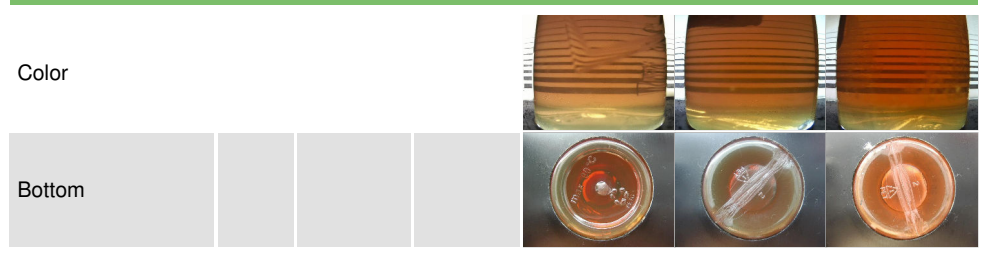
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	41437	75779	65983	
Particles >6µm	ASTM D7647	>5000	5613	18330	14665	
Particles >14µm	ASTM D7647	>640	95	▲ 674	567	
Particles >21µm	ASTM D7647	>160	14	169	106	
Particles >38µm	ASTM D7647	>40	4	16	5	
Particles >71µm	ASTM D7647	>10	3	10	2	
Oil Cleanliness	ISO 4406 (c)	>21/19/16	23/20/14	▲ 23/21/17	23/21/16	

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	1.5	2.15	2.25	2.29

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	VLITE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	140.3	139	138	139
Visc @ 100°C	cSt	ASTM D7279(m)	15.05	14.7	14.8	14.7
Viscosity Index (VI)	Scale	ASTM D2270*	109	105	107	105

SAMPLE IMAGES



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