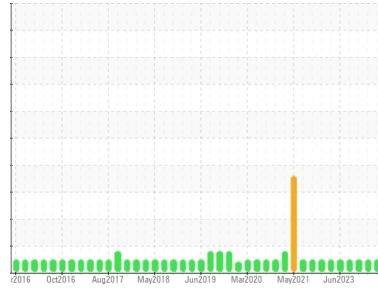


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area

Cranes

Machine Id

Crane - Mid Ship Slewing Gearbox #2 (S/N Sample Tag MA-04002-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		PC	PC0080323	PC0076224
Sample Date	Client Info		19 Mar 2024	20 Jan 2024	04 Oct 2023
Machine Age	hrs	Client Info	0	0	0
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

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

WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184*		0	0	0
Iron	ppm	ASTM D5185(m) >150	11	9	8
Chromium	ppm	ASTM D5185(m) >10	0	0	0
Nickel	ppm	ASTM D5185(m) >10	0	0	0
Titanium	ppm	ASTM D5185(m)	0	0	0
Silver	ppm	ASTM D5185(m)	0	0	<1
Aluminum	ppm	ASTM D5185(m) >5	0	<1	0
Lead	ppm	ASTM D5185(m) >65	0	<1	<1
Copper	ppm	ASTM D5185(m) >80	4	<1	<1
Tin	ppm	ASTM D5185(m) >8	0	0	0
Antimony	ppm	ASTM D5185(m) >5	0	0	0
Vanadium	ppm	ASTM D5185(m)	0	0	0
Beryllium	ppm	ASTM D5185(m)	0	0	0
Cadmium	ppm	ASTM D5185(m)	0	0	0

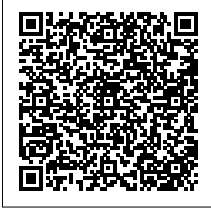
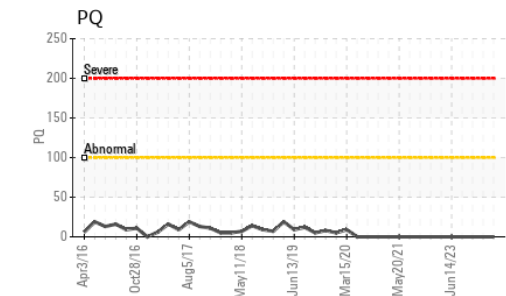
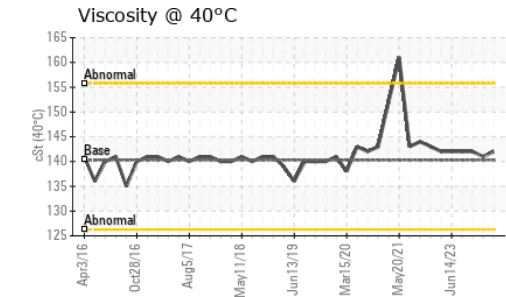
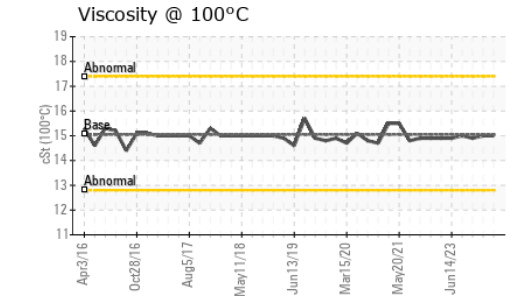
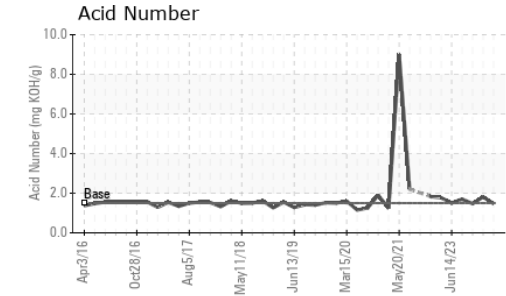
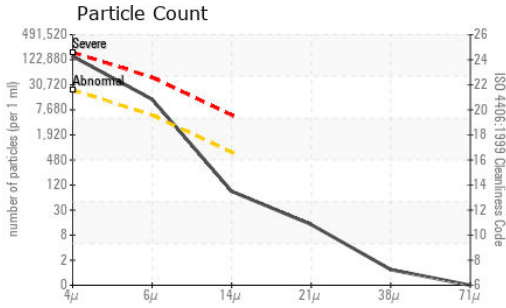
ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m) 240	230	223	253
Barium	ppm	ASTM D5185(m) 1	<1	<1	<1
Molybdenum	ppm	ASTM D5185(m) 0.0	0	0	0
Manganese	ppm	ASTM D5185(m)	0	<1	0
Magnesium	ppm	ASTM D5185(m) 2	1	2	<1
Calcium	ppm	ASTM D5185(m) 6	3	17	4
Phosphorus	ppm	ASTM D5185(m) 1000	911	1011	927
Zinc	ppm	ASTM D5185(m) 3	12	144	12
Sulfur	ppm	ASTM D5185(m) 19400	19756	23108	19622
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >20	2	3	4
Sodium	ppm	ASTM D5185(m)	1	2	<1
Potassium	ppm	ASTM D5185(m) >20	<1	<1	0

OIL ANALYSIS REPORT



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC **Received** : 02 Apr 2024
Lab Number : **02626217** **Tested** : 03 Apr 2024
Unique Number : 5759349 **Diagnosed** : 03 Apr 2024 - Kevin Marson
Test Package : MAR 2 (Additional Tests: KV100, PQ, PrtCount, TAN Man, 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	128297	31878	91068	
Particles >6µm	ASTM D7647	>5000	11925	6070	16440	
Particles >14µm	ASTM D7647	>640	75	377	68	
Particles >21µm	ASTM D7647	>160	12	104	17	
Particles >38µm	ASTM D7647	>40	1	9	7	
Particles >71µm	ASTM D7647	>10	0	1	6	
Oil Cleanliness	ISO 4406 (c)	>21/19/16	24/21/13	22/20/16	24/21/13	

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	1.5	1.47	1.81	1.47

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	142	141	142
Visc @ 100°C	cSt	ASTM D7279(m)	15.05	15.0	15.0	14.9
Viscosity Index (VI)	Scale	ASTM D2270*	109	106	107	105

SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						
Bottom						