

OIL ANALYSIS REPORT

Area

Cranes

Machine Id

Crane - Aft - Slewing Gearbox N°2 (S/N Sample Tag MA-04001-S8)

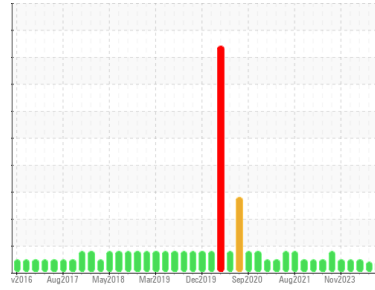
Component

Gearbox

Fluid

PETRO CANADA GEARLUBE TOS 80W90 (8 LTR)

Sample Rating Trend



ADDITIVES



DIAGNOSIS

Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. 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

Additive levels indicate the addition of a different brand, or type of oil. 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			PC0080131	PC	PC0082747
Sample Date	Client Info			15 Jul 2024	30 Apr 2024	17 Mar 2024
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				ATTENTION	ATTENTION	NORMAL

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

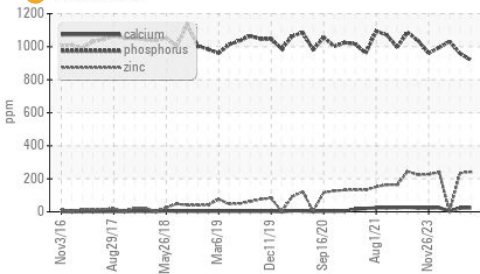
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		0	0	0
Iron	ppm	ASTM D5185(m)	>150	11	10	4
Chromium	ppm	ASTM D5185(m)	>10	0	0	0
Nickel	ppm	ASTM D5185(m)	>10	2	2	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		<1	0	0
Aluminum	ppm	ASTM D5185(m)	>5	0	0	<1
Lead	ppm	ASTM D5185(m)	>65	0	0	0
Copper	ppm	ASTM D5185(m)	>80	14	13	<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	207	201	253
Barium	ppm	ASTM D5185(m)	1	2	2	0
Molybdenum	ppm	ASTM D5185(m)	0.0	0	0	0
Manganese	ppm	ASTM D5185(m)		<1	<1	0
Magnesium	ppm	ASTM D5185(m)	2	<1	<1	<1
Calcium	ppm	ASTM D5185(m)	6	23	23	4
Phosphorus	ppm	ASTM D5185(m)	1000	920	959	1033
Zinc	ppm	ASTM D5185(m)	3	240	235	3
Sulfur	ppm	ASTM D5185(m)	19400	21595	21291	17980
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

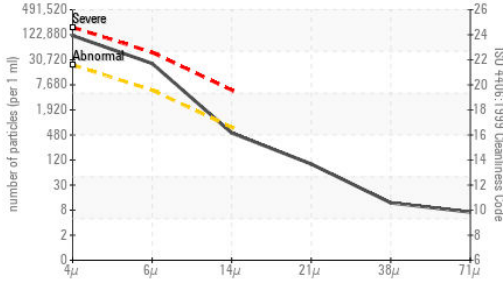
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	2	3	4
Sodium	ppm	ASTM D5185(m)		<1	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	1

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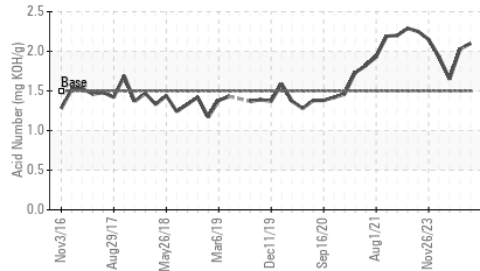
Additives



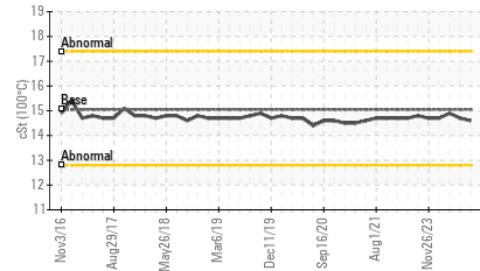
Particle Count



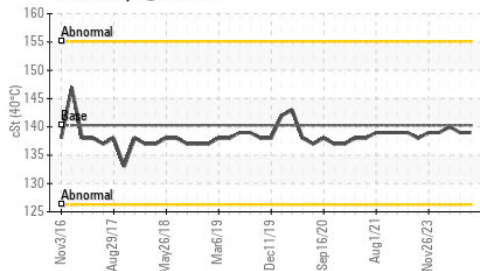
Acid Number



Viscosity @ 100°C



Viscosity @ 40°C



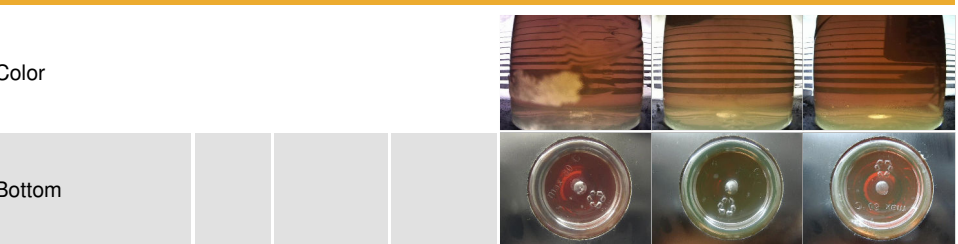
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	101132	105933	54550
Particles >6µm	ASTM D7647	>5000	21732	24584	6449
Particles >14µm	ASTM D7647	>640	472	381	54
Particles >21µm	ASTM D7647	>160	85	52	11
Particles >38µm	ASTM D7647	>40	10	7	6
Particles >71µm	ASTM D7647	>10	6	6	5
Oil Cleanliness	ISO 4406 (c)	>21/19/16	24/22/16	24/22/16	23/20/13

FLUID DEGRADATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D974*	1.5	2.10	2.03	1.65

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	NONE	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	139	140
Visc @ 100°C	cSt ASTM D7279(m)	15.05	14.6	14.7	14.9
Viscosity Index (VI)	Scale ASTM D2270*	109	104	105	106

SAMPLE IMAGES



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0080131
Lab Number : **02648236**
Unique Number : 5813788
Test Package : IND 2 (Additional Tests: KV100, PQ, PrtCount, TAN Man, VI)

Received : 16 Jul 2024
Tested : 17 Jul 2024
Diagnosed : 18 Jul 2024 - Kevin Marson

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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.