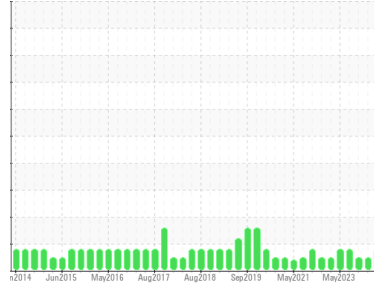


Area
Cranes [450255637]
Machine Id
Crane - Mid Ship Distribution Gearbox (S/N Sample Tag MA-04002-S11)
Component
Gearbox
Fluid
PETRO CANADA TRAXON 80W90 (6 LTR)



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			PC0081067	PC0076230	PC0040543
Sample Date	Client Info			20 Jan 2024	04 Oct 2023	12 Aug 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				ABNORMAL	NORMAL	NORMAL

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

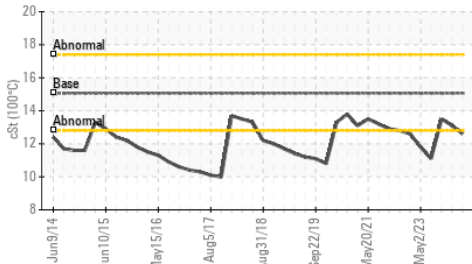
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		0	0	0
Iron	ppm	ASTM D5185(m)	>150	5	4	4
Chromium	ppm	ASTM D5185(m)	>10	0	0	0
Nickel	ppm	ASTM D5185(m)	>10	0	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	<1	0
Aluminum	ppm	ASTM D5185(m)	>5	<1	0	0
Lead	ppm	ASTM D5185(m)	>65	0	<1	0
Copper	ppm	ASTM D5185(m)	>80	<1	<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)	243	227	253	251
Barium	ppm	ASTM D5185(m)	1	<1	<1	<1
Molybdenum	ppm	ASTM D5185(m)		0	0	0
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)	2	<1	<1	<1
Calcium	ppm	ASTM D5185(m)	6	10	7	6
Phosphorus	ppm	ASTM D5185(m)	987	926	924	1071
Zinc	ppm	ASTM D5185(m)	1	18	18	16
Sulfur	ppm	ASTM D5185(m)	21530	16558	16367	17824
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

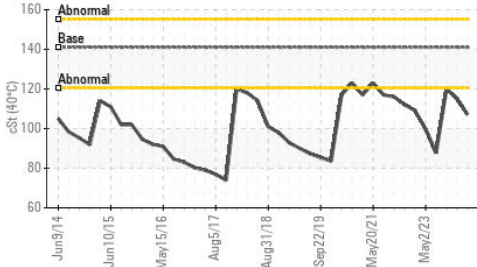
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	3	3	3
Sodium	ppm	ASTM D5185(m)		<1	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	<1	0	<1

OIL ANALYSIS REPORT

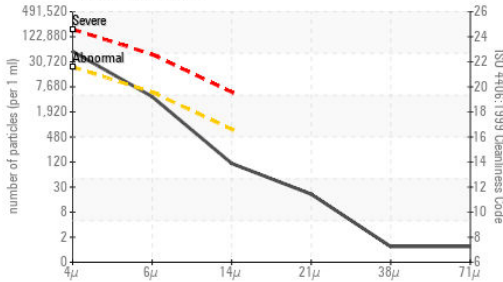
▲ Viscosity @ 100°C



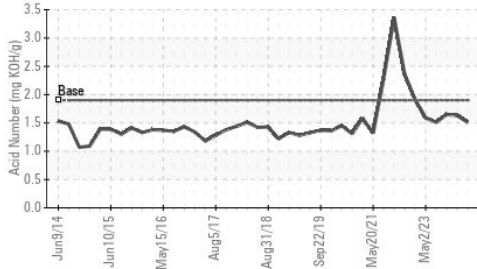
▲ Viscosity @ 40°C



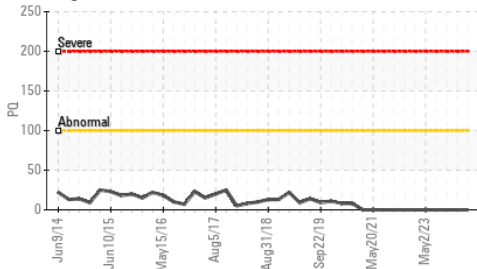
Particle Count



Acid Number



PQ



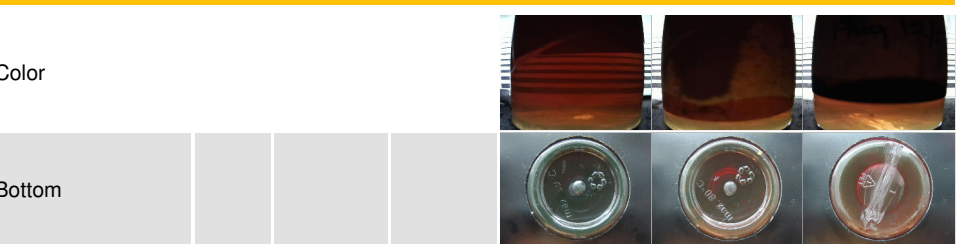
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	47234	44087	50363
Particles >6µm	ASTM D7647	>5000	3887	4424	7242
Particles >14µm	ASTM D7647	>640	98	124	444
Particles >21µm	ASTM D7647	>160	18	26	130
Particles >38µm	ASTM D7647	>40	1	3	9
Particles >71µm	ASTM D7647	>10	1	2	5
Oil Cleanliness	ISO 4406 (c)	>21/19/16	23/19/14	23/19/14	23/20/16

FLUID DEGRADATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D974*	1.9	1.51	1.63	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	VLITE	VLITE
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)	141.0	▲ 107	115	120
Visc @ 100°C	cSt ASTM D7279(m)	15.06	▲ 12.6	13.1	13.5
Viscosity Index (VI)	Scale ASTM D2270*	108	110	108	108

SAMPLE IMAGES



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
 Sample No. : PC0081067
 Lab Number : **02614807**
 Unique Number : 5723902
 Test Package : MAR 2 (Additional Tests: KV100, PQ, PrtCount, TAN Man, VI)
 Received : 09 Feb 2024
 Tested : 13 Feb 2024
 Diagnosed : 13 Feb 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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