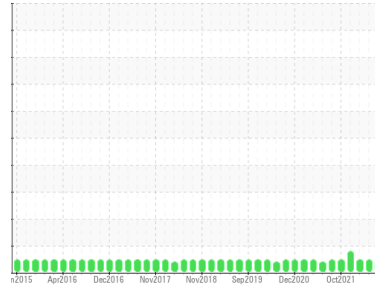


Area
Cranes [450207986]
 Machine Id
Crane - Mid - Hydraulic System (Luffing) (S/N Sample Tag MA-04002-S1)
 Component
Hydraulic System
 Fluid
PETRO CANADA ATF DEXRON III/MERCON (800 LTR)



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	PC0076221	PC0052594	PC0052191
Sample Date	Client Info	04 Oct 2023	12 Aug 2023	14 Jun 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

WEAR METALS method limit/base current history1 history2

PQ	ASTM D8184*		0	0	0
Iron	ppm ASTM D5185(m)	>20	<1	2	2
Chromium	ppm ASTM D5185(m)	>10	0	0	0
Nickel	ppm ASTM D5185(m)	>10	<1	<1	0
Titanium	ppm ASTM D5185(m)		0	0	0
Silver	ppm ASTM D5185(m)		<1	0	0
Aluminum	ppm ASTM D5185(m)	>10	0	<1	<1
Lead	ppm ASTM D5185(m)	>20	<1	2	2
Copper	ppm ASTM D5185(m)	>20	1	3	3
Tin	ppm ASTM D5185(m)	>10	0	<1	0
Antimony	ppm ASTM D5185(m)		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)	130	102	82	81
Barium	ppm ASTM D5185(m)	1.0	2	8	7
Molybdenum	ppm ASTM D5185(m)	0.0	0	<1	<1
Manganese	ppm ASTM D5185(m)		0	0	0
Magnesium	ppm ASTM D5185(m)	1.0	2	<1	<1
Calcium	ppm ASTM D5185(m)	20	66	36	35
Phosphorus	ppm ASTM D5185(m)	280	238	312	293
Zinc	ppm ASTM D5185(m)	10	46	141	130
Sulfur	ppm ASTM D5185(m)	440	737	816	772
Lithium	ppm ASTM D5185(m)		<1	<1	<1

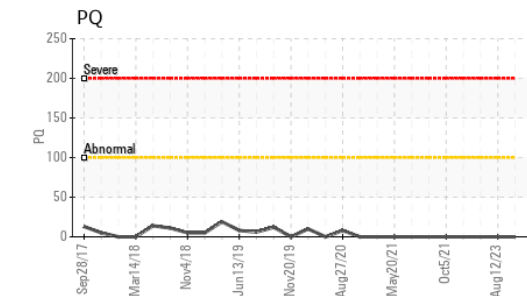
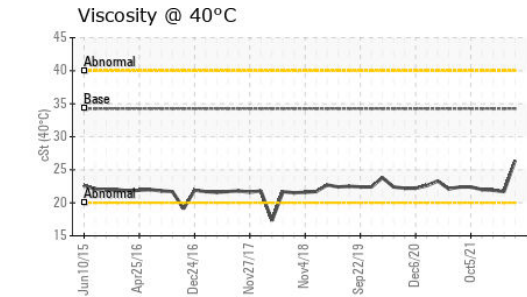
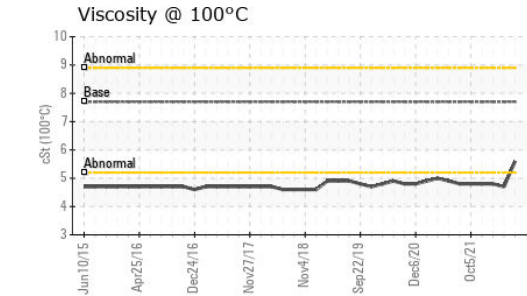
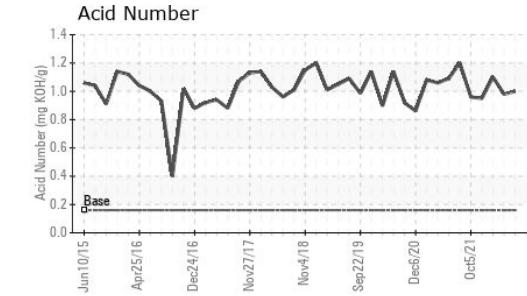
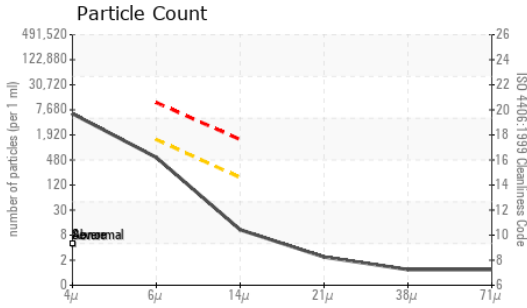
CONTAMINANTS method limit/base current history1 history2

Silicon	ppm ASTM D5185(m)	>15	2	1	1
Sodium	ppm ASTM D5185(m)		1	2	2
Potassium	ppm ASTM D5185(m)	>20	0	1	<1

FLUID CLEANLINESS method limit/base current history1 history2

Particles >4µm	ASTM D7647		5409	2669	2777
Particles >6µm	ASTM D7647	>1300	485	348	345
Particles >14µm	ASTM D7647	>160	9	10	11
Particles >21µm	ASTM D7647	>40	2	3	3
Particles >38µm	ASTM D7647	>10	1	0	0
Particles >71µm	ASTM D7647	>3	1	0	0
Oil Cleanliness	ISO 4406 (c)	>--/17/14	20/16/10	19/16/10	19/16/11

OIL ANALYSIS REPORT

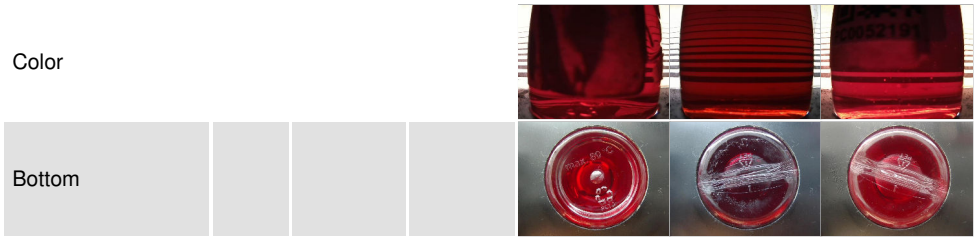


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.16	1.00	0.98	1.10

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*	>0.05	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)	34.26	26.4	21.7	21.9
Visc @ 100°C	cSt	ASTM D7279(m)	7.7	5.6	4.7	4.8
Viscosity Index (VI)	Scale	ASTM D2270*	210	158	139	145

SAMPLE IMAGES



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0076221
Lab Number : **02590061**
Unique Number : 5659127
Test Package : MAR 2 (Additional Tests: KV100, PQ, TAN Man, VI)
Received : 18 Oct 2023
Diagnosed : 19 Oct 2023
Diagnostician : Kevin Marson

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 St. John's, NL
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 F: (709)724-2835

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.