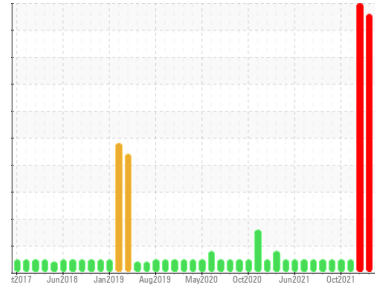


Area
Cranes [450185704]
Machine Id
Crane - Fwd Hydraulic Reservoir (S/N Sample Tag MA-04003-S4)
Component
Hydraulic System
Fluid
PETRO CANADA ATF DEXRON III/MERCON (800 LTR)



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	PC	PC0053011	PC0040129
Sample Date	Client Info	13 Aug 2023	02 May 2023	29 Nov 2021
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	SEVERE	ABNORMAL

WEAR METALS method limit/base current history1 history2

PQ	ASTM D8184*		0	0	0
Iron	ppm	ASTM D5185(m) >20	3	2	3
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	0	<1
Aluminum	ppm	ASTM D5185(m) >10	<1	<1	1
Lead	ppm	ASTM D5185(m) >20	4	4	▲ 6
Copper	ppm	ASTM D5185(m) >20	6	6	▲ 8
Tin	ppm	ASTM D5185(m) >10	<1	<1	<1
Antimony	ppm	ASTM D5185(m)	0	<1	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	76	75	67
Barium	ppm	ASTM D5185(m) 1.0	<1	<1	<1
Molybdenum	ppm	ASTM D5185(m) 0.0	<1	0	<1
Manganese	ppm	ASTM D5185(m)	0	<1	<1
Magnesium	ppm	ASTM D5185(m) 1.0	2	<1	<1
Calcium	ppm	ASTM D5185(m) 20	63	60	50
Phosphorus	ppm	ASTM D5185(m) 280	289	277	279
Zinc	ppm	ASTM D5185(m) 10	115	92	111
Sulfur	ppm	ASTM D5185(m) 440	851	806	812
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

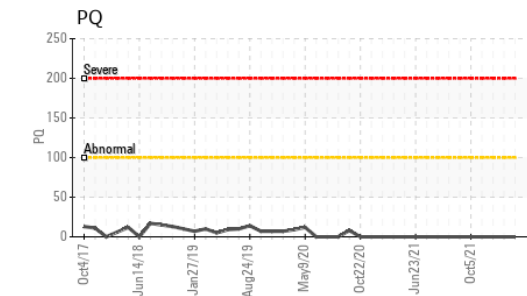
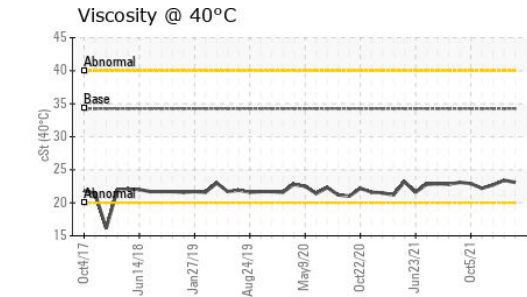
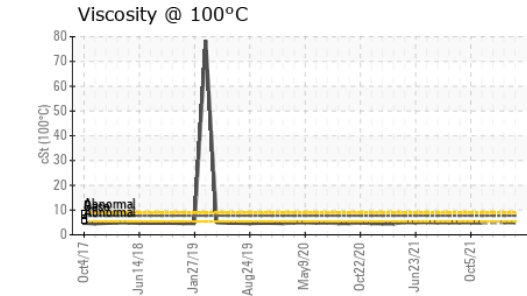
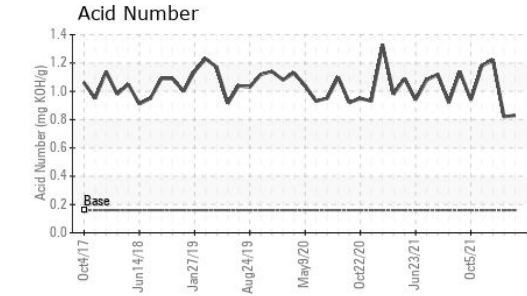
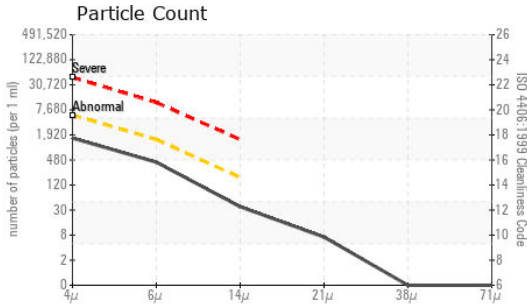
CONTAMINANTS method limit/base current history1 history2

Silicon	ppm	ASTM D5185(m) >15	4	7	▲ 21
Sodium	ppm	ASTM D5185(m)	2	2	3
Potassium	ppm	ASTM D5185(m) >20	1	1	1

FLUID CLEANLINESS method limit/base current history1 history2

Particles >4µm	ASTM D7647	>5000	1406	● 61792	▲ 36180
Particles >6µm	ASTM D7647	>1300	374	● 29634	▲ 9189
Particles >14µm	ASTM D7647	>160	32	● 3897	▲ 681
Particles >21µm	ASTM D7647	>40	6	● 767	▲ 184
Particles >38µm	ASTM D7647	>10	0	▲ 16	▲ 19
Particles >71µm	ASTM D7647	>3	0	2	2
Oil Cleanliness	ISO 4406 (c)	>19/17/14	18/16/12	● 23/22/19	▲ 22/20/17

OIL ANALYSIS REPORT

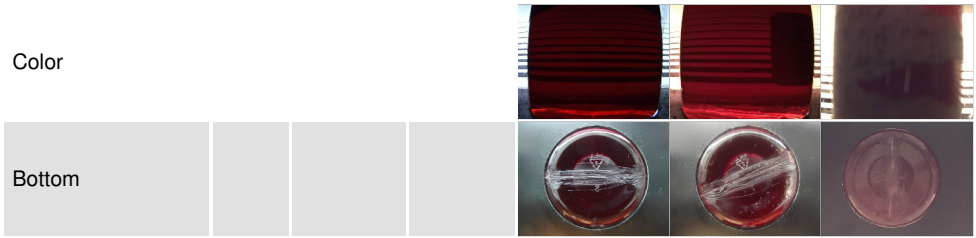


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.16	0.83	0.82	1.22

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	VLITE	▲ LIGHT
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	LIGHT	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.05	NEG	.5%	▲ 1%
Free Water	scalar	Visual*		NEG	▲ 5%	▲ >10%

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	34.26	23.1	23.4	22.7
Visc @ 100°C	cSt	ASTM D7279(m)	7.7	4.9	5	---
Viscosity Index (VI)	Scale	ASTM D2270*	210	140	145	▲ 836

SAMPLE IMAGES



Color

Bottom



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC
Lab Number : 02582165
Unique Number : 5643230
Test Package : MAR 2 (Additional Tests: KV100, PQ, VI)
Received : 13 Sep 2023
Diagnosed : 14 Sep 2023
Diagnostician : Kevin Marson

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 Scotia Centre, 235 Water Strret
 St. John's, NL
 CA A1C 1B6
 Contact: Josh Hynes
 joshynes@suncor.com
 T: (709)778-3575
 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.