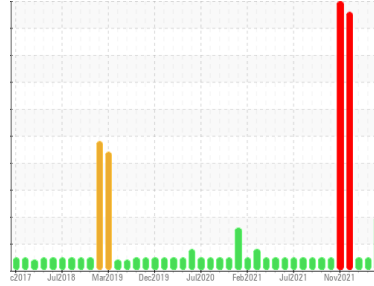


Area
Cranes [450255636]
 Machine Id
Crane - Fwd Hydraulic Reservoir (S/N Sample Tag MA-04003-S4)
 Component
Hydraulic System
 Fluid
PETRO CANADA ATF DEXRON III/MERCON (800 LTR)



DIAGNOSIS

Recommendation
 We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition.

Wear
 All component wear rates are normal.

Contamination
 There is a moderate amount of particulates (2 to 100 microns in size) present in the oil. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code.

Fluid Condition
 The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	PC0076312	PC0078235	PC
Sample Date	Client Info	24 Jan 2024	27 Dec 2023	13 Aug 2023
Machine Age	hrs	0	0	0
Oil Age	hrs	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 >0.05	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2
PQ	ASTM D8184*	0	0	0
Iron	ppm ASTM D5185(m) >20	1	<1	3
Chromium	ppm ASTM D5185(m) >10	0	0	0
Nickel	ppm ASTM D5185(m) >10	0	<1	0
Titanium	ppm ASTM D5185(m)	0	0	0
Silver	ppm ASTM D5185(m)	0	0	0
Aluminum	ppm ASTM D5185(m) >10	<1	<1	<1
Lead	ppm ASTM D5185(m) >20	2	2	4
Copper	ppm ASTM D5185(m) >20	3	3	6
Tin	ppm ASTM D5185(m) >10	<1	<1	<1
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

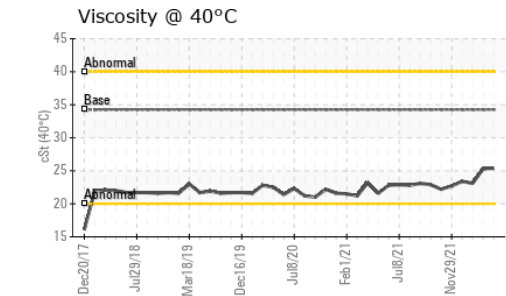
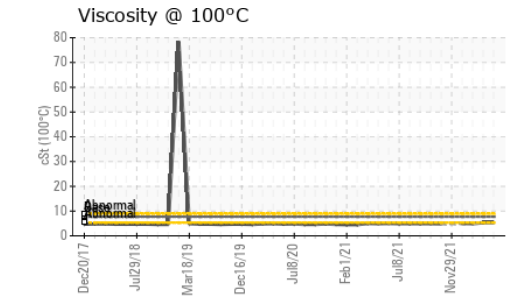
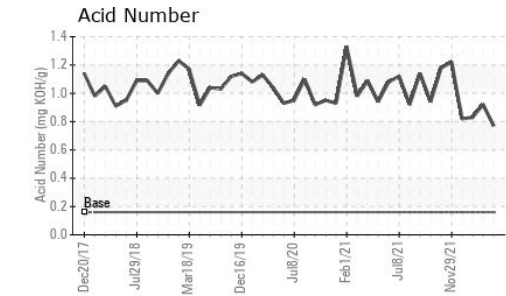
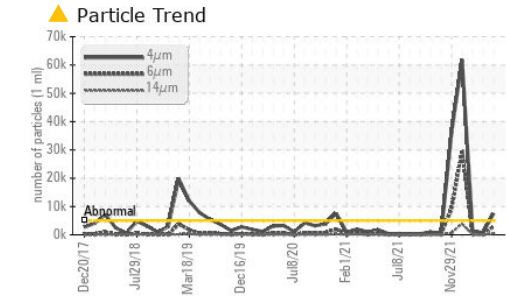
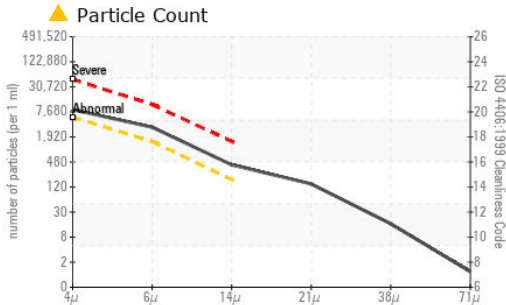
ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185(m) 130	100	94	76
Barium	ppm ASTM D5185(m) 1.0	0	0	<1
Molybdenum	ppm ASTM D5185(m) 0.0	0	0	<1
Manganese	ppm ASTM D5185(m)	0	0	0
Magnesium	ppm ASTM D5185(m) 1.0	2	2	2
Calcium	ppm ASTM D5185(m) 20	75	75	63
Phosphorus	ppm ASTM D5185(m) 280	238	237	289
Zinc	ppm ASTM D5185(m) 10	38	38	115
Sulfur	ppm ASTM D5185(m) 440	778	775	851
Lithium	ppm ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >15	2	2	4
Sodium	ppm ASTM D5185(m)	<1	<1	2
Potassium	ppm ASTM D5185(m) >20	<1	<1	1

OIL ANALYSIS REPORT



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0076312 **Received** : 16 Feb 2024
Lab Number : **02616247** **Tested** : 20 Feb 2024
Unique Number : 5733357 **Diagnosed** : 20 Feb 2024 - Kevin Marson
Test Package : MAR 2 (Additional Tests: KV100, PQ, 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.

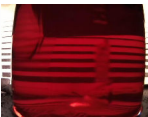
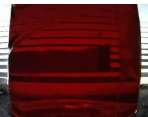
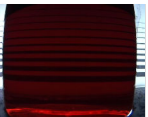
Suncor - Terra Nova Projects
 Scotia Centre, 235 Water Street
 St. John's, NL
 CA A1C 1B6
 Contact: Josh Hynes
 joshhynes@suncor.com
 T: (709)778-3575
 F: (709)724-2835

FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	▲ 7582	718	1406
Particles >6µm	ASTM D7647	>1300	▲ 2871	207	374
Particles >14µm	ASTM D7647	>160	▲ 360	18	32
Particles >21µm	ASTM D7647	>40	▲ 126	4	6
Particles >38µm	ASTM D7647	>10	14	1	0
Particles >71µm	ASTM D7647	>3	1	1	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ 20/19/16	17/15/11	18/16/12

FLUID DEGRADATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D974*	0.16	0.77	0.92	0.83

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	VLITE	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	25.4	25.3	23.1
Visc @ 100°C	cSt ASTM D7279(m)	7.7	5.3	5.3	4.9
Viscosity Index (VI)	Scale ASTM D2270*	210	147	148	140

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom			