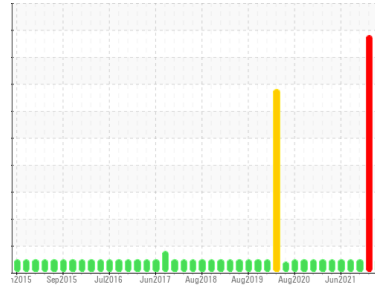


Area  
**Cranes [450159533]**  
 Machine Id  
**Crane - Mid - Hydraulic System (Reservoir) (S/N Sample Tag MA-04002-S4)**  
 Component  
**Hydraulic System**  
 Fluid  
**PETRO CANADA ATF DEXRON III/MERCON (800 LTR)**



**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 history 1 history 2

Sample Number	Client Info	<b>PC0052198</b>	PC0052679	PC416836
Sample Date	Client Info	<b>14 Jun 2023</b>	02 May 2023	05 Oct 2021
Machine Age	hrs	Client Info	<b>0</b>	0
Oil Age	hrs	Client Info	<b>0</b>	0
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>NORMAL</b>	SEVERE	NORMAL

**WEAR METALS** method limit/base current history 1 history 2

PQ	ASTM D8184*		<b>0</b>	0	0
Iron	ppm	ASTM D5185(m) >20	<b>2</b>	2	1
Chromium	ppm	ASTM D5185(m) >10	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m) >10	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185(m) >10	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185(m) >20	<b>1</b>	2	1
Copper	ppm	ASTM D5185(m) >20	<b>3</b>	5	3
Tin	ppm	ASTM D5185(m) >10	<b>&lt;1</b>	<1	<1
Antimony	ppm	ASTM D5185(m)	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)	<b>0</b>	0	0

**ADDITIVES** method limit/base current history 1 history 2

Boron	ppm	ASTM D5185(m) 130	<b>81</b>	78	92
Barium	ppm	ASTM D5185(m) 1.0	<b>7</b>	7	8
Molybdenum	ppm	ASTM D5185(m) 0.0	<b>0</b>	0	<1
Manganese	ppm	ASTM D5185(m)	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m) 1.0	<b>&lt;1</b>	<1	<1
Calcium	ppm	ASTM D5185(m) 20	<b>35</b>	34	35
Phosphorus	ppm	ASTM D5185(m) 280	<b>290</b>	289	293
Zinc	ppm	ASTM D5185(m) 10	<b>128</b>	125	113
Sulfur	ppm	ASTM D5185(m) 440	<b>776</b>	775	780
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1

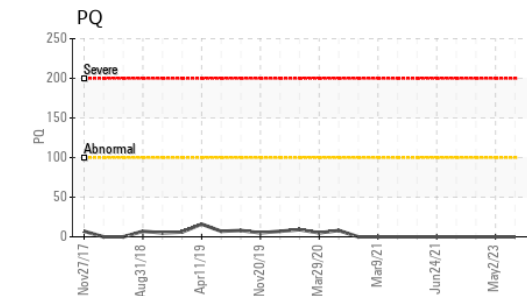
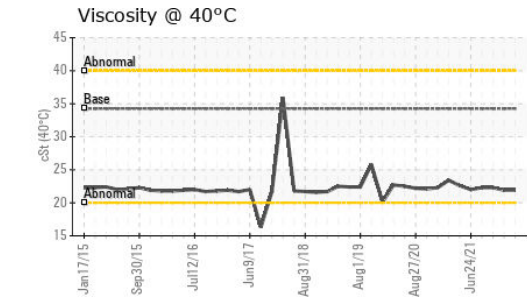
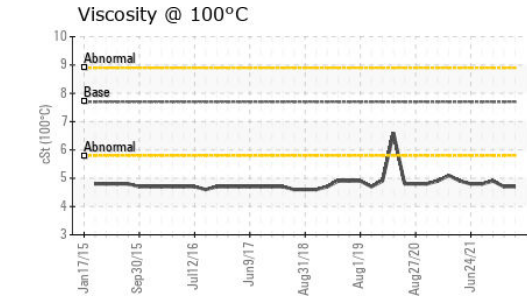
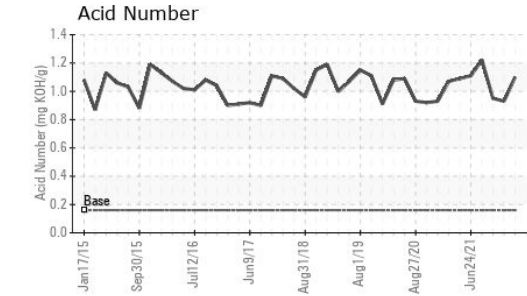
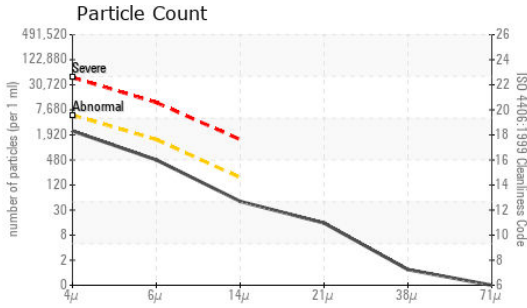
**CONTAMINANTS** method limit/base current history 1 history 2

Silicon	ppm	ASTM D5185(m) >15	<b>1</b>	▲ 26	1
Sodium	ppm	ASTM D5185(m)	<b>2</b>	2	2
Potassium	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	1

**FLUID CLEANLINESS** method limit/base current history 1 history 2

Particles >4µm	ASTM D7647	>5000	<b>2088</b>	◆ 45175	1406
Particles >6µm	ASTM D7647	>1300	<b>423</b>	◆ 15067	129
Particles >14µm	ASTM D7647	>160	<b>43</b>	▲ 420	11
Particles >21µm	ASTM D7647	>40	<b>13</b>	▲ 65	4
Particles >38µm	ASTM D7647	>10	<b>1</b>	4	1
Particles >71µm	ASTM D7647	>3	<b>0</b>	1	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	<b>18/16/13</b>	◆ 23/21/16	18/14/11

# OIL ANALYSIS REPORT

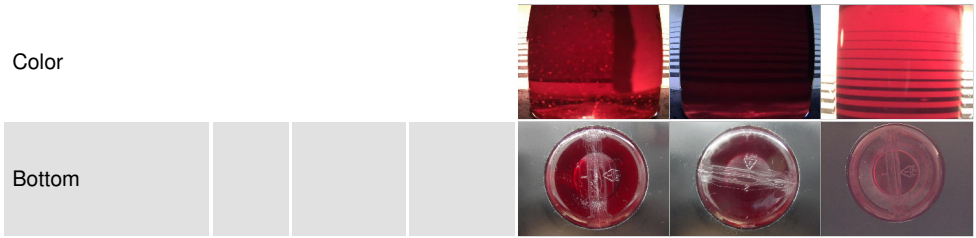


FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.16	<b>1.10</b>	0.93	0.95

VISUAL		method	limit/base	current	history 1	history 2
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	Visual*	NONE	<b>NONE</b>	▲ LIGHT	NONE
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>	NONE	VLITE
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.05	<b>NEG</b>	.5%	NEG
Free Water	scalar	Visual*		<b>NEG</b>	▲ 5%	NEG

FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 40°C	cSt	ASTM D7279(m)	34.26	<b>21.9</b>	21.9	22.3
Visc @ 100°C	cSt	ASTM D7279(m)	7.7	<b>4.7</b>	4.7	4.9
Viscosity Index (VI)	Scale	ASTM D2270*	210	<b>136</b>	136	149

## SAMPLE IMAGES



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0052198 **Received** : 06 Jul 2023  
**Lab Number** : **02568257** **Diagnosed** : 07 Jul 2023  
**Unique Number** : 5605303 **Diagnostician** : Kevin Marson  
**Test Package** : MAR 2 ( Additional Tests: KV100, PQ, TAN Man, VI )

**Suncor - Terra Nova Projects**  
 Scotia Centre, 235 Water Strret  
 St. John's, NL  
 CA A1C 1B6  
 Contact: Josh Hynes  
 joshhynes@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.