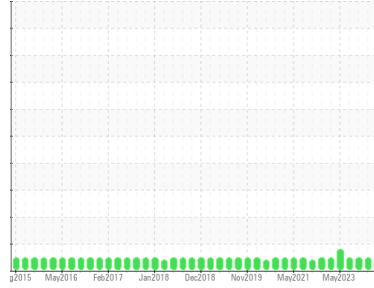


# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**Cranes [450231374]**  
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	<b>PC0078229</b>	PC0076221	PC0052594
Sample Date	Client Info	<b>27 Dec 2023</b>	04 Oct 2023	12 Aug 2023
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >0.05	<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2
PQ	ASTM D8184*	<b>0</b>	0	0
Iron	ppm ASTM D5185(m) >20	<b>&lt;1</b>	<1	2
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>	<1	0
Aluminum	ppm ASTM D5185(m) >10	<b>&lt;1</b>	0	<1
Lead	ppm ASTM D5185(m) >20	<b>&lt;1</b>	<1	2
Copper	ppm ASTM D5185(m) >20	<b>1</b>	1	3
Tin	ppm ASTM D5185(m) >10	<b>0</b>	0	<1
Antimony	ppm ASTM D5185(m)	<b>0</b>	0	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

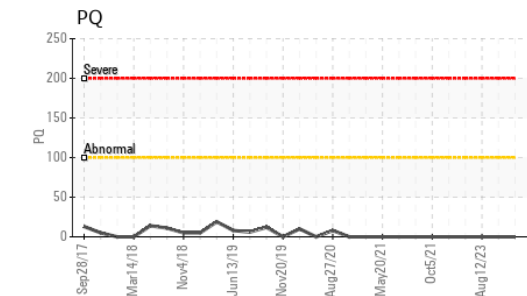
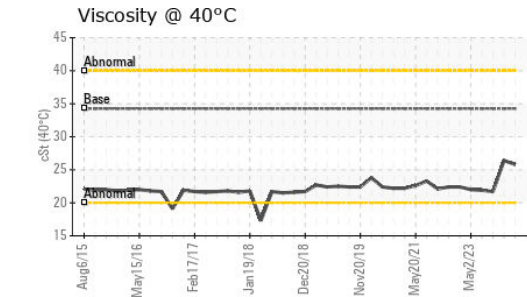
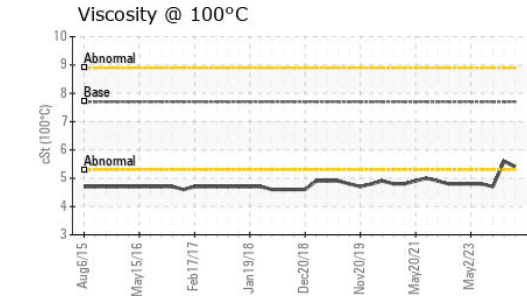
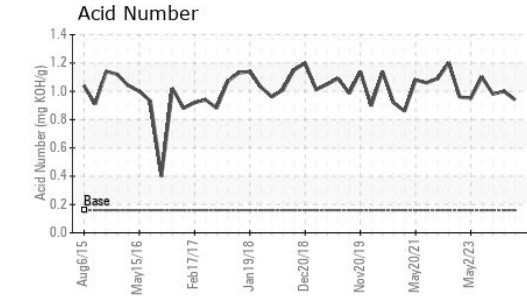
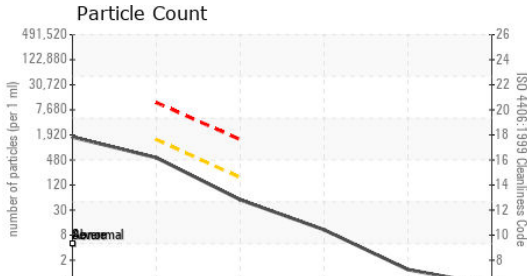
## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185(m) 130	<b>92</b>	102	82
Barium	ppm ASTM D5185(m) 1.0	<b>2</b>	2	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>2</b>	2	<1
Calcium	ppm ASTM D5185(m) 20	<b>65</b>	66	36
Phosphorus	ppm ASTM D5185(m) 280	<b>241</b>	238	312
Zinc	ppm ASTM D5185(m) 10	<b>44</b>	46	141
Sulfur	ppm ASTM D5185(m) 440	<b>746</b>	737	816
Lithium	ppm ASTM D5185(m)	<b>&lt;1</b>	<1	<1

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >15	<b>2</b>	2	1
Sodium	ppm ASTM D5185(m)	<b>&lt;1</b>	1	2
Potassium	ppm ASTM D5185(m) >20	<b>&lt;1</b>	0	1

# OIL ANALYSIS REPORT



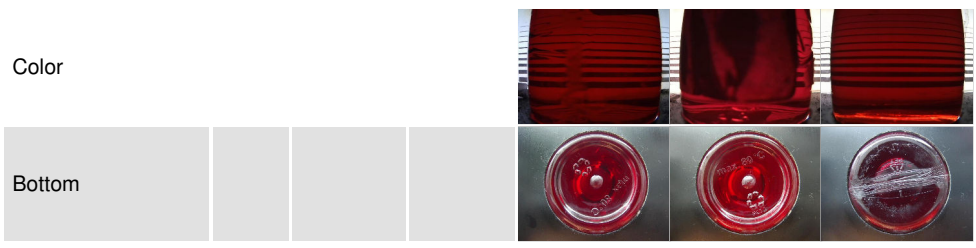
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647			<b>1489</b>	5409	2669
Particles >6µm	ASTM D7647	>1300		<b>478</b>	485	348
Particles >14µm	ASTM D7647	>160		<b>47</b>	9	10
Particles >21µm	ASTM D7647	>40		<b>9</b>	2	3
Particles >38µm	ASTM D7647	>10		<b>1</b>	1	0
Particles >71µm	ASTM D7647	>3		<b>0</b>	1	0
Oil Cleanliness	ISO 4406 (c)	>--/17/14		<b>18/16/13</b>	20/16/10	19/16/10

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.16	<b>0.94</b>	1.00	0.98

VISUAL		method	limit/base	current	history1	history2
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>	NONE	NONE
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	<b>VLITE</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>	NEG	NEG
Free Water	scalar	Visual*		<b>NEG</b>	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	34.26	<b>25.8</b>	26.4	21.7
Visc @ 100°C	cSt	ASTM D7279(m)	7.7	<b>5.4</b>	5.6	4.7
Viscosity Index (VI)	Scale	ASTM D2270*	210	<b>150</b>	158	139

SAMPLE IMAGES		method	limit/base	current	history1	history2
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Color  
  
Bottom



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0078229 **Received** : 28 Dec 2023  
**Lab Number** : **02605555** **Diagnosed** : 02 Jan 2024  
**Unique Number** : 5698640 **Diagnostician** : Kevin Marson  
**Test Package** : MAR 2 ( Additional Tests: KV100, PQ, TAN Man, VI )

**Suncor - Terra Nova Projects**  
 Scotia Centre, 235 Water Street  
 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.