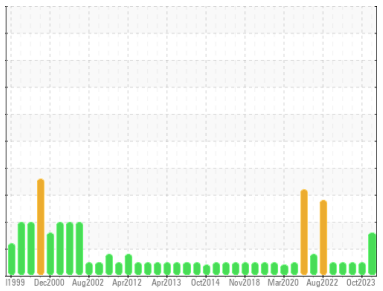
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
PUMPHOUSE/DIRTY WATER PUMPS
Machine Id
C - Dirty Water Turbine OB
Component
Lube System
Fluid
PETRO CANADA HYDREX AW 100 (1 GAL)

DIAGNOSIS

Recommendation
We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Wear
Copper ppm levels are abnormal. Lead ppm levels are noted. A sharp increase in the copper level is noted. A sharp increase in the lead level is noted. Oil cooler core leaching or motor piston wear is indicated.

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 oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0968454**	WC0866304	WC0824410
Sample Date		Client Info		**17 Jul 2024**	04 Oct 2023	31 May 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				**ABNORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>5	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*	>DFLT	**0**	0	0
Iron	ppm	ASTM D5185(m)	>20	**6**	6	3
Chromium	ppm	ASTM D5185(m)	>20	**0**	0	0
Nickel	ppm	ASTM D5185(m)	>20	**<1**	0	0
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**0**	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	**<1**	<1	0
Lead	ppm	ASTM D5185(m)	>20	● **10**	1	<1
Copper	ppm	ASTM D5185(m)	>20	▲ **27**	6	6
Tin	ppm	ASTM D5185(m)	>20	**2**	<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)	0	**0**	<1	<1
Barium	ppm	ASTM D5185(m)	0	**<1**	3	3
Molybdenum	ppm	ASTM D5185(m)	0	**0**	0	0
Manganese	ppm	ASTM D5185(m)	0	**0**	0	0
Magnesium	ppm	ASTM D5185(m)	0	**0**	<1	<1
Calcium	ppm	ASTM D5185(m)	50	**62**	46	46
Phosphorus	ppm	ASTM D5185(m)	330	**349**	319	363
Zinc	ppm	ASTM D5185(m)	430	**420**	403	381
Sulfur	ppm	ASTM D5185(m)	760	**2624**	2525	2769
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**4**	3	3
Sodium	ppm	ASTM D5185(m)		**<1**	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	**<1**	0	0

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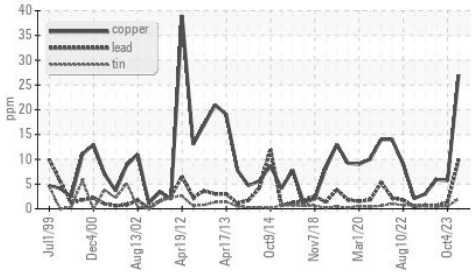
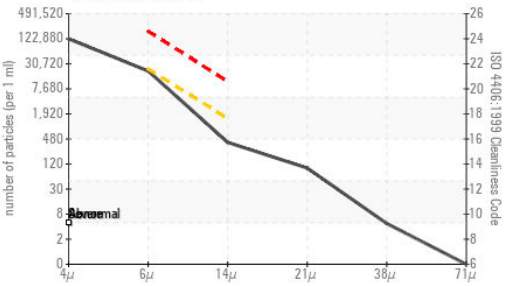
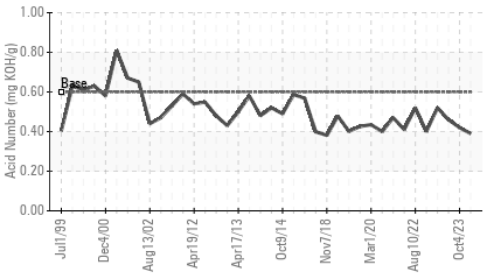
Non-ferrous Metals



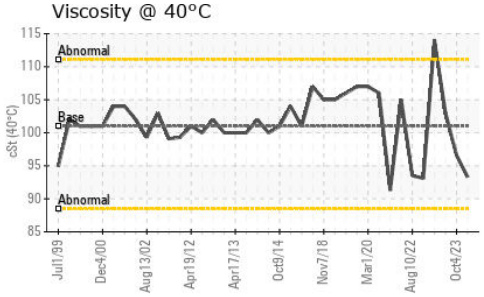
Particle Count



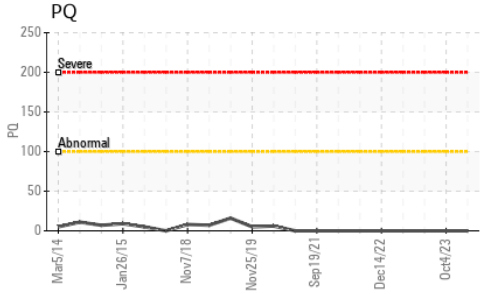
Acid Number



Viscosity @ 40°C



PQ

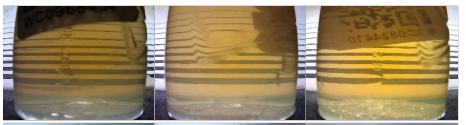


FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		**105645**	75544	46020
Particles >6µm		ASTM D7647	>20000	**17924**	15393	8615
Particles >14µm		ASTM D7647	>1300	**350**	1248	257
Particles >21µm		ASTM D7647	>320	**85**	305	41
Particles >38µm		ASTM D7647	>80	**4**	10	1
Particles >71µm		ASTM D7647	>20	**0**	1	0
Oil Cleanliness		ISO 4406 (c)	>--/21/17	**24/21/16**	23/21/17	23/20/15

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.60	**0.39**	0.42	0.46

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**VLITE**	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Precipitate	scalar	Visual*	NONE	**NONE**	NONE	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*	>5	**NEG**	NEG	.2%
Free Water	scalar	Visual*		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	101	**93.3**	96.6	103

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0968454
Lab Number : 02648438
Unique Number : 5813990
Test Package : IND 2 (Additional Tests: Bottom, PQ)

Received : 17 Jul 2024
Tested : 18 Jul 2024
Diagnosed : 18 Jul 2024 - Kevin Marson

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.

STELCO - BOSC - Basic Oxygen Slab Caster
2330 Regional Road #3, Door: BOSC8
NANTICOKE, ON
CA N0A 1L0
Contact: Tom Walden
Thomas.Walden@stelco.com
T: (519)587-4541
F: (519)587-7702

Report Id: LEWBOSC [WCAMIS] 02648438 (Generated: 07/18/2024 09:34:09) Rev: 1

Submitted By: Bob Melanson