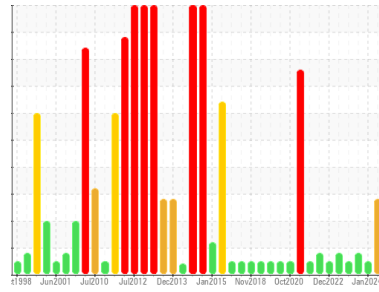




OIL ANALYSIS REPORT

Sample Rating Trend



Area
PUMPHOUSE/CASTER SPRAY WATER PUMPS
 Machine Id
C - Caster Spray Water Electric Pump IB
 Component
Lube System
 Fluid
PETRO CANADA HYDREX AW 100 (1 GAL)

DIAGNOSIS

Recommendation

We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil from the component if this has not already been done. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend an early resample to monitor this condition.

Wear

Iron ppm levels are abnormal. A sharp increase in the iron level is noted. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion.

Contamination

There is a moderate concentration of dirt present in the oil. High amount of ingressed dirt has caused abrasive wear to the component.

Fluid Condition

The oil viscosity is lower than typical, possibly indicating the addition of lighter grade oil. 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	WC0968461	WC0898666	WC0850118
Sample Date	Client Info	17 Jul 2024	10 Jan 2024	16 Aug 2023
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		ABNORMAL	NORMAL	ABNORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >1	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2
PQ	ASTM D8184* >DFLT	9	12	0
Iron	ppm ASTM D5185(m) >20	▲ 72	23	29
Chromium	ppm ASTM D5185(m) >20	<1	0	<1
Nickel	ppm ASTM D5185(m) >20	1	0	<1
Titanium	ppm ASTM D5185(m)	0	0	0
Silver	ppm ASTM D5185(m)	0	0	<1
Aluminum	ppm ASTM D5185(m) >20	1	<1	<1
Lead	ppm ASTM D5185(m) >20	1	2	4
Copper	ppm ASTM D5185(m) >20	10	4	▲ 28
Tin	ppm ASTM D5185(m) >20	0	0	2
Antimony	ppm ASTM D5185(m)	<1	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	<1	0	<1
Barium	ppm ASTM D5185(m) 0	0	0	0
Molybdenum	ppm ASTM D5185(m) 0	0	0	0
Manganese	ppm ASTM D5185(m) 0	<1	0	<1
Magnesium	ppm ASTM D5185(m) 0	6	2	<1
Calcium	ppm ASTM D5185(m) 50	33	38	48
Phosphorus	ppm ASTM D5185(m) 330	440	426	344
Zinc	ppm ASTM D5185(m) 430	319	349	396
Sulfur	ppm ASTM D5185(m) 760	2526	2541	2454
Lithium	ppm ASTM D5185(m)	2	<1	<1

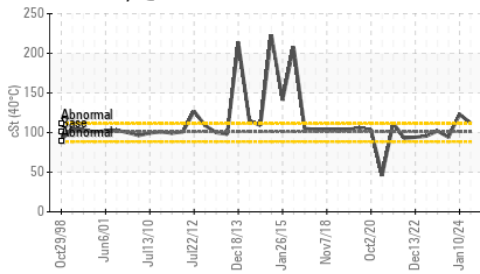
CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >15	▲ 18	14	3
Sodium	ppm ASTM D5185(m)	<1	0	4
Potassium	ppm ASTM D5185(m) >20	<1	<1	<1

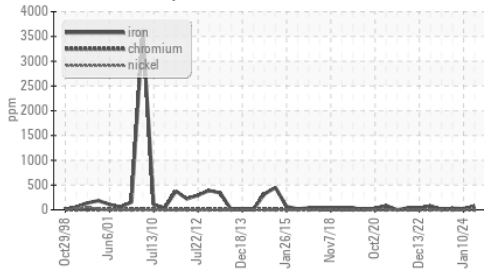


OIL ANALYSIS REPORT

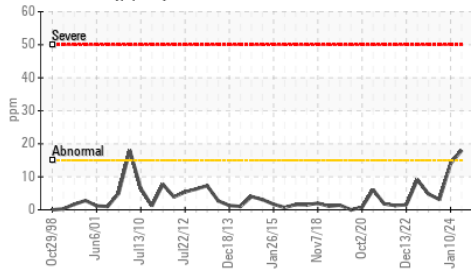
▲ Viscosity @ 40°C



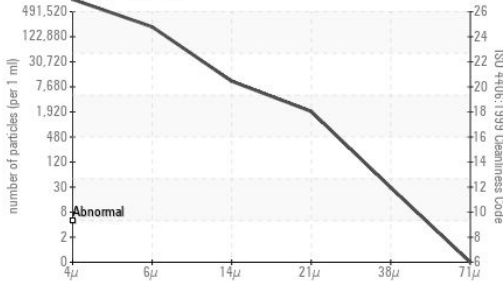
▲ Ferrous Alloys



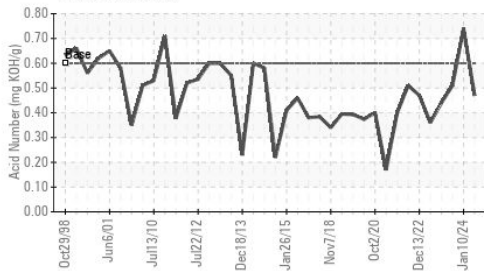
▲ Silicon (ppm)



Particle Count



Acid Number



FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		835588	183587	118169
Particles >6µm	ASTM D7647	>10240000	183067	84570	52474
Particles >14µm	ASTM D7647	>10240000	9132	3520	2374
Particles >21µm	ASTM D7647	>2560000	1729	918	460
Particles >38µm	ASTM D7647	>640000	26	78	9
Particles >71µm	ASTM D7647	>160000	0	7	1
Oil Cleanliness	ISO 4406 (c)	>--/30/30	27/25/20	25/24/19	24/23/18

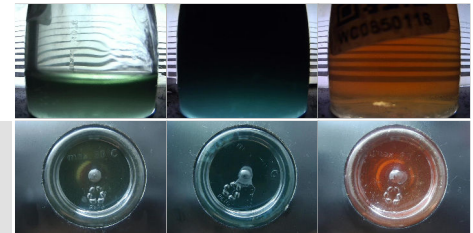
FLUID DEGRADATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D974*	0.60	0.47	0.74	0.51

VISUAL	method	limit/base	current	history1	history2
White Metal	scalar Visual*	NONE	VLITE	NONE	NONE
Yellow Metal	scalar Visual*	NONE	NONE	NONE	VLITE
Precipitate	scalar Visual*	NONE	NONE	LIGHT	NONE
Silt	scalar Visual*	NONE	NONE	NONE	NONE
Debris	scalar Visual*	NONE	LIGHT	NONE	VLITE
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*	>1	NEG	NEG	NEG
Free Water	scalar Visual*		NEG	NEG	NEG

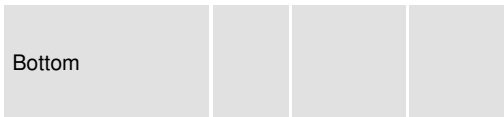
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt ASTM D7279(m)	101	▲ 112	123	94.1

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. : WC0968461
Lab Number : 02648537
Unique Number : 5814089
Test Package : IND 2 (Additional Tests: Bottom, PQ, TAN Man)

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

*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.*