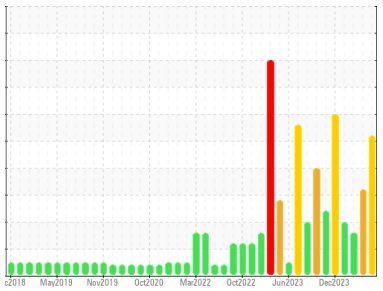
OIL ANALYSIS REPORT

Sample Rating Trend



WATER

Area
BOF/OG SYSTEM
Machine Id
D - 7 Skirt Lifting and Seal Jacking Hydraulics
Component
Hydraulic System
Fluid
FORSYTHE NO FIRE WG 200R (350 GAL)

DIAGNOSIS

Recommendation

We advise that you add glycol concentrate to restore the water concentration level to 41%. Due to the low reserve alkalinity it is advised that you contact FORSYTHE to assist in restoring the proper amine concentration. 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. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using IND 3 test kits, this testkit includes Analytical Ferrography which provides a detailed morphological analysis of wear particles present in the fluid.

Wear

Component wear rates appear to be normal (unconfirmed).

Contamination

There is a moderate amount of particulates (2 to 100 microns in size) present in the oil.

Fluid Condition

The reserve alkalinity of this fluid is lower than acceptable. The water concentration level is higher than acceptable for this fluid. Viscosity of sample indicates oil is within ISO 15 range, advise investigate. The AN level is acceptable for this fluid. The pH level of this fluid is within the acceptable limits. 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		**WC0934085**	WC0926487	WC0910446
Sample Date		Client Info		**15 Apr 2024**	22 Mar 2024	16 Feb 2024
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**	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*	>99999	**0**	9	0
Iron	ppm	ASTM D5185(m)	>20	**<1**	0	0
Chromium	ppm	ASTM D5185(m)	>20	**0**	0	0
Nickel	ppm	ASTM D5185(m)	>20	**0**	0	0
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**<1**	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	**<1**	0	0
Lead	ppm	ASTM D5185(m)	>20	**0**	0	0
Copper	ppm	ASTM D5185(m)	>20	**<1**	0	0
Tin	ppm	ASTM D5185(m)	>20	**0**	0	0
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)		**2**	<1	<1
Barium	ppm	ASTM D5185(m)		**1**	0	0
Molybdenum	ppm	ASTM D5185(m)		**0**	0	0
Manganese	ppm	ASTM D5185(m)		**0**	0	0
Magnesium	ppm	ASTM D5185(m)		**2**	<1	<1
Calcium	ppm	ASTM D5185(m)		**6**	1	<1
Phosphorus	ppm	ASTM D5185(m)		**6**	<1	<1
Zinc	ppm	ASTM D5185(m)		**2**	0	0
Sulfur	ppm	ASTM D5185(m)		**51**	61	59
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**1**	<1	<1
Sodium	ppm	ASTM D5185(m)		**142**	157	187
Potassium	ppm	ASTM D5185(m)	>20	**17**	15	32
Water	%	ASTM D6304*		▲ **58.2**	▲ 52.6	46.4
ppm Water	ppm	ASTM D6304*	>10%	▲ **582000**	▲ 526000	464000

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **38065**	1969	▲ 21821
Particles >6µm		ASTM D7647	>1300	▲ **7471**	427	▲ 4298
Particles >14µm		ASTM D7647	>160	▲ **773**	32	97
Particles >21µm		ASTM D7647	>40	▲ **239**	10	11
Particles >38µm		ASTM D7647	>10	**8**	1	2
Particles >71µm		ASTM D7647	>3	**4**	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **22/20/17**	18/16/12	▲ 22/19/14

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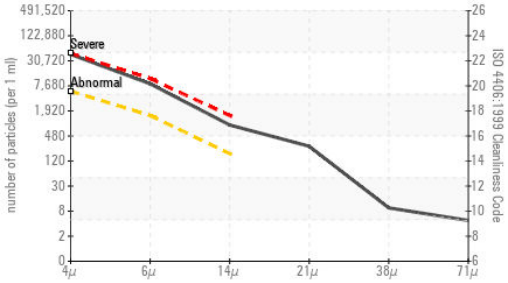
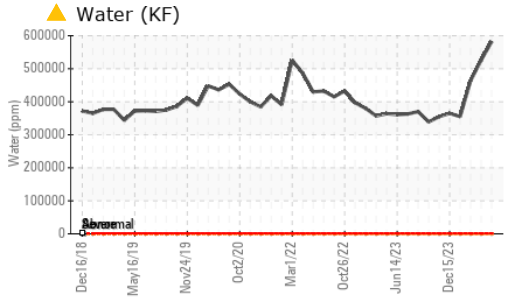
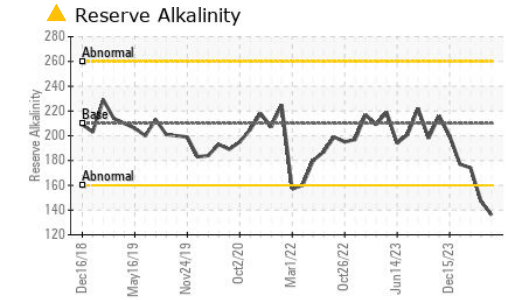
Particle Count



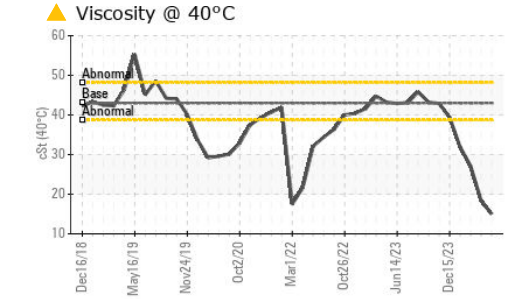
Water (KF)



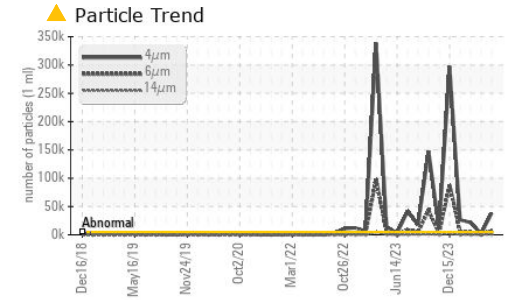
Reserve Alkalinity



Viscosity @ 40°C



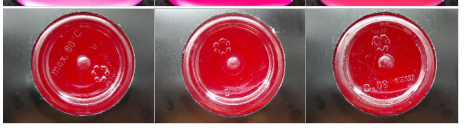
Particle Trend



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		**2.19**	2.67	2.77
Alkiline Reserve (Oils)	ml KOH/g	ASTM D1121*	210	▲ **136**	▲ 147	174

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	**NONE**	NONE	NONE
Silt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Debris	scalar	Visual*	NONE	**VLITE**	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Appearance	scalar	Visual*	NORML	**FRGLY**	NORML	FRGLY
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*		**>10%**	NEG	>10%
Free Water	scalar	Visual*		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
pH	Scale 0-14	ASTM D1287*		**9.72**	9.63	9.64
Visc @ 40°C	cSt	ASTM D7279(m)	43	▲ **15.0**	▲ 18.4	▲ 27.1

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. : WC0934085
Lab Number : 02629388
Unique Number : 5762520
Test Package : IND 2 (Additional Tests: KF, pH, PQ, ReserveAlk)

Received : 16 Apr 2024
Tested : 17 Apr 2024
Diagnosed : 17 Apr 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
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Report Id: LEWBOSC [WCAMIS] 02629388 (Generated: 04/17/2024 16:31:19) Rev: 1

Submitted By: Bob Melanson