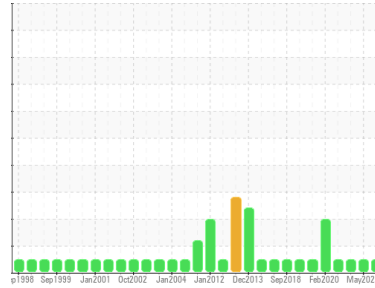




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
Caster/Segment Drives
 Machine Id
B - Strand 2 - 1 Gear Box Roll # 48 Bottom
 Component
Gearbox
 Fluid
SHELL OMALA 220 (45 GAL)

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 water content is negligible. 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		WC0898694	WC0824360	WC0743637
Sample Date	Client Info		10 Jan 2024	30 May 2023	13 Sep 2022
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			NORMAL	NORMAL	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184*	>DFLT	34	29	25
Iron	ppm	ASTM D5185(m)	>200	102	97
Chromium	ppm	ASTM D5185(m)	>15	<1	<1
Nickel	ppm	ASTM D5185(m)	>15	<1	<1
Titanium	ppm	ASTM D5185(m)		0	<1
Silver	ppm	ASTM D5185(m)		0	0
Aluminum	ppm	ASTM D5185(m)	>25	2	2
Lead	ppm	ASTM D5185(m)	>100	<1	<1
Copper	ppm	ASTM D5185(m)	>200	<1	<1
Tin	ppm	ASTM D5185(m)	>25	0	0
Antimony	ppm	ASTM D5185(m)	>5	0	0
Vanadium	ppm	ASTM D5185(m)		0	0
Beryllium	ppm	ASTM D5185(m)		0	0
Cadmium	ppm	ASTM D5185(m)		0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	4.4	7	6
Barium	ppm	ASTM D5185(m)	0.0	0	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0
Manganese	ppm	ASTM D5185(m)		1	2
Magnesium	ppm	ASTM D5185(m)	0	5	5
Calcium	ppm	ASTM D5185(m)	0	12	11
Phosphorus	ppm	ASTM D5185(m)	215	240	271
Zinc	ppm	ASTM D5185(m)	0	5	2
Sulfur	ppm	ASTM D5185(m)	7039	10234	10052
Lithium	ppm	ASTM D5185(m)		<1	<1

CONTAMINANTS

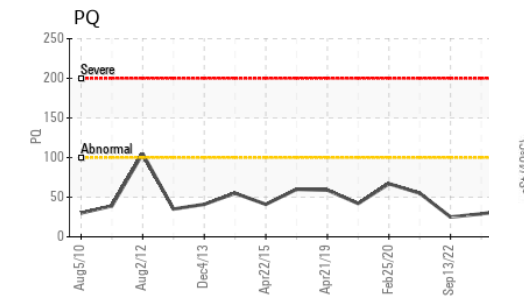
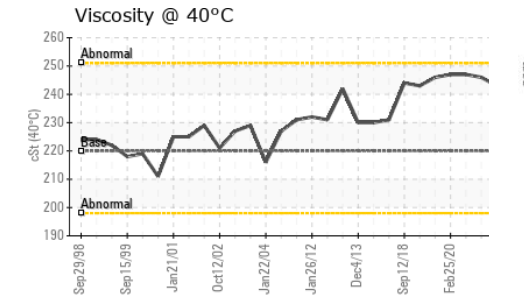
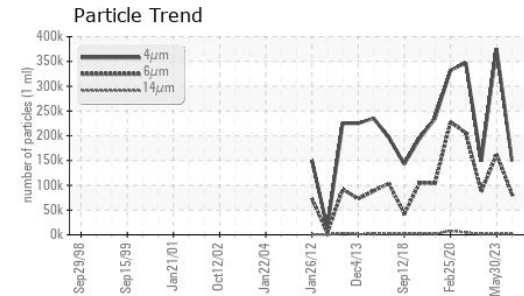
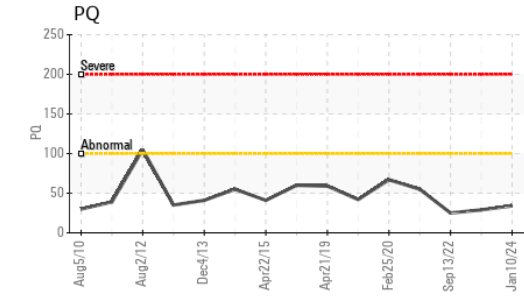
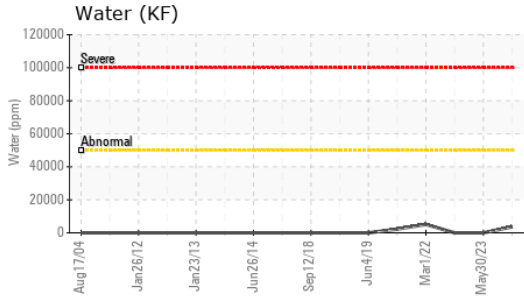
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>50	6	6
Sodium	ppm	ASTM D5185(m)		2	1
Potassium	ppm	ASTM D5185(m)	>20	<1	0
Water	%	ASTM D6304*	>5	0.365	---
ppm Water	ppm	ASTM D6304*	>50000	3651	---

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		149152	375675	148576
Particles >6µm	ASTM D7647	>10240000	82033	162308	87424
Particles >14µm	ASTM D7647	>10240000	1298	1528	1702
Particles >21µm	ASTM D7647	>2560000	177	240	315
Particles >38µm	ASTM D7647	>640000	9	3	4
Particles >71µm	ASTM D7647	>160000	4	0	0
Oil Cleanliness	ISO 4406 (c)	>--/30/30	24/24/17	26/25/18	24/24/18



OIL ANALYSIS REPORT

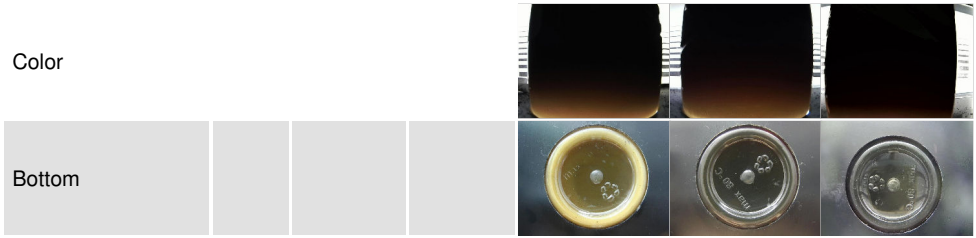


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		0.44	0.56	0.57

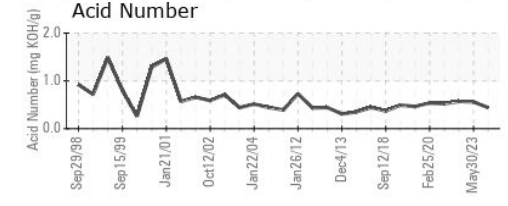
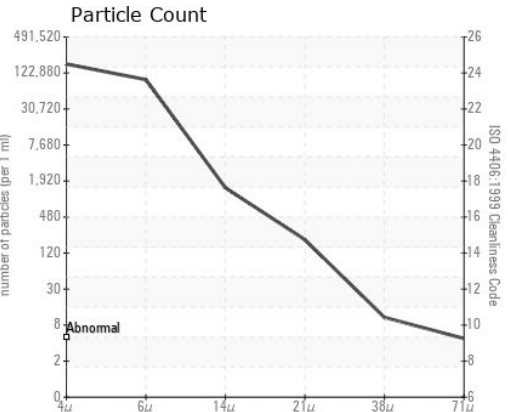
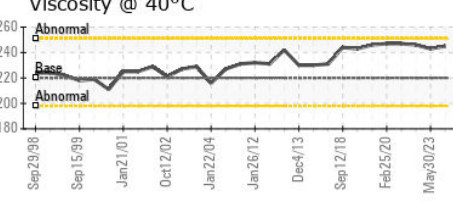
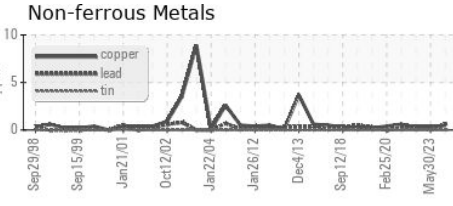
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	VLITE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	VLITE	NONE
Appearance	scalar	Visual*	NORML	MILKY	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>5	.2%	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	220	245	243	246

SAMPLE IMAGES		method	limit/base	current	history1	history2
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GRAPHS



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **STELCO - BOSC - Basic Oxygen Slab Caster**
Sample No. : WC0898694 **Received** : 10 Jan 2024 2330 Regional Road #3, Door: BOSC8
Lab Number : **02608035** **Diagnosed** : 12 Jan 2024 NANTICOKE, ON
Unique Number : 5709121 **Diagnostician** : Kevin Marson CA N0A 1L0
Test Package : IND 2 (Additional Tests: KF, PQ, PrtCount)
 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.
 Contact: Tom Walden
 Thomas.Walden@stelco.com
 T: (519)587-4541
 F: (519)587-7702