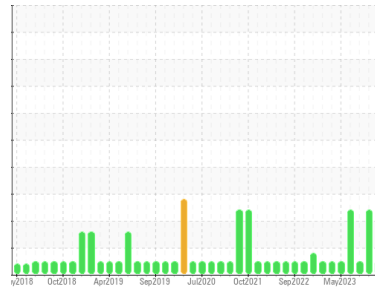




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
BOF/OG SYSTEM
Machine Id
D - O.G. Motor Lube System # 8
Component
Tank Hydraulic System
Fluid
PETRO CANADA HARMONY AW 32 (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		WC0871210	WC0850094	WC0838951
Sample Date	Client Info		16 Oct 2023	16 Aug 2023	13 Jul 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			NORMAL	ABNORMAL	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184*	>DFLT	0	0	0
Iron	ppm	ASTM D5185(m) >20	<1	<1	<1
Chromium	ppm	ASTM D5185(m) >20	0	0	0
Nickel	ppm	ASTM D5185(m) >20	<1	<1	0
Titanium	ppm	ASTM D5185(m)	0	0	0
Silver	ppm	ASTM D5185(m)	<1	0	<1
Aluminum	ppm	ASTM D5185(m) >20	0	<1	<1
Lead	ppm	ASTM D5185(m) >20	2	2	2
Copper	ppm	ASTM D5185(m) >20	<1	<1	<1
Tin	ppm	ASTM D5185(m) >20	0	0	0
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)	<1	<1	0
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) 110	<1	1	<1
Calcium	ppm	ASTM D5185(m) 60	49	48	49
Phosphorus	ppm	ASTM D5185(m) 330	336	365	377
Zinc	ppm	ASTM D5185(m) 390	434	438	453
Sulfur	ppm	ASTM D5185(m) 660	4337	4394	4455
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

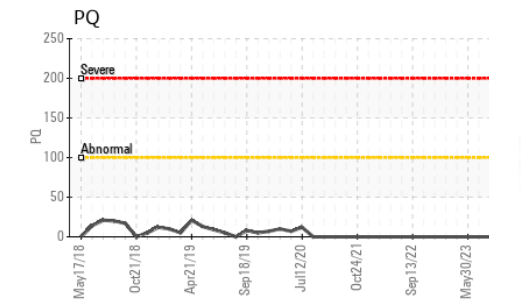
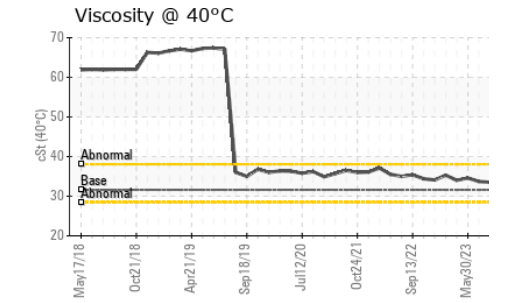
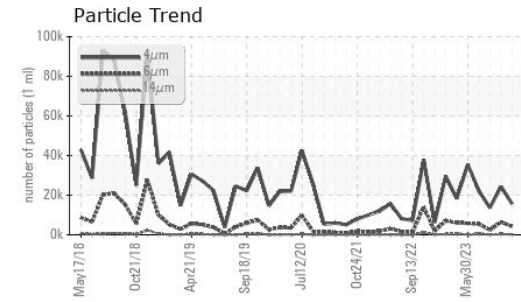
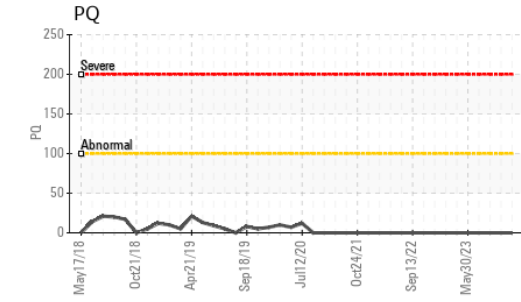
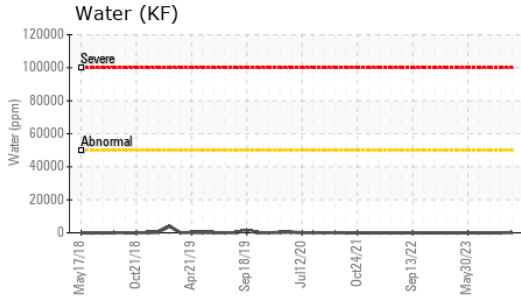
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >15	1	1	1
Sodium	ppm	ASTM D5185(m)	<1	<1	<1
Potassium	ppm	ASTM D5185(m) >20	<1	<1	<1
Water	%	ASTM D6304* >5	0.009	---	---
ppm Water	ppm	ASTM D6304* >50000	90.6	---	---

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		15630	24382	13588
Particles >6µm	ASTM D7647	>10240000	4239	6442	2370
Particles >14µm	ASTM D7647	>10240000	205	344	127
Particles >21µm	ASTM D7647	>2560000	35	71	50
Particles >38µm	ASTM D7647	>640000	1	1	5
Particles >71µm	ASTM D7647	>160000	0	0	0
Oil Cleanliness	ISO 4406 (c)	>--/30/30	21/19/15	22/20/16	21/18/14



OIL ANALYSIS REPORT

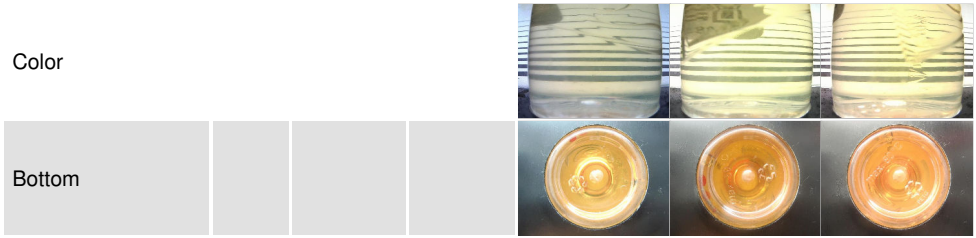


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.28	0.42	0.44	0.44

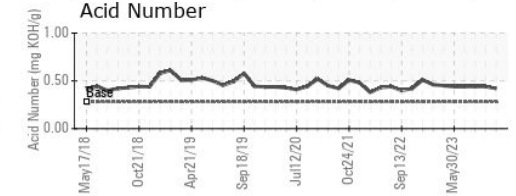
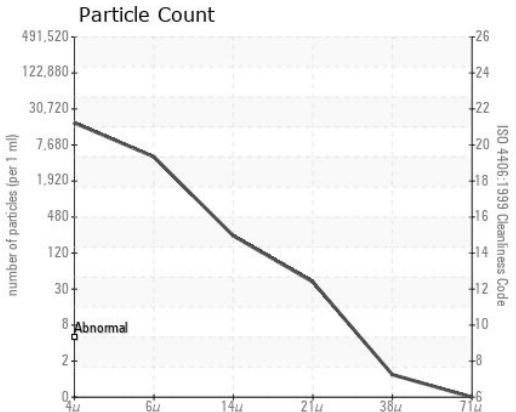
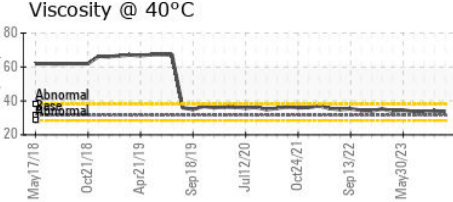
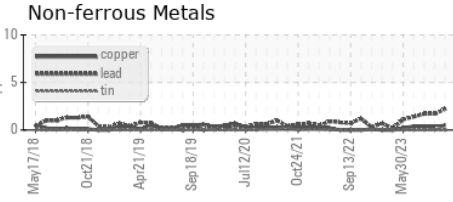
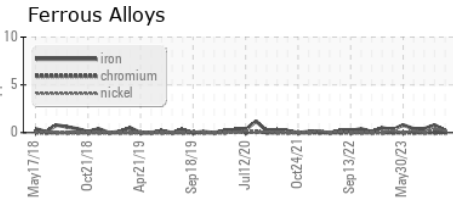
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	VLITE	VLITE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	▲ WGOIL	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>5	.2%	.2%	NEG
Free Water	scalar	Visual*		NEG	▲ 1%	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	31.61	33.9	34.1	33.5

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. : WC0871210 **Received** : 17 Oct 2023 2330 Regional Road #3, Door: BOSC8
Lab Number : 02589635 **Diagnosed** : 18 Oct 2023 NANTICOKE, ON
Unique Number : 5658701 **Diagnostician** : Wes Davis CA N0A 1L0
Test Package : IND 2 (Additional Tests: KF, PQ)

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