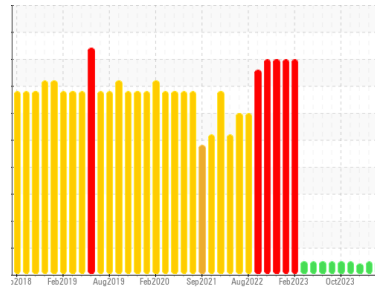




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area

BOF/VESSELS

Machine Id

A - 7 Vessel Drive Lube System

Component

Drive End Gearbox

Fluid

ESSO SPARTAN EP 320 (710 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 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	WC0934086	WC0926496	WC0901972
Sample Date	Client Info	15 Apr 2024	22 Mar 2024	22 Jan 2024
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		NORMAL	NORMAL	ABNORMAL

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* >99999	55	83	66
Iron	ppm ASTM D5185(m) >200	51	64	69
Chromium	ppm ASTM D5185(m) >15	<1	<1	<1
Nickel	ppm ASTM D5185(m) >15	<1	<1	<1
Titanium	ppm ASTM D5185(m)	0	0	0
Silver	ppm ASTM D5185(m)	0	0	0
Aluminum	ppm ASTM D5185(m) >25	<1	<1	1
Lead	ppm ASTM D5185(m) >100	0	0	<1
Copper	ppm ASTM D5185(m) >200	<1	<1	<1
Tin	ppm ASTM D5185(m) >25	0	0	0
Antimony	ppm ASTM D5185(m) >5	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

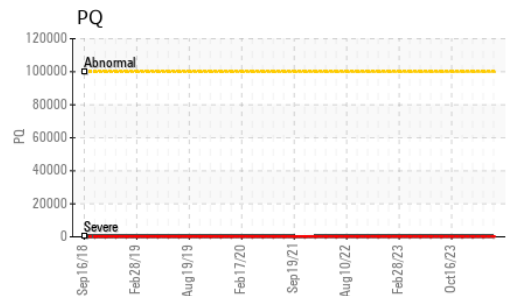
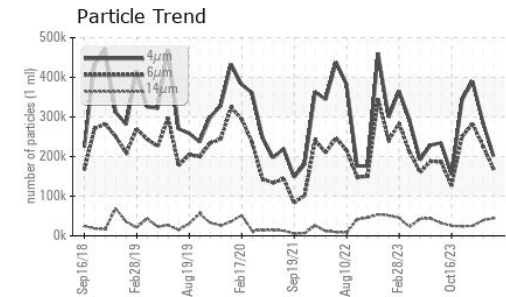
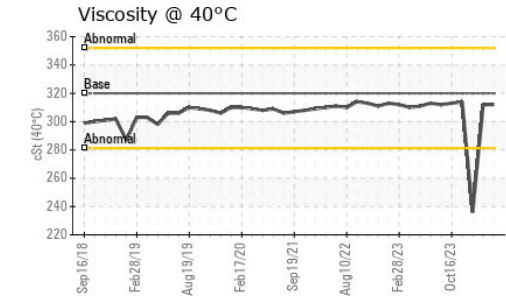
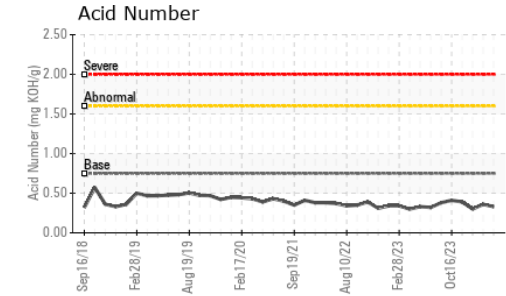
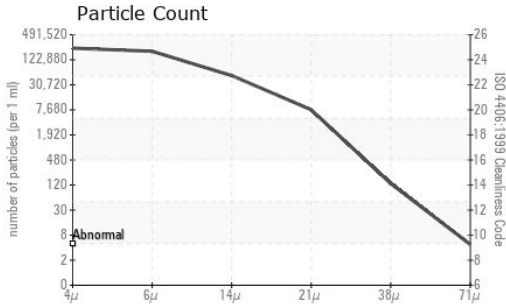
method	limit/base	current	history1	history2
Boron	ppm ASTM D5185(m) .4	<1	0	1
Barium	ppm ASTM D5185(m)	0	0	0
Molybdenum	ppm ASTM D5185(m) 0	7	6	4
Manganese	ppm ASTM D5185(m)	<1	0	<1
Magnesium	ppm ASTM D5185(m) 0	2	1	1
Calcium	ppm ASTM D5185(m) 0	4	6	5
Phosphorus	ppm ASTM D5185(m) 250	294	289	298
Zinc	ppm ASTM D5185(m) 0	40	32	25
Sulfur	ppm ASTM D5185(m)	8857	8842	9198
Lithium	ppm ASTM D5185(m)	7	5	4

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >50	2	3	3
Sodium	ppm ASTM D5185(m)	<1	<1	<1
Potassium	ppm ASTM D5185(m) >20	<1	<1	<1



OIL ANALYSIS REPORT



FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		201058	284802	390072
Particles >6µm	ASTM D7647	>10240000	168977	226312	282773
Particles >14µm	ASTM D7647	>10240000	44318	39345	25069
Particles >21µm	ASTM D7647	>2560000	6723	4619	1617
Particles >38µm	ASTM D7647	>640000	115	110	6
Particles >71µm	ASTM D7647	>160000	4	4	1
Oil Cleanliness	ISO 4406 (c)	>--/30/30	25/25/23	25/25/22	26/25/22

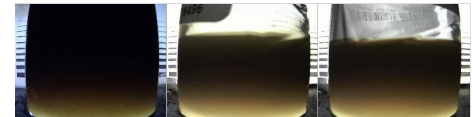
FLUID DEGRADATION	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D974*	0.75	0.33	0.36	0.30

VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	Visual*	NONE	NONE	NONE	VLITE
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	VLITE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>5	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)	320	312	312	▲ 236

SAMPLE IMAGES	method	limit/base	current	history1	history2
---------------	--------	------------	---------	----------	----------

Color



Bottom



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0934086
Lab Number : 02629320
Unique Number : 5762452
Test Package : IND 2 (Additional Tests: 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.